

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 5, 2020

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending June 5, 2020

Tank Farms: A safety-significant (SS) liquid level detector switch for the AP-102 double-shell tank annulus failed resulting in both local and remote high level alarms which required shift personnel to enter applicable limiting control for operation conditions. The switch remains inoperable pending repair. Operators will periodically monitor the annulus for buildup of flammable gas until repairs are complete and the system is once again operable.

The Plant Review Committee (PRC) met to discuss new information related to freeze protection exceptions in the Tank Farms safety basis. Specifically, an exception from the requirement of 36" of soil overburden or temperature monitoring of SS piping relies on a heat transfer calculation that may have non-conservative assumptions. New estimates suggest a more detailed thermal model will lead to a negative unreviewed safety question (USQ) determination. However, the PRC voted to declare a potential inadequacy of the safety analysis while a new calculation is developed to support the freeze protection methodology for SS piping, and to prohibit waste transfers in the lines operated under the exception when freezing conditions exist.

Central Waste Complex (CWC): Last week, contractor personnel exited their USQ screening process after reviewing the RL assessment of the current Solid Waste Operations Complex (SWOC) safety basis (see 5/29/2020 report). Their decision was based on the conservatism of the respirable fraction and airborne respirable fraction values used for dose consequences and the fact that RL had not directed CHPRC to follow all guidance in DOE-STD-5506, *Preparation of Safety Basis Documents for Transuranic (TRU) Waste Facilities* rather than DOE-STD-3009, *Preparation of Nonreactor Nuclear Facility Documented Safety Analysis*, for their development of the SWOC safety basis. The contractor subsequently committed to re-evaluating the accident analysis using the bounding material-at-risk guidance in DOE-STD-5506.

Hanford Site: DOE and contractor management continue to follow federal and state guidance to reduce the transmission of the novel coronavirus disease (COVID-19) (see 5/29/2020 report). RL, ORP, PNSO, and all contractors remain in the first phase of their resumption plans. The onsite workforce is increasing as the contractors methodically open additional work locations and activities; the primary focus of initial work onsite is outdoor construction related activities. The DOE ORP Deputy Manager conducted return to work COVID-19 hazard control training for DOE ORP and RL management personnel.

Hanford Fire Department responded to eight wild fires which resulted from lightning strikes over the weekend of May 30. Because of high winds following a thunderstorm that caused some of the fires, one of the fires proved difficult to control and burned approximately 5600 acres in the vicinity of Gable Mountain north of the 200E area. The fire damaged electrical distribution lines which provide power to a communication station causing minor communication disruptions at some site locations. However, the fire did not damage any nuclear facilities and did not affect any radiological sites. Power has been restored to the communication station.