

Test Bed Initiative at Hanford



The Washington State Department of Ecology is seeking public comment on a draft permit for the U.S. Department of Energy's (Energy) proposed 2,000-gallon Test Bed Initiative (TBI). TBI will demonstrate the feasibility of an alternative option for the retrieval, treatment, and disposal of a portion of the Hanford Site's low-activity tank waste.

During the proposed TBI Demonstration, Energy will deploy an in-tank pretreatment system (ITPS) in a double-shell tank. This system will separate and pretreat about 2,000 gallons of low-activity tank waste.

The pretreated waste would be stored in six U.S. Department of Transportation compliant shipping containers. Sampling will be conducted to confirm compliance with shipping requirements.

Then, the waste will be shipped offsite for grouting and disposal at Resource Conservation and Recovery Act (RCRA) permitted facilities outside Washington.

ECOLOGY'S ROLE

The proposed TBI Demonstration requires a Research, Development, and Demonstration (RD&D) permit from Ecology for the retrieval and pretreatment activities that will occur onsite at Hanford.

This draft RD&D permit is anticipated to be effective for one year and limits the demonstration to 2,000 gallons. The public comment period for this draft permit begins March 11, 2024.

The proposed demonstration also requires a treatability variance from EPA. This variance, pending issuance, would satisfy certain land disposal requirements in our agency's RD&D permit.

To request an ADA accommodation, contact Ecology by phone at 509-372-7950 or email at Hanford@ecy.wa.gov, or visit <https://ecology.wa.gov/accessibility>. For Relay Service or TTY call 711 or 877-833-6341.

BACKGROUND

Energy performed an initial three-gallon TBI Demonstration under a RCRA treatability study in 2017 as a proof-of-concept. The study included:

- Pretreatment and shipment certification for three gallons of tank waste.
- Treatment of the pretreated waste using a grouting process at an offsite RCRA-permitted facility in Richland, Washington.
- Transport and permanent disposal of the grouted waste at an offsite RCRA-permitted disposal facility in Texas.

WHY IT MATTERS

- This demonstration could prove a valid path to final appropriate offsite disposal of grouted low-activity tank waste.
- Successful deployment of ITPS could also mitigate space limitations in the double-shell tanks, and accelerate timelines for single-shell tank waste retrieval.

PUBLIC COMMENT PERIOD

March 11 - April 25, 2024

Nuclear Waste Program's public comment page
[Ecology.wa.gov/NWP-comment-periods](https://ecology.wa.gov/NWP-comment-periods)

March 20 informational meeting
<http://tinyurl.com/TBI-Public-Meeting>