



# **CH2M HILL Plateau Remediation Company: *Recovery Act (ARRA) Lessons Learned and Continuing the Momentum***

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Chief Executive Officer

Waste Management 2011

*One Team. One Culture.*

# Overall Project Status



Accomplishing work safely, on schedule, and below cost

**1 Million Safe Hours in both Plutonium Finishing Plant and Soil and Groundwater Projects...800,000K safe hours for D&D!**



All regulatory milestones are on or ahead of schedule



Executing efficiently in all major scope areas



Exceeding small business goals



Achieving all Recovery Act goals



ISMS/EMS Verified and EVMS certified



# ARRA Implementation Ramp Up



Activity	Date
The Recovery Act signed into Law by the President of the United States	February 2009
Identified ARRA Project Manager and Implementation Team	February 2009
Leased two in-town offices and mobilized ~200 modular units for new hires	March 2009
Received Contract Modification and Notice to Proceed for Recovery Act Work	April 2009
Held job fair – More than 3,000 people attended	April 2009
Began block training for more than 400 D&D new hires	April 2009
Initiated ARRA work scope in TRU retrieval, low level waste and mixed low level waste treatment, D&D, and Request for Proposals (RFPs) for groundwater expansion projects and for waste site remediation	April 2009
Developed first CHPRC ARRA Weekly Report and Video supporting transparency requirements (Contract Modification )	April 2009
Completed definitization of ~\$1.3 billion Recovery Act Scope (2 phases)	July 2010

# Recovery Act Dollars at Work

## *Making a Difference – Creating Jobs*



Since April 2009

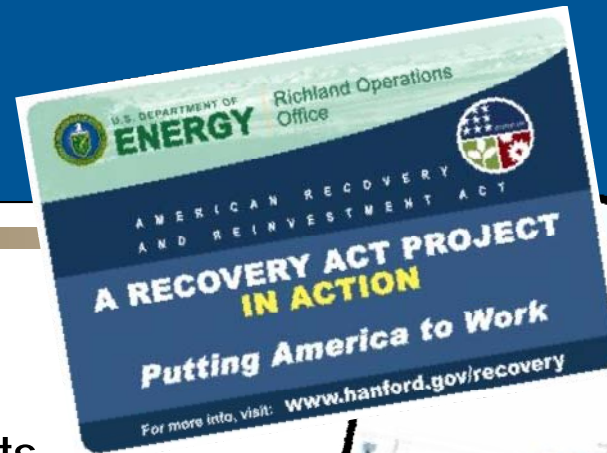
- Participated in 18 job fairs
- Received more than 22,100 applications/resumes
- Awarded \$686M in Subcontracts
  - 55% of subcontracts awarded to Small Businesses
- Touched 6,990 lives
- Providing workers experience and training for future opportunities
- Signed Memorandum of Agreement with Hanford Atomic Metal Trades Council (HAMTC) to hire ARRA bargaining unit employees direct (without bumping)





# Ramping Up

- Logistics for more than 2,100 new hires:
  - Medical exams, whole body counts
  - Background checks and badging
  - Training
  - Mobilized ~200 mobile facilities
  - Computers, telephones and supplies
  - Vehicles, heavy equipment, and waste containers
  - Equipment, tools
  - Personal Protective Equipment
  - Increased sampling volume



First round of ARRA D&D graduates



# Synchronization of Programs

## *Safety and Training*

- Developed a comprehensive safety and field work training program for new workforce along with project-specific training
- Conducted Readiness Self Assessments
- Implemented ARRA work using existing ISMS/EMS Program
- Integrated safety culture of new and incumbent workers
- Incorporated Lessons Learned from operational events across the complex
- Reinforced management expectations for compliance, reporting and performance of work
- Reinforced workers ability to Stop Work



# ARRA Integrated Training Program

## *Lesson Learned*

- Scale of the increased training required site-wide planning, preparation, and implementation
  - Resource limitations
  - Competing contractor demands
  - Consolidated/expanded facility usage
  - Prioritization of effort
- Organized a Training Support Team to provide administrative direction and control to new hires



CH2M HILL Plateau Remediation Company Provided Deactivation and Decommissioning Workers New Hire Orientation on April 27, 2009. Workers Met Members of the Leadership Team and Received a Briefing on CH2M HILL's Safety Culture.

# Continuing Training

## *Lesson Learned*

- Integrated staffing plan that identifies long-term staffing needs and sequencing of training
- Embrace new hires by teaming with incumbents
  - Communicate long-term opportunities
  - Communicate common information
- Training set up as a “block session” by assignment
  - Includes a safety culture orientation “Do Work Safely”
  - D&D worker fundamentals
  - Supported a programmatic review/audit of training
  - Incorporated Lessons Learned from operational events



Workers Mock-up Process Equipment Removal  
in a PFP Glove Box



# Implementation of ARRA

## *Lessons Learned*

- Staffing pressures for critical positions such as shift managers, trainers, subject matter experts, etc.
- Flow down of requirements into subcontracts
- Increased onsite traffic (vehicular safety)
- Coordination with other site contractor(s)
- Increased supervision
- Integrated work teams
- Increased oversight and involvement from subcontractors
- Focus on *One Team. One Culture.*



Quarterly Subcontractor Safety Meetings to Discuss Performance and Lessons Learned

# Implementation of ARRA

## *Lessons Learned*

- Managing ARRA projects is 'routine project management'
  - Priority and Resource Management
  - Integration with other contractors
- Focus has clearly been on ARRA Key Performance Parameters
  - In addition to baseline management
- Partnership with customer and regulators to facilitate getting work in the field



# ARRA Reporting Maintaining Transparency



- ARRA Reporting Overview
  - Weekly, monthly, and quarterly reporting
  - Understanding reporting requirements and metrics
  - Establishing information flow
- Reporting Mechanisms and Tools
  - COBRA Cost - Tracking and Reporting
  - Primavera (P6) - Scheduling and Status
  - Business Management Systems Procurement, Timekeeping, Financial, etc.
  - Coding ARRA Scope in the business management and EVMS tools helps to ensure consistent tracking of costs and metrics



CH2M HILL PLATEAU REMEDIATION COMPANY  
**RECOVERY ACT UPDATE**  
September 17, 2010 Volume 2, Issue 36

**Items size reduced for removal from Criticality Mass Laboratory**



Inside the 209-E Criticality Mass Laboratory, workers are size reducing and removing items from the Critical Assembly Room to help prepare the facility for demolition. A containment tent was set up to support planned removal activities. Asbestos abatement also continued on the steam lines within the facility perimeter. Outside of the facility, support trailers were received for installation and fencing is being removed. The 209-E laboratory once supported nuclear criticality and safety activities and is currently considered a nuclear facility. With Recovery Act funding, CH2M HILL plans to decommission and demolish the facility to help clear the 200 East Area and the overall Central Plateau of buildings that are no longer of service.

**Box of transuranic waste removed from underground storage**



CH2M HILL Plateau Remediation Company (CH2M HILL) used funding from the American Recovery and Reinvestment Act (Recovery Act) to remove a box of suspect transuranic waste from underground storage at the Hanford Site. Removal of the box brings the total of suspect transuranic waste retrieved and shipped to a treatment, storage or disposal facility to 577 cubic meters. The box, identified as Box 81, has been in the 3A burial ground since the 1970s. This box and others like it in the burial ground contain a mix of materials such as gloves, other personal protective equipment and miscellaneous materials contaminated decades ago during work activities. Today, CH2M HILL is retrieving the boxes, repackaging them as necessary, and shipping them for off-site treatment and disposal. After several weeks of preparations – including placing the box on a protective bag, removing railroad ties from beneath the box, and packaging the box in a protective shipping container – CH2M HILL lifted the box from the trench and shipped it to the Central Waste Complex. Altogether, CH2M HILL plans to retrieve 2,500 cubic meters of suspect transuranic waste from the Hanford Site by the end of fiscal year 2011.

**Recovery Work UPDATE "Putting People to Work"**

<b>Contracts</b> <b>\$549M</b> Contracts awarded <small>As of August 2010</small>	<b>Employment</b> <b>5,298</b> Lives touched! <small>As of June 2010</small>	<b>Awards</b> <b>57%</b> Contracts awarded to small businesses <small>As of August 2010</small>
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Refers to the total number of people who have been laid off or partially funded by the Recovery Act.

**U.S. DEPARTMENT OF ENERGY**  
Check out videos and photos from CH2M HILL and other Hanford Recovery Act projects online at [www.hanford.gov/recovery](http://www.hanford.gov/recovery)

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# Enhanced Transparency

- Safety Metrics
- Assessments
- Job Tracking
- Financial Reporting
- Progress Reporting



DOE-EM Review Team and CHPRC Staff



Workers Place Concrete Footings for the 200 West Pump and Treat Rad. Building





# Enhanced Transparency

## *ARRA Progress Draws Public Attention*

EM, DOE-RL, DOE-ORP and Elected Official Visits



Increased Site Tours



EM ARRA Review Team Visit



- Increased local and national political attention
- Increased local and national media attention
- Increased site tours (DOE-HQ, DNFSB, EM, Congress, community leaders, interest groups)
- Increased communications

# Recovery Act Dollars at Work

## Making a Difference



### Creating Jobs

- \$686M Subcontracts awarded
- 55% Subcontracts awarded to small businesses
- 6,990 Lives touched
- Providing workers experience and training for future growth
  - 1,373 HAMTC workers
  - More than 550 Building Trades workers

### Reducing Footprint / Lifecycle Costs

- Accelerated preparation of PFP demolition 3 years ahead of TPA milestone
- Accelerated TRU waste retrieval and shipments to WIPP (139 to date)
- Record-breaking year with 306 groundwater wells drilled
- Increased pumping capacity, treating more than 600 M gallons of groundwater
- Early preparation of U-Canyon for demolition in 2012 (2 years ahead of the milestone)

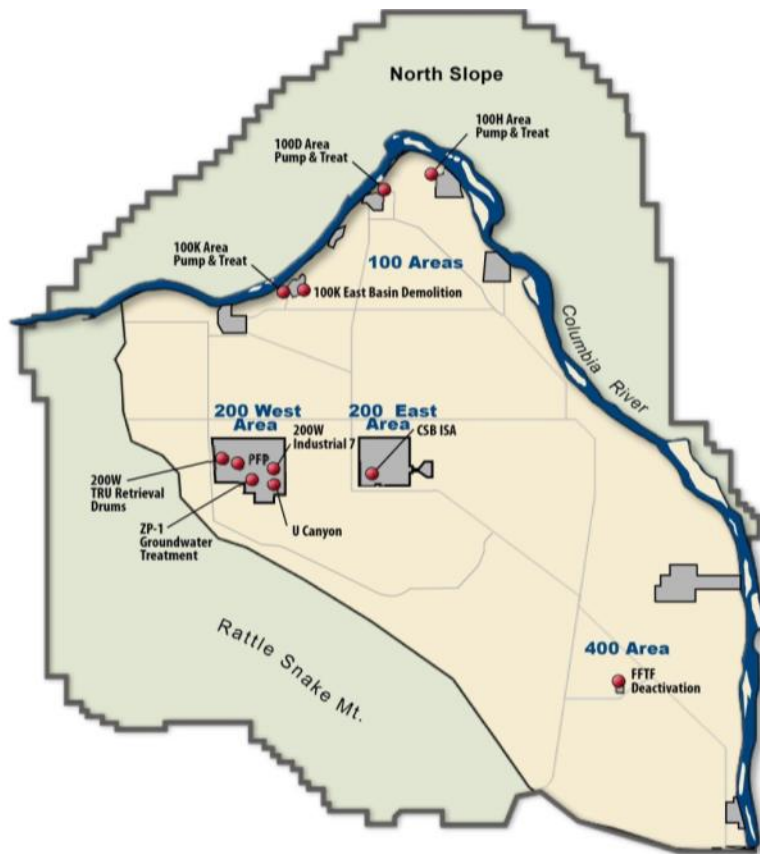
### Transparency

- *“Tribal members to do Wahluke Slope work”*
- *“Recovery Act Funds Stack Demolition at Hanford Site”*
- *“Hanford's U Canyon cleared for demolition”*
- *“Last vault complex glove box set for removal”*
- *“Hanford Recovery Act Workers Tear Down Facilities, Expand Groundwater Treatment in 2010”*





# Contract Start



LEGEND	
	Contract Start October 2008 Soils Remediation, Deactivation, Demolition, GW Treatment, Waste Retrieval



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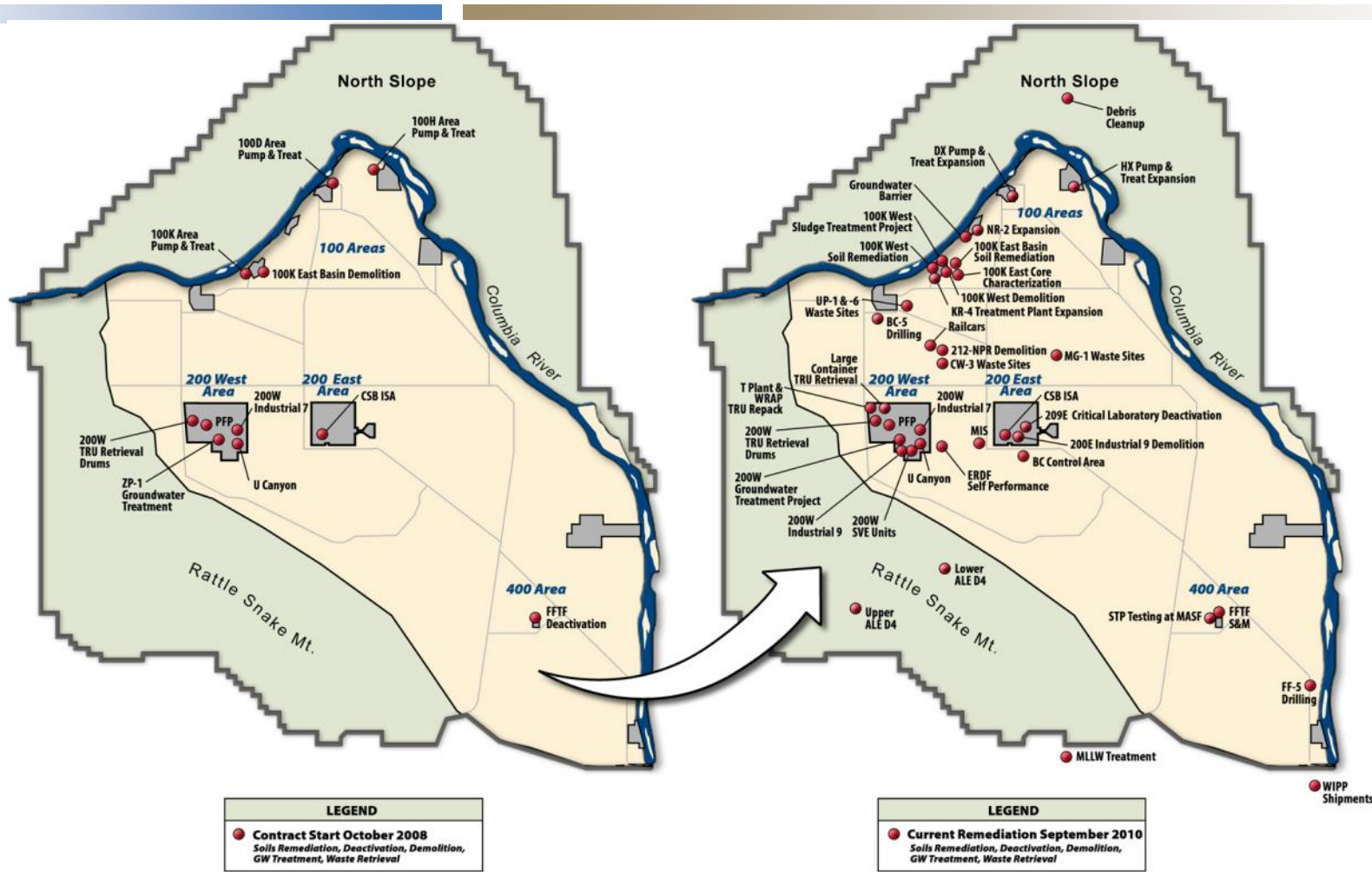


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# Contract Start

**One and one-half years later,**  
*Workforce Doubled,*  
*Cleanup Area Increased 280%*



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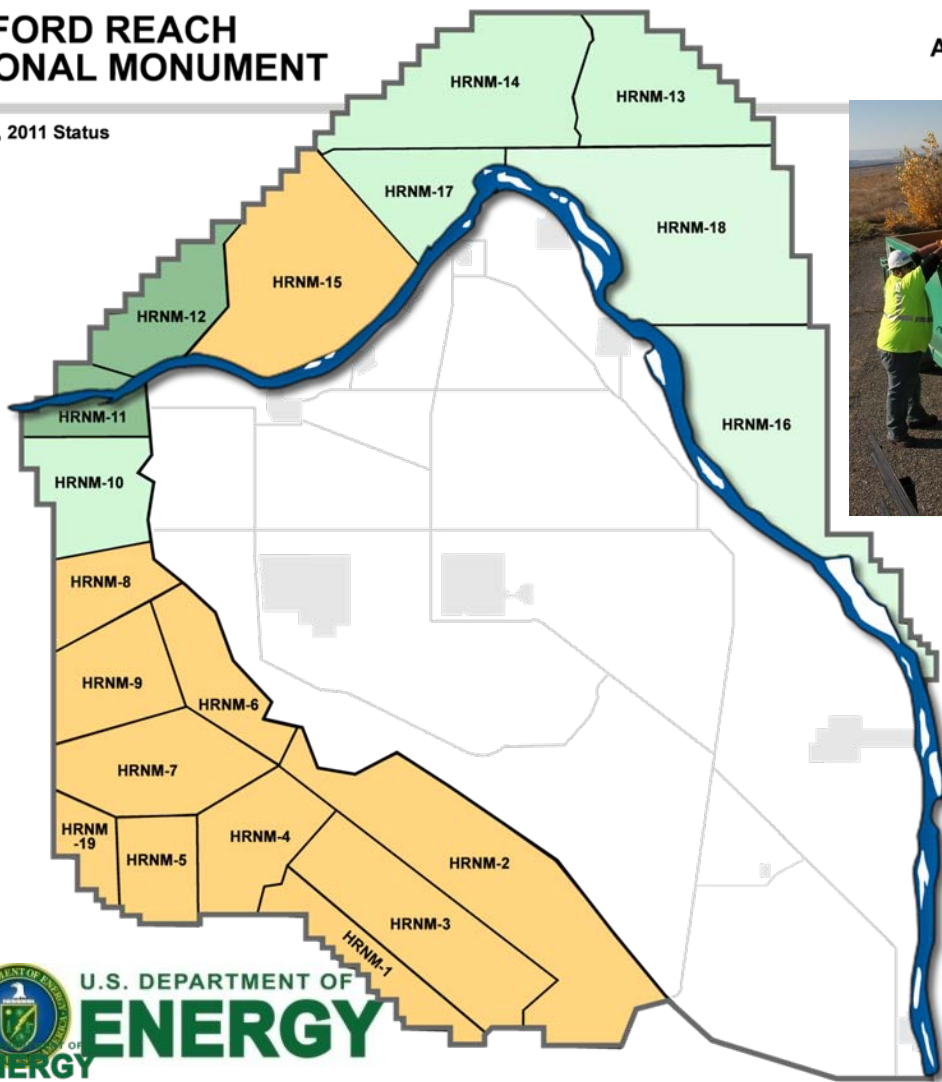
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 Plateau Remediation Company

# Hanford Reach National Monument

## Shrinking the EM Footprint: 290 square miles by 2011

### HANFORD REACH NATIONAL MONUMENT

January 6, 2011 Status



### ALE/NORTH SLOPE CLOSURE AREA



- 143 square miles complete
- Removed 24 structures and more than 661 debris sites
- Unique teaming approach with HAMTC, Sealaska and Yakama Tribe

- STARTED
- NOT STARTED
- COMPLETED
- PHYSICAL WORK COMPLETE



# Reducing Footprint/Lifecycle Costs *On Schedule, Below Cost*

- Reduced the footprint by more than 143 square miles
- Demolished 112 structures
- Remediated 89 waste sites
  - *More than 793,000 tons of soil and debris taken to Environmental Restoration Disposal Facility (ERDF)*
- Shipped 1,155 m<sup>3</sup> Low-Level Waste (LLW) / Mixed Low-Level Waste (MLLW)
- Made 44,000 shipments of LLW/MLLW to ERDF
- Shipped 938 m<sup>3</sup> of contact-handled transuranic (TRU) waste
- Made 140 TRUPAC II shipments since March 2010
- Retrieved 1,147m<sup>3</sup> of contact-handled TRU waste
- Repackaged 655 m<sup>3</sup> of Waste Isolation Pilot Plant certifiable TRU



U-Canyon Ancillary Facilities after Demolition



# Reducing Footprint/Lifecycle Costs *On Schedule, Below Cost*

- Removed 132 glove boxes from Plutonium Finishing Plant
  - Downgraded PFP security, saved \$25M/year
  - Demolishing PFP 3 years ahead of the TPA milestone will save \$50M/year
- Drilled 306 wells
- Treated more than 600 million gallons of groundwater in CY2010
- Decommissioned 188 wells
- Completed construction of 100DX Pump and Treat Facility





# Innovations from ARRA funding

- New treatment resin at DX expected to reduce long-term operating costs by \$20 million, essentially paying for itself
- Remedial Process Optimization (RPO) tool increases capacity and effectiveness of groundwater remediation
- Technologies increase worker safety and increase capabilities for present and future cleanup operations
  - Aerial survey technology
  - Mobile survey technology
  - Super dump trucks
- Initiated construction of 200 West Groundwater Treatment Facility
  - Increases capacity to 2,500 gpm
  - LEED certifiable facility
  - Largest, most complex in Environmental Management



200 West Groundwater Treatment Facility

# Ramping Down *The Path After ARRA*



Quarterly All-Hands Meetings Held to Recognize Accomplishments, Set Safety Expectations and Address Transition Concerns After ARRA

# Planning for FY2012

## After ARRA

- Performing evaluation of funding, priorities and sequence of work
- Integrating staffing plan that identifies long-term staffing needs
- Communicating future opportunities
- Developed workforce transition planning
- Providing workforce transition assistance
- Working safely in a distracting environment



Training for the Future