

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 18, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending October 18, 2019

DNFSB Staff: Members of the Board's staff held a teleconference with representatives from DOE ORP and the United States Geological Survey to perform a factual accuracy review of the results of the staff's recent review of a volcanic ashfall model that was developed for Hanford site. ORP still intend to use the ashfall design criteria contained in HNF-SD-GN-ER-501, *Natural Phenomena Hazards, Hanford Site Washington, Revision 2*. This approach is conservative since the ashfall load and airborne concentration criteria contained in HNF-SD-GN-ER-501 are generally higher than those determined by the model. However, ORP has also provided the model results to the Waste Treatment Plant (WTP) contractor as a reference for evaluation and determination regarding how to appropriately include model results that may differ from the volcanic ash criteria in HNF-SD-GN-ER-501, Rev. 2, in the WTP design.

Members of the Board's staff held a teleconference with representatives from DOE RL and the Plateau Remediation contractor to discuss technical safety requirement (TSR) compliance and reporting. The discussion is part of a complex wide review of TSR implementation.

Canister Storage Building (CSB): The contractor formally implemented a new Documented Safety Analysis (DSA) for CSB that replaces the facility's previous Final Safety Analysis Report. This new safety basis is the first at the Hanford site developed in compliance with the DOE-STD-3009-2014, *Preparation of Nonreactor Nuclear Facility Documented Safety Analysis*. The DSA update also closes conditions identified in three potential inadequacies of the safety analysis (see 10/27/2017 and 12/1/2017 reports). Most significantly, this update will allow the facility to discontinue enhanced monitoring of a multi-canister overpack that had been previously classified as having an elevated leak rate.

200 West Area: During normal operations at the site, the Patrol Operations Center (POC) received a high chlorine alarm signal from the 283W Water Filtration Plant, a non-radiological facility with a sizable inventory of chlorine for water treatment. The POC activated a take cover in the 200 West area, but facility personnel had not seen either a low or high level chlorine alarm, nor had the area's audible chlorine alarm activated. First responders were able to confirm there was no evidence of a chlorine release in or around the facility and the take cover was lifted. Further investigation determined that a failed electrical protection device in the communication system between 283W and the POC triggered a signal that initiated the event.

Waste Treatment Plant: The safety basis approval authority approved revision 2 of both the WTP Low-Activity Waste Facility DSA and the TSR document. Among other changes, these revisions support completion of a planned design and operational safety improvement (PDOSI) requiring implementation of DOE Order 414.1D, *Quality Assurance*, and closure of a directed change that required safety-significant designation of the high efficiency particulate air differential pressure instruments. Both the PDOSI and the directed action were required by the initial approval of the DSA.