

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 27, 2004

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending August 27, 2004

Messrs. Shackelford, Linzau, and Lewis (Outside Expert) conducted a configuration management review for the Waste Treatment Plant. Mr. Troan reviewed emergency preparedness, waste retrieval, and supplemental treatment at tank farms.

Tank Farms: After a subcontractor improperly moved a load under a 13.8 kva power line at U Farm, all crane work at tank farms was secured until compensatory actions are put in place. (II)

CH2M Hill Hanford Group (CHG) is finalizing their root cause analysis and corrective actions for the recent extremity exposure. As part of this, CHG managers are interviewing the field work supervisors (FWS) to ensure that they understand the lessons learned and new expectations. The Site Rep is closely following these activities. Some FWS's are having to repeat interviews. (IV)

K Basins: The site rep observed installation activities for the two tech view pit sludge consolidation containers. Both containers are now installed in the basin. However, the flocculent system testing has been problematic. Minor variations in the simulant have resulted in a drop in flocculent efficiency and sludge release from the top of the test container. This would have an adverse effect on basin water clarity likely causing operational difficulties in retrieving sludge. The project is adding additional testing of the system prior to allowing the system to be installed in the basin. (II)

An additional three feet of grout was placed in the K-East Basin discharge chute this week for a total of 9 feet. Grouting is anticipated to resume next week. (II)

Plutonium Finishing Plant (PFP): Following the Rocky Flats glove box fire, PFP started an investigation to determine if decontamination materials could self-heat and start a fire. The preliminary results of these studies have shown that cotton rags used with nitric/nitrate ions remain reactive after being treated with neutralizing and reducing agents, slow-heat generation reactions proceed at room temperatures but energetic reactions start if temperatures rise above 70° C, and as rags age, until 18 weeks, the temperature at which self-heating reaction starts gets lower. The studies have also shown that synthetic rags do not support these reactions in agreement with theoretical predictions. PFP expects to continue these studies with other decontamination materials and use the results to develop and implement fire protection controls for these activities. (II)

Worker Fatality Investigation: DOE issued their report of the Hanford worker fatality. The root cause was determined to be the Fluor Hanford and All Mobile Transporting & Repairs (AMTR) not applying and AMTR not implementing the basic elements of safety management practices. It was also concluded that DOE did not clearly state their authorities, accountability, roles and responsibilities for commercial work performed by community reuse organization non-government contractors on the Hanford site. (IV)