

# HANFORD COMMUNITIES

## FALL HANFORD NEWS RECAP

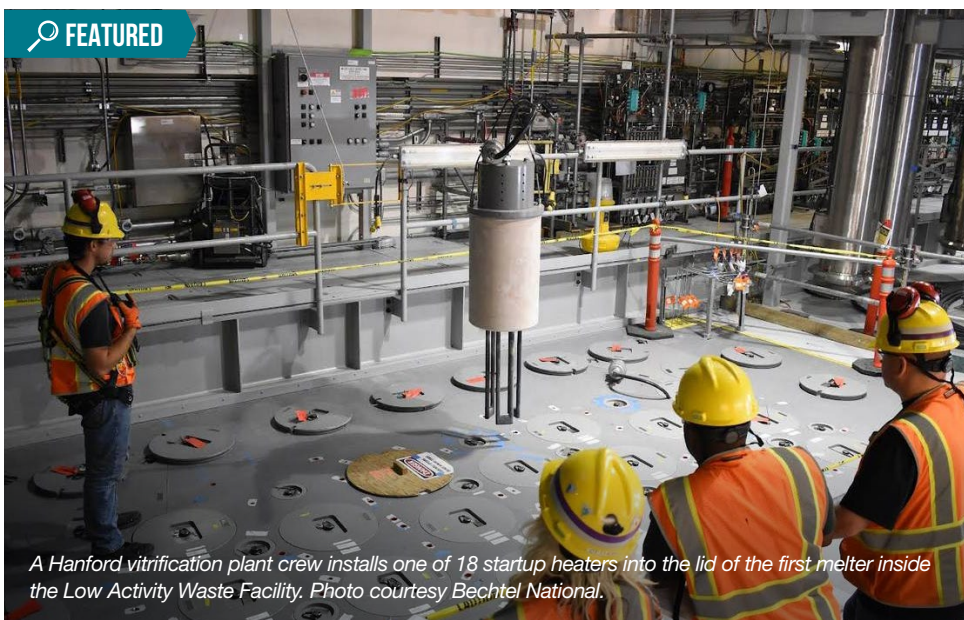
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### FEATURED



A Hanford vitrification plant crew installs one of 18 startup heaters into the lid of the first melter inside the Low Activity Waste Facility. Photo courtesy Bechtel National.

## WORLD'S LARGEST RADIOACTIVE WASTE MELTER HALTED IN EASTERN WA, IT WAS OVERHEATING

Tri-City Herald | Published October 20, 2022 | By Annette Cary, senior staff writer

The heat up of world's largest radioactive waste melter at the Hanford site vitrification plant in Eastern Washington has not started as hoped. The melter temperature was expected to climb to 2,100 degrees Fahrenheit over about two weeks this month, but the heating was halted before 300 degrees was reached. The Department of Energy's Hanford manager Brian Vance made the announcement at a Wednesday evening meeting of the Hanford Advisory Board.

When heating of the melter was started it was not expected to be turned off over the next five years to avoid damaging melter components. The plan was to run it continuously and also bring a second melter online that would both be used to commission the plant with a nonradioactive waste simulant and then to start treating radioactive waste as soon as the end of next year.

But the melter temperature has now been allowed to cool to the ambient temperature while troubleshooting is done on the electrical system, Vance said.

> Read the full story on Tri-City Herald's website [HERE](#)

# METAMORPHOSIS: 'COCOONING' COMPLETE FOR SEVENTH HANFORD REACTOR BUILDING

RICHLAND, Wash. – Just over a year after breaking ground, crews recently completed construction of a protective enclosure, or “cocoon,” around another former plutonium production reactor at the Hanford Site, leaving only one more to go.

This EM 2022 priority, completed ahead of schedule and under budget, marks a significant accomplishment in EM’s risk-reduction cleanup mission along the Columbia River.

One of EM’s key construction priorities for 2022, the huge steel structure is more than 120 feet tall and 150 feet wide. The interim safe storage structure will protect the K East Reactor building while the radioactivity in the deactivated reactor core decays over the next several decades, making it safer to complete disposition of the reactor in the future.

“Our One Hanford team continues to deliver taxpayer value by safely completing projects that reduce risks to our workforce, our community, the Columbia River and the environment of the Pacific Northwest,” said Brian Stickney, deputy director, EM Office of River Protection and Richland Operations Office. “With this achievement and the exceptional accomplishments over the last few years, I am very optimistic about the Hanford Site’s future.”

Workers with EM contractor Central Plateau Cleanup Company (CPCCo) broke ground on the project last fall after awarding a subcontract to a local business for the work in August 2021.

Earlier this year, crews finished backfilling and compacting the area around the former reactor with approximately 34,000 cubic yards of sand and gravel to level the site before pouring a 6-foot-thick concrete foundation to support construction of the cocoon. The first steel columns for the enclosure were placed in mid-May with construction of the frame and installation of metal sheeting on the walls and roof continuing through the summer.



*Workers with EM contractor Central Plateau Cleanup Company recently completed construction of a protective enclosure, or cocoon, over the former K East Reactor building. The cocoon is designed to protect the reactor building while the radioactivity in the deactivated reactor core decays over the next several decades, making it safer to complete disposition of the reactor in the future.*

The cocoon’s design allows for routine inspections of the reactor every five years. During this “checkup,” radiation technicians will confirm that no contamination is leaving the sealed reactor core, and that nothing is entering the building from the outside. Additional safety features include new lighting between the structure and the reactor building, as well as upgraded lighting inside the building.

“I’m very proud of our team’s performance on this complex project,” said John Eschenberg, CPCCo president. “So many different skillsets were needed to successfully complete this work. From laborers to trades and crafts to the support of the Department and our regulators, it was a true collaborative effort, and we did it all with a spotless safety record.”

The K East Reactor operated from 1955 to 1971 and is the seventh of Hanford’s nine former reactors to be cocooned. The nearby K West Reactor will be the eighth. The ninth, the B Reactor, has been preserved as the world’s first full-scale plutonium production reactor and is part of the Manhattan Project National Historical Park. Hanford’s other six reactors were cocooned between 1998 and 2012. ■



**WATCH THE K EAST  
REACTOR COCOONING  
TIMELAPSE VIDEO**



# EVERY WA CONGRESSIONAL LEADER IS SENDING BIDEN THE SAME MESSAGE ABOUT THE HANFORD NUCLEAR SITE

Tri-City Herald

Published October 27, 2022 | By Annette Cary



*Hanford site workers remove old equipment from an underground waste tank. The Washington congressional delegation says more money is needed for Hanford cleanup. Photo courtesy Department of Energy.*

The entire Washington congressional delegation, both Democrats and Republicans, have called on President Biden to do his part to get more money for the Hanford nuclear reservation site.

Sen. Patty Murray, D-Wash., and Rep. Dan Newhouse, R-Wash., led the effort to send a letter Thursday to the president. It points out the progress toward starting to treat and dispose of some of the least radioactive of 56 million gallons of waste stored in underground tanks, many of them prone to leaking.

Murray carries clout on the issue as a senior member of the Senate Appropriations Committee, and Newhouse, who serves on the House Appropriations Committee, has advocated for strong Hanford budgets since taking office in 2015.

Now DOE needs more money to also work toward treating the most radioactive tank waste by proceeding with the engineering and construction of the High Level Waste Facility at the Hanford vitrification plant, the letter said.

"This is a top priority for our constituents, the state of Washington, the communities surrounding DOE's Hanford site and regional tribes," the Washington delegation said.

> [Read the full story on Tri-City Herald's website](#) 

## OFFICE OF ENVIRONMENTAL MANAGEMENT Published November 8, 2022



*EM Richland Operations Office contractor Central Plateau Cleanup Company recently received groundwater treatment units for installation at the 200 West Pump and Treat Facility on the Hanford Site. The units are part of an upgraded system that will expand capacity for the largest of Hanford's six groundwater treatment plants.*

## HANFORD SITE GROUNDWATER PROGRAM CONTINUES TO BUILD ON CLEANUP PROGRESS

RICHLAND, Wash. – Another year, another 2 billion gallons of contaminated groundwater treated. It's a repeat of last-year's statistics, but a new chapter that illustrates continuous, consistent cleanup progress at the Hanford Site year after year.

The fiscal year that ended Sept. 30 marked eight consecutive years of topping the 2 billion-gallon mark, as the site continues to reduce risk to the Columbia River. The year's treatment reached 2.34 billion gallons, bringing the site's total to over 30 billion gallons treated, with nearly 700 tons of radiological and chemical contaminants removed since the groundwater treatment program began in the 1990s.

"Hanford's groundwater program is one of the biggest success stories in our ongoing cleanup mission," said Mike Cline, EM Richland Operations Office (RL) project director for soil and groundwater cleanup at Hanford. "But the job is not finished. We are continually seeking more efficient and cost-effective solutions to improve our systems. Protecting the Columbia River continues to drive our treatment efforts today just as it did when groundwater cleanup operations began more than 25 years ago."

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The new system works by pushing up to 225 gallons per minute of clean water through the soil to force — or flush — chromium contamination in the soil to the groundwater, where it can be more easily moved through a network of existing wells to a nearby treatment facility, accelerating the cleanup process.

CPCCo's field sampling group also plays a critical role in the success of the groundwater cleanup effort. Each year field crews log thousands of miles collecting more than 20,000 samples of soil and groundwater from hundreds of strategically placed monitoring wells. The samples are shipped to an offsite laboratory for analysis.

RL contractor Central Plateau Cleanup Company (CPCCo) operates five pump-and-treat systems along the Columbia River and one near the center of the Hanford Site. These systems remove radioactive and chemical contaminants from groundwater in areas where contaminated liquids were disposed in open pits near facilities that separated plutonium from fission products from the 1940s through the 1980s.

These advanced treatment facilities are just part of Hanford's comprehensive program to target and shrink plumes — or areas of groundwater contamination — across the 580-square-mile site.

Near Hanford's former K East Reactor, an innovative soil flushing system installed earlier this year on a half-acre area is accelerating the removal of hexavalent chromium, a hazardous chemical once used to inhibit corrosion in Hanford's reactors. During operations, some of the chromium was spilled or leaked to the soil. Nearby groundwater treatment facilities have reduced the area of chromium contamination by more than 75% since 2010, but some contamination remains in the soil above the water table, making it difficult to remove.

“Hanford's groundwater program is one of the biggest success stories in our ongoing cleanup mission.”

– Mike Cline, EM Richland Operations Office

Detailed data gleaned from analyzing the samples helps gauge the performance of ongoing remediation efforts and supports decision-making to drive efficient, cost-effective cleanup approaches.

Work is also underway to expand capacity of the 200 West Pump and Treat Facility, Hanford's largest groundwater treatment plant, by 50%. The expansion will increase the amount of water treated in the central part of the Hanford Site from 2,500 to 3,750 gallons a minute, potentially shortening the time required to meet cleanup goals and saving money.

“Hanford groundwater cleanup is more of a marathon than a sprint,” said Mark Cherry, CPCCo soil and groundwater program director. “While our experienced and innovative team is proud of the progress we've made, we're also committed to building on that success.” ■

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## CONTRACTORS COLLABORATE ON SAFETY AND PROGRESS AT HANFORD'S 324 BUILDING

RICHLAND, Wash. – EM Richland Operations Office (RL) contractors Central Plateau Cleanup Company (CPCCo) and Hanford Mission Integration Solutions (HMIS) are teaming up again to continue removing contaminated soil beneath the 324 Building, a former nuclear materials research facility on the Hanford Site.

CPCCo crews in protective gear recently finished installing the last of 13 vertical structural supports, called micropiles, to fortify the foundation under a hot cell in the 324 Building where remotely operated equipment will be used to cut through the floor and excavate the contaminated soil.

"Installing the micropiles is a significant accomplishment in this challenging project," said Tim Trevis, CPCCo project manager. "I'm proud of our group's teamwork and persistence to ensure a safe path forward."

Key to safely installing the micropiles has been the continued use of mock-ups on the project. Such simulated work environments are frequently used at Hanford to allow employees to train and test equipment and procedures before performing work in a radiological environment.

As work on the micropiles wrapped up, a team at the Volpentest HAMMER Federal Training Center, managed by HMIS, met to practice repairing one of the overhead cranes in the building that workers will use to remotely clean out the contaminated hot cells. CPCCo radiological control technicians offered coaching and assistance as the team rehearsed the repairs. HAMMER stands for Hazardous Materials Management and Emergency Response.

"Utilizing the props at HAMMER allows workers to safely train and understand the tasks in a realistic, controlled environment," said Brian Von Barga, HMIS vice president of Interface & Integration Services. "This will translate to continued efficient work at the 324 Building that maintains the principle of minimizing radiation exposure."

"I appreciate the excellent collaboration and organization among multiple contractors and crews to safely advance this work," said Mark French, RL Projects and Facilities division director for Hanford's Central Plateau Cleanup Project.

"The sustained progress on projects like this reinforces the value of our collaborative One Hanford approach: everyone working toward a common goal to accomplish the cleanup mission."

The 324 Building supported research on radioactive materials while operating from 1966 to 1996. Removing the contaminated soil under the facility is a priority in the Hanford cleanup mission, due to the building's proximity to the Columbia River and the city of Richland. ■



*Inside an area of the 324 Building on the Hanford Site, workers recently installed 13 structural supports, called micropiles, to ensure the integrity of the building during the removal of contaminated soil under the facility.*



An aerial view of the Plutonium Uranium Extraction Plant. The main facility is at center. Also shown is the 211-A Chemical Storage Area, which is the open area just below the main facility, and the 203-A Acid Storage Area, which is the open area in foreground.

## CREWS MAKING PROGRESS AT HANFORD'S FORMER PLUTONIUM PROCESSING FACILITY

RICHLAND, Wash. – Crews with EM Richland Operations Office (RL) contractor Central Plateau Cleanup Company (CPCCo) are performing risk-reduction activities to prepare a former plutonium processing facility on the Hanford Site for eventual disposition.

The Plutonium Uranium Extraction Plant (PUREX) was the final and most advanced chemical separations plant on the site.

Cleanup is currently focused on the north side of the main PUREX facility, where crews are preparing the 211-A Chemical Storage Area and 203-A Acid Storage Area for equipment removal and demolition. Both areas contain chemical storage tanks, structures and equipment that supported operations.

“It will be a yearslong effort to get this large facility ready for disposition, and I’m encouraged by the progress to safely and efficiently advance this work,” said Andy Wiborg, RL Projects and Facilities Division team lead for Hanford’s Central Plateau Cleanup Project.

PUREX was key to Hanford’s plutonium production mission during the Cold War era. Nearly 70% of Hanford’s irradiated fuel rods were processed through PUREX, which was designed to recover plutonium from the uranium fuel.

The 211-A Area contains 20 chemical storage tanks. Eight small tanks are located inside a pump house. Crews recently began draining chemical lines inside the pump house to prepare for eventual demolition. The lines were flushed during the 1990s, but workers needed to confirm no process fluids remained. Workers also inspected and sampled inside tanks that had not been opened in decades, ensuring workers will be able to safely demolish them in coming months.

Workers have also been making progress cleaning up asbestos at the 203-A Acid Storage Area. Constructed in 1954, the 203-A Area consists of a pump house, a railroad loading dock and a secondary containment area that housed nine aboveground tanks. So far, crews have removed asbestos-contaminated insulation from nearly 1,600 of 1,900 feet of pipeline in the 203-A Area.

“Our crews are making excellent progress on a daily basis,” said Darin Corriell, CPCCo PUREX manager. “We have a team of highly skilled professionals who are focused on taking things step by step to ensure a safe, effective cleanup.” ■



# U.S. SPENDING BILL PASSES WITH MORE MONEY FOR HANFORD CLEANUP — ‘BIG STEP,’ INSLEE SAYS

Tri-City Herald Published December 23, 2022

By Annette Cary, senior staff writer

The Hanford nuclear reservation will get about \$140 million more for Hanford environmental cleanup for the fiscal year that started in October than was allocated by Congress for the past fiscal year.

The House approved the Hanford budget appropriation Friday as part of a \$1.7 trillion spending package for fiscal 2023 that was approved by the Senate on Thursday. It now goes to President Biden for his signature.

“It’s a big step toward getting the resources we need to finish the cleanup safely, effectively and efficiently,” Washington



Crews at the Plutonium Uranium Extraction Plant install bags on a piping system to safely remove asbestos-containing material in the 203-A Acid Storage Area.

Gov. Jay Inslee posted on Twitter. “There’s more work ahead, but this is a huge win for Washington state.”

The increase will put the budget just above the nearly \$2.7 billion appropriation for fiscal 2022.

> Read the full story on Tri-City Herald’s website [HERE](#) 

## MANHATTAN PROJECT NATIONAL HISTORICAL PARK TAKES SPOTLIGHT IN 2023 STAMP SET

OFFICE OF ENVIRONMENTAL MANAGEMENT | Published November 22, 2022

DENVER – Manhattan Project National Historical Park (MPNHP) takes center stage as the national stamp in the 2023 Passport to Your National Parks Stamp Set.

The national stamp is the large center stamp in a collection of 10 stamps that honor national parks. Sure to become a collector’s item, the 2023 national stamp features three photos from the MPNHP locations at three EM sites – Los Alamos, New Mexico, Oak Ridge, Tennessee, and the Hanford Site.

The park was selected for the stamp set because its locations and historical buildings represent the nation’s diverse geography while weaving together many themes of national importance.

“The park turns seven this month as it debuts in the 2023 stamp set. The national stamp provides a wonderful opportunity to showcase the park and invite people to learn about and visit the park throughout the year,” said Wendy Berhman, acting park superintendent.

MPNHP commemorates the top-secret project that ushered in the nuclear age with the development of the world’s first atomic bombs. The building of atomic weapons began in 1942 in three communities across the country: Los Alamos built the atomic bombs using plutonium from Hanford and enriched uranium from Oak Ridge.

The national stamp features three historic buildings: B Reactor in Hanford, Pond Cabin in Los Alamos and X-10 Graphite Reactor in Oak Ridge.

Since 1986, national park visitors have turned to the National Parks stamps to preserve memories of their park travel by collecting ink cancellations at each national park they visit.

> Read the full story [HERE](#) 

