SPRING 2023

HANFORD COMMUNITIES

HANFORD NEWS RECAP

RICHLAND • WEST RICHLAND • KENNEWICK • PASCO • FRANKLIN COUNTY • BENTON COUNTY • PORT OF BENTON

IN THIS ISSUE:

DEPARTMENT OF ENERGY

DOE SHIFTS GEARS ON ITS APPROACH TO REMEDIATING HANFORD'S 324 BUILDING

Earlier this year, structural stabilization work at Hanford's 324 Building was paused after crews discovered a significant amount of additional soil contamination under the building. Further sampling was conducted and validated by scientists at the Pacific Northwest National Laboratory, to assess the extent of contamination.

Recognizing this changed condition, DOE, in coordination with its regulator the U.S. Environmental Protection Agency, is evaluating changes to the cleanup approach that is safer for the workforce, protective of the environment and effective in completing the mission. DOE is considering a resequencing of the work to deactivate the 324 Building, demolish it to slab on grade, construct a containment superstructure over the slab on grade and then remediate the contaminated soils. Any changes to the cleanup approach will follow applicable regulatory processes including, as appropriate, soliciting tribal and public input.

The 324 Building remains in a safe and stable configuration. Contaminated soils beneath the structure have remained stable for decades and existing monitoring indicates no migration of contamination into the groundwater. Crews will continue to monitor groundwater to ensure worker and public safety and health.

While this change in approach will take longer to complete, it represents a safer path to remediation and aligns with current budget profiles through fiscal year 2025. ■

DOE PREPS FOR PHASE II OF THE TEST BED INITIATIVE

DEPARTMENT OF ENERGY

The U.S. Department of Energy continues to make progress toward the start of vitrifying Hanford's low-activity tank waste under the Direct-Feed Low-Activity Waste program. In parallel with the program, the Department is evaluating additional technology options to potentially accelerate treatment and disposal of Hanford low-activity tank waste. One such approach is the Test Bed Initiative (TBI) Demonstration Project. The Department is announcing two decisions today that represent the next steps in moving forward with the demonstration. First, the Department has submitted a request to the Washington State Department of Ecology for a permit.

Second, the Department has selected Waste Control Specialists LLC, in Andrews County, Texas, and EnergySolutions in Clive, Utah, as the off-site commercial facilities for this demonstration project, which will immobilize the low-level waste in grout and dispose of it at their respective sites. The selection of these licensed facilities represents the best value to the government and will demonstrate the capability of two locations for grouting and disposing of the waste, adding options that are different from the 3-gallon demonstration completed in 2017.

The Department appreciates the long-standing congressional support for the Test Bed Initiative Demonstration Project. ■

E. WASHINGTON OFFICIALS TRY AGAIN TO FIRE UP WORLD'S LARGEST RADIOACTIVE WASTE MELTER

Tri-City Herald **Published June 26, 2023 by Annette Cary**

A second attempt began on Saturday to heat up the world's largest radioactive waste melter to turn waste into a stable glass form at the Hanford nuclear reservation site.

It's a significant step toward getting the massive Hanford vitrification plant operating after construction started 21 years ago and a crucial step toward getting millions of gallons of radioactive waste treated and into permanent disposal.

Early Monday morning the melter temperature had reached 313 degrees and the heat up was paused for 48 hours for a preplanned evaluation. The goal is to get the temperature to 2,100 degrees Fahrenheit, the temperature needed to eventually glassify radioactive waste.

"DOE is following a carefully planned approach in the heat up process that will take several weeks to ensure the temperature increase slowly and steadily toward the target temperature," DOE said in a statement.

The vitrification plant at the Hanford nuclear reservation is shown at night. The plant will be operated around the clock as a second attempt to heat up its first melter started Saturday. Courtesy Bechtel National

Bechtel National, the contractor building and commissioning the plant for the Department of Energy, attempted to heat up the vit plant's first 300-ton melter Oct. 8.

> Read the full story on Tri-City Herald's website HERE

STATE OF WASHINGTON, FEDERAL AGENCIES ANNOUNCE CONCEPTUAL AGREEMENT IN HANFORD SITE HOLISTIC NEGOTIATIONS

Agencies now drafting potential amendments to Tri-Party Agreement, Consent Decree for public comment and submission to Court

Published May 2, 2023

The U.S. Department of Energy (USDOE), Washington State Department of Ecology (Ecology), and the U.S. Environmental Protection Agency (EPA) announced today that negotiating teams have reached conceptual agreement in Holistic Negotiations on revising plans for managing millions of gallons of waste stored in tanks at the Hanford Site.

The conceptual agreement upholds the Tri-Party Agencies' shared commitment to a safe, effective, and achievable path forward.

This achievement is the result of nearly three years of discussions and more than 60 mediation sessions. Additionally, President Biden's Fiscal Year 2024 budget proposal for USDOE aligns with the conceptual agreement. The agencies are now drafting potential amendments to the Washington v. Granholm Consent Decree and the Tri-Party Agreement (TPA) that will reflect the conceptual agreement.

While this drafting process is underway, the agencies are restricted from discussing further details by the confidentiality terms of a mediation agreement between the agencies and the Federal Mediation and Conciliation Service. Any resulting proposed settlements, including potential modifications to the Consent Decree and TPA, remain subject to review and approval by State and Federal officials.

Once the proposed Consent Decree and TPA changes are drafted and approved by State and Federal officials, a public notice with detailed information will be shared and public comment periods will be held on the proposed changes. No agreement is final until that public comment process is complete, the federal district court accepts the proposed Consent Decree amendments, and the agencies execute the proposed revisions.

For background information on Hanford, visit Energy's Hanford website and Ecology's website. ■

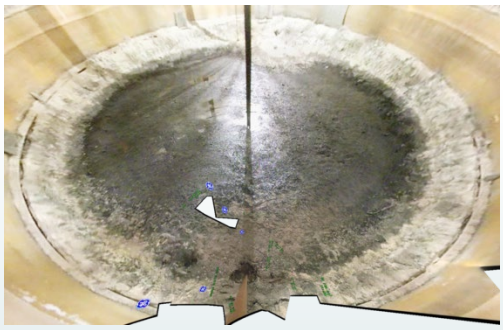
SETTLEMENT REACHED IN APPEAL OF HANFORD SITE LEAKING TANKS AGREED ORDER

WASHINGTON STATE DEPARTMENT OF ECOLOGY | Published May 10, 2023

RICHLAND, Wash. Work to respond to actively leaking tanks and future tank leaks at the Hanford Site will continue to proceed as planned following a settlement agreement filed with Washington's Pollution Control Hearings Board today.

Heart of America Northwest, a nonprofit group, had challenged an Agreed Order between the Washington State Department of Ecology and U.S. Department of Energy on the tank leak response the agencies announced last August.

Ecology and Energy announced the order in August 2022. The document outlined a path for responding to leaks in tanks B-109 and T-111 and created plans on how to respond to any potential future single-shell tank leaks.



"This settlement is the result of a collaborative effort to resolve concerns with the Agreed Order we announced last year," said David Bowen, Ecology's Nuclear Waste Program manager. "Work has continued over the last nine months to begin implementing this order, and we're glad that we can continue that momentum."

CONTINUED ON PAGE 6

OPEN SEASON: VISITORS SET SIGHTS ON HANFORD B REACTOR TOURS

The B Reactor National Historic Landmark is the world's first full-scale plutonium production reactor and part of the Manhattan Project National Historical Park administered by DOE and the National Park Service.

RICHLAND, Wash. – History buffs, engineering enthusiasts and science aficionados are all taking aim at one of Washington state's hottest tickets: a tour of the B Reactor National Historic Landmark.

Constructed during World War II, the B Reactor is the world's first full-scale plutonium production reactor.

The 2023 public tour season began the first week of April, when the EM Richland Operations Office opened free registration. The B Reactor and other Manhattan Project National Historical Park facilities on the Hanford Site will be available for public tours through Nov. 18.

Nearly 80 people visited Hanford's historic B Reactor on the first day of tour season in April. Public tours are offered through Nov. 18, with registration available through the facility website.

The park also includes historic properties at the DOE sites in Oak Ridge, Tennessee, and Los Alamos, New Mexico, where EM also conducts cleanup work. The park preserves and interprets the story of the Manhattan Project and the dawn of the atomic age. Created in 2015 following congressional action, the park is jointly administered by DOE and the National Park Service. DOE's national park mission is to own and preserve its historic facilities and provide public access to them.

"It is so exciting to be back this year with a full public tour schedule," said Colleen French, DOE program manager for the Manhattan Project National Historical Park at Hanford. "We have tours six days a week through the summer, including the holiday weekends, and they are already going out completely full. I'm not sure who is more excited — the visitors coming in the door, or the staff and docents!"

The park includes the B Reactor, which produced the plutonium used in the Trinity test in July 1945 and one of the atomic bombs used to help bring an end to the war in the Pacific. Park facilities also include the remains of a turn-of-the-century high school, bank, pump house and fruit warehouse that were part of the agricultural towns taken over by the government in 1943. EM contractor Central Plateau Cleanup Company and local subcontractor Lucas Engineering and Management Services work together to maintain the park facilities and keep them accessible to the public.

The National Historical Park at Hanford gets up to 15,000 visitors each year. Since tours began in 2009, visitors have come from all 50 states and more than 90 countries. The tours also have a positive economic effect on the surrounding communities, bringing several million dollars each year in hotel bookings, restaurant visits and purchases.

The free tours last about four hours and offer a guided experience and an opportunity to self-explore interpretations and reflect on the global effect of the Manhattan Project. The tours are wheelchair accessible and offer assistance to hearing-impaired and sight-impaired visitors. To register or for more information, visit the tour website. ■

BECHTEL NAMES NEW VIT PLANT PROJECT DIRECTOR

VIT PLANT | Published May 25, 2023

Bechtel today named Senior Vice President Brian Hartman as project director for the Waste Treatment and Immobilization Plant (WTP) project at the U.S. Department of Energy's (DOE) Hanford Site in Washington state. Hartman is a 40-year Bechtel veteran with extensive leadership experience.

"Brian is an exceptional leader with a proven talent for building strong partnerships with customers and creating high-performance teams," said John Howanitz, president of Bechtel's Nuclear, Security, and Environmental business. "His deep experience on complex projects and across all aspects of project management and execution, from development to startup and commissioning, makes him an ideal choice to lead the WTP project forward."

Effective May 30, Hartman will lead the WTP team through final commissioning of the Low-Activity Waste Facility and its support facilities, which will immobilize low-activity waste in a form safe for disposal. He also will oversee the team working the engineering, design, and procurement for a facility to treat the Hanford Site's high-level waste.

"I look forward to building on the WTP team's quality culture and collaborative approach to how we do work," Hartman said. "We have an important mission to protect the environment and the public. I'm eager to work with our customer, other Hanford contractors, regulators, and the local community as we achieve hot commissioning for low-activity waste and ramp up efforts toward vitrifying high-level waste."

Hartman served most recently as Bechtel's corporate manager of Engineering and Technology and project execution manager. In this role, he headed the global engineering and technology functions for 5,000 professionals in 115 locations across 20 countries. Over the past year he also managed collaborative engineering efforts between Bechtel, NASA, and subcontractors to design a new launch facility at the Kennedy Space Center supporting NASA's Artemis Mission.

Hartman began at Bechtel as an intern in 1982 and joined the company full time in 1983 as a junior engineer on the Grand Gulf Nuclear Station project in Mississippi. His career includes leadership roles related to nuclear, thermal, and renewable energy systems, including distributed control systems, instrumentation and controls, and facilities.

Hartman was elected a principal vice president in 2013 and senior vice president in 2020. He holds a bachelor's degree in electrical engineering from the University of Tennessee, Knoxville. He is a certified professional engineer and a member of the International Association of Automation ISA and National Society of Black Engineers.

> "Brian is an exceptional leader with a proven talent for building strong partnerships with customers and creating high-performance teams."
>
> – John Howanitz, president of Nuclear, Security and Environmental business, Bechtel

Hartman succeeds Valerie McCain, who passed away earlier this year. ■

LOOKING FOR MORE WAYS TO CONNECT?

Hanford Events Calendar
See upcoming events and public engagement GO!

Hanford Virtual Tours
Tour the Hanford Site virtually from your device GO!

FOLLOW US ON SOCIAL MEDIA
@hanfordcommunities
Hanford Communities

"SETTLEMENT REACHED..." – CONTINUED (PAGE 3)

The settlement with Heart of America does not amend the Agreed Order, but instead provides clarity on the order's requirements. It also requires Energy to obtain a third-party expert review from Pacific Northwest National Laboratory of a key technical evaluation included in the order.

The technical evaluation under the order requires Energy to explore ways to accelerate the schedule to remove waste from undergrounds tanks T-111 and B-109. This settlement clarifies that this evaluation will include consideration of near-term options such as enhanced salt-well pumping and the use of an in-tank pretreatment system for removing waste from the tanks.

Energy will hold a technical workshop on this evaluation with experts from Pacific Northwest National Laboratory for a third-party review and include an expert chosen by Heart of America Northwest.

Details about all of the components of the Agreed Order are available on Ecology's leaking tanks webpage.

As Ecology continues working with Energy to implement the Agreed Order, there will be opportunities for the public to review the plans and provide input. Details about these upcoming public involvement opportunities can also be found on the same webpage. ■

HANFORD MAKES PROGRESS RETRIEVING TANK WASTE, PREPARES FOR FUTURE TRANSFERS

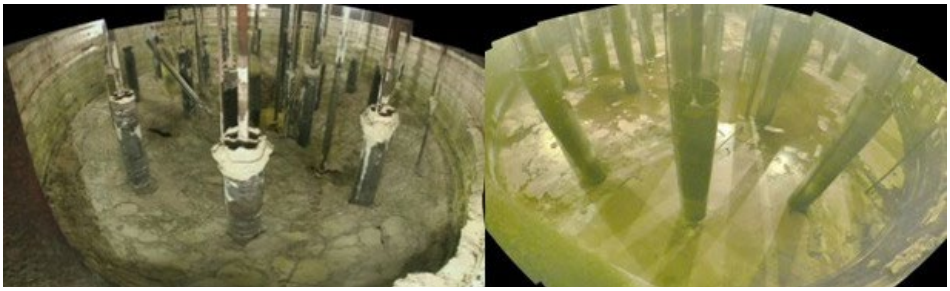
OFFICE OF ENVIRONMENTAL MANAGEMENT | Published April 18, 2023

RICHLAND, Wash. – Hanford Site workers continue to make headway dissolving solid waste in a large underground storage tank in a campaign to remove and transfer 426,000 gallons of radioactive and chemical waste to a newer double-shell tank for safe storage until the waste is treated.

Meanwhile, field crews are getting several other tanks ready for future waste retrieval campaigns.

Since starting retrieval operations on single-shell Tank AX-101 in January, the team with EM Office of River Protection (ORP) contractor Washington River Protection Solutions has removed 35% of tank waste.

"Removing the waste from the single-shell tanks and upgrading the aging infrastructure in the tank farms is a top priority for the Department of Energy," said Delmar Noyes, ORP assistant manager for Tank Farms Project. "It is a necessary step to protect the community and the Columbia River, and to advance our mission to reduce risk on the site."



These photos were taken inside single-shell Tank AX-101 before Hanford Site workers started removing radioactive and chemical waste from it in January. Crews have removed 35% of the tank waste.

Tank AX-101 is the last of four tanks in the AX Farm to be retrieved. When completed, AX Farm will be the second tank farm at Hanford where retrieval operations have been completed.

Crews are preparing other tanks for retrieving and receiving waste. Workers were recently trained on new tools to make it safer and more efficient to remove a contaminated pump from double-shell Tank AY-101. The training readies the workers for success as they prepare the tank to receive waste in the future.

Workers continue to set up the six tanks in the adjacent A Farm for waste retrieval operations by removing outdated equipment and installing new retrieval systems and infrastructure. To retrieve waste from one of the tanks, A-106, workers will drill a hole through the top of the underground tank to install retrieval equipment. Workers at the Cold Test Facility are building a mock-up to test the cutting system, which is designed to help protect workers from radiological exposure when they drill into the tank.

"We have talented team members who demonstrate a commitment to efficiency and innovation and approach their work with a sense of pride and accomplishment," said Peggy Hamilton, WRPS Single-Shell Tank Retrievals manager. "They work together to safely and seamlessly transfer waste, moving us forward in the Hanford cleanup mission." ■

An aerial view of the Direct-Feed Low-Activity Waste Facility on the Hanford Site. A new $30 million investment by EM will fund research and technology development to advance the tank waste mission at the Hanford Site.

EM INVESTS $30 MILLION IN HANFORD TANK WASTE RESEARCH & DEVELOPMENT

OFFICE OF ENVIRONMENTAL MANAGEMENT
Published June 13, 2023

A new $30 million investment by EM will fund research and technology development led by DOE's national laboratories aimed at better addressing tank waste at the Hanford Site.

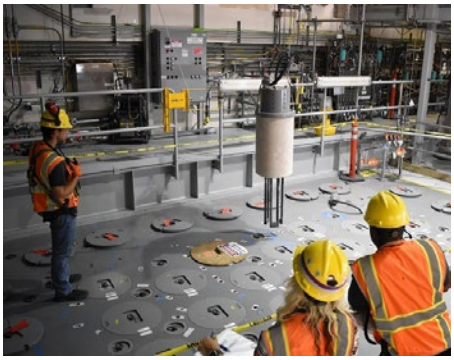
"With tank waste at sites like Hanford driving EM's environmental risk and liabilities, we have a responsibility to evaluate options that could shave decades off the current schedule, reduce project risks and save billions — without sacrificing safety or effectiveness," EM Senior Advisor William "Ike" White said.

The investment in the Hanford tank waste mission is based on priorities outlined in the Hanford Tank Waste R&D Roadmap developed by the Network of National Laboratories for Environmental Management and Stewardship. EM incorporated input from the EM Advisory Board in the implementation of the roadmap.

The $30 million will be used for research activities to evaluate options and add new tools that could be used to advance the tank waste mission.

"As we keep moving towards immobilizing some Hanford tank waste in glass via the Direct-Feed Low-Activity Waste system, we are also looking at how to develop breakthrough technologies that will improve efficiency, reduce lifecycle cost and accelerate the schedule for the Hanford tank waste mission," said Ming Zhu, EM senior advisor for laboratory policy.

The targeted investment is consistent with recommendations made by the U.S. Government Accountability Office, National Academy of Sciences, DOE national laboratories and others. It represents one of several steps EM is taking to identify and analyze technologies and other opportunities to get waste safely out of tanks, treated and disposed of sooner, driving down risks to workers, the public, and the environment.



Workers with the Waste Treatment and Immobilization Plant tour and learn about Melter 1 at the Low-Activity Waste Facility on the Hanford Site. Tank waste will be mixed with glass-forming materials and heated in melters in a process known as vitrification, or immobilization in glass.

EM has solicited proposals from the national laboratories on ideas that could help advance the Hanford tank waste mission in the near term and solutions that could impact the long-term cost and schedule.

Focus areas of proposals are to include:

- waste retrieval, transport and tank closure;
- pretreatment;
- immobilization and disposal;
- secondary waste treatment; and
- crosscutting research with the potential to substantially reduce the total cost and duration of the mission.

The national laboratories are encouraged to partner with universities and colleges, including minority serving institutions, and industry in their proposals.

EM anticipates awarding funding to selected national laboratory teams by the end of September. ■