

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 16, 2009

TO: T. J. Dwyer, Technical Director
FROM: M. P. Duncan and M. T. Sautman, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending January 16, 2009

DOE-SR Staffing: The Site Rep discussed staffing progress with senior management because there are currently nine facility representative, nine safety system oversight, and six facility engineer positions open, yet reportedly only nine full-time equivalent slots are left within DOE-SR. The Manager stated he was still committed to filling the positions that were previously approved (4/25/08 report).

K-Area: The contractor completed a significant revision of the K-Area Complex's Documented Safety Analysis. It will allow the storage of enriched uranium in a new location. This will free up space in K-Area Material Storage to ensure that all of the material from Hanford's accelerated deinventory activities can be accommodated. In addition to many other changes, it implemented DOE-STD-1186, which resulted in the development of 13 Specific Administrative Controls. A line management assessment began this week to verify the contractor's readiness to implement the changes. The Site Rep observed most of the field demonstrations. There were several instances where conduct of operations and procedures will need improvement. One procedure required that if paint on the floor in the new storage location was damaged, it must be taped, but this was not performed. During operator rounds, one Specific Administrative Control to verify that transient combustibles are less than one pound in a large room could not be fully completed because the room was roped off to prevent access. A significant portion of the room was not visible, but the step was marked as complete and verified by a second person. The assessment is scheduled to end next week.

3013 Surveillance and Monitoring Program Review: While gas sampling of 3013 containers being stored at SRS usually finds only trace quantities of oxygen and hydrogen, three packages have been found containing between 0.1 and 1.7% oxygen and five different packages containing between 18.7 and 30.8% hydrogen. The highest pressure seen in any can so far has been 17.6 psia in a high hydrogen container. Small scale tests and the literature have shown that the presence of calcium chloride can lead to pitting or stress corrosion. The relative humidity present while packaging is a key parameter in determining whether the salt will deliquesce to form a concentrated salt solution. Based on processing records, the 3013s most at risk are those from SRS and the Plutonium Finishing Plant's C-Line. Destructive evaluation of 3013 containers has found no problems with outer cans and only minor anomalies (e.g., oxide deposits on surface, but no corrosion beneath) with the inner ones. A revision to DOE-STD-3013 is underway to incorporate new information on oxygen generation, corrosion, and the importance of relative humidity.

Tritium Facilities: The Implementation Validation Review completed this week (1/9/09 report). The team performed a thorough review, generating 5 pre-start findings (4 more were corrected "on the spot") and 8 post-start findings. Facility personnel's understanding and execution of the Process Hood Transient Combustible Material Specific Administrative Control was singled out as requiring additional work. The team observed good conduct of operations, but had several issues with procedures. Overall, the team believes that the facility is ready to implement the new safety basis once the pre-start findings are resolved.