

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 25, 2021

TO: Christopher J. Roscetti, Technical Director
FROM: B. Caleca and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending June 25, 2021

Tank Side Cesium Removal (TSCR) System: Tank Farm Operations Contractor (TOC) personnel participated in an emergency preparedness drill at the Tank Side Cesium Removal (TSCR) facility. This drill will be used to develop the required affidavits to declare readiness for the facility later next week. In order to accommodate the additional observers, the TOC drill team used video teleconferencing to display incident command post activities as well as the player debriefing. Due to scheduling, the affidavits will be signed prior to completion of the drill report, with readiness personnel working with the contractor drill team to affirm that the drill met its objectives. TOC personnel expect to declare readiness later this summer and be complete with construction activities by the end of the fiscal year.

Liquid Effluent Retention Facility (LERF): A Tank Farms Operation Contractor worker assigned to remove the LERF basin 44 cover was found to have contamination on his personal clothing while removing his personal protective equipment (PPE). During the ALARA review for the event, the worker noted he had sweated through his coveralls, which can allow contamination to wick through PPE. Basin 44's cover is damaged and the basin itself has much higher contamination than the adjacent basins, so this work activity is being performed in a high contamination and airborne radioactivity area. As a result, workers are in two sets of water-resistant coveralls and respirators. This, when coupled with high temperatures working outdoors on the black basin cover, has made heat stress a significant concern for the project, even with early morning shifts. The worker also noted that he had possibly leaned on the handle of the tool he was using, and that tools were not necessarily radiologically clean during a work evolution. TOC personnel had a productive discussion on the use of tools, cooling tents, different types of PPE, earlier shifts, and means of speeding up entry into the basin to maximize the amount of work that can be performed under cooler temperatures. Pending any broader changes to PPE or work schedules, the Basin 44 work will renew their emphasis on careful handling of potentially contaminated tools and be mindful of exiting the basin prior to sweat through of PPE.

Tank Farms: During hand excavation inside the TX tank farms, TOC personnel detected a strong odor and exited the tank farm. Ten individuals reported to the onsite medical facilities for evaluation, with three more sent to Kadlec regional hospital for further evaluation. All workers were released as of the next day. Initial investigation of worker's ammonia monitors, and air monitoring performed as part of recovery actions, did not detect any chemicals above action levels. Workers reported that they did not observe any indications of an underground system breach. The event investigation meeting noted that while exit from the tank farm had been prompt, workers all took a direct path to their normal change trailer rather than exiting the farm away from the source of the odor. As a result, workers in some cases approached and walked past the area of concern rather than staying upwind and exiting out of another gate at the farm. A stop work on excavation activities is currently in place, and the event investigators are taking soil and respirator cartridge samples, reviewing TX tank farm chemistry, as well as reviewing TX farm equipment and the powered buggies used to move soil out during excavation.