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

EM Recovery News
American Recovery and Reinvestment Newsletter

August 2010 | Issue 15

Recovery Act Enhances DOE Partnerships, Helps Idaho National Laboratory Succeed

A Message from the Director

More than 16 months have passed since the Office of Environmental Management (EM) began its American Recovery and Reinvestment Act Program, and we continue to work hard to achieve our goals, including cleaning up nuclear waste, creating and saving jobs, and spurring economic activity.

The EM Recovery Act Program has been successful. More than 24,000 workers have benefited from the $6 billion in EM Recovery Act funds. We're on target to complete the majority of our program's projects by 2011, and we have already met 22 of our 46 accelerated compliance milestones. We've demolished more than 3 million square feet of facilities, and permanently disposed of demolition debris and contaminated soil equal in size to 211 Olympic swimming pools. We've also awarded over $1.4 billion in contracts to small businesses.

In the months ahead, EM's success will continue, and our work will keep benefiting other DOE Offices, as well. This month's issue of *EM Recovery News* focuses on the support we provide these other DOE Offices—such as the Office of Science, Office of Nuclear Energy, and the National Nuclear Science Administration—and how the work we're accomplishing at their sites helps them excel in their missions.

The Recovery Act enhances EM's working relationship with other DOE Offices. At the sites of these DOE Offices across the country, we're cleaning up contaminated facilities, soil, and groundwater left behind by the Cold War era, and saving time and money for these Offices to focus on their important work.

Cynthia V. Anderson
Director, EM Recovery Act Program

Workers check instrumentation that will be used for sodium treatment as part of an effort to demolish the Experimental Breeder Reactor-II at the Materials and Fuels Complex at the Idaho National Laboratory.

Idaho Falls, Idaho – The success of the Idaho National Laboratory (INL), the only national lab overseen directly by the DOE's Office of Nuclear Energy (NE), depends heavily on the cleanup mission under way there.

DOE's commitment to INL's cleanup and waste management was reinforced with the passage of the Recovery Act in 2009, which provided about $468 million for mostly cleanup activities at the Idaho site.

The Idaho Cleanup Project (ICP) got the lion's share of that funding, and is using it to accelerate decontamination and decommissioning (D&D) of potentially contaminated facilities that no longer serve a useful, mission-related purpose.

"Recovery Act funding has really provided the Office of Nuclear Energy a big lift from a number of perspectives," said Ray Furstenau, Deputy Manager for Nuclear Energy in DOE's Idaho Operations Office. "The Recovery Act has allowed us to get many of these facilities taken down or stabilized long term, and eliminated ongoing surveillance and maintenance costs."

Furstenau also points to the partnership of NE and EM as the two work together to support INL's mission.

"The Recovery Act Program in Idaho is a great example of the Office of Nuclear Energy and Office of Environmental Management working together to support the long-term mission of the laboratory, and the Recovery Act is providing the funding to get this work accomplished," Furstenau said.

A number of the facilities undergoing D&D at the Idaho site were originally the property of the NE. Those facilities were known as environmental liabilities that could be contaminated with radiological or hazard-

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New Opportunities Emerge for Idaho Lab Worker in Recovery Act Project...

In this 15th issue of *Recovery News*, we focus on the benefits and support the Office of Environmental Management's American Recovery and Reinvestment Act Program brings to DOE Offices outside EM. In more ways than one, the EM Recovery Act Program's successful work is helping these DOE Offices—such as the Office of Science, Office of Nuclear Energy, and the National Nuclear Science Administration—further their missions. Meanwhile, EM is enhancing its partnerships with them as EM completes important projects that will restore the environment, create and save jobs, spur economic activity, and reduce the nation's nuclear waste footprint.

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Recovery Act Helps Savannah River Site Open Large Tracts of Land for Potential Future Missions

Recovery Act Cleanup Supports Mission of Science at Brookhaven Lab

Workers remove a control rod sleeve from the biological shield in the Brookhaven Graphite Research Reactor.

UPTON, N.Y. – Since its founding more than 60 years ago, the primary mission focus of Brookhaven National Laboratory (BNL) has been world-class science and technology.

Seven Nobel Prize-winning discoveries and countless other advances have their origins at the Lab, with applications in fields as diverse as medicine and national security. Funded primarily by DOE's Office of Science, BNL is now in the forefront of research into the mysteries of the early universe, transformative energy technologies, and the intriguing properties of matter at the nanoscale.

Another key part of the mission of the Lab and DOE, though, involves environmental responsibility. The Lab and DOE have a shared responsibility to remediate environmental impacts left behind by older facilities, including two of BNL's research reactors and associated structures.

Recovery Act funding totaling $70.5 million has been extremely beneficial on both fronts. It has allowed BNL to maintain its mission focus—and move ahead with construction of crucial new scientific facilities like the National Synchrotron Light Source II—while accelerating and completing these environmental cleanup projects, which strengthens overall community support for its efforts.

With Recovery Act funds, the Lab will be able to complete the remaining remediation work at the site under the EM program by September 2011—including some work that was originally scheduled for completion in 2020.

Using Recovery Act funds, DOE and BNL were able to accelerate and complete the most difficult part of the Brookhaven Graphite Research Reactor (BGRR) decommissioning project—safely removing more than 700 tons of radioactive graphite from the core of the reactor—while providing jobs and supporting small businesses.

The funding also played an important role in accelerating cleanup of BNL's High Flux Beam Reactor. Its cleanup plan specified that certain near-term actions be completed no later than 2020. The completion has been moved up by nine years to 2011 as a result of Recovery Act funding.

"We could not have completed the graphite reactor cleanup and the rest of the EM-funded work by September 2011 without the additional Recovery Act funding," BNL Environmental Restoration Projects Director Chuck Armitage said. "The Recovery Act has given us the opportunity to complete two very significant projects here, which is great news for the Lab and great news for the Long Island community." □

Clearing old, dilapidated facilities will expand the Science and Technology Park with new buildings such as the National Security Energy Center and the Commercialization Center.

A Recovery Act Tale of Two Campuses: Out With the Old, In With the New

OAK RIDGE, Tenn. – The Oak Ridge National Laboratory (ORNL) has a rich history dating back to the early 1940's. Today, however, what remains of the Cold War and Manhattan Project-era facilities there is either hazardous or too outdated to perform DOE's current science missions.

During the past decade, ORNL, an Office of Science laboratory, has successfully managed to modernize much of its campus. Outer portions of the campus have experienced significant upgrades, but the Lab's central campus, which is the oldest section, lags due to the large amount of environmental management cleanup work needed.

Fortunately, this is changing with the influx of more than $755 million in Recovery Act funds at Oak Ridge. Much of that funding is being used to accelerate cleanup of ORNL's old, dilapidated facilities. Approximately 40 facilities in the central campus area will be demolished, and plans are already in place to redevelop the central campus once it's cleared of old facilities.

In addition to providing for the much needed removal of unsafe facilities, Recovery Act funds are helping clear the way for future expansion, research, and economic development.

New development will include the Maximum Energy Efficiency Building Research Laboratory (MAXLAB), a project funded by the DOE Energy Efficiency and Renewable Energy Program and the Recovery Act, which is funding demolition and construction. MAXLAB, which will consist of a research laboratory and two building envelope test platforms, will be close to existing laboratory facilities, saving valuable infrastructure dollars and enhancing research opportunities.

"These new laboratory facilities will be used to develop technology and designs aimed at maximizing energy efficiency in buildings," said Patrick Hughes of ORNL's Energy and Transportation Science Division.

With Recovery Act funds, ORNL also is clearing space to expand the Oak Ridge Science and Technology Park from 12 acres to 17 acres. Once Recovery Act projects are completed by 2012, the entire northwest quadrant, about 40 acres of real estate, should be available for redevelopment. □

Recovery Act Helps Office of Science Laboratory Achieve Significant Milestone at Argonne

ARGONNE, Ill. – With the support of the Recovery Act, the DOE Office of Science's Argonne National Laboratory (ANL) has reached a significant milestone in reducing its nuclear footprint now that it has reclassified a key building because a significant amount of highly radioactive test material was removed.

In December 2008, when ANL kicked off the nuclear footprint reduction plan, Building 205, K-Wing was considered a "Nuclear Hazard Category 2" facility, meaning that it contained a significant amount of nuclear material.

Debris is removed for packaging in Building 205, K-Wing, at Argonne National Laboratory.

> **"Achieving this deactivation milestone fulfills an important commitment to both the DOE Office of Science and the Office of Environmental Management."**
>
> *– Joanna Livengood, DOE Argonne Site Office Manager*

The building—once used for fuel experiments—was recently reclassified as a "radiological facility" after the removal of 36, 55-gallon drums of irradiated test material.

"This is a significant milestone for the laboratory's environmental stewardship effort," said ANL Director Eric Isaacs. "It's important to clean up our past and make this facility available for more scientific and engineering research to ensure the nation's energy future."

With $1.7 million in Recovery Act funds, ANL began removing transuranic waste—waste from elements heavier than uranium – from the site in October 2009. The project is on time and under budget.

Project Manager Devin Hodge said most of the irradiated and contaminated material removed from Building 205, K-Wing was remote-handled transuranic waste and had to be packaged with the help of robotic arms. Such projects are both time consuming and expensive; it took 22 full-time personnel to get to this stage of the job.

Hodge said the building's new classification will help ANL save money because facilities containing significant quantities of nuclear material are more costly to monitor and maintain.

"It's expensive to run this building wing as a nuclear facility," Hodge said. "It's now much cleaner and could be available for future use when clean-up work is finished in March of 2011."

Hodge explained that all of the drums have been transferred to ANL's waste management facility, where they are awaiting final approval for shipment to DOE's Waste Isolation Pilot Plant outside Carlsbad, N.M. The packages will be moved off-site beginning this month and continuing through November 2010. □

Recovery Act Projects Support ANL's Ongoing Science Mission

With $79 million in Recovery Act funding, several additional significant Recovery Act projects are under way at Argonne National Laboratory (ANL).

The projects include demolition of two old radioactive research facilities: Building 330, which formerly housed the Chicago Pile 5 Reactor, and Building 310, the former Reactor Engineering Building.

Demolition of those outdated and excess facilities removes potential sources of future contamination, reduces burden on the site's resources, and supports ANL's ongoing science mission.

Significant amounts of materials and wastes, including transuranic waste, also are being removed from the Alpha Gamma Hot Cell Facility and other locations, contributing to reduction of the nuclear footprint of the site.

Office of Science Works Closely with EM on Recovery Act-Funded Cleanup at SLAC

An aerial view shows the SLAC National Accelerator Laboratory in Menlo Park, California.

MENLO PARK, Calif. – The accelerated cleanup of legacy waste at the SLAC National Accelerator Laboratory (SLAC) demonstrates how the Recovery Act is enhancing the working relationship between EM and the DOE Office of Science.

The Office of Science SLAC Site Office has been working closely with the EM Oakland Project Office on work supported by $11.8 million in Recovery Act funds. That work includes an investigation and remediation of impacted soil and groundwater. Historic spills and leaks have occurred in the operation of the two-mile-long linear accelerator at SLAC, the longest linear accelerator in the world.

Representatives from the SLAC Site Office meet with the EM Oakland Project Office routinely on a wide range of technical and management issues related to the accelerated cleanup.

"We are pleased with the working relationship we have with the EM Oakland Project Office on the accelerated cleanup of legacy waste at SLAC," said Dave Osugi, Environmental Scientist for the SLAC Site Office. "Working together will ensure that the scope of the current EM cleanup mission and the Office of Science research mission at SLAC are both accomplished without significant disruption to ongoing operations."

With the help of Recovery Act funding, EM is expected to complete cleanup at SLAC by fall 2011.

Recovery Act remediation activities support SLAC's continuing world class performance in photon science, astrophysics, and accelerator and particle physics research programs. Six scientists have been awarded the Nobel Prize for work carried out at SLAC.

SLAC is operated by Stanford University for the Department of Energy under a contract with the Office of Science. The SLAC National Accelerator Laboratory was formerly known as the Stanford Linear Accelerator Center. □

A Recovery Act Footprint: Savannah River Site is Opening Land for Future Missions

Savannah River Nuclear Solutions Recovery Act workers perform soil and sediment sampling at Lower Three Runs.

"The Recovery Act is the opportunity that keeps on giving at the Savannah River Site."

– Rodrigo V. Rimando, Jr., Savannah River Recovery Act Program Deputy Director

AIKEN, S.C. – As Recovery Act workers clean up the environment, they are helping make land available for future missions.

It's occurring at full speed at the Savannah River Site (SRS), where SRS's $1.6 billion in Recovery Act funds have provided DOE a unique opportunity to reduce the existing cleanup project footprint at the 310-square-mile site and attract future missions to large tracts of land.

"At the Savannah River Site, the Recovery Act has provided for more than additional jobs and economic recovery. It's accelerating cleanup by a decade and reducing the overall risk to surrounding communities, while also creating large expanses of land that will be made available for future missions or redevelopment," said Savannah River Recovery Act Program Deputy Director Rodrigo V. Rimando, Jr. "With new development comes additional future jobs and economic security. The Recovery Act is the opportunity that keeps on giving at the Savannah River Site."

Cleanup Milestone Slated for 2012

Despite a reduction in the cleanup project footprint, SRS's borders will remain unchanged. A reduction in footprint will allow the federal government to declare the large tracts of land where the footprint is reduced available for reuse or redevelopment. By September 2012, SRS will have completed cleanup of more than 75 percent of the site.

In addition to freeing up lands for future work early, accelerating the cleanup reduces the overall lifecycle costs of the cleanup program. □

Save the Date!

ARRA Information Exchange III

Conference Set for October in Washington, D.C.

Save the dates **October 6 and 7** this year for **Savannah River Site's** "ARRA Information Exchange III," at the **Gaylord National Hotel & Convention Center*** in Washington, D.C.

"Celebrate Finishing Strong" is the theme of the event. Get the latest information through presentations and breakout sessions on worker transition planning, footprint reduction, communications, congressional viewpoints, and Recovery Act project progress updates from all Recovery Act sites.

- Listen to personal stories of Recovery Act workers, and learn from the successes of small businesses working in Recovery Act projects.
- In addition, participants can engage in team-building activities!
- A "Special Taste of South Carolina" reception will be held Oct. 6 during the conference.

For more information, contact Paivi Nettamo, Savannah River Nuclear Solutions Public Affairs, at Paivi.Nettamo@srs.gov.

* When making a room reservation at Gaylord, please provide the code **X-HVF10** and reference the DOE ARRA Information Exchange.

INL Succeeds...

Continued from page 1

ous materials. Therefore, they eventually had to be removed, disposed or stabilized.

As long as NE owned those facilities, NE was charged with maintaining surveillance over the radioactive or hazardous materials, as well as keeping the lights and heat on in the buildings and providing adequate security. NE also was responsible for paying to D&D them.

With the influx of Recovery Act funding, however, NE was able to turn over such facilities to EM's Recovery Act program for D&D activities. This has provided a cost savings to NE that can be used for its nuclear energy research mission.

When the INL took over management of the Materials and Fuels Complex (MFC), it inherited a historic inventory of remote-handled transuranic waste and mixed low-level waste. The Recovery Act has provided about $86 million to remove the waste from MFC, process it and ship it to appropriate off-site disposal.

The MFC is also the site of the Experimental Breeder Reactor-II (EBR-II) facility. That's a historic and illustrious research reactor that, nonetheless, is filled with residual sodium which was used for coolant in the reactor. The residual sodium is a hazardous material because of its reactive qualities.

EBR-II was shut down in 1994 and put in stable condition, but it remained on the laboratory's books as an environmental liability. It also was taking up space within MFC's security perimeter that could be used for new facilities.

The arrival of Recovery Act money will allow CH2M-WG Idaho, the Idaho cleanup contractor, to D&D the old reactor facility, remove or stabilize the residual sodium, and open up space within the MFC security perimeter to allow eventual construction of three planned facilities: a post-irradiation examination facility, a technology support facility, and an irradiated materials characterization laboratory. □

In Person:

Recovery Act Offers Opportunity for Employment, New Skills for Idaho Technician

Brandon Blackmon

"I'm an example of how employing one person stimulates jobs throughout my local economy. We've bought furniture, appliances, and even a couple of pets. We'll be purchasing more as we're expecting our first child in February!"

– Brandon Blackmon, Retrieval Operator Technician, Idaho Site facility

IDAHO FALLS, Idaho – In April 2009, Brandon Blackmon and his wife, Tasha, were in a bind. They were three months behind on their rent. Brandon had lost his seasonal job in hazardous waste and environmental work. But the Blackmons' fortunes changed because of the Recovery Act.

Brandon was one of 49 employees hired with Recovery Act funding by Bechtel BWXT Idaho, the manager and operator of the Advanced Mixed Waste Treatment Project (AMWTP) at the Idaho National Laboratory (INL).

Brandon is among the more than 1,900 workers who have benefited from Recovery Act funds at INL since Recovery Act work began in April 2009.

Presently, Brandon is a retrieval operator technician at the Idaho Site facility. He's helping to retrieve historically managed transuranic waste in preparation for characterization, treatment, and shipment to the Waste Isolation Pilot Plant in New Mexico and commercial disposal sites.

"In three months, I went from being behind in my rent to purchasing a new home with my wife, Tasha," Blackmon said. "I'm an example of how employing one person stimulates jobs throughout my local economy. We've bought furniture, appliances, and even a couple of pets. We'll be purchasing more as we're expecting our first child in February!"

Brandon began work at AMWTP in May 2009. He accomplished several weeks of training that made him feel safe and appreciative of the challenges in his job.

"It's exciting to be able to figure out how to safely and compliantly accomplish a task and support the goal of accelerated waste retrieval." Brandon also likes the fact that his work is helping send radioactive waste out of Idaho.

The AMWTP received $18 million—for use between April 2009 and September 2010—of the Idaho Site's total $468 million in Recovery Act funding. The $18 million was allocated to accelerate cleanup work at AMWTP.

AMWTP is in a contract competition that the DOE intends to resolve by Sept. 30 of this year, at which time the new contractor will be given direction in terms of Recovery Act funding and work scope. Meanwhile, Brandon feels fortunate to be working.

"I enjoy my job," Brandon said. "It's exciting to be a part of what is happening out here." □

Recovery Act Makeover Improves Facilities for Naval Reactors Laboratory

Pictured here are waste liners that will be used to dispose of radioactive waste inside tanks at the Separations Process Research Unit. The tanks and their vaults are among the facilities that will be demolished with Recovery Act funds.

NISKAYUNA, N.Y. – The Separations Process Research Unit Disposition Project (SPRU-DP) is experiencing its own version of the extreme home makeover television shows, brought to you by the Recovery Act.

The SPRU site was a research project in the early 1950s, used to research chemical processes for separating plutonium and uranium from irradiated materials in support of Hanford and the Savannah River Site.

SPRU-DP is responsible for decontamination and decommissioning work on two contaminated buildings totaling about 50,000 square feet, and surrounding soil that was contaminated with radioactivity and chemicals.

As part of the preparation process for demolition of a building, all of the hazards located within the building need to be removed or rendered safe for demolition. SPRU-DP has removed or is removing in excess of 40,000 pounds of lead, a majority of which is radioactively contaminated; 20,000 gallons of water drained from tanks, lines and vaults; over 50,000 square feet of transite wall panels; 7,500 linear feet of friable asbestos insulation; over 4,000 square feet of asbestos pipe insulation; and almost 1,500 gallons of radioactive waste sludge.

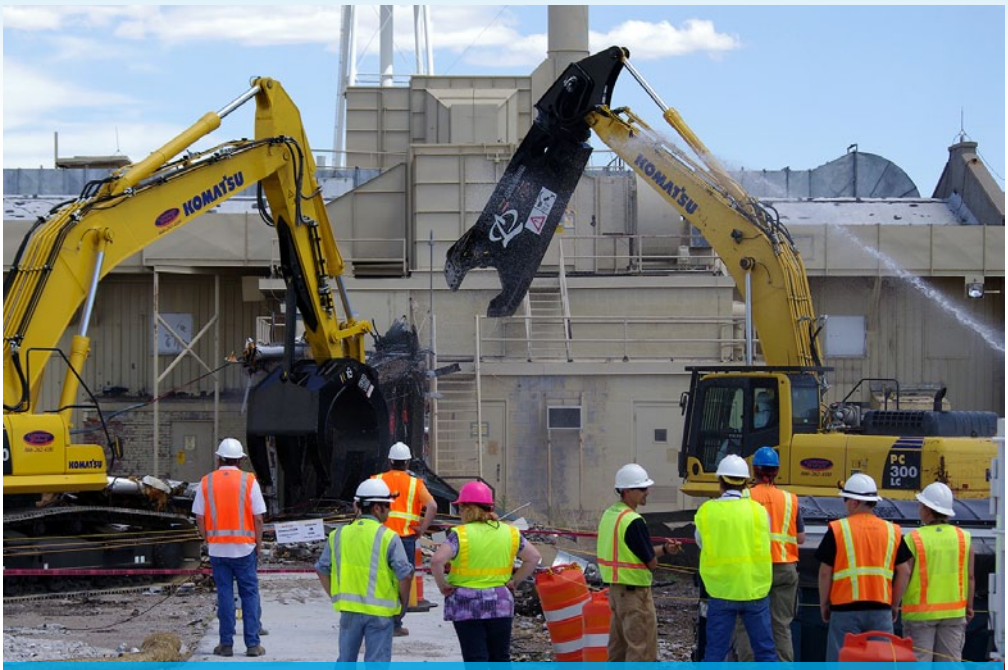
SPRU is located at the Knolls Atomic Power Laboratory (KAPL), a world-class research and development facility dedicated to support the United States Naval Nuclear Propulsion Program.

Thanks to $37 million in Recovery Act funding, the project is slated for completion by the end of September 2011. Then, DOE will return the remediated site to the Naval Reactors Laboratory Field Office-Schenectady for potential re-use. □

Los Alamos Recovery Act Project Hits Hiring Peak, Exceeds Job Goals

LOS ALAMOS, N.M. – One of New Mexico's largest Recovery Act projects will hit its hiring peak this summer as an additional 125 people will be hired to work on an environmental remediation project at Los Alamos National Laboratory (LANL).

The new crop of workers for the project in the coming weeks raises the tally of jobs created and saved at LANL to more than 500. Among other projects, the workers will excavate Material Disposal Area B (MDA-B), LANL's oldest waste disposal site, which was used from 1944 to 1948.



LANL safety and operations crews observe the demolition of the world's first full-scale plutonium processing lab. Known as "DP West," the facility operated from late 1945 to 1978.

"We originally estimated that these projects would create or save 300 to 350 jobs, so the addition of 125 more workers exceeds our job goals significantly."

– Bruce Schappell, LANL Recovery Act Director

"As work on MDA-B ramps up this summer, we will add 12 additional crews to our workforce," said LANL Recovery Act Director Bruce Schappell. "We originally estimated that these projects would create or save 300 to 350 jobs, so the addition of 125 more workers exceeds our job goals significantly."

The MDA-B excavation is just one of LANL's projects funded by $212 million in Recovery Act funds. Other Recovery Act projects include the decontamination and decommissioning of 21 old buildings at Technical Area 21 (TA-21) and the installation of 16 groundwater monitoring wells. Since Recovery Act work began in July 2009, 13 of the 21 buildings have been demolished and 13 of the 16 groundwater monitoring wells are complete.

Most Recovery Act work at TA-21 has been performed by four small business subcontractors selected before the project began. The subcontractors submit bids to perform specific tasks and provide the personnel to complete the work. Jobs range from engineers and project managers to laborers and truck drivers.

In all EM Recovery Act projects nationwide so far since Recovery Act work began in April 2009, small businesses have been awarded $1.4 billion in contracts.

In addition to creating work for New Mexicans, the LANL Recovery Act project will result in long-term environmental benefits for northern New Mexico. After it is cleaned up, the six acres that comprise MDA-B and the nearly 100 acres of TA-21—minus the Manhattan Project and Cold War era buildings that will be demolished—will be restored for potential land transfer and reuse.

"Putting people to work has a beneficial effect on families and communities," Schappell said. "This project has long-term environmental benefits as well as the obvious economic benefits that job creation provides." □

Recovery Act Milestone: Excavation Begins at Manhattan Project Landfill

LOS ALAMOS, N.M. – Recovery Act funds are helping clean up National Nuclear Security Administration (NNSA) sites at Los Alamos National Laboratory (LANL) for eventual reuse.

Energized by a total $212 million in Recovery Act funds allocated for cleanup and monitoring, LANL began excavating a 65-year-old landfill this summer after months of soil sampling, safety analyses, and preparation.

"This project marks major environmental cleanup progress for the Lab," said Everett Trollinger, Recovery Act project manager for NNSA's Los Alamos Site Office. "We look forward to the day we are able to transfer this land for other uses."

In the upper center of this aerial photo is the landfill known as the Materials Disposal Area B at Los Alamos National Laboratory.

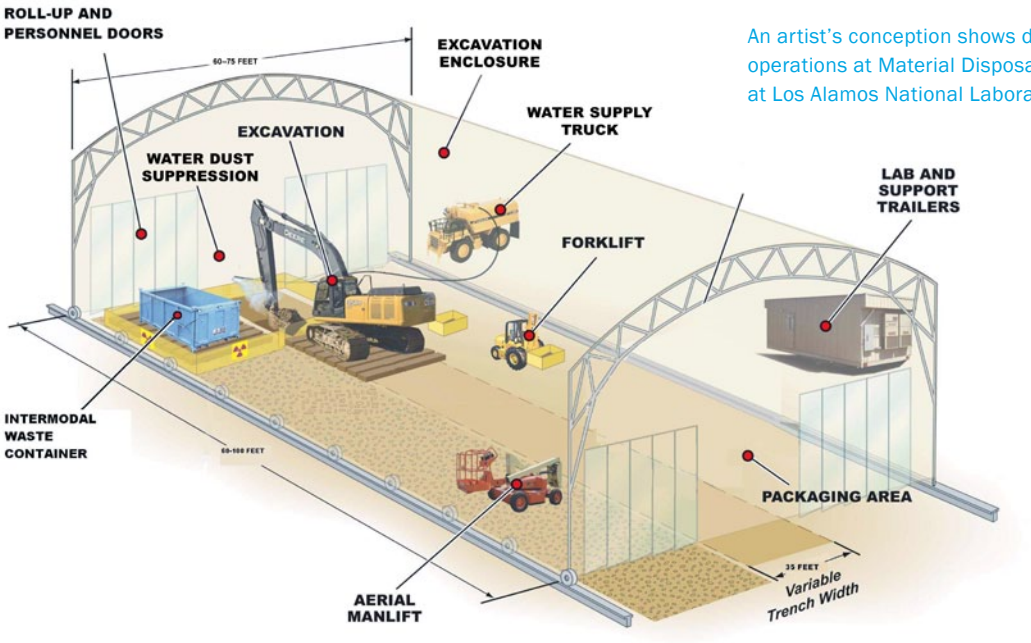
Cleanup crews will scoop out 22,000 cubic yards of trash and dirt—enough to cover a football field to a depth of about 11 feet—and fill the excavated areas with clean soil.

The landfill, known as Material Disposal Area B (MDA-B), is a six-acre site that contains a series of trenches used from 1944 to 1948 to dispose of hazardous and non-hazardous trash from Manhattan Project labs and buildings.

Despite the original purpose of the landfill, crews do not expect to find much radioactive material. Plutonium was extremely rare, and any created during World War II was zealously recovered for reuse. Soil cores taken last year estimate that between three and seven ounces of plutonium are scattered across the site. That's about the weight of small mobile phone.

According to persistent legend at LANL, an entire empty truck used at the Trinity bomb test—the world's first test of an atomic bomb—could be buried in MDA-B.

"We might uncover something that could go to the Bradbury Science Museum in Los Alamos," LANL Program Manager Andy Baumer said. □



An artist's conception shows digging operations at Material Disposal Area B at Los Alamos National Laboratory.

Shannon Seneca, right, a State University of New York at Buffalo doctoral candidate, reviews a log book in the WVDP onsite laboratory.

Recovery Act Funds Construction of Trench to Mitigate Groundwater Contamination

WEST VALLEY, N.Y. – With the infusion of $6.5 million in Recovery Act funds, West Valley Demonstration Project (WVDP) is installing an 850-foot-long trench this fall that will prevent the spread of a contaminated groundwater plume.

WVDP worked with the State University of New York at Buffalo to develop the trench, known as a permeable treatment wall. The trench will contain zeolite, a naturally-occurring mineral formed from volcanic ash. The zeolite attracts the contaminant, Strontium-90, and pulls it out of the groundwater, similar to a home water softener system.

The university's Department of Civil, Structural, and Environmental Engineering conducted tests for the trench over a year. Following the tests, WVDP selected zeolite from the Bear River Mine near Preston, Idaho. An estimated 2,000 metric tons of zeolite will be required.

"The Recovery Act funds being used on this project will go a long way towards mitigating this contaminated groundwater plume. Our team is working closely to ensure the safe, successful installation of this trench in the fall of 2010," WVDP Federal Project Director Mark Bellis said.

WVDP is ensuring that the excavated contaminated soil is effectively contained in a lined, above-ground containment. The team designed and constructed a conveyor system that can collect and lift the heavy, wet soil into the containment where the water can be collected, removed, and treated.

The groundwater contamination was caused by a leak in a process pipe in a commercial facility that reprocessed spent nuclear fuel from 1966 to 1974. □

> **"The Recovery Act funds being used on this project will go a long way towards mitigating this contaminated groundwater plume."**
>
> *– Mark Bellis, WVDP Federal Project Director*

Recovery Act Funds Lay Groundwork for Unique Demolition at Hanford Site

Workers demolish the 224-U facility, one of five ancillary facilities adjacent to Hanford's U Plant.

Richland, Wash. – A $12 million Recovery Act-funded project will help prepare for a first-of-a-kind demolition of the U Plant, one of five former nuclear fuel reprocessing plants at the Hanford Site.

In the project, the remaining three of five ancillary facilities adjacent to the U Plant will be removed.

"Removing these last three facilities takes us one step closer to preparing the U Plant processing canyon for demolition by 2012," said Kurt Kehler, vice president of the decommissioning and demolition project. "U Plant will be the first facility of its type to be demolished at the Hanford Site."

Altogether, more than 53,190 square feet of contaminated facilities will be removed from the Hanford Site and help clear the area around U Plant. The work is being accomplished with the help of 35 workers hired by DOE contractor CH2M HILL.

The ancillary facilities once supported the processing of liquids generated during uranium recovery. The buildings have been out of service for years and contained radiological and industrial contaminants that CH2M HILL removed before beginning demolition.

As demolition continues on the outside, inside U Plant's 810-foot-long canyon building, crews recently removed over 125 large pieces of equipment off the massive canyon deck into below-grade openings, called cells, in preparation for final grouting.

"This project will set the stage for the work we do at the Hanford Site's four other canyons," said Kehler. "Through efficiencies, our team is currently ahead of schedule and below cost for this cleanup effort." □

Recovery Act-Funded Crane Provides Lift to Tank Waste Retrieval at Hanford

A state-of-the-art, 135-ton, all-terrain crane purchased with Recovery Act funds will provide a much-needed lift to waste retrieval efforts at Hanford.

Richland, Wash. – A state-of-the-art, 135-ton all-terrain crane purchased with nearly $2 million in Recovery Act funds will provide a big lift to tank waste retrieval efforts at Hanford.

The crane was purchased to hoist the Mobile Arm Retrieval System (MARS) up and into Hanford's aging single-shell tanks. MARS is a remotely operated, articulating arm installed on a mast in the center of a tank that will use high-pressure water nozzles to break apart waste and rake it towards a centralized pump for retrieval.

"We bought the crane mainly to support the MARS project," said Pat Howard, C-107 Retrieval Projects construction manager. "The crane will support other projects, with a cost savings of about $35,000 a week in crane rental fees," Howard said.

The crane features an advanced computerized system that controls swinging, stopping and booming. The computer-based controls are an important feature for both safety and performance. Other features include a 523-horsepower, turbo-charged Mercedes-Benz engine, another four-cylinder engine that powers the crane's superstructure, and a five-section boom that extends 167 feet.

"This is a pretty mobile piece of equipment for its size," Howard says. "That's an important feature in tank farms. We'll be able to walk in and out of some tight spots while staying off the top of the tanks." □

Construction of Interim Moisture Barrier Begins at Hanford

Workers begin excavation for a new Recovery-Act-funded interim moisture barrier at Hanford's TY Farm.

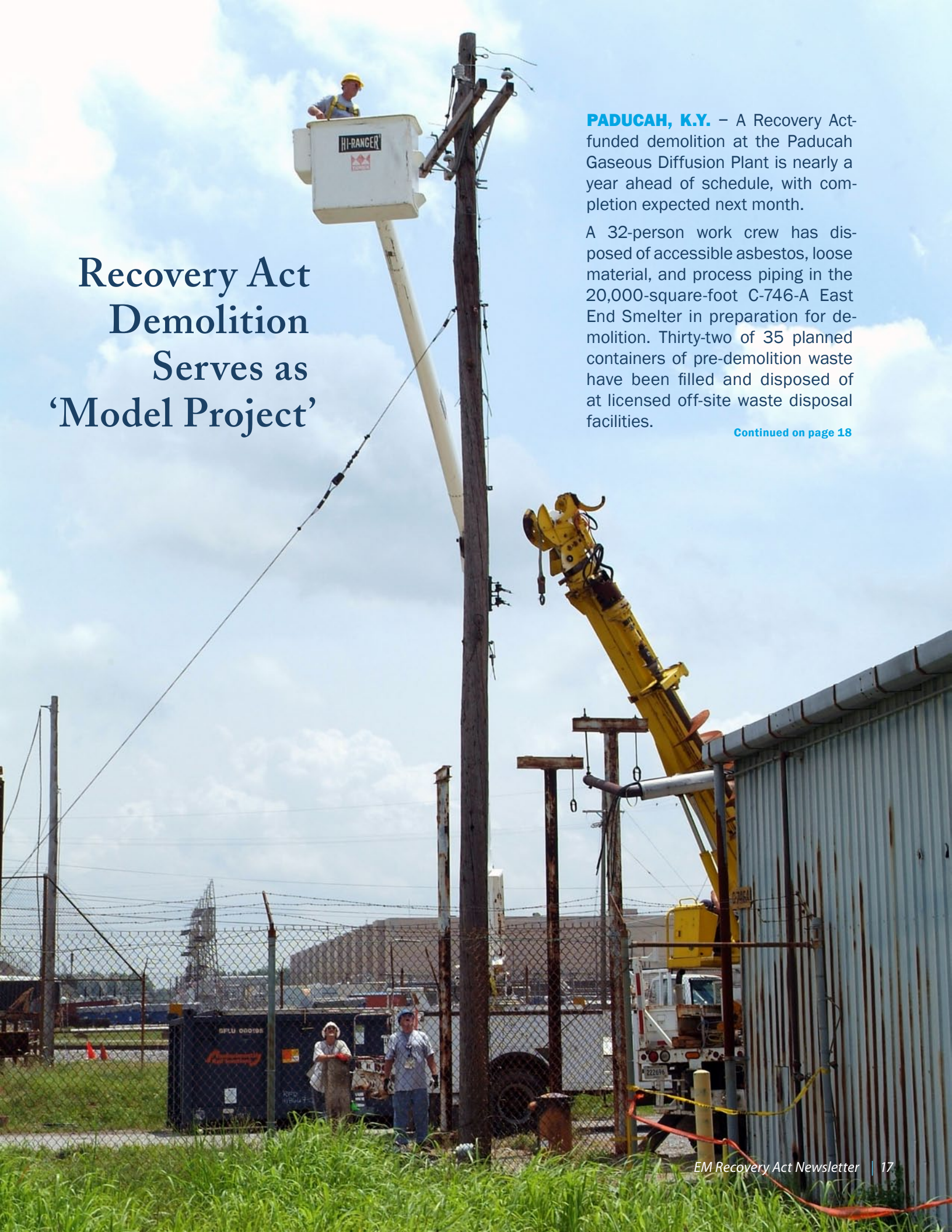
Richland, Wash. – Work is now under way to build an interim moisture barrier over the top of one of the tank farms at Hanford. The barrier is designed to act as a protective shield and prevent rainwater from seeping into the soil and pushing leaked radioactive and chemical waste deeper into the ground. The $4.8 million project is funded by the Recovery Act.

Hanford is home to more than 53 million gallons of radioactive and chemical waste stored in 177 underground tanks, up to a third of which are suspected "leakers." Barriers, however, have proven effective to keep leaked waste from migrating toward the water table. These barriers are a temporary measure, but are expected to be in place for up to 25 years until decisions are made to deal with the contamination in the soil around the tanks.

The barrier now being built at TY Farm will be the second such barrier constructed over a single-shell tank farm at Hanford with at least four more barriers planned. TY Farm, constructed in 1951, contains six underground storage tanks. Five of the six tanks are assumed to have leaked waste into the soil in the past.

Precipitation collected on the barrier will flow to an evaporation basin lined with material to prevent it from leaking. The barrier will be covered with soil and planted with native grasses to soak up the moisture. □

Recovery Act Demolition Serves as 'Model Project'



PADUCAH, K.Y. – A Recovery Act-funded demolition at the Paducah Gaseous Diffusion Plant is nearly a year ahead of schedule, with completion expected next month.

A 32-person work crew has disposed of accessible asbestos, loose material, and process piping in the 20,000-square-foot C-746-A East End Smelter in preparation for demolition. Thirty-two of 35 planned containers of pre-demolition waste have been filled and disposed of at licensed off-site waste disposal facilities.

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Paducah Demolition...

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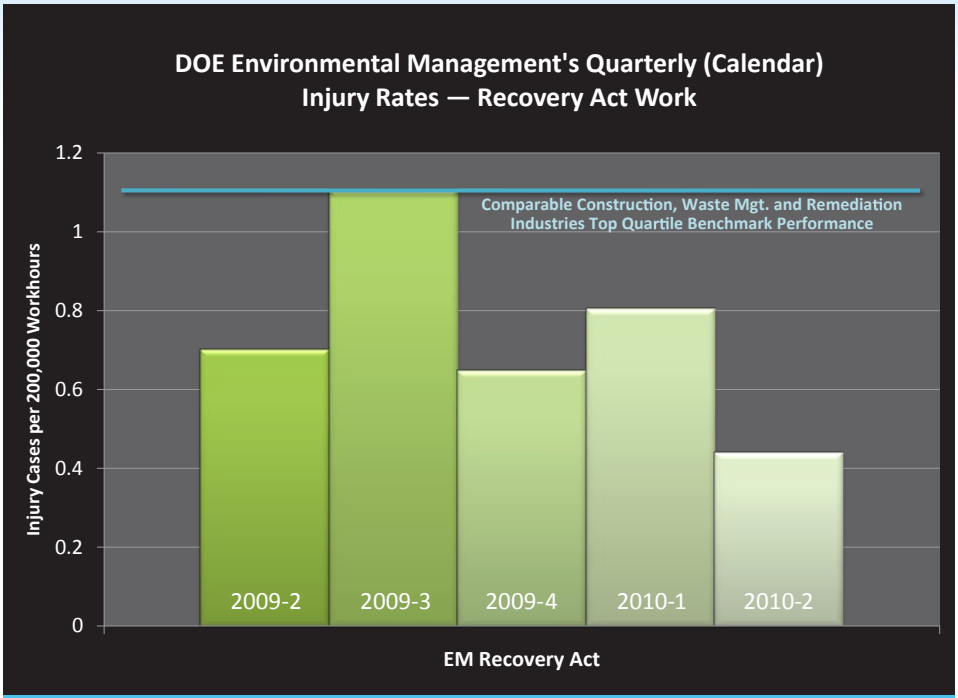
"It's important to note that this project is significantly ahead of schedule. This is a model project, well-planned and executed even after encountering a number of obstacles," said DOE Recovery Act Project Manager Rob Seifert.

One obstacle was the discovery of beryllium in the facility. Exposure to beryllium, a metal, can cause lung tissue scarring. The Paducah Site developed and implemented a beryllium protection plan specific for the facility to ensure workforce safety.

The East End Smelter was built as a warehouse in the early 1950s and was converted to a smelter in the 1970s to make nonferrous (not containing iron) ingots from scrap metal, primarily nickel. It was idled in 1986.

The Recovery Act allocated $78.8 million in funds to the Paducah Site to demolish the East End Smelter and help prepare two other facilities for demolition. □

Recovery Act Work Injury Rates Drop in Latest Quarter



DOE EM oversight assures that EM site contractors perform normal and Recovery Act-funded cleanup projects while maintaining safety performance that meets or exceeds the best-in-class performance of the comparable commercial industries.

FOR MORE INFORMATION ON EM RECOVERY ACT WORK PLEASE VISIT:

http://www.em.doe.gov/emrecovery/

http://www.recovery.gov

http://recoveryclearinghouse.energy.gov

EMAIL ANY QUESTIONS OR COMMENTS TO:

EMRecoveryActProgram@em.doe.gov

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