

Hanford Tanks



Work is ongoing in Hanford's single-shell tanks (SSTs) in an effort to meet the Consent Decree, which calls for complete retrieval of tank waste from 10 C-Farm SSTs by September 30, 2014. Following is the status of each tank as of May 23, 2014.

Tank C-101 retrieval operations have reached the limit of technology for two established technologies, modified sluicing and high-pressure water. Both use the extended reach sluicer system. Retrieval work has stopped for now, awaiting determination from Ecology if a 3rd retrieval technology should be utilized. The residual waste was calculated at about 5,000 gallons (667 cubic feet). The U.S. Department of Energy (USDOE) may request foregoing a third retrieval technology, based on:

- A limited ability of available technologies to remove more waste.
- Very minimal risk reduction if more waste is retrieved.
- Increased worker exposure.

Sluicing retrieval operations in Tank C-102 began during the last week of April. About 31% of the waste has been removed. The assumed starting waste volume is 316,000 gallons (42,000 cubic feet). Extended reach sluicers will be used to remove the top waste, and then longer reach sluicers will be installed. Due to recent vapor releases, operations are restarting with personal protective equipment available to workers.

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Waste retrieval operations in C-104 have been completed, and the residual waste is estimated to be 217 cubic feet. The retrieval actions are summarized in a Retrieval Data Report, which details the residual waste based on a waste sample and the retrieval process.

C-105's Mobile Arm Retrieval System-vacuum (MARS-V) equipment was placed into the tank. Preparations for waste retrieval are ongoing. This will be the first use of the MARS-V unit. Retrieval is expected to start in June and continue through September 2014. About 105,000 gallons (14,000 cubic feet) of waste remain in this tank.

Waste retrieval from C-107 has stopped after use of the Mobile Arm Retrieval System-Sluicer (MARS-S) with supernatant and high pressure water spray. Approximately 16,000 gallons (2,100 cubic feet) of waste remain in this tank. A chemical retrieval process (water dissolution) was selected as the third technology. The MARS-S arm was successful in moving solids to the slurry pump, but the large size of the solid particles resulted in inefficient removal of the solids with the pump. Water dissolution is expected to reduce the phosphate waste solids to a pumpable size and should enhance the retrieval of other water-soluble constituents, reducing the risk to groundwater.

Waste retrieval operations for C-108 are completed. Modified sluicing and chemical dissolution technologies removed all but 3,400 gallons (460 cubic feet) of waste. Ecology has approved a USDOE request to forego a third retrieval technology because removing more waste is not practical and the remaining waste poses a relatively small risk. Ecology received the Retrieval Data Report.

C-109 waste retrieval is complete. About 1,700 gallons (230 cubic feet) of residual waste remain, less than the waste residual goal of 360 cubic feet. Ecology received the Retrieval Data Report.

C-110 waste retrieval operations are complete. About 2,100 gallons (280 cubic feet) of waste remain in this tank. Ecology received the Retrieval Completion Report.

C-111 waste retrieval is expected to restart with two enhanced reach sluicers in June. About 35,000 gallons (4,700 cubic feet) of waste remain in this tank.

The C-112 hard-to-remove waste heel operation was terminated. The modified sluicing and caustic additions have reached the limit of technology. Sampling activities are being planned this month to determine what the waste contains. About 11,000 gallons (1,500 cubic feet) of waste remain in this tank.



*C-Farm Tank Operations
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Contact us!

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