



# THE HANFORD SITE

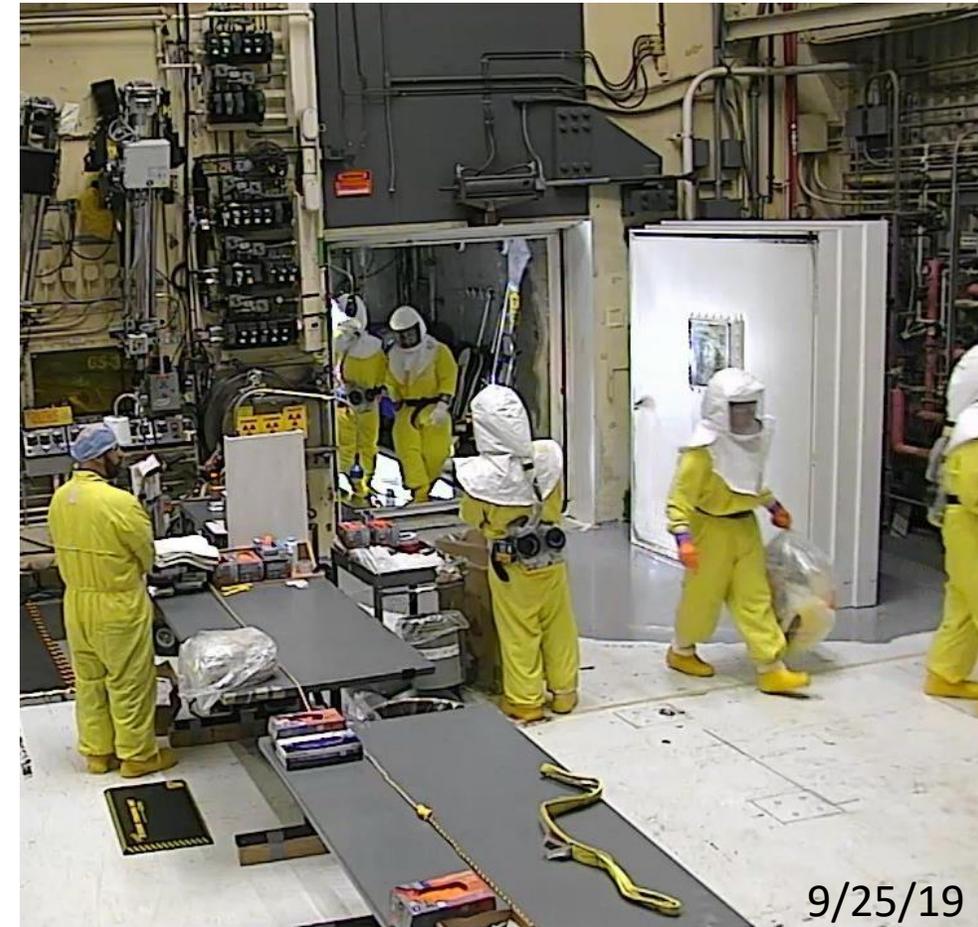
## 324 Building Status Update

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DOE Richland Operations Office

- Nov. 14 Stop Work in 2019
- Groundwater Monitoring

- On Nov. 14, 2019, low-level skin contamination was identified on an employee exiting the airlock during the doffing process
- A stop work on radiological activities at the 324 Building was immediately issued – even though this event was minor and contained, there had been a trend of minor events influencing the stop work
- The employee received two bioassay tests and neither indicated an uptake or internal dose



324 Building REC Airlock Entrance

- Unacceptable trend of low-level contamination events in radiologically controlled areas
- 12,000+ entries; 99.9% without incident
- 20,000 future entries required
- Highly contaminated areas within the facility. Some risks are tied to the work; that is why the emphasis is on worker safety, procedures, and practices.

- Goal: Reduce the number of contamination events at the 324 Building, and continue to maintain within the boundaries (if encountered)
- Resumption Team: CHPRC assembled a highly experienced 12-person team to assess various aspects of the 324 Building project
- Worker involvement and feedback is an integral part of the path forward



Potential Radioactive Contaminants	Sample Results (pCi/L) Well 399-4-15	Sample Results (pCi/L) Well 399-4-16 (new)	MCL Equivalent
Cesium-137	1.02	2.08	200
Strontium-90	1.33	0.206	8

	Sample Results (pCi/L) Well 399-4-15	Sample Results (pCi/L) Well 399-4-16 (new)	Drinking Water Standard
Sum of Fractions	0.17	0.04	1
Cumulative Beta/Photon Emitter	0.69 mrem/yr	0.14 mrem/yr	4 mrem/yr*

\*Calculation of Radiological Dose Based on Calendar Year 2018 Atomic Energy Act Groundwater Monitoring at Hanford, ECF-Hanford-19-0012, <https://pdw.hanford.gov/document/AR-03051>.

- All results are below the drinking water standards
- Results for all analytes are available at <https://ehs.hanford.gov/eda>

Suite of Analytes
Americium-241 Plutonium-238, Plutonium-239/240
Cesium-137, Cobalt-60
Strontium-90
ICP Metals: Antimony, arsenic, barium, beryllium, cadmium, chromium (total), cobalt, copper, lead, manganese, nickel, selenium, silver, strontium, tin, vanadium, zinc
Uranium (metal)
pH

- Anticipate resuming radiological work at the 324 Building in February 2020. It is work with some hazards that will be controlled with recent lessons learned.
- Groundwater sample results from downstream of the 324 Building are within drinking water standards
- The safety of the workforce and protection of the environment and the public are paramount as we prepare to begin removing highly radioactive soil from beneath the 324 Building