

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 27, 2018

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** P. Foster and P. Fox, Hanford Resident Inspectors  
**SUBJECT:** Hanford Activity Report for the Week Ending July 27, 2018

**222-S Laboratory:** A circuit breaker that provides power to the laboratory confinement ventilation fans tripped when workers tested a set of trouble lights that had been moved from one control panel to another panel as part of the ongoing ventilation upgrade project. The standby diesel exhaust fan started, as expected, when the three operating exhaust fans stopped. However, the exhaust pressure in the laboratory increased above specification and laboratory personnel were directed to perform an orderly egress from the facility. The electric fans were subsequently restarted, restoring normal operating pressures in the laboratory. Post event surveys did not identify any contamination spreads. This is the second significant ventilation system upset resulting in a laboratory evacuation to occur during the ventilation upgrade project. Consequently, facility management has established new work release controls that limit time periods for work that could potentially result in a loss of ventilation.

**Tank Farms:** DOE announced that they have completed action 2-2 of the Recommendation 2012-2 Implementation Plan. This action installed safety significant instrumentation for monitoring of the ventilation exhaust flow from each double shell tank (DST) in order to ensure flammable atmospheres do not occur. The contractor is developing the safety basis amendment that revises flammable gas controls to use the real-time flow monitoring instruments.

**Plutonium Finishing Plant:** The resident inspector observed a discussion session between the author of the Air Dispersion Model that was developed to support radiological planning of 234-5Z demolition work and the project radiological control (radcon) staff leadership. The session was useful in closing gaps in understanding that the radcon staff had regarding the accumulation of debris during the demolition process. However, the discussion also demonstrated that there is a misalignment regarding demolition rate and debris accumulation allowances between the project demolition workforce, operations staff, and radcon staff. Management personnel present in the meeting stated that they expect to resolve the misalignment during an upcoming meeting.

**105-KW Basin:** While performing loading activities on the second sludge transport and storage container (STSC), the contractor encountered a number of problems related to procedure workability and execution. The difficulties included having to stop a revised procedure because of unexecutable steps, unexpectedly needing to remove water from the STSC, and discovering higher than expected radiation levels in a process hose. These events resulted in the generation of one-time-use procedures, an in-progress ALARA review, and a formal recovery plan in order to finish the loading activities. To date the problems have only caused minor delays; however, continued issues may indicate the need to pause and evaluate the adequacy of procedures.

Prior to starting the work necessary to install a new head on the main air compressor, the field work supervisor (FWS) noticed an unexpected electrical switch that would need to be disconnected during the process. The FWS recognized that the electrical work hazards had not been properly analyzed. Upon notification, management suspended the work activity.