

# ON THE PLATEAU



September 2011 Volume 4, Issue 8

*A Lasting  
Impression*



# ON THE PLATEAU



## *From the President's Office*

The American Recovery and Reinvestment Act of 2009 posed a challenge and an opportunity: Put people to work quickly and accelerate cleanup. You accepted the challenge and you succeeded. I want to thank you all for helping create a new chapter in the legacy of Hanford cleanup and bringing the Hanford Site closer to its final cleanup footprint.

As you know our company received \$1.3 billion in Recovery Act funds, and Hanford overall received more stimulus dollars than any other site in the U.S. Department of Energy Complex. We were given this opportunity because decision makers trusted we had the right approach and capabilities to get the job done safely. We were “shovel ready” and considered a worthwhile investment.

In two and a half years, we have lived up to some very high expectations. We've made more safe cleanup progress on the Site than has ever been accomplished before. We accelerated critical environmental cleanup that's important not only to our community but to stakeholders and leaders far beyond the Tri-Cities.

Our success is measured not only by the fieldwork but also by the behind-the-scenes efforts it took to make it happen – the hiring, training, procurement and mobilization to develop, deploy and maintain a safe and high performing team of CHPRC employees and subcontractors. Our safety, efficiencies and innovations enabled us to not only meet but exceed our goals. Altogether, Hanford cleanup efforts reduced the site cleanup footprint by a total of 316 square miles, exceeding our goal of 290 square miles (or approximately 49 percent) by 26 square miles.

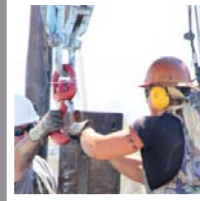
Everyone on the CHPRC team responded to the challenge of accelerating the Recovery Act scope and demonstrated an ability to plan, implement and improve safe and efficient environmental cleanup operations. And every person in our company can feel proud of the role they played in cleaning up the Hanford Site for future generations. Thank you for your dedication to Hanford cleanup.

### **John G. Lehew**

*President and Chief Executive Officer*

CH2M HILL Plateau Remediation Company

## Exceeding Expectations



### *Building skills and experience*

We held job fairs that welcomed thousands and advertised nationally to both recruit and transition our highly skilled workforce. More than 50% of our contracts were also consistently awarded to small businesses, surpassing our company goal of 49%.

### *Reducing lifecycle, surveillance, and maintenance costs*

We demolished more than 20 additional buildings beyond our 49 building target, some the size of several football fields or scaling nearly 200 feet high. We removed all 16 of the historical railcars on the 212-R rail spur for display or disposal. At the Plutonium Finishing Plant (PFP), we also readied another 28 ancillary facilities for removal/demolition – 8 more than planned – while simultaneously removing 130 gloveboxes, more than 1,700 feet of highly contaminated process vacuum and transfer piping, more than 15,000 feet of asbestos, as well as the facility's long-standing security systems.

### *Expanding and enhancing groundwater protection*

We set a record in well drilling, surpassing our 265 well target by completing 303 wells; we also closed 280 wells that were no longer of service. The first of our two newly constructed groundwater treatment facilities is online and helped us set a record in groundwater treatment – more than 800 million gallons treated in a single year. When the last of CHPRC's new facilities come online they will increase Hanford's groundwater treatment capacity from 75 million gallons per month in FY11 to 150 million gallons a month in FY12.

### *Managing legacy waste and fuels*

We exceeded our targets to ship 1,800 m<sup>3</sup> mixed and low-level waste for treatment, repackage 850 m<sup>3</sup> transuranic (TRU) waste for the Waste Isolation Pilot Plant, retrieve 50 m<sup>3</sup> remote-handled TRU waste, and disposition 2,000 m<sup>3</sup> contact-handled TRU waste; we are also retrieving 2,500 m<sup>3</sup> of TRU waste from underground storage and shipped 217 TRUPACT-II shipments.

### *Reducing the cleanup footprint*

We remediated more than 40 additional waste sites than planned for a total of 89 waste sites remediated across the site. We also removed more than 1,003 debris sites from the Hanford Reach National Monument, helping us exceed our cleanup footprint reduction goal.

As of September 15, 2011

# Accelerating Cleanup



NEWS MEDIA CONTACT:  
(202) 586-4940

FOR IMMEDIATE RELEASE  
Tuesday, March 31, 2009

## Energy Secretary Chu Announces \$6 Billion in Recovery Act Funding for Environmental Cleanup

*New Funding Will Create Jobs and Accelerate Cleanup Efforts*

WASHINGTON, DC – Energy Secretary Steven Chu today announced \$6 billion in new funding under the American Recovery and Reinvestment Act to accelerate environmental cleanup work and create thousands of jobs across 12 states. Projects identified for funding will focus on accelerating cleanup of soil and groundwater, transportation and disposal of waste, and cleaning and demolishing former weapons complex facilities.

These investments will put Americans to work while cleaning up contamination from the cold war era,” said Secretary Chu. “It reflects our commitment to future generations as well as to help local economies get moving again.”

These projects and the new funding are managed by the Department’s Office of Environmental Management, which is responsible for the risk reduction and cleanup of the environmental legacy from the nation’s nuclear weapons program, one of the largest, most diverse and technically complex environmental programs in the world.

The states and DOE sites that will receive this funding include:


- Washington (Total funding \$1.961 billion)

Richland Operations Office (\$1.635 billion) - Demolish nuclear facilities and support facilities, remediate waste sites, remediate contaminated groundwater, and retrieve...  
Accelerate...  
Columbia...  
5-square-



*Within days of the funding announcement, we hit the job market and subcontractor community to build a workforce capable of delivering safe and efficient cleanup. Our team proudly supported the nation's Recovery Act goals to bolster the local, regional and national economy and provide long-term benefits.*







### U Plant Ancillary Facility Demolition

A Department of Energy Recovery Act Project

May 2010

The Department of Energy is using American Recovery and Reinvestment Act funding to remove the last five ancillary facilities adjacent to the U Plant, one of five former nuclear fuel reprocessing plants at the Hanford Site in southeast Washington State. Demolition of the facilities is a major step in preparing U Plant for a first-of-a-kind demolition project.

The U Plant Ancillary facilities once supported the processing of liquids generated during uranium recovery at the adjacent U Canyon reprocessing plant and at the PUREX reprocessing plant in the 200 East Area. The facilities were used to convert uranyl nitrate liquid into uranium trioxide powder.

Today, the buildings contain radiological and industrial contaminants such as friable asbestos insulation that had to be removed before demolition could begin. With support from Recovery Act funds CH2M HILL Plateau Remediation Company plans to have the ancillary facilities removed and the canyon ready to begin demolition in 2012.

**Ancillary Facilities at U Plant**

**211-U Tank Farm:** Five 10,000 gallon above grade tanks used to supply nonradioactive chemical solutions to the U Canyon uranium recovery process.



**211-UA Tank Farm:** 10 above grade stainless steel (six 100,000- and four 50,000-gallon) tanks used to supply or store chemical solutions in support of the U Canyon or uranium trioxide (UO<sub>3</sub>) plant operations.

**224-UO<sub>3</sub> Plant Concentration Building:** Radioactively contaminated 35,340 square foot multi-storied concrete structure used for the concentration of liquid uranium solutions and UO<sub>3</sub> powder conversion equipment.

**224-UA Calcination and Loadout Building:** 9,934 square foot multi-storied structure used for the conversion of uranium solutions to UO<sub>3</sub> powder.

**203-UX Concentrated Uranium Storage Tank Enclosure:** Two outdoor concrete enclosures containing 100 percent uranyl nitrate hexahydrate feed storage tanks, filters, and associated piping systems.

**For more information:**  
Geoff Payne, Department of Energy, (202) 276-4171, Geoff.Payne@doe.gov  
Chris Hillier, CH2MHILL, (209) 376-1257, Chris.Hillier@ch2m.com



**\$1.3 billion allocation announced**

**Mobilized ~200 modular units for new hires**

**Began block training for more than 400 D&D new hires**

**Job fair welcomes 4,200 potential applicants**

**Leased 2 in-town offices**

**211-U/UA U Plant ancillary structures demolished**

**April 2009**

CH2M HILL PLATEAU REMEDIATION COMPANY

# ON THE Plateau

CH2MHILL  
Plateau Remediation Company  
August 6, 2009

*Our support organizations recruited, trained and mobilized hundreds of workers in just weeks and managed the regulatory documents, risk calculations and approvals that enabled work to proceed. Two and a half years later, as work ramps down in the final months of funding, these teams are equally engaged in closing out projects and transitioning our workforce to future opportunities.*



DOE and CHPRC held a groundbreaking ceremony for the 200 West Area Groundwater Treatment Facility. It will be the largest treatment system for contaminated groundwater at the Hanford Site. Construction will be funded by the Recovery Act. (From left) John Lelew, CHPRC President and Chief Executive Officer; Dave Brockman, U.S. Department of Energy Assistant Secretary for Environmental Management; Ron Au, Department of Energy Assistant Secretary for Environmental Management; Metal Trades Department President, AFL-CIO; Mike Gearheard, U.S. Environmental Protection Agency, Region X Assistant Deputy Administrator; and Jay Manning, Director, Washington State Department of Ecology.

### Recovery Act Supporting Accelerated Groundwater Cleanup

*"This project is just one example of how the additional (Recovery Act) funding is creating jobs, protecting the environment and...*

On July 23, CHPRC workers began construction of the new 200 West Area Groundwater Treatment Facility. When it is operational — currently planned for 2012 — the facility will pump more than 85 million gallons of contaminated groundwater per month from the 200-ZP-1 and 200AIP-1 groundwater operable units. The project will use approximately \$80 million Recovery Act funding.



Broke ground on 200 West Groundwater Treatment Facility

Kicked off weekly Recovery Act videos and newsletters

Surveyed BC Control Area

Remediation of 105KE Fuel Storage Basin begins

September 2009

Characterized 200-CW-3 waste sites

Removed 1,300+ deteriorating drums of suspect TRU waste from TV7 vaults

Demolished the 110KE Gas Storage Tanks

# Maintaining Momentum



*We consistently awarded more than 50% of our contract awards to small businesses, helping build their resources and experience. Nearly 60% of our contracts were awarded to companies in Benton and Franklin Counties.*



Cleanup begins at lower ALE

Slab finished for 100-DX Groundwater Treatment Facility

Remediation at 200-CW-3 waste sites begins

October 2009

Began draining PFP process vacuum cooling system

Construction of Container Maintenance Facility under way

183KW Sedimentation Basin demolition begins



Thanks to \$30 million in Recovery Act funding, CH2M HILL resumed shipments of transuranic waste to the Waste Isolation Pilot Plant.



Once the special nuclear material was removed, workers performed a monumental downgrade in PFP's historical security, removing the guards, guns, inspection stations, razor wire, vehicle barrier and access control facilities.

2734-ZJ Nitrogen Storage Tank removed from PFP

Sampling under way at former 212-NPR building sites

Equipment installation begins at 100-DX

TRUPACT-II shipments resume

Fixative application complete in U Canyon (29,670 sq. ft.)

Demolition and debris removal in progress on ALE Reserve

Well decommissioning begins

Container Maintenance Facility complete

# Protecting the Columbia River



*Thirty-five years ago, an explosion left PFP's 242-Z facility highly contaminated. PFP workers began the difficult task of entering the facility and removing some of the gloveboxes inside. To allow just 4 workers inside the facility, a support team of 13 are needed to control clean air supplies, decontamination, coordination and safety during the work.*



212-NPR backfilling complete (29,000 sq. ft. of facilities)

100-DX equipment installation at 50%

Demolition begins on upper ALE Reserve

April 2010

PFP defensive fighting and small guard stations ready for reuse

Combustibles removed from 242-Z PFP facility

Core boring complete for 105KE characterization





### K East Reactor Stack Taken Down

Funding Removes Large Hanford Landmark from Along Columbia River  
ND, WASH. – The U.S. Department of Energy (DOE) used \$420,000 in American Recovery and Reinvestment Act (Recovery Act) funds to safely bring down the K East Reactor's high exhaust stack on Friday, July 23, 2010, at the Hanford Site in southeastern Washington State.

Life demolition—a credit to how well the team planned and prepared this project,” DOE's Federal Project Director for the K Basin Closure Project. “Taking down the stack clears the way for additional demolition work in the 100-K Area and forever changes the Hanford skyline.”

exhaust stack, the explosive demolition brought down heavy equipment including counterweights and overhead cranes that had been

removed the stack using explosive demolition. CH2M HILL Plateau contractor, CH2M HILL Plateau

small amount of the stack using explosive demolition. CH2M HILL Plateau contractor, CH2M HILL Plateau

CH2M HILL Plateau contractor, CH2M HILL Plateau

CH2M HILL Plateau contractor, CH2M HILL Plateau

CH2M HILL Plateau contractor, CH2M HILL Plateau

CH2M HILL Plateau contractor, CH2M HILL Plateau

CH2M HILL Plateau contractor, CH2M HILL Plateau

CH2M HILL Plateau contractor, CH2M HILL Plateau

CH2M HILL Plateau contractor, CH2M HILL Plateau

CH2M HILL Plateau contractor, CH2M HILL Plateau

CH2M HILL Plateau contractor, CH2M HILL Plateau

CH2M HILL Plateau contractor, CH2M HILL Plateau

CH2M HILL Plateau contractor, CH2M HILL Plateau

CH2M HILL Plateau contractor, CH2M HILL Plateau

CH2M HILL Plateau contractor, CH2M HILL Plateau

CH2M HILL Plateau contractor, CH2M HILL Plateau

CH2M HILL Plateau contractor, CH2M HILL Plateau

CH2M HILL Plateau contractor, CH2M HILL Plateau

CH2M HILL Plateau contractor, CH2M HILL Plateau

CH2M HILL Plateau contractor, CH2M HILL Plateau

CH2M HILL Plateau contractor, CH2M HILL Plateau

CH2M HILL Plateau contractor, CH2M HILL Plateau



Truck removed by helicopter from Rattlesnake Mountain

116KE Reactor Stack demolished with explosives

15 PFP fuel storage vaults removed two years ahead of schedule

Achieved goal for installing 265 wells

125 pieces of equipment removed from U Canyon deck

PFP vehicle inspection station & access control facilities readied for demolition

Completed goal to ready 20 PFP structures for removal

Super Type-A waste shipments begin

# Cleaning up Legacy Waste

*The 200 West Groundwater Treatment Facility, to complete this year, will be Hanford's largest and greenest pump and treat facility; the facility's Bio-Treatment Building is designed to achieve Leadership for Energy and Environmental Design (LEED) certification.*



*"It has been the year of the most progress that we've had and some of the most phenomenal activities that have gone on. Work has started in the central plateau soil cleanup as well as all the protection of the Columbia River." Jane Hedges, Nuclear Waste Program Manager, Washington State Department of Ecology, in InSite January 2011*

Achieved goal to demolished 18 outer zone facilities

Cleanup begins on North Slope

100th TRUPACT-II shipment leaves Hanford Site

## October 2010

Achieved waste site remediation goal

183KW Sedimentation Basin demolition complete

ALE Reserve cleanup complete (115 sq. mi.)

Construction of DX groundwater treatment facility complete

*"This year has been incredible and it's due to the workforce that's out there. [...] With the ARRA money we've had this year it's just tremendous progress."  
Dennis Faulk, Program Manager, Environmental Protection Agency, in InSite January 2011*



200-CW-3 waste sites backfilled

Repackaging operations resume at WRAP facility

Explosives demolished 200 Area Power House structures

TRU waste retrieval concurrent in three trenches

100th glovebox leaves PFP

Last glovebox removed from PFP Vault Storage Complex

'Next generation' of waste retrieval processes set up

# Demolishing Excess Facilities

*"Thank you and 'well done' Waste & Fuels Management Project Team! Completing our work safely is a high priority and your performance clearly demonstrates your commitment to balancing high productivity with safety excellence." J.D. Dowell, DOE-RL Assistant Manager for Central Plateau, and Larry Romine, DOE-RL Federal Project Director, in a note of recognition to the project*



140 acres seeded at BC Control Area

200 West Groundwater Treatment Facility hits 50%

Railcar and U Canyon grouting begin

850 m<sup>3</sup> of TRU waste repackaging goal complete

April 2011

ALE Reserve work sites revegetated

100K infrastructure upgrade complete

Completed retrieval of 50 m<sup>3</sup> remote-handled TRU waste

PPF Vault Complex declared operationally clean



*"Safety was a high priority on (the BC Control Area project). Workers moved a tremendous amount of material and in two years didn't have a single injury that was significant enough to record or cause a day away from work." DOE Federal Project Director Al Farabee*



200 West Groundwater Treatment Facility 80% complete

Completed shipment of 1,800 m<sup>3</sup> mixed/low-level waste

D-10 tank removed from U Canyon

280 wells decommissioned

U Canyon grouting 88% complete

PPF laboratories empty

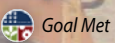
Completed removal of 16 railcars

Last of 20,000 truck loads leaves BC Control Area

High-energy real-time radiography unit operational

100K Area D&D goal complete

September 2011



# Leaving a Legacy

In 2009, we went to work on “shovel ready” cleanup projects. Less than three years later in conjunction with Washington Closure Hanford we have expanded our work across the site and shrunk the active area of cleanup by approximately 54 percent, exceeding DOE’s goal. Our projects spanned the Hanford Site – from Rattlesnake Mountain to the North Slope – expanding our working area by 280 percent. The work cleaned up contaminated facilities, waste sites and groundwater but more importantly it set the stage for cleanup yet to come.



Removing legacy waste and fuels reduces the onsite inventory of waste and fuels and facilitates DOE’s effort to remove 90% of TRU waste from the DOE Complex



Accelerated demolition preparations will allow PFP and U Canyon to be demolished ahead of schedule



New wells and groundwater treatment facilities will expand Hanford groundwater treatment capabilities for years to come



Removing excess and ancillary facilities that are no longer of service reduces future surveillance and maintenance costs



Removing buildings and debris sites and remediating waste sites significantly reduces the active area of cleanup, including the area of cleanup around the K East and K West reactors

## Hanford Site

- Footprint reduction
- Remaining footprint

# Unprecedented. Unparalleled. Unbelievable.



From day one of the stimulus funds, we have been documenting your accomplishments to maintain transparency to DOE and the public of how the funding was changing lives and the state of cleanup at the Hanford Site. Every week, month, quarter — we have been proud to show off your high quality and safe performance. We invite you to see for yourself just how much of a difference you've made on this project.

- Weekly reports from 2009-2011 are available at [www.hanford.gov/recovery](http://www.hanford.gov/recovery)
- See progress from across the DOE complex at <http://www.em.doe.gov/emrecovery>
- You've seen our video team in the field and now their footage is on the web at [www.youtube.com/hanfordplateau](http://www.youtube.com/hanfordplateau)
- For more photos, videos and newsletters, visit [www.plateauremediation.hanford.gov](http://www.plateauremediation.hanford.gov)
- Don't forget to 'Like' our local office on Facebook at [www.facebook.com/hanfordsite](http://www.facebook.com/hanfordsite)
- Stay tuned at [www.youtube.com/hanfordsite](http://www.youtube.com/hanfordsite) for future chapters of the Hanford Story.

## Video Premiere

**Watch the Recovery Act chapter of the Hanford Story!  
A special edition DVD of the video and a printed issue  
of On The Plateau will be available to PRC  
employees later this month.**

<http://ow.ly/6uF5W>





Visit **INSITE** each week for the latest news about the work we are doing at the Hanford Site.



<http://prc.rl.gov/rapidweb/Communications/index.cfm?PageNum=88>

**On the Plateau** is published monthly for CHPRC employees. Submit comments and contributions to CHPRC Communications at [chprcc@rl.gov](mailto:chprcc@rl.gov). Contributions are due by the 10th calendar day of the month prior to publication.

**Editor-in-Chief:**  
Maren Disney, 509.376.2285  
**Graphics:** Wally Williams

**Employees have a duty** to report possible fraud, waste, abuse, misuse, corruption, criminal acts, or mismanagement relating to DOE programs, operations, facilities, contracts or information technology systems, and to report possible reprisals against employees who report such information. Allegations should be reported to an appropriate authority, such as the Office of Inspector General (OIG) at:

**800.541.1625 • 202.586.4073**  
(OIG Hotline numbers)

Visit [www.ig.energy.gov/hotline.htm](http://www.ig.energy.gov/hotline.htm) to learn more or call the Director of Internal Audit at 372.0779.

