

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 9, 2013

TO: S. A. Stokes, Acting Technical Director
FROM: D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending August 9, 2013

Board staff members D. Grover and L. Lin were onsite to review ventilation systems. Board staff members R. Robinson, R. Rosen, and D. Shrestha observed the Double-Shell Tank Integrity Project Expert Panel Oversight Committee meeting.

Waste Treatment Plant. The Office of River Protection (ORP) directed the contractor to evaluate the impacts of implementing DOE Standard 1195, *Design of Safety Significant Safety Instrumented Systems Used at DOE Nonreactor Nuclear Facilities*.

100K West Basin. While performing preventative maintenance of a fan on the roof of the 100K West basin, workers noted higher than expected contamination levels and saw dust rise up from the fan housing. The levels were above the action limits for the radiological work permit but did not exceed the void limits. The workers exited the area and communicated the situation to management. The rad con manager requested nasal smears for the individuals in the contamination area. There were positive counts on three smears. A recount the next day showed only one positive smear. The workers will receive bioassays to determine if there was any radiological uptake. This preventative maintenance task was supposed to be performed every six months. It had not been performed in several years which may have allowed additional material to accumulate in the fan housing. The possibility of higher contamination levels that could become airborne due to draft effects was not evaluated during the work planning process.

Tank Farms. The contractor briefed ORP on the construction histories of the AZ and SY double-shell tank farms. They concluded that, in general, AZ farm construction proceeded smoothly and had significantly fewer problems than were noted with AY-102. SY farm used a different construction contractor and had a number of issues including a high rate of weld rework. The contractor is also finalizing an evaluation of the construction history of AY-101.

The contractor took another sample from the leak detection pit for tank AY-102 this week. The preliminary results are similar to samples taken in June and July and do not indicate the presence of tank waste. The contractor then pumped out the liquid collected in the leak detection pit.

The site rep and staff walked down hose-in-hose transfer lines in C Farm and AN Farm with an ORP facility representative. They observed short lengths of hose that are not protected by hose barns or soil cover as these exposed sections may be more vulnerable to degradation. The exposed sections are covered by an insulation system and a coating that is resistant to weather, ultraviolet light, and ozone.

The contractor installed the Mobile Arm Retrieval System turntable on single-shell tank C-105.

Plutonium Finishing Plant. The hoist on the bridge crane in the Plutonium Reclamation Facility canyon failed during post maintenance testing when fuses blew (see Activity Report 8/2/2013). The contractor is evaluating a path forward and believes that the motor on the hoist needs to be replaced.