EPA REGION 10

ISSUE SUMMARY:

- The Department of Energy's Hanford Site is perhaps the largest and most complex environmental cleanup site in the United States. It is one of multiple sites being cleaned up and closed within DOE's nuclear weapons complex.
- Cleanup activity is focused on decommissioning nine former production reactors along the river corridor, addressing 400 square kilometers (150 square miles) of contaminated groundwater, and cleaning up thousands of waste sites across the facility.
- Hanford has the largest inventory of high-level radioactive waste within the weapons complex, including 56 million gallons of waste in tanks from the chemical processing of spent fuel from plutonium production, as well as unprocessed spent fuel. Hanford also manages substantial inventories of mixed, transuranic, and low-level wastes.
- DOE's current budget for Hanford is approximately $3B/year, and funds cleanup, facility operations, waste management, and the construction and operation of the Waste Treatment Plant.

KEY POINTS:

- The Hanford Site covers 580 square miles in south-central Washington adjacent to the Columbia River. Work at the site is focused on waste management and environmental cleanup.
- The Federal Facility Agreement and Consent Order (aka Tri-Party Agreement) was signed in 1989 by DOE, EPA, and the Washington State Department of Ecology. The Tri-Party Agreement governs CERCLA and RCRA cleanup.
- Ecology, with EPA support and oversight, is the lead regulatory agency for RCRA permitting and waste management issues, including tank closure and waste treatment.
  - If DOE elects to grout tank waste, the EPA RCRA program will play a lead role in out-of-state disposal of grouted waste.
- Lead regulatory agency responsibilities for CERCLA cleanup are divided between Ecology and EPA.
- Substantial progress toward the CERCLA cleanup has been made at Hanford:
  - More than 1,300 waste sites cleaned up, including most of the 100 and 300 Areas;
  - Almost 900 facilities demolished and disposed;
  - 19 million tons of contaminated soil and debris deposited in the on-site landfill;
  - 30 billion gallons of contaminated groundwater treated.
- Substantial work remains:
  - Cleanup of an estimated 700 waste sites and 800 facilities;
  - Operation of groundwater pump and treat systems is expected to last 25+ years;
  - Long-term management of spent fuel, transuranic wastes, and other highly radioactive wastes;
  - Construction of the Waste Treatment Plant to vitrify tank waste (currently scheduled for initial operation in 2025), with expansion and operation projected to last 20+ years;
  - Complete closure, including waste retrieval, of 149 aging single-shell tanks.

ONGOING/UPCOMING REVIEWS:

- FY 2025: Finalize Agreement changes to implement "holistic negotiations";
  Startup of the Waste Treatment Plant to begin processing of low-activity portions of tank waste;
  Issue three proposed plans soliciting public comment; and
  Renegotiate Tri-Party Agreement major milestones that govern cleanup.
- FY 2026: Finalize three Records of Decision.

KEY EXTERNAL STAKEHOLDERS:

☒ Congress ☐ Industry ☒States ☒ Tribes ☒ Media ☒ Other Federal Agency
☒ NGO ☒ Local Governments ☒ Public

MOVING FORWARD:

- In January 2019, DOE updated its estimated cost to complete Hanford cleanup from $107 billion (2016 estimate) to a range of $323 - $677 billion, and the time to complete cleanup was extended to 2095. The largest contributor to the increased cost estimate is the tank waste cleanup, for which Ecology is the lead regulator through its Dangerous Waste Program.
- The Tri-Parties completed "holistic negotiations" to revise schedules and work requirements associated with underground tank closure and waste treatment. The results of the negotiation will be implemented via changes to a consent decree between DOE and Washington State and via changes to the Tri-Party Agreement. The Tri-Parties are considering the comments received during the public comment period and during Tribal Consultation before finalizing consent decree and then the Tri-Party Agreement.
- Significant issues remain regarding waste classification and applicable RCRA land disposal restriction treatment standards associated with high-level mixed tank waste.
- The tank waste mission will require additional funding in order to implement and comply with the negotiated agreements.
- There is significant cleanup work left for soil and groundwater under CERCLA. Without an increase in the total Hanford budget, DOE will continue to shift funding from this important Hanford cleanup mission and DOE will miss or attempt to renegotiate CERCLA milestones.
- EPA is committed to safe and efficient cleanup at Hanford and will continue to work with DOE, Ecology, and the federally recognized Tribes (Yakama, Umatilla, and Nez Perce) to find further innovations.

LEAD OFFICE/REGION: REGION 10 SEMD AND LCARD OTHER KEY OFFICE: FFRRO, FFEO, ORC

Hanford site