

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 16, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: B. Caleca, P. Fox, and P. Meyer, Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending August 16, 2024

Radiochemical Processing Laboratory (RPL): A worker found radiological contamination on their hands while surveying out of the radiological buffer area after inventorying radiological material. An accompanying worker cleared the hand and foot monitor and left the facility. Subsequent radiation protection technologist (RPT) surveys identified contamination on the hands, shirt, and pants of the worker, who was subsequently decontaminated. During the fact gathering for the event, participants identified multiple weaknesses in the performance of the inventory work. The worker also recognized there was a potential contamination transfer when they had handled the other worker's computer cable. As a result, facility management requested activation of a Radiological Assistance Program team. The team performed surveys of the other worker, their car, residence, and the computer cable. They found contamination on the cable but did not identify any other contamination spread. At RPL, RPTs conducting surveys of areas entered by the individual identified a contaminated logbook, which they believe is the source of the personnel contamination. However, they are currently unable to determine how the logbook became contaminated. Consequently, management has suspended radiological work on the first floor of the lab pending thorough surveys of lab rooms to locate the origin of the contamination.

Waste Encapsulation and Storage Facility (WESF): In support of pre-operational acceptance testing, the contractor successfully utilized the vertical cask transporter (VCT) to relocate a cask from the Interim Storage Area (ISA) pad to the WESF truck port. Prior to the evolution, a resident inspector observed operators at the ISA simulate the VCT placing a cask onto a mock air pallet— a challenging operation given the very close tolerances between the air pallet and the VCT wheels. While placement of the cask onto the actual air pallet at the truck port pad was successful, it was evident that additional positioning and orientation aids, such as painted lines, are needed to avoid mishaps. The resident inspector shared this observation along with areas for improvement for operational command and control with facility management, who agreed.

Tank Farms: The Test Bed Initiative (TBI) will demonstrate treatment of double-shell tank supernatant and create mixed low-level waste for shipment offsite (see 10/27/2023 report). The demonstration will involve installation, operation, and removal of the TBI equipment, and will fill six process totes with a total of 2000 gallons of waste. A Senior Review Board (SRB) met to consider the amendments to the tank farms documented safety analysis to support the TBI and voted to recommend approval of the changes.

WRPS determined that single-shell tank T-101 is likely leaking to the soil under the tank. This finding raises the number of suspected leaking tanks to three (see 04/30/2021 report). The leak does not represent a new or increased safety risk to the workers or the public.

105-KW Basin: CPCCo completed work to fill the dewatered 105-KW basin with grout (see 08/02/2024 report).