U.S. DEPARTMENT OF ENERGY | OFFICE OF ENVIRONMENTAL MANAGEMENT

Hanford Effluent Treatment Facility Puts Upgrades to the Test

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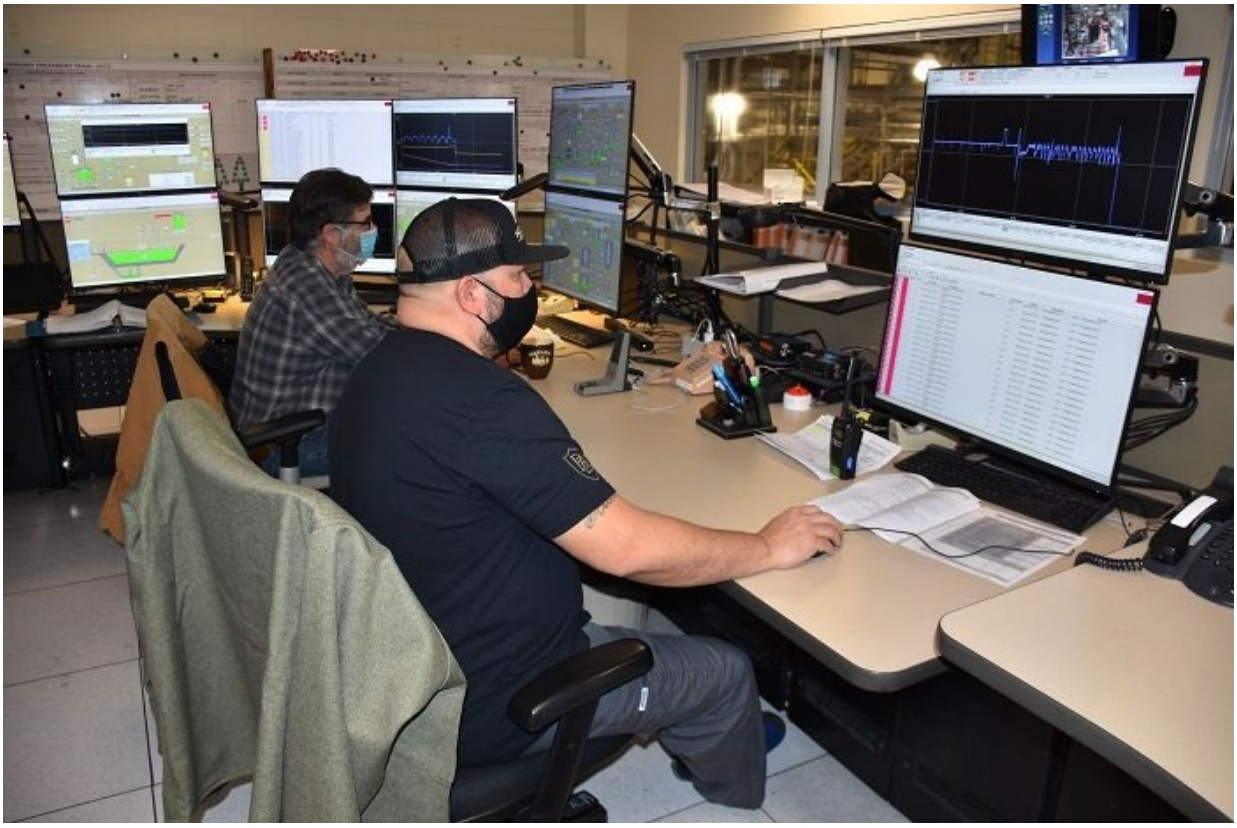
This aerial photo shows the Effluent Treatment Facility, at left, and the four basins where wastewater from Hanford Site projects is stored before it is processed. Approximately 1 million gallons of wastewater are expected to be treated during the current campaign.

RICHLAND, Wash. – After another year of **extensive equipment upgrades**, **EM** Office of River Protection (ORP) tank operations contractor Washington River Protection Solutions (WRPS) is conducting its fiscal 2022 processing

campaign at the **Hanford Site**'s Effluent Treatment Facility (ETF) with a goal to process approximately 1 million gallons of wastewater over the next few months.

The facility removes radioactive and hazardous contaminants from wastewater generated by tank waste activities, groundwater projects, solid waste disposal facilities and other Hanford cleanup activities.

"The resumption of facility operations is important to the Hanford Site cleanup mission," said Bibek Tamang, **ORP** program manager. "Enhancements to the facility will also be critical to the success of Hanford's tank waste treatment mission."



Washington River Protection Solutions nuclear chemical operators George Gilmour, back, and Clint Davidson, front, monitor readings in the Effluent Treatment Facility control room at the Hanford Site. After extensive equipment upgrades, the facility is conducting its fiscal 2022 wastewater processing campaign.

The ETF is one of several Hanford facilities being upgraded to support the Direct-Feed Low- Activity Waste (**DFLAW**) Program for treating tank waste by immobilizing it in a glass form. When fully operational, Hanford's **Waste Treatment and Immobilization Plant** will be the primary generator of liquid waste to be treated by the ETF.

"The upgrades and additions of some new equipment will increase the Effluent Treatment Facility's capability, efficiency and reliability to handle the

increase in wastewater volume," said Tamang. "When working at full capacity, the Waste Treatment and Immobilization Plant is expected to produce as much as 5.4 million gallons of effluent per year that will need to be treated at the Effluent Treatment Facility."

The Effluent Treatment Facility is one of several Hanford Site facilities being upgraded to support tank waste treatment. The facility's current wastewater treatment campaign will test new equipment to ensure it is ready to carry out its mission when 24/7operations to treat tank waste begin.

Annual wastewater treatment totals in the past have varied as Hanford cleanup work has progressed. The ETF processed 3.2 million gallons of wastewater during its last campaign, which ended in February 2021, and between 1 million and 4 million gallons in each of the three previous years.

"We will be seeing longer and larger processing campaigns when tank waste treatment begins," said Brandon McFerran, ETF manager for WRPS. "Testing the new equipment and components during this year's processing campaign will give us lessons learned for the years ahead."

Since beginning operations in 1995, the facility has processed more than 330 million gallons of contaminated wastewater to remove radioactive and chemical waste.

This is the third year of renovations and modernization of the nearly 30-year-old facility. Once this year's wastewater treatment campaign is completed,

ETF will undergo a final round of improvements to accommodate future DFLAW needs.