

The logo for DOE NEWS. The letters 'DOE' are in a large, blue, serif font, and 'NEWS' is in a smaller, blue, sans-serif font. The text is positioned below several horizontal blue lines.

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U.S. Department of Energy Releases Two Reports on Hanford's Waste Treatment Plant

REPORTS ANALYZE THE MATURITY OF TECHNOLOGIES AND EARLY OPERATION OF THE LOW-ACTIVITY WASTE FACILITY

The U.S. Department of Energy (DOE) today released two reports assessing technical and schedule progress at the Hanford Waste Treatment Plant (WTP). The first report assesses the maturity of technologies in three of the Waste Treatment Plant's key processing and support facilities, and the second report analyzes scenarios for the early start-up and operation of the Low-Activity Waste (LAW) vitrification facility in advance of completion and startup of the WTP's other separations and treatment facilities.

The Technology Readiness Assessment report for the Analytical Laboratory, Balance of Facilities and LAW vitrification facility concludes that the critical technology elements for these facilities are sufficiently mature to incorporate into the final design. Technology readiness assessments are a best practice used by government agencies such as the Department of Defense to determine the maturity of critical technologies. DOE's Office of River Protection (ORP) conducted the assessment to benchmark the maturity of technologies to be used in the LAW vitrification facility, Analytical Laboratory and Balance of Facilities, and provide greater confidence in the design, cost and schedule activities for those facilities.

The second report released by DOE, the LAW First analysis, evaluates operating the LAW vitrification facility prior to the completion of the other WTP facilities, with initial operations starting between 2013 and 2015. The report was also commissioned by ORP. In order to assess a full range of options for completing and operating the WTP and removing and treating waste from aging underground tanks, ORP directed its two prime contractors – CH2M HILL Hanford Group and Bechtel – to evaluate options for starting the LAW vitrification facility when it is completed and certified as operational. This is in advance of the completion and operations of the remaining WTP facilities scheduled for 2019.

The report estimates that approximately 8 percent of the 42 million gallons of low-activity tank waste can be treated between early start of the LAW vitrification facility and start-up of the rest of the WTP in 2019. Early startup of the LAW vitrification facility could also provide useful lessons-learned for the startup of the other WTP facilities, and create a base of trained and experienced operational staff.

Under the scenario analyzed, startup of the LAW vitrification facility early would require approximately \$160 to \$220 million for the construction of a pretreatment capability for the LAW vitrification facility. The operations cost of the LAW vitrification facility would be approximately \$760 million for the five-year period.

The analyses in this report, along with other treatment options will be addressed in a Waste Treatment Mission Completion Alternatives Study scheduled for completion this summer. The Mission Completion study will evaluate multiple tank waste treatment approaches, including early LAW vitrification operations and supplemental LAW treatment technologies, including the related costs, schedules and risks with each approach.

The Technology Readiness Assessment can be found at:

http://www.hanford.gov/orp/uploadfiles/LBLTRA_Final_07_03_08adobe.pdf, and LAW First reports can be found at [http://www.hanford.gov/orp/uploadfiles/Start%20LAW%20First%20Study%20\(RPP-29981%20Rev%201\)%203-29-07.pdf](http://www.hanford.gov/orp/uploadfiles/Start%20LAW%20First%20Study%20(RPP-29981%20Rev%201)%203-29-07.pdf), in the section titled Public Information, under Documents and Presentations.

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