









Weekly Progress

AMERICAN RECOVERY & REINVESTMENT ACT

Week Ending September 30, 2011

CHPRC-01532

Contract DE-AC06-08RL14788 Modification MO47



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CHPRC-01532

OVERVIEW

CH2M HILL Plateau Remediation Company (CHPRC) used funds from the American Recovery and Reinvestment Act (Recovery Act) to accelerate critical environmental cleanup across the Central Plateau and the 100K Area along the Columbia River to help pursue the U.S. Department of Energy (DOE) "2015 Vision" to shrink the Hanford Site cleanup footprint.

RL-0011 PLUTONIUM FINISHING PLANT D&D

CHPRC accelerated critical decontamination and decommissioning work to cleanout and prepare the Plutonium Finishing Plant (PFP) for demolition ahead of the Tri-Party Agreement milestone of September 2016.

RL-0013 SOLID WASTE STABILIZATION & DISPOSITION

CHPRC achieved and surpassed all five of its Recovery Act goals for accelerating cleanup of Hanford's legacy waste and fuels, including retrieving, repackaging, and shipping transuranic (TRU) waste and shipping mixed low-level waste (MLLW) and low-level waste (LLW) for treatment and/or disposal.

RL-0030 SOIL & GROUNDWATER REMEDIATION

In the ongoing effort to protect the Columbia River, CHPRC constructed two groundwater treatment facilities; installed 303 wells for monitoring, extracting, and remediating groundwater; and decommissioned 280 wells that are no longer of service.

RL-0040 NUCLEAR FACILITY D&D REMAINDER OF HANFORD

Across the Central Plateau and along the outer zone of the Hanford Site, CHPRC remediated 41 waste sites and decommissioned and demolished (D&D) 23 facilities to reduce mortgage, surveillance, and maintenance costs on buildings that are no longer of service. The scope also included cleanup along the outermost edges of the Hanford Site at the Arid Lands Ecology (ALE) Reserve and North Slope (for a total cleanup footprint reduction of 290 square miles), preparing the U Plant for a first-of-its-kind canyon demolition, and dispositioning and relocating 16 railcars in the 200 North Area.

RL-0041 100K AREA REMEDIATION

CHPRC demolished 26 reactor support facilities and sampled and remediated 48 waste sites to shrink the cleanup footprint of two reactors, K East and K West, located in the 100K Area along the Columbia River.

For More Information

To find out more about Recovery Act progress at the Hanford Site, visit www.hanford.gov/recovery.

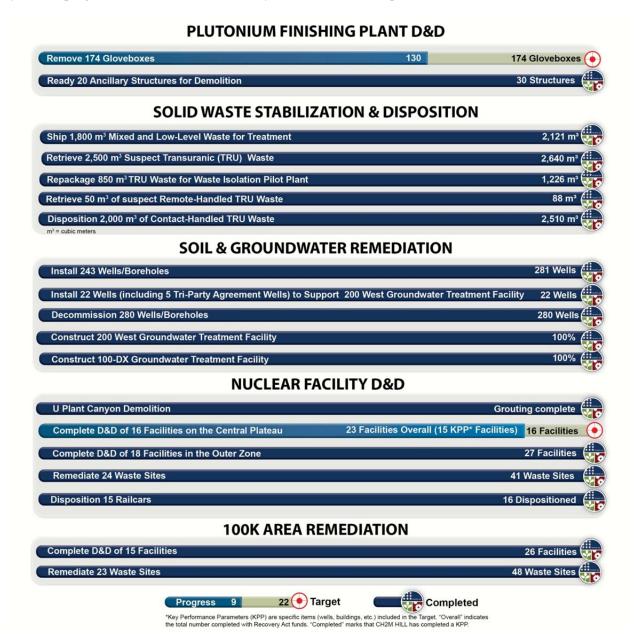
A special edition of CHPRC's newsletter highlighting CHPRC's Recovery Act accomplishments as well as weekly Recovery Act newsletters and videos are available at www.plateauremediation.hanford.gov. For more information contact chprcc@rl.gov.

The Recovery Act chapter of the Hanford Story is available at www.youtube.com/hanfordsite.



SUMMARY

The following chart outlines CHPRC's progress on its main Recovery Act work goals. Progress on subprojects and other Recovery Act-funded activities are detailed throughout this report and accompanied by a short progress video available on www.youtube.com/hanfordplateau.





ACCOMPLISHMENTS

RL-0011 Nuclear Materials Stabilization & Disposition

RL-0011.R1: Plutonium Finishing Plant D&D

ACTIVITY	PFP WASTE REMOVAL & DISPOSITION		
	Week of Sept 30, 2011	Completed to Date with Recovery Act Funding	
KPP-1, Lab & Process Areas Ready for Demo Gloveboxes/hoods removed or dispositioned in place Add'I gloveboxes ready for removal/size reduction	-	130 gloveboxes/hoods 1 gloveboxes/hoods	
MLLW/LLW shipped	7 m ³	2,949 m³	
TRU shipped	4 m³	700 m ³	
Non-radioactive waste shipped	-	30 m³	
Process transfer line removed	11 feet	592 feet	
Process vacuum system piping removed	-	1,210 feet	
Asbestos removed		15,228 feet	
	-		
KPP-2 Fuel Vaults, Buildings Ready for Demo Fuel vaults and ancillary buildings ready for demo Ancillary buildings/structures removed or demolished	-	30 structures 20 structures	

Since April 2009, Recovery Act funding allowed CHPRC to make great strides in preparing the PFP Complex for demolition to slab-on-grade. CHPRC removed more than half of the facility's gloveboxes, nearly three miles of asbestos and more than 1,700 feet of highly contaminated process vacuum and transfer piping. Recovery Act funds have also supported the deactivation of 31 buildings and structures to a certified cold and dark condition, prepared 30 of these for demolition, and removed or demolished 20.

To ensure safe delivery on the remaining Recovery Act scope at PFP, CHPRC was granted an extension of Recovery Act funding into fiscal year 2012, permitting CHPRC to continue cleanout and removal of gloveboxes and other process equipment in the 234-5Z building and demolish the six vault complex buildings. The project is moving forward with the work with a significantly reduced staff in response to fiscal year 2012 funding constraints and workforce restructuring. Approximately 50 higher seniority bargaining unit staff from other projects and contractors are expected to arrive at PFP next week to backfill positions vacated by lower seniority staff, resulting in a net reduction of 250 people from the project's fiscal year 2011 staffing level.

Process and Laboratory Areas

Work to prepare PFP's three laboratories and the 234-5Z building vaults for demolition is now nearing completion. All 97 gloveboxes and hoods have been removed from these four areas with Recovery Act funds, along with miles of process transfer lines, process vacuum system piping, drain lines, and exhaust ventilation ductwork. During the past week, miscellaneous cleanout was completed for six rooms, including rooms 134, 135, 145, and 157 in the former Analytical Laboratories, and rooms 182 and 191 in the Plutonium Process Support Laboratory. Nearly 60 percent of the 47 rooms in these areas are now ready for demolition in accordance with the Key Performance Parameter (KPP) completion criteria.

In the former process areas, work continued toward removal of four additional gloveboxes. In the RMA Line area, interconnected gloveboxes HA-14S and 14P were unbolted from HA-14DC, and sleeving to support their removal is being installed. Cleanout and initial decontamination has also been completed on glovebox HC-11 in the RMA Line, and non-destructive assay measurements were taken and are being analyzed to determine if further work is required prior to removal. External mechanical isolations and process equipment removal were also completed on the nearby HC-10 glovebox.



Infrastructure, support systems, and equipment removal

All waste generated during the removal of 224 HEPA filters from deactivated filter rooms 311 and 316 has been removed and transferred to waste operations for disposal.

The final 11 feet of process solution transfer lines in the current work package was removed and size reduced, bringing the total removed with Recovery Act funds to 592 feet, more than half of the transfer line piping throughout the 234-5Z building. The process vacuum system removal team laid up their work areas, having previously completed removal of 1,210 feet of piping, approximately 22 percent of the total facility scope.

2736-Z/ZB Vault Complex

Work to ready the 2736-ZB Vault Support Facility for demolition remains on hold until late October as a result of higher priority commitments for the CHPRC D&D Project staff assigned to this work. Five of the six buildings in and around the vault complex are ready for demolition, with just a few weeks of work remaining in 2736-ZB. The six vault buildings are scheduled for demolition by the end of December, and five additional buildings were demolished with base funds.

RL-0013 Solid Waste Stabilization & Disposition

CHPRC achieved and surpassed all five of its Recovery Act goals for managing legacy waste and fuels on the Hanford Site. This includes constructing the Container Maintenance Facility and procuring the resources necessary to accommodate increased waste generated by accelerated cleanup across CHPRC's projects. The facility was constructed and operational in less than a year. Altogether, Recovery Act funds enabled CHPRC to remove several thousand cubic meters of waste from the Hanford Site, resume TRUPACT-II shipments four years ahead of schedule, resume TRU repackaging operations, retrieve deteriorating containers of waste from underground storage, and make significant progress in pursuing the DOE goal to disposition 90% of legacy TRU waste from across the DOE complex by the year 2015.

RL-0013C:R1.1: Mixed Low-Level Waste (MLLW)/Low-Level Waste (LLW) Treatment

Ship 1,800 m³ of MLLW/LLW for treatment and disposal

Ship 1,800 m³ of MLLW/LLW for treatment and disposal

• 2,121 m³ shipped

• 1,891 m³ treated and disposed

• 230 m³ at offsite treatment facilities awaiting processing. Treatment is scheduled for FY11 and 1st quarter FY12

CHPRC completed its last Recovery Act waste shipments for a total of 2,121 m³ of MLLW/LLW shipped for treatment disposal since April 2009. The work helped reduce the onsite inventory and backlog of waste at Hanford and helped make room for processing waste generated by future cleanup.

RL-0013C:R1.2: TRU Waste

Retrieve 2,500 m³ of suspect TRU waste

Retrieve 50 m³ of suspect remote-handled TRU waste

Retrieve 50 m³ of suspect remote-handled TRU waste

SOLID WASTE STABILIZATION & DISPOSITION Total Completed with Recovery Act funding

• 0 m³ are staged, pending shipment
• 2,640 m³ shipped to a treatment, storage, or disposal facility
• 0 m³ are staged, pending shipment.
• 88 m³ shipped to a treatment, storage, or disposal facility

The CHPRC Waste Retrieval program completed its last Recovery Act-funded loading and shipping activities at the 4B and 12B burial grounds while also performing lay-up activities to close out work sites at the 3A, 4B, and 12B burial grounds, where CHPRC has been removing TRU waste for shipment to a



treatment, storage or disposal facility. The week of Sept. 23, 2011, CHPRC achieved and surpassed its Recovery Act target to retrieve 2,500m³ of TRU waste. Recovery Act funds allowed CHPRC to perform the work as well as set up new retrieval and characterization systems for processing waste, including:

- Conveyor system
- Gamma Assay Unit
- Neutron Assay Unit
- Drum Venting Units
- Real-Time Radiography Unit
- Drum Warming Unit
- Box Load-Out Station.

TRU Repackaging & Shipments

ACTIVITY

Repackage 850 m³ of WIPP certifiable TRU waste Disposition 2,000 m³ of contact-handled TRU waste

SOLID WASTE STABILIZATION & DISPOSITION Total Completed with Recovery Act funding

- 1,226 m³ have been repackaged
- 2,510 m³ have been disposed

With Recovery Act funds, CHPRC completed 217 TRUPACT-II shipments since shipments resumed in March 2010. In conjunction with the Central Characterization Program, 77 shipments were completed to Idaho and 140 were sent to the Waste Isolation Pilot Plant (WIPP).

RL-0030 Soil & Groundwater Remediation, Groundwater/Vadose Zone

RL-0030.R1: Central Plateau Soil & Groundwater

ACTIVITY	Complete to Date with Recovery Act funds
Install 265 wells and/or boreholes along the river and in the Central Plateau	303
Decommission 280 old wells and boreholes that are no longer of service	280
Construct the 200 West Groundwater Treatment Facility	100% complete

200 West Groundwater Treatment Facility

At the 200 West Area Groundwater Treatment Facility project, construction activities continued on schedule. The 200 West Pump and Treat KPP, RL-0030.R1.1 – Construction 200 West Groundwater Pump and Treat Major System Components, is 100 percent complete, marking the completion of CHPRC's second groundwater treatment facility with Recovery Act funds. The first facility, 100-DX, was completed in 2010.

The 200 West Groundwater Treatment Facility will be Hanford's largest pump and treat facility, with a capacity to treat 108 million gallons per month. To find out more about the 200 West Groundwater Treatment Facility, a fact sheet is available at

http://www.plateauremediation.hanford.gov/newsletter/200 West Fact Sheet 8-11-11.pdf.

Recent construction of the process and transfer facilities included (listed by facility):

- Process buildings
 - o Radiological Building: Concrete-penetrating floor sealer placement is complete. Construction punchlist items continued.
 - o BIO Building and BIO Pad: Construction Acceptance Testing (CAT) in all areas was completed, and completion of construction punchlist activities, grouting of equipment, and touch-up painting continued. Final site preparations were initiated.



- Transfer buildings
 - o Extraction Building #1: Construction punchlist items continued. Acceptance Test Procedure (ATP) continued.
 - o Extraction Building #2: Construction punchlist items continued. ATP continued.
 - o Injection Building #1: Construction punchlist items continued. Initiated ATP. Epoxy floor installation reached 95 percent completion.
 - o Injection Building #2: Construction punchlist items continued. Initiated ATP. Epoxy floor installation 95 percent completion.
- Startup and Testing: All 29 CATs completed to achieve the KPP.



The 200 West Groundwater Treatment Facility in September 2011 as Recovery Act-funded construction wrapped up on Hanford's largest groundwater treatment facility to date.





Photo 2

A close-up on some of the massive equipment that makes up the 200 West Groundwater Treatment Facility.

RL-0040 Nuclear Facility D&D – Remainder of Hanford

RL-0040.R1.1: U Plant/Other D&D

CENTRAL PLATEAU FACILITIES DEMOLISHED WITH RECOVERY ACT FUNDS

- 211U Cold Chemical Makeup Tank Farm
- 211UA Cold Chemical Makeup Tank Farm Addition
- 203UX Gas Storage Facility
- 2701M Office Bldg
- 272E Fabrication, Mockup Shop Bldg
- 2716E Power Maintenance Storage Bldg
- 2722W Welding Laboratory Bldg
- 224UA UO3 Calcination/Load-out Facility
- 2710W Coal Handlers Shed*
- 2701EC 209E Guard Station*
- 2902E Water Storage Tank*
- 284W Power House & Steam Plant
 - *Not part of the Key Performance Parameter

- 2734EA Gas Cylinder Storage Bldg
- 275E Carpenter Shop Bldg
- MO104 Mobile Office
- MO405 Mobile Office
- MO840 Mobile Office
- X8 Motor Car Shed
- 224U UO3 Plant Concentration/Load-out Bldg
- 284WB Package Boiler Plant
- 209EA 90 Day Storage Pad*
- 2902W Water Storage Tank*
- 284E Power House & Steam Plant

PLANNED FOR D&D/IN PROGRESS

- 209E Critical Mass Laboratory
- 2718E 209E Fissile Material Storage*



U Canyon

CHPRC and subcontractors AGEC and Central Pre-Mix completed grouting of the U Canyon ventilation ducts and the final deck pour, for approximately 25,600 cubic yards placed. The grouting marked the completion of the U Canyon Recovery Act-funded work scope and the last stage in preparing the U Canyon for a first-of-a-kind canyon demolition.

Altogether at the U Plant, CHPRC used Recovery Act funds to:

- Remove five ancillary structures:
 - 211-U Tank Farm (Five 10,000 gallon above-ground tanks)
 - 211-UA Tank Farm (10 above-ground stainless steel tanks)
 - 224-U UO3 Plant Concentration Building (35,346 sq. ft.)
 - 224-UA Calcination and Loadout Building (9,934 sq. ft.)
 - 203-UX Concentrated Uranium Storage Tank Enclosure
- Apply fixative to the interior of the canyon (29,760 sq. ft.)
- Return the original canyon crane to service and relocate approximately 125 major pieces of equipment from the canyon deck into below-grade cells
- Construct a grout batch plant to supply grout
- Remove the 7-foot-tall, 15,000-pound, radioactive D-10 tank
- Place 25,600-plus cubic yards of grout into the canyon void spaces.



Photo 3

Workers prepare equipment for grouting the ventilation ducts of the U Plant canyon, one of the last grout pours for the U Canyon demolition project.





Week Ending September 30, 2011

A worker begins to reposition equipment for grouting the ventilation ducts of the U Plant canyon.



Workers direct the grout hose as it is lowered to the ventilation ducts at the U Plant canyon.

hoto 5





Workers position the grout hose for the final pour of grout into the U Plant canyon's ventilation ducts. Altogether, CHPRC placed over 25,600 cubic yards of grout into the void spaces and cells of U Canyon.

200 West Area Industrial Facilities

Demolition was completed and debris cleaned up at the site of the 284-W Power House. The 284-W Power House was the last industrial facility CHPRC demolished with Recovery Act funds in the 200 West Area of the Hanford Site and it was one of 23 facilities CHPRC demolished on the Central Plateau.

Demolition on the 284-W Power House began when CHPRC demolished the building's exhaust chimneys, baghouses and water tower with explosives with the help of Clauss Construction and Controlled Demolition, Inc. in February 2011. The Feb. 18 event made local headlines and newscasts and was the most viewed video on the DOE Richland Operation Office's YouTube site, bringing in a recordsetting 1,000-plus views in just one day and over 14,000 the first week. To watch the demolition and other Central Plateau cleanup videos, visit www.youtube.com/hanfordplateau.





Photo 7

Demolition is complete at the 284-W Power House. CHPRC completed demolition of the main building of the 284-W Power House, including its four internal boilers, in a matter of weeks in September 2011.

209-E Criticality Mass Laboratory

Tank 106 was removed (the last of the 11 contaminated slab tanks in the facility) and the 209-E facility was downgraded to a Less Than Hazard Category 3 (non-nuclear) facility. Approval to terminate active ventilation was also received from the Washington Department of Health. Upon final clean out of the facility, demolition will begin.

RL-0040.R1.2: Outer Zone D&D/Waste Sites

OUTER ZONE FACILITIES DEMOLISHED WITH RECOVERY ACT FUNDS

212N Storage Building	6652M Fallout Laboratory
212P Electrical Storage & Transformer Shop	6652R Acid Storage Shed
212R Storage Building	6652C Space Science Laboratory
614 Monitor Station	6652C SHED Storage Building
646 Radioecology Field Laboratory	6652D Pump House
6652G ALE Field Storage Building	6652T Fire Protection Lower Pump House
6652H ALE Laboratory 1	6652U Rattlesnake Mountain Upper Pump House
6652I ALE Headquarters	623A Plant Radio Relay Bldg
6652J ALE Laboratory II	T520-6 Navy MARS Radio Station
6652S Sentry Shed*	6631 Radio Telescope Pedestal*
6634 ENW Tower and Building*	6630 Hodges Well Pumphouse*
// 25 O	(/2/ Oak wilds Camming to the Tanna and Dailidh

6635 Crown Castle/Cingular Tower and Building * 6636 Columbia Communication Tower and Building * 6637 Tri City Amateur Radio Tower and Building * 6633 Franklin County Communication Building * 6632 Verizon Telephone Enclosure * TOTAL: 62,748 square feet



*Not part of the Key Performance Parameter

North Slope Debris Removal

With demolition and cleanup on the Arid Lands Ecology Reserve completed in November 2010 and cleanup of debris sites completed on North Slope, CHPRC completed its 290-square-mile Hanford Reach National Monument footprint reduction goal with Recovery Act funds. The work included removing more than 20 facilities and 1,000 debris sites from the outermost areas at the Hanford Site.

D&D of Railcars Located on the 212-R Rail Spur

CHPRC completed removal of all 16 railcars from the 200 North Area of the Hanford Site. Four of the railcars – the locomotives and two cask cars – were relocated for preservation and display at Hanford's B Reactor. The 12 other railcars were disposed of at the ERDF.

Waste Sites

CHPRC surpassed its Recovery Act goal to remediate 24 outer zone waste sites, for a total of 41 waste sites remediated. Also in the outer zone, CHPRC remediated and revegetated 140 acres of the BC Control Area, removing 483,000 tons (approximately 20,000 truckloads) of contaminated soil from the 13-square-mile waste site.

Recent activities regarding the outer zone waste sites included (listed by operable unit or site):

- 200-MG-1
 - o 216-S-19: The reclassification form was signed by the regulator and is being transmitted to DOE Richland Operations Office (DOE-RL).
 - 216-S-26: The reclassification form was signed by the regulator and is being transmitted to DOE-RL.
- 200-CW-3
 - o The CW-3 Operable Unit closure documentation was approved by the regulator and is being transmitted to DOE-RL.
- BC Control Area
 - ODE-RL and regulator comments on the On-Scene Coordinator Report have been incorporated. The document was approved by DOE-RL and the regulator; transmittal from the CHPRC President's Office to DOE-RL is under way.

RL-0041 Nuclear Facility D&D – River Corridor Closure Project

RL-0041.R1.1: 100K Area Remediation

100K AREA FACILITIES DEMOLISHED WITH RECOVERY ACT FUNDS **D&D IN PROGRESS** 183KW Chlorine Vault 116KE Reactor Exhaust Stack • 190KW Main Pump House 183.1KW Headhouse 118KE Horizontal Control Rod Storage 183.2KW Sedimentation Basin MO048 Construction Lunch Trailer 183.3KW Filter Basin • MO969 Ops/HPT Change Trailer 183.7KW Pipe Tunnel • 115KE Gas Recirculation 110KE Gas Storage Facility 185K Potable Water Treatment Plant 110KW Gas Storage Facility • 117KE Exhaust Air Filter Bldg 1605KE Guard House • 1717K Maintenance Shop 1605KW Guard House • 1717AKE Electrical Storage Shed 181KE River Pumphouse • 181KW River Pumphouse 183.4KE Clearwell • 183.4KW Clearwell • 183.3KE Filter Basin • 1720K Administrative Bldg 183.1KE Headhouse • 190KE Main Pump House

Altogether with Recovery Act funding, CHPRC has removed 26 buildings, remediated 48 waste sites, and upgraded or rerouted utilities to facilitate future cleanup at Hanford's 100K Area along the Columbia River. The work significantly shrunk the cleanup footprint surrounding the K East and K West Reactors



and set the stage for the cleanup yet to come in moving hazards away from the river and preparing the reactors for interim safe storage.

Facility D&D

Asbestos abatement was completed at the 190-KW Main Pump House, which is scheduled for demolition with carryover Recovery Act funds in the first quarter of fiscal year 2012.

Waste Sites

RL-41 Waste Sites were transferred to Base funding. Altogether with Recovery Act funding, CHPRC remediated 48 100K Area waste sites – double its goal for 23 waste sites.

UPCOMING EVENTS

RL-0011 Nuclear Materials Stabilization & Disposition

RL-0011.R1: Plutonium Finishing Plant D&D

- Complete demo-ready actions for the 2736-ZB facility, and initiate demolition of the 4-building PFP vault complex and two ancillary buildings.
- Complete final area cleanout in the Standards, Analytical, and Plutonium Process Support Labs.
- Remove gloveboxes HA-14S, HA-14P, and HA-14DC from the RMA Line, and HC-11 from the RMC Line.
- Continue cleanout and decontamination of the remaining gloveboxes in the RMA/RMC Line process areas.
- Continue removal of asbestos insulation from throughout the 234-5Z building.

RL-0013 Solid Waste Stabilization & Disposition

RL-0013C:R1.1: MLLW Treatment

• CHRPC completed its Recovery Act MLLW/LLW treatment work scope.

RL-0013C:R1.2: TRU Waste

• CHPRC completed its Recovery Act TRU waste retrieval, shipping, and repackaging work scope.

RL-0030 Soil & Groundwater Remediation, Groundwater/Vadose Zone

RL-0030.R1: Central Plateau Soil & Groundwater

• CHPRC completed its Recovery Act scope for construction of the 200 West and 100-DX Groundwater Treatment Facilities, installation of wells and decommissioning of wells.

RL-0040 Nuclear Facility D&D – Remainder of Hanford

RL-0040.R1.1: U Plant/Other D&D

• CHPRC will continue demolition activities for the 209-E Criticality Mass Laboratory with carryover funds.

RL-0040.R1.2: Outer Zone D&D/Waste Sites

 CHPRC completed its Recovery Act scope for remediating outer zone waste sites. Closure documentation for the waste sites is in progress.

RL-0041 Nuclear Facility D&D - River Corridor Closure Project



RL-0041.R1.1: 100K Area Remediation

• Demolition of the 190-KW Main Pump House will occur in the first quarter of fiscal year 2012 with carryover Recovery Act funds.

