

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 11, 2020

TO: Christopher J. Roscetti, Technical Director
FROM: M. Bradisse, B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending December 11, 2020

Waste Treatment and Immobilization Plant: A resident inspector observed a coached drill activity at WTP's Low Activity Waste (LAW) facility. The scenario involved a seismic event, damage to an ammonia reagent system supply line, and a subsequent ammonia release. This was the first coached drill for this crew of emergency response personnel. Following the activity, the drill participants and controllers discussed lessons learned. The resident inspector noted that discussions were candid, participants readily self-identified opportunities for improvement, and drill coordinators presented constructive feedback.

The contractor's Executive Safety Review Board (ESRB) met twice this week, as part of its effort to stand up safety management programs ahead of LAW facility startup. The ESRB reviewed documentation related to the configuration management and plant engineering programs, and voted to move both programs forward. The resident inspector notes that the content of the meetings was thoroughly prepared and the discussion amongst ESRB members was productive.

The contractor held a pre-job briefing for the upcoming Process Hazards Analysis (PrHA) for seismic natural phenomena hazards (NPH) at the High Level Waste (HLW) facility. This effort will reassess HLW accidents using revised information on the current HLW design and other recently performed PrHAs to determine the adequacy of the current NPH control set.

Tank Farms: The tank farms contractor held a Joint Review Group (JRG) meeting to review and approve a work instruction developed to perform work activities at the Liquid Effluent Retention Facility (LERF) Basin 44 under the newly developed Justification for Continued Operations (JCO). This JCO implements new controls due to higher-than-expected material at risk (MAR) in the basin, though Basin 44's hazard category is still indeterminate pending additional work to characterize the basin (see 10/30/2020 report). These controls are focused on protecting assumptions regarding MAR contents and leak rates of LERF waste transfer pumps and piping, protect loaded filter cartridges prior to disposal, and prevent the possibility of fires impacting radionuclide solids in Basin 44. The work instruction will allow the contractor to pump standing water from the cover of Basin 44, change filters, and recirculate and transfer filtered liquids to adjacent LERF basins. These activities will be performed ahead of planned work to repair or replace the Basin 44 cover at a later date. The JRG recommended approval of the work instruction package.

A resident inspector observed an incident command post (ICP) limited drill at the 222-S Laboratory. Several personnel in both the ICP and event scene were evaluated for proficiency. In the scenario, a tornado picked up a Conex box and deposited it onto the laboratory building, causing significant damage to the ventilation intake ducting. Per the scenario, one individual was injured and contaminated, and had to be located and treated. All drill objectives were met.