EM UPDATE

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

# Progress Upgrading Hanford Facilities to Support Tank Waste Treatment

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**An aerial view of the Effluent Treatment Facility on the Hanford Site, where workers are completing the final upgrades needed for the Direct-Feed Low-Activity Waste Program to treat tank waste.**

**RICHLAND, Wash.** – After several years of renovations and upgrades, the **Hanford Site**'s **Effluent Treatment Facility** (ETF) is nearly ready for its key role in treating contaminated wastewater from direct-feed low-activity waste (DFLAW) operations.

**EM Office of River Protection** (ORP) tank operations contractor Washington River Protection Solutions (WRPS) finished construction on nine DFLAW upgrades at the ETF last year and is on schedule to complete the final improvements this spring. The new equipment will support processing additional wastewater that will be created by the

**Waste Treatment and Immobilization Plant** (WTP) and other facilities during tank-waste treatment.

“We will see longer and larger processing campaigns at the ETF when DFLAW operations begin,” said Bibek Tamang, ETF program manager for ORP. “The upgrades will increase the capability, efficiency, and dependability of the facility, which is needed for 24/7 tank-waste treatment operations.”

**Equipment in this portable electrical facility will distribute additional power needed to run the many upgrades at the Effluent Treatment Facility.**

The construction projects completed last year include a system that will collect and filter the air from processing equipment and tanks inside the ETF. Crews added another filtration system, along with a system to remove carbon dioxide gas in wastewater from the WTP. They also replaced aging motor controls, added new ones, and brought additional power to the ETF to support the many facility upgrades.

Workers also upgraded hardware and software in the facility’s monitoring and control systems so the ETF can better communicate with other site facilities during operations. This communication is important to the DFLAW Program, which links together highly interdependent and integrated systems and facilities in the tank-waste treatment process.

The WTP is expected to transfer as much as 5.4 million gallons of wastewater per year to the ETF from vitrifying or immobilizing in glass, low-activity tank waste. Hanford's **Integrated Disposal Facility** (IDF), where containers of vitrified waste will be disposed of, will add another 1.2 million gallons of leachate, which is rain and dust-suppression water, annually during DFLAW operations. The IDF is designed to keep the environment safe by isolating waste and leachate through an engineered liner and collection system.

In addition to preparing the ETF to receive additional volume, the contractor has also been expanding the capacity of the nearby Liquid Effluent Retention Facility (LERF). Late last year crews finished constructing a fourth **7.8 million-gallon storage basin** to receive and store wastewater prior to treatment at the ETF.