

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 3, 2020

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending January 3, 2020

Tank Farms: A spill of radioactive material occurred from a containment used to support tank sampling. The work instructions provided appropriate direction for this contingency and workers responded correctly. This is the second contaminated spill event inside a tank farm facility within the last two month that resulted from a leak in a glove bag designed and built to support tank sampling operations. Contractor management has scheduled a meeting next week to collect facts related to this event.

Hanford Site: The site experienced two significant wind events this week. One of the wind events made the national news when U.S. Highway 240, which runs through the west side of Hanford site, was blocked by very large tumbleweed accumulations that stranded some drivers for up to eight hours. A Resident Inspector visited waste storage and tank farm sites following the wind events to determine the impact of the events on those facilities. The technical safety requirements for the waste storage areas notes that contribution of vegetation to combustible loading is considered and controlled, but also notes that wind-blown vegetation cannot be controlled effectively on a real-time basis. Consequently, it should be cleaned up as soon as practicable. The tank farm technical safety requirements do not address wind-blown vegetation. The Resident Inspector observed significant tumbleweed accumulations at facility fence lines that facility personnel will need to address, but areas within the facilities (other than the fence lines) are relatively free of tumbleweed buildup. Based on the location of the observed accumulations, and relatively wet conditions, the existing accumulations do not represent a significant fire hazard as long as they are resolved in a timely manner.

Waste Treatment Plant (WTP): The WTP contractor submitted revision 3 of the Low-Activity Waste (LAW) Facility documented safety analysis (DSA) and technical safety requirements (TSR) to ORP for approval. Revision 3 of the DSA aligns the safety analysis with DOE-STD-1228-2019, *Preparation of Documented Safety Analysis for Hazard Category 3 DOE Nuclear Facility*, which is the new safe harbor methodology for nuclear safety analysis under 10 CFR 830 that provides for chemicals identified as standard industrial hazards to be managed under a separate Chemical Safety Management Program rather than under the DSA (see 11/8/2019 report). The contractor also submitted a revised DSA and TSR implementation plan for ORP approval along with the DSA and TSR documents.

The WTP contractor submitted revision 2 of the LAW Facility criticality safety evaluation report to ORP for review and comment. The revised report incorporates fissile mass results from the most recent hazard categorization study for the facility. That study determined that the LAW Facility is a HAZCAT 3 facility. Additionally, the revised report includes descriptions and impacts of the Tank-Side Cesium Removal System, which DOE will use to pretreat feed to the LAW Facility, and which was recently incorporated into the LAW Facility design. The conclusion of the report is unchanged from the previous report, and determined that a criticality at the LAW Facility or Effluent Management Facility is not credible.