



## Crews complete upgrades to critical waste transfer lines

Washington River Protection Solutions (WRPS) is celebrating the completion of Recovery Act (RA) funded work to upgrade radioactive waste transfer lines in a Hanford tank farm.

Double-walled piping is used to transfer high-level radioactive waste between underground storage tanks at Hanford. Hanford's AZ tank farm, one of 18 tank farms that house a total of 177 storage tanks, is being upgraded to prepare the tanks to feed waste to the Waste Treatment Plant (WTP) under construction nearby. The WTP will immobilize the radioactive liquid waste by turning it into a sturdy glass waste form suitable for disposal.

During the course of the project, workers installed roughly 80 feet of transfer line between two tanks in the AZ Tank Farm. The accomplishment keeps Recovery Act work at Hanford's tank farms on schedule for completion by the September 30 deadline. Many projects expect to wrap up in July, well ahead of schedule. Through May, WRPS spent \$259 million in Recovery Act funds to complete 81 percent of identified Recovery Act work scope.



## RA-funded pump design complete

WRPS recently met an important RA milestone by completing the design of an in-tank mixer pump that will be used to stir the waste stored in Hanford's double-shell tanks before it is transferred to the WTP. The team overcame significant challenges in the design process, including development of a state-of-the-art method to shield workers from potential radiation exposure during the pumping process.

WRPS plans to purchase four of the in-tank mixer pumps which will be built and delivered in the next two-and-a-half years. The first pump is expected to be installed in a 34-inch riser in tank AY-102 in September or October of 2014.

### RECOVERY ACT SUMMARY

- EXTENDING LIFE OF OPERATING FACILITIES
- UPGRADING TANK FARM INFRASTRUCTURE
- PREPARING FOR WASTE TREATMENT PLANT OPERATION

<b>RA Funding</b> <b>\$322.6M</b>	<b>Spent to Date</b> <b>\$259M</b> <small>as of 5/31/11</small>	<b>Jobs Created</b> <b>554 FTE</b> <small>2nd Quarter FY11</small>
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## Old Glory & new construction

Construction workers at Hanford's 222-S Laboratory paused briefly to proudly place a flag firmly atop the steel frame of a 17,000-square-foot facility that, once complete, will house more than 100 workers at the 222-S complex.

The building is the last of three RA-funded structures to be built at the lab. It replaces several aging mobile office trailers and is designed to last through the end of WRPS' long-term mission to retrieve and treat more than 56 million gallons of waste stored in Hanford's underground tanks.

The new facility will have 12-foot ceilings, a kitchen and three conference rooms available for use. The building has many of the environmentally friendly aspects featured at other facilities recently built at the 222-S Lab which include energy-efficient lighting, large windows and skylights. The building is scheduled for completion by mid-August.



## Drawing reconstitution project nears completion

RA-funded work to update drawings of the double-shell tank farms and other support facilities is now more than 80 percent complete. Workers have updated a total of more than 2,500 drawings that show the layout of several Hanford tank farms and two critical operating nuclear facilities—the 242-A Evaporator and the 222-S Laboratory.

The drawing reconstitution project includes updates to process, ventilation and electrical drawings critical to operations, work planning and worker safety. The project includes replacing manual drawings with computer-aided drawings saved as electronic files. Crews conduct walk-downs to inspect all installed systems and highlight the differences between the drawings and true layout of the facility. Any variances are noted and incorporated into the drawings. As construction modifications are made across the Hanford Site, the drawings become important because they allow engineers to start design work with accurate information. The project is scheduled for completion in August more than a month ahead of schedule.



## Tank farms storage facility complete



Construction of a 10,000-square-foot climate-controlled storage building in Hanford's 200 East area is now complete. The RA-funded storage area will help consolidate materials currently housed in other site facilities and will provide office space for a handful of workers.

## Construction provides new office space



Construction of a new trailer complex at Hanford's AW Farm is now more than two-thirds complete. Once finished, the complex will provide offices for roughly 120 tank farm workers. The trailer complex includes a host of offices, restrooms, a large lunchroom, showers and lockers. A portion of the work at AW is being done with RA funding.