

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 26, 2018

TO: Christopher J. Roscetti, Technical Director
FROM: P. Foster and P. Fox, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending October 26, 2018

DNFSB Staff Activity: P. Foster completed his detail assignment as a Hanford Site Resident Inspector. M. Bradisse was onsite to perform oversight support activities.

PUREX: On Friday morning, a work crew reporting to the PUREX Storage Tunnel 2 worksite noted what appeared to be water vapor escaping from the north end of the tunnel. The contractor is using engineered grout to stabilize the tunnel structure (see 10/5/18 report) and is approximately 23 percent complete. The water vapor is most likely a product of the grout curing process; however, the environmental permit does not allow unfiltered releases of tunnel air to the environment. The work crew reported the anomaly to the shift office. An abnormal event was subsequently declared and a precautionary take cover was established for the 200 East area until surveys and air samples determined that there had been no significant release of hazardous materials. The contractor is confirming and correcting the cause of the water vapor release before resuming grout placement activities.

The contractor held a critique this week to discuss a switch misalignment that resulted in the backstroke of a grout pump. Backstroking can inadvertently spread contamination from the tunnel. The critique determined that the most likely cause of the inadvertent positioning was personal protection clothing catching on the switch. The contractor is placing a cover over the switch and implementing administrative controls to prevent recurrence.

Plutonium Finishing Plant (PFP): The contractor held an in-progress ALARA review (IPAR) to discuss an elevated reading on a radiological contamination area boundary air sampler. In response to the elevated sample, the contractor performed a survey of the region between the work performance area and the air sampler, as well as an extended area around the unit. All survey results were normal and no other air samplers recorded any actionable levels. The IPAR discussion identified a need to improve timeliness in responding to elevated readings and to formalize survey methods used in response to similar events. Additionally, the IPAR discussed recent improvements in the water cannon location and spray patterns during debris size reduction activities.

Contractor management held a critique to discuss a recent unexpected shutdown of a worker's respirator in the PFP contamination area. During the event investigation, they determined that the battery in the unit had been inappropriately returned to service after being previously marked for disposal. In response to the event, the contractor issued a standing order to ensure that issuers obtain appropriate management approval before returning any equipment to service.

105-KW Basin: The contractor held an IPAR to identify necessary actions to prevent recurrence of a liquid spill that occurred while using a newly fabricated long-length tool. The discussion identified a need to redesign the tool and to reinforce actions taken in response to spills that occur during sludge retrieval activities.