

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 9, 2014

TO: S. A. Stokes, Technical Director
FROM: D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending May 9, 2014

R. Quirk was at Los Alamos National Laboratory this week.

242-A Evaporator. The contractor declared readiness to begin the 242-A Readiness Assessment (RA) with only one open prestart item. That item was to address equipment failures during fire scenarios with a safety basis amendment (see Activity Report 4/18/2014). They planned to develop this amendment in parallel with the RA and manage its implementation using an Independent Verification Review after the RA. ORP personnel noted that the safety basis changes in development to address fire scenarios were not yet well-defined and proposed that the safety basis changes be completed prior to the RA. The contractor shifted their plans to align with ORP and postponed the RA.

Tank Farms. In an effort to address continuing reports of vapors in the tank farms, the contractor is implementing new general hazards analysis requirements for all personnel performing work activities in the tank farms that have the potential to create vapor sources where no engineered controls exist. These jobs will now require half-mask respirators at a minimum to reduce exposure to low-threshold vapors. Contractor management briefed field work supervisors on how to implement this new requirement and what factors to consider when determining if work activities have the potential for creating uncontrolled low-threshold vapor sources. They have also specifically mandated half-mask respirators for any entry into C and AN farm during active retrieval operations.

Plutonium Finishing Plant. The contractor obtained results from gas sampling of locations adjacent to the pipe segment involved in the exothermic event (see Activity Report 5/2/2014). They detected small concentrations of organic gases at levels well below flammability limits. The tests specifically looked for organic compounds that may have collected during historical polycube disposition activities (see Activity report 8/30/2002) and some of these compounds were found at low concentrations. The stop work on cutting activities is still in place, but the contractor reached agreement with the initiator that they could cut segments of the pipe involved in the event using a rotary cutter in order to obtain samples. They managed to obtain a small amount of solid material and are sending it to the 222-S Laboratory for analysis.

Waste Treatment Plant. ORP transmitted their review comments on the High Level Waste Facility Safety Design Strategy (SDS) to the contractor (see Activity Report 4/25/2014). The primary areas of concern with the SDS are the hydrogen control strategy and the lack of documentation that describes implementation and use of the SDS. The contractor is currently developing procedures and processes that define the use of the SDS to align the design with the safety basis.

Waste Encapsulation and Storage Facility (WESF). RL approved the Safety Evaluation Report (SER) for the annual safety basis update of WESF which included downgrading the pool cell area structure from safety class to safety significant. In the SER, RL also concurred with continued operation of the K-3 filters.