

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 29, 2005

TO: K. Fortenberry, Technical Director
FROM: D. Grover, W. Linzau, and R. Quirk, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending July 29, 2005

K Basin Closure Project (KBC): During the K-East (KE) Basin Tech View Pit clean out last year, four baskets were removed from the pit into the main basin. The two baskets that were identified as containing fuel were emptied and the fuel was moved to K-West (KW) Basin. The other two were identified as having debris. This week during debris mapping with underwater cameras, an operator identified three objects resembling fuel in one of the two remaining KE baskets. Removal of these items revealed additional items totaling 30 suspect fuel pieces. Investigation has confirmed that seven of these are fuel. Additional investigations were suspended when one item was identified as potentially having a higher enrichment than is allowed in the KE Basin. It is expected that revised criticality documentation as well as the existing controls for the higher enriched fuel at KW will be implemented at KE early next week. This will allow the investigation to continue. Due to the small quantity of fuel involved there is not expected to be a criticality safety concern. The project is also planning the work to clean out the baskets completely and verify that no additional suspect items are present.

Plutonium Finishing Plant (PFP): Following recent criticality control nonconformances and fissile material movement events, PFP instituted a training session for all fissile material handlers. The training emphasizes the need for proper procedure use and compliance. This includes the expectation that procedures not normally needed to be open and followed step-by-step will use the step-by-step method if the work is not frequently performed. Frequently performed will be defined as used more than once per week. The training also emphasized the expectation that conservative decisions and the most restrictive controls are applied until the conditions have been confirmed to allow otherwise. The need to contact subject matter experts to aid in the confirmation if confusion exists was also stressed.

Loss of Electrical Power: For the third time in the last six weeks, there was a significant loss of electrical power to the 200 East Tank Farm Area. Causes for the loss of power events include a non-related power line falling on a tank farm-related power line. A Problem Evaluation Report was initiated after the most recent event to determine if maintenance or design changes, such as electrical breaker settings, are needed to minimize the frequency and magnitude of future power losses.

Tank Farm Chemistry: The site reps met with the tank farm contractor to understand what actions were being taken to resolve historic out of specification chemistry control conditions in four double shell tanks. Recent retrieval actions resulted in another tank, SY-102, being out of specification. Caustic additions this week should result in this tank being returned to within specification.

Cc: Board Members