

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 11, 2013

TO: T. J. Dwyer, Technical Director
FROM: D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending January 11, 2013

Plutonium Finishing Plant (PFP). The contractor chose to hold a second critique to further evaluate the conditions that led to the contamination spread in PFP last week (see Activity Report 1/4/2013). PFP management made this decision after questioning how air flow patterns and the initially reported personnel movements could have resulted in the potential plutonium uptakes they observed. The second critique developed a more accurate and more detailed description of the event. PFP management judged that five individuals were potentially exposed to airborne alpha emitters. A total of ten workers are undergoing bioassay evaluation. Initial corrective actions include: removing some of the involved personnel from watch standing duties pending completion of additional training, changing the radiological work permits to better define limits and work controls in high contamination areas, enhancing expectations regarding Field Work Supervisor presence during high hazard activities, and reinforcing Continuous Air Monitor alarm response actions with Field Work Supervisors.

Tank Farms. During maintenance of the mobile arm retrieval system for single-shell tank C-107, a worker inadvertently dislodged one of his respirator's filter cartridges on a piece of equipment. The worker noticed the missing cartridge immediately and the response of the field workers was prompt and appropriate. They assisted the individual with the compromised respirator in exiting the work zone in a rapid and safe manner. The worker did not have any measurable contamination on personal garments and the nasal smears read barely above background. The worker was sent for a whole body count and bioassay.

At the event investigation meeting, workers noted that this type of respirator, when equipped with the large combination cartridge, may be a poor choice for future use in tight areas where it might get caught and compromise worker safety. They suggested that masks with screw-in cartridges would be more appropriate for this type of work. Future maintenance work on this specific job will no longer allow this type of respirator configuration. Contractor management released a site-wide lesson learned notice and is evaluating the need for wider restrictions.

242-A Evaporator. The Tank Farms Contractor completed a draft Documented Safety Analysis for the 242-A Evaporator (see Activity Report 7/20/2012). The proposed safety basis includes three new safety-significant active engineered controls.

Office of River Protection (ORP). The site reps met with K. Smith, who replaced S. Samuelson as the ORP manager.

D. Patel passed her final oral board and completed her initial qualification as a Tank Farms facility representative.