
U.S. DEPARTMENT *of* ENERGY

# Office of Environmental Management

*Hanford Field Office*

# Transportation Pathway for Effluent Management Facility Concentrate

Prepared for:

Oregon Hanford Cleanup Board Meeting

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U.S. Department of Energy, Hanford Field Office

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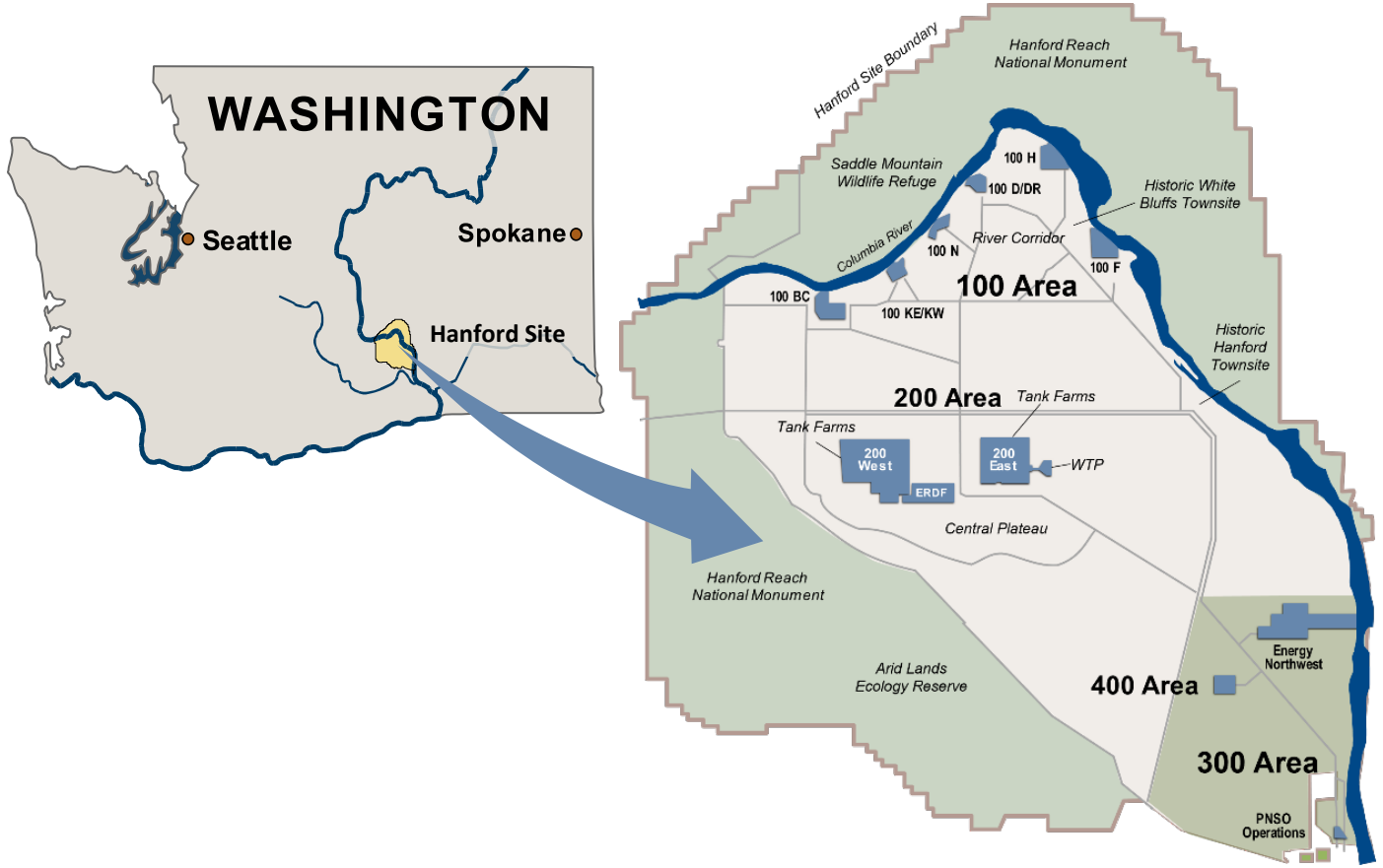
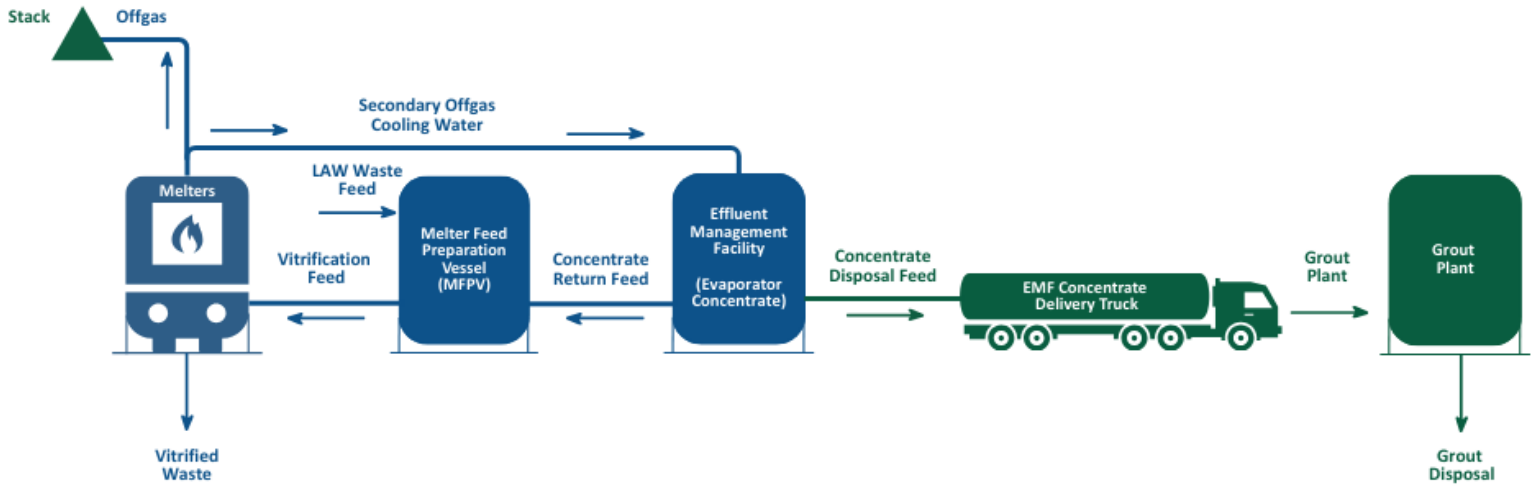
# Objective

- Utilize a safe and efficient transportation pathway for a byproduct from the Effluent Management Facility (known as EMF concentrate) generated during tank waste vitrification.
- Safely solidify the byproduct in grout and ship it out of Washington state for disposal in a commercial facility as solidification in glass is not required



# Benefits

- Enable continued tank retrievals, treatment and solidification in glass
- Maximize throughput of WTP – enabling it to process up to 20 percent more tank waste and keep the melters focused on turning tank waste to glass
- Increase operational flexibility and efficiency
- Enhance ability to meet legal commitments related to tank retrievals
- Help expedite remediation and revitalization of Hanford via a dual glass-plus-grout outcome driven approach
- Maintain safety and regulatory compliance



# Waste Characterization and Certification

- EMF concentrate is rigorously analyzed to ensure it meets regulatory and safety requirements.
- Verification against the licensed disposal facility's Waste Acceptance Criteria (WAC) confirms compliance.
- Material is classified as Department of Transportation (DOT) Class 7 "Radioactive Material," ensuring proper handling, labeling and transport protocols.

Example shipping container of grouted waste

# Waste Transport Practices and Compliance

- Solidified waste is shipped in double-walled, steel DOT IP-2 containers (19’ x 7’ x 7’, 5,000-gallon capacity), inspected for safety and compliance.
- Shipments average 7,500 gallons/month.
- Expected dose rate on contact with outside of the IP-2 container is less than 0.5 millirem per hour for shipments from Hanford to Richland for grouting.
- Expected dose rate on contact with outside of containers used for transporting treated grout from Richland to UT for disposal is zero millirem.


Example shipping container of liquid waste

# Shipment Controls and Security

- Dedicated carriers with extensive experience and proper licensing are utilized to safely and compliantly transport radioactive waste.
- Drivers hold commercial driver's licenses with Hazmat endorsements and complete specialized training in radioactive material transport.
- Transport vehicles are equipped with advanced safety features, reliable communication systems, and required placarding for proper identification and operational safety.
- Comprehensive security protocols are implemented throughout transit to prevent unauthorized access or tampering, maintaining the integrity and safety of each shipment.

# Public Involvement Opportunity

- DOE is holding a 60-day public comment period on a proposed Class 2 modification to the Hanford Dangerous Waste Permit through April 26, 2026.
- This comment period covers a permit change that would allow EMF concentrate to be solidified in grout and shipped out of Washington state for disposal.
- A public meeting is scheduled for March 24 at 5:30 p.m. PT at the Richland Public Library, 955 Northgate Dr., Richland, WA 99352.
- Submit written comments at https://bit.ly/4rqodjJ or by mail to:

Washington State Department of Ecology
3100 Port of Benton Boulevard
Richland, WA  99354

# Questions?