

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 15, 2004

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending October 15, 2004

Spent Nuclear Fuel Project (SNFP): Multi-Canister Overpack (MCO) 386 was removed from the K-West Basin. This is the last full MCO of fuel to be removed from the basin with 1,000 pounds of scrap fuel remaining in the basin. SNFP is expected to request closure of the completion of fuel removal milestone and remove this fuel with fuel that will be found during sludge retrieval. (II)

Plutonium Finishing Plant (PFP): PFP completed the reviews of DSA implementation and determined that no other TSR violations exist and design authorities have an adequate knowledge of their systems. Fissile material moves and TSR related work have been authorized to resume. (II)

Tank Farms: An independent examination of the CH2M HILL Hanford Group (CHG) safety culture, determined through interviews of hundreds of employees, identified a number of beliefs that are of concern. In addition, a consultant-performed common cause analysis (CCA) of several recent radiological events had some extremely negative findings. CHG is determining the extent of condition of these issues and plans to reinforce their expectation with the workforce that procedure compliance is mandatory, regardless of the schedule impacts. In parallel, CHG will be doing some validation of the CCA because the bases for some of the stronger findings are not clear in the report. The CCA recommendations are also very high level and there is not a direct link between the recommended actions and many of the findings. Field work was impacted this week by 3 work pauses, 2 stop works, and a Sheriff's office investigation of alleged sabotage of air line hoses. In addition, a senior supervisory watch stopped a high-risk job after a number of radiation control and logistical issues were raised during the pre-job briefing (PJB). With the exception of the field work supervisor, there was no overlap between the craft who planned the job and those at the PJB. The Site Rep is becoming concerned about the loss of dexterity as new permits require four layers of gloves (one of which is waterproof leaded gloves) for some jobs. The Site Rep is also concerned about the apparent arbitrariness of some of the limits in some recent radiation work permits. (IV)

When CHG was granted a one-year exemption from meeting corrosion control limits in tank SY-102, they had expected to have the S-112 and S-102 retrievals and associated cross-site transfers completed prior to the expiration of the Justification for Continued Operations. This would have minimized caustic additions since the retrieved waste goes back into specification after being blended with East tank farm waste. Now, CHG faces the potential of having to add 100,000's of gallons of caustic to SY-102 as dozens of out-of-specification batches of waste are transferred into SY-102. The repeated cross-site transfers will also transfer out the caustic-rich waste before it has a chance to mix throughout SY-102. CHG is also proposing installing a mixer pump in AN-107 and making smaller, frequent caustic additions to AN-102 because new models predict that natural mixing or past caustic additions will not be adequate to bring these entire tanks into compliance.(II)

Waste Treatment Plant: At the construction site, a pair of pliers was dropped 50 feet onto another worker's hard hat and a fiberglass ladder burned inside a vessel. Revised combustible loadings for the Analytical Laboratory hot cells are significantly higher than previous estimates. Additional controls may be needed since the new loadings are above that calculated to cause flashover. (III)