

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 17, 2017

TO: S. A. Stokes, Technical Director
FROM: P. Fox and D. Gutowski, Hanford Resident Inspectors
SUBJECT: Hanford Activity Report for the Week Ending March 17, 2017

Low Activity Waste Pretreatment System (LAWPS). The ORP/contractor Integrated Project Team (IPT) is evaluating several potential changes to safety controls for LAWPS. These include redesign of the safety-significant (SS) Gas Removal System, changing the cold chemical reagent system from SS to general service, and eliminating the SS process piping freeze protection system. The IPT also received a briefing on preliminary results from geotechnical studies.

Members of the Board's staff held a call with ORP and contractor personnel to continue discussions regarding ORP's decision to allow the contractor to use a locally developed procedure in lieu of DOE-STD-1195 for the design of safety significant instrumented systems (see Activity Report 11/4/2016).

Conduct of Operations. Both the tank farms contractor (TOC) and plateau remediation contractor (PRC) are evaluating recent conduct of operations events. The PRC Executive Safety Review Board approved a common cause evaluation that looked for common themes among 37 reportable conduct of work events from last year. They found that most events occurred during low risk or routine task-based work. Common weaknesses included inadequate formality and work discipline, poor hazard recognition during work perceived as routine or skill-based, inadequate flow down of performance expectations to subcontractors, and misinterpretation of hazardous energy program requirements including how they are applied under cold and dark conditions. The PRC has already started work on a conduct of work improvement plan and, based on the common cause evaluation, have added a number of supplemental actions intended to sustain improvement in conduct of work. The TOC's Corrective Action Review Board reviewed a similar common cause analysis on technical procedure use and adherence that was started after ORP had noted the potential emergence of negative trends in procedure compliance and work planning and control. The TOC concluded that existing efforts were addressing the work planning and control concerns, but initiated a common cause analysis of 19 work procedure compliance events. The draft analysis found three leading causes for workers deviating from written instructions: less than adequate human performance, field changes to work scope that were not handled per the work order change procedure including additions of new scope considered skill of the craft by the work team, and ambiguous or incomplete instructions.

Tank Farms. The contractor's Joint Review Group approved the work package to remove the plugged transfer pump from AW-106 (see Activity Report 2/18/2016). The package includes use of a new punching tool and a number of shielding and contamination control improvements based on experiences with previous pump jobs.

A new standing order allows full face air-purifying respirator instead of supplied air usage in AP farm for performance of operator rounds when no other work is occurring in the farm.

Effluent Treatment Facility (ETF). The contractor replaced the Basin 43 pump in the Liquid Effluent Retention Facility and resumed feed to ETF (see Activity Report 3/3/2017).