

Glass and Grout

Myth vs Fact



Work is underway at the Hanford Site to treat and permanently dispose of 56 million gallons of radioactive and chemical waste stored in 177 underground tanks. Under legal agreements between the TPA agencies (see *second page for definitions and acronyms*) this tank waste will be treated in two different ways:

- HLW and a portion of LAW will be transformed into a stable glass form through a process called vitrification.
- A portion of LAW will be encapsulated in a concrete-like mixture, called grout.

Myth 1: Hanford's tank waste must either be all vitrified or all grouted.

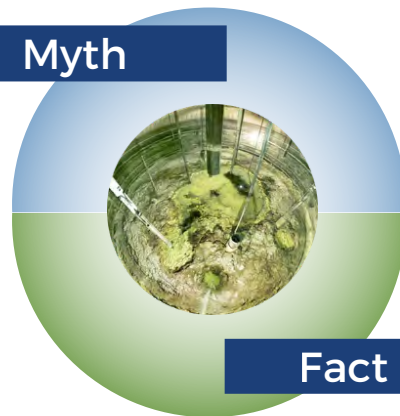
Myth 2: Ecology does not support grouting low-activity tank waste.

Myth 3: Grouted tank waste can be disposed of at Hanford.

Myth 4: WTP can be converted to a grouting facility.

Myth 5: Grout is substantially cheaper and faster than vitrification.

Myth



Fact

Fact 1: Both treatment methods will be used for different types of waste. This gets more waste out of tanks, treated, and disposed of sooner.

Fact 2: Ecology supports grouting LAW for offsite disposal at facilities with more robust geology. In January 2025, the agencies agreed to grout LAW from 22 tanks.

Fact 3: Studies have shown that disposing of grouted tank waste at Hanford will have an unacceptable impact to groundwater. Other offsite facilities have more suitable geology.

Fact 4: WTP was specifically designed for vitrification of tank waste. Reconfiguring it would cost billions and take years.

Fact 5: The price tags are similar when factoring in transportation and disposal costs.

ADA Accessibility

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Acronyms

TPA: Tri-Party Agreement which is the legal binding agreement governing Hanford cleanup

TPA Agencies: Washington Department of Ecology, the U.S. Department of Energy, and the U.S. Environmental Protection Agency

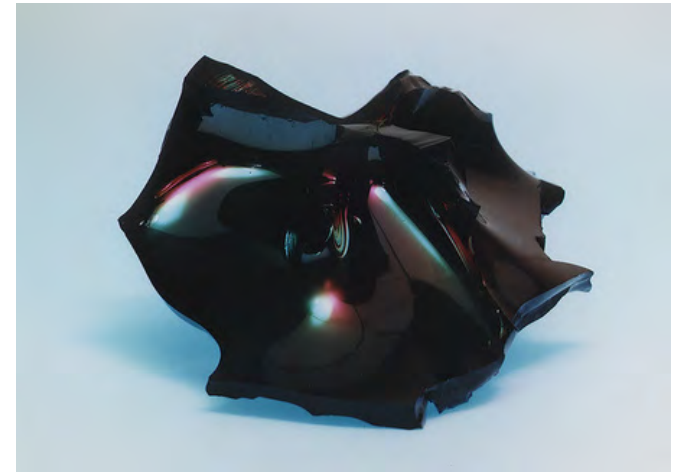
HLW: High-level waste

LAW: Low-activity waste

WTP: Waste Treatment and Immobilization Plant

Background

- Energy is continuing to retrieve waste from single-shell tanks and move it to safer double-shell tanks. Waste needs to be removed from double-shell tanks and treated. This will free up space and allow more waste from single-shell tanks to be retrieved.
- Much of this waste will be pretreated and then vitrified. This treated LAW will be disposed of at Hanford, while vitrified HLW will go to an offsite deep geologic repository.
 - LAW vitrification began October 2025.
- LAW from 22 tanks will be immobilized in grout. This grouted tank waste will be disposed of at offsite disposal facilities outside of Washington state.



Sample of vitrified material
Photo courtesy of Energy



Sample of solidified grout
Photo courtesy of Energy

For more information see [High-level waste at Hanford](https://ecology.wa.gov/waste-toxics/nuclear-waste/hanford-cleanup/high-level-nuclear-waste-definition)¹

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