

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 10, 2021

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca, P. Fox, and P. Meyer, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending December 10, 2021

DNFSB Staff Activity: B. Sharpless was onsite for training and site familiarization.

Liquid Effluent Retention Facility (LERF): The contractor's Plant Review Committee (PRC) held a Control Decision Meeting to discuss the controls necessary to support a new safety basis for the LERF basins. Future operations are expected to increase material-at-risk in the basins to higher than Hazard Category 3 levels. Accident analyses suggest that there are no accidents with significant consequences requiring new controls, however several defense-in-depth controls have been proposed to control solids accumulation in the basin. Though there were some concerns about whether these controls might restrict future operations, the PRC voted to approve these changes.

The contractor held a second Plant Review Committee meeting to review the evaluation of a Potential Inadequacy of the Safety Analysis (PISA) related to the discovery of solids in the transfer piping at the LERF Basins (see 10/29/2021 report). The initial estimate used to declare the PISA assumed the piping between Basin 44 and Basin 43 was half-filled with solids. However, subsequent camera inspections showed smaller accumulations. Based on the new estimated volume and using the radiological estimates developed for a previous Basin 44 JCO for solids accumulation (see 10/23/2020 report), the contractor estimated that the radionuclide content of the accumulated solids remains less than a Hazard Category 3 level. Consequently, nuclear safety representatives did not identify an Unreviewed Safety Question. The PRC recommended approval of the negative determination.

222-S Laboratory: Resident inspectors observed a limited drill designed to evaluate emergency response organization activation and response to a hazardous materials operations emergency involving a fire inside the 222-S building. The drill utilized an incident command post (ICP) and simulated event scene. It was well-conducted and successfully demonstrated timely onsite notification and implementation of protective actions, as well as effective communications. Command and control was effective, and responders demonstrated good conduct of operations in the ICP. The resident inspector also notes that the contractor is now able to provide controllers/evaluators without augmentation from other organizations (see 7/30/21 report).

Building 324: The contractor held an in progress ALARA review (IPAR) to examine the circumstances related to a violation of a radiological work permit (RWP). The language in the RWP specified the use of a single set of personal protective equipment (PPE) for entry into a contamination area. However, the language did not specify use of a PPE hood. During the IPAR, the radiological work planner who developed the RWP indicated that he had expected hoods to be worn. However, radiological control technicians (RCT) noted that the planner's expectation and the language in the RWP was different than what was instituted after a similar event earlier this year, resulting in their confusion. Other participants asked whether RWP language that describes a single set of PPE was also ambiguous at other facilities; the resident inspector had previously checked RWPs at other facilities run by the same contractor and noted that RWPs clearly delineate what constitutes a single set of PPE and whether hoods are required.