

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 1, 2007

**MEMORANDUM FOR:** J. Kent Fortenberry, Technical Director  
**FROM:** J. S. Contardi/M.T. Sautman, SRS Site Representatives  
**SUBJECT:** SRS Report for Week Ending June 1, 2007

**Transuranic (TRU) Waste:** Rather than address the transportation of high plutonium-equivalent curie (PEC) TRU waste drums between F-Canyon and the Solid Waste Management Facility via a F-Canyon Justification for Continued Operations, the contractor developed a non-routine transfer (NRT) evaluation addressing the transportation between the E and F Area gates. (Site Rep Weekly 5/11/07). However, the Department of Energy does not approve NRTs or other onsite transportation safety analyses, but just the contractor's process. The contractor considers the risk to be acceptable since it is below the guidance they developed themselves ( $3.75E-2$  rem-event/yr). The transportation controls required by the three safety analyses are not entirely consistent nor are the assumptions used for determining the consequences (80+ rem onsite due to fire). This worker dose was after the allowable PEC per conveyance was reduced 25%. Although these transfers are now "non-routine," the contractor previously argued they were routine and ~90 of these transfers are expected. The contractor believes the increased risk of a dropped container while loading an overpack outweighs the benefits gained from using overpacks for these high PEC drums.

**Tritium Operations:** While an engineer performed a test on a leak detection device, a small contamination release occurred. The leak detection equipment is used to validate the weld integrity for reservoirs. The test was necessary due to recent software changes. While performing the test, the engineer realized that a test specimen was necessary for proper execution. Out of convenience, the test engineer selected a reclaimed reservoir. Although it had already been unloaded, it did not have a weld. The contractor believes that during the evacuation portion of the test, residual tritium was released from the unit. Critique findings included: use of reclaimed reservoirs in the leak detection equipment is inappropriate, less than adequate knowledge regarding reclaimed reservoirs contributed to the event, and the test should have been stopped once the test procedure failed to properly describe the necessary activities.

**Site Emergency Preparedness:** Last week's training drill was graded not satisfactory.

**H-Canyon:** In April, an engineer noticed that all the grout was missing around a pipe penetration through the Safety Significant (SS) Chemical Storage Basin, but the contractor did not recognize that this compromised its integrity until a facility representative questioned this penetration recently. It is not known whether the grout was removed before or after the Specific Administrative Control-required annual integrity inspection last January. In any case, the conflicting functional class information of this basin in the contractor's authorization basis, databases, drawings, and procedures contributed to the confusion and delayed response. A similar penetration was later found in an adjacent SS basin.

**Tank 48:** A DOE-sponsored independent review team determined that the project should continue with fluidized bed steam reforming as the primary technology with continued development of wet air oxidation. Further pilot scale testing was recommended since recent testing did not fully resolve issues identified by a previous Independent Technical Review team.