

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 24, 2004

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending September 24, 2004

Tank Farms: Corrective actions have been identified for the 244-CR Vault thermocouple exposure event. Actions include the development of a new hazard identification process, conduct of operations training, defining the process for "placing the plant in a safe condition," setting up a consolidated lessons learned database to support work planning, and developing a radiological monitoring control strategy. Many of these new processes will not be implemented until late 2004 or early 2005. While the actions address the appropriate topics, there are few details at this time concerning what these new processes, training courses, and databases will look like and how they will actually resolve previously identified weaknesses. Compensatory actions were put in place in July after this event which required all medium and high risk work packages to go through a new, revised work planning process. During the last two weeks, the first few high risk packages have emerged from the new process. Observed Joint Review Group meetings have been thorough and identified dozens of changes to be made to work planning documents. (IV)

Waste Treatment Plant: A recent Board letter identified that safety design significant (SDS) loads were connected to the safety design class (SDC) busses. Bechtel plans to move all SDS loads at the High-Level Waste facility to an SDS motor control center (MCC) and move all SDC loads to an SDC MCC. (III)

Bechtel has decided to move the Pretreatment Facility control room into a stand-alone concrete facility, continuously operate the filtration system, and recalculate the required ventilation intake flow and leakage factor. This will help address concerns the Board had with the adequacy of the standby filtration system design and the time to activate it following an ammonia spill. (III)

Transuranic Waste Retrieval: On swing shift September 8, 2004, an operator performing assays of waste drums noticed a drum with changed markings related to the need to perform an assay. This was communicated to the operations supervisor, who pulled the container relocation approved list. This showed the drum contained 14.1 fissile gram equivalent of transuranic (TRU) mass and therefore did not require assay. A contractor investigation into the drum identified that the drum had originally been mislabeled and 4 TSR administrative control program elements had not been complied with, including 1) batching unvented drums containing >2 grams of TRU, 2) segregation of these drums 3) venting these drums within 30 days of accumulating a batch of 24 drums, and 4) assuring these requirements are met via a monthly surveillance. The project has determined that the marking of drums is a single point failure in compliance with the program and the surveillance relied upon correct marking of drums rather than including a verification of markings. In addition, the project has been unable to identify when the drum labeling was changed and why proper actions were not taken at that time. The site rep has also questioned why supervisors did not take the TSR required actions (immediate termination of affected activities, notification of DOE within 8 hours, and reporting the event in the occurrence reporting program) when the condition was discovered instead of leaving the drum as found until document reviews were completed the next day. (II)