

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 3, 2004

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending September 3, 2004

Waste Treatment Plant (WTP): The staff held a videoconference to discuss concerns with the hydrogen mitigation strategy for the cesium ion exchange system. (See 8/20/04 report). The design has been modified so that the amount of dilution reflects the safety margins in NFPA 69, *Explosion Prevention Systems*, and Bechtel will be revising their calculation to reflect the lower limiting oxidizer concentration found in that standard. Bechtel and the Office of River Protection (ORP) are reviewing the applicability of other sections of NFPA 69 to this system. (III)

Tank Farms: The Site Rep has been observing CH2M Hill Hanford Group's (CHG) implementation of 244-CR thermocouple event compensatory actions. After the Site Rep provided CHG management several observations for improving their oral interviews of first line managers, the interviews were halted until their protocol was revised. Due to the number of issues that resulted from the first work package that went before the ALARA Joint Review Group since medium/high risk work was halted, the chairman suspended the review and a mockup review will be performed for field work supervisors and planners. A high degree of oversight of the implementation of compensatory and corrective actions remains warranted based on observations to date. (IV)

Although sufficient caustic has been added to tank AN-107, modeling indicates that the tank will never be brought back into specification through natural mixing. Adding additional caustic will only result in additional solids precipitation and increased gas retention. CHG is evaluating whether to mix the tank or to develop an argument that the current chemistry is acceptable. (II)

Rec. 95-2: The Site Rep met with the team leader of the ORP Integrated Safety Management (ISM) System Assessment. The team could only review a program that was in flux since all medium/high risk work at tank farms was on hold due to identified weakness with the existing process and improvements had not yet been implemented. There was also a missed opportunity to take a broad look at common issues associated with several safety incidents at tank farms and the WTP construction site. The assessment's conclusion that "ISM is fully implemented, maintained, and functioning in an effective manner for WTP and the TFC [tank farms contractor] operations" is more optimistic than the Site Rep's perception of the current state. (IV)

Plutonium Finishing Plant (PFP): During a walkdown of PFP, the site rep was present during a breached glove box glove response. The glove was breached during deactivation activities to remove a suspended piece of equipment. The response to the breached glove was prompt and well controlled. However, the post job identified concerns with the conduct of the work. The weight of the piece being removed was underestimated resulting in difficulties handling it as it was cut free. The planning for handling this equipment only involved workers during the prejob briefing rather than being a subject in the job hazard analysis with engineering and other subject matter expert assistance. The site rep discussed the need to develop guidelines for maximum size and weight for pieces of equipment to be moved without formal planning with plant management. (IV)