

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 28, 2011

TO: T. J. Dwyer, Technical Director
FROM: M. T. Sautman and D. L. Burnfield, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending October 28, 2011

Plutonium: Last month, NNSA conducted an independent review of plutonium oxide production capabilities at SRS. This week, NNSA decided to process approximately 3.7 MT of non-pit plutonium metals and oxides, currently stored in K-Area, through H-Canyon and HB-Line to make it suitable for feedstock for the Mixed Oxide Fuel Fabrication Facility. SRS would use the NNSA funds to change the safety basis, prepare procedures, verify flow sheets, train operators, etc. SRNS could begin dissolution of plutonium as early as April 2012 with oxide production beginning at HB-Line by October 2012. This 5-year mission would be significantly larger than recent campaigns and would require 4 shift, 24/7 operations. DOE continues to evaluate other missions for H-Canyon.

235-F: A site rep observed workers remove flexible ducting from the east maintenance area, which may have been there since the 1970s (see 12/21/07 report). A site rep also accompanied the facility representative on a field observation to observe the removal of combustible material from the facility. Some of the facility emergency procedures are out-of-date. For example, the earthquake response procedure directs the shift operations manager (SOM) to inspect the facility for damage although the SOM is supposed to be acting as the Area Emergency Coordinator for all F-Area.

Recommendation 2004-02: DOE has not formally updated the Board on their lack of progress in closing their high priority gaps at SRNL and F/H Laboratory (see Triay 10/1/2010 letter to DNFSB). DOE recently provided \$1M to SRNL. However, this is not enough to start installation of the new secondary confinement zone exhaust system in 773-A E-Wing, where currently the wooden housing of the HEPA filters and duct tape form part of the confinement boundary. The new system has been sitting at SRS since 2006. (See 11/5/2010 report).

Solid Waste Management Facility (SWMF): SWMF personnel sort transuranic waste, in Cell 11 of the Low Activity Waste Vault, in order to extract items prohibited in shipments to the Waste Isolation Pilot Plant. They have recently added new equipment (a glove hood and cutting equipment such as reciprocating saws and rotary cutting tools) and expanded the scope to allow the opening of some plastic bags and wooden boxes (cubes) to make this operation more flexible. SRNS conducted a Functional Area Management (FAM) assessment and a Readiness Assessment to ensure safe operations. Both assessments found minor items that SWMF will correct before these operations begin in earnest.

Spent Nuclear Fuel: SRNS found a white, string-like growth on the ends of spent fuel racks stored underwater in the L-Basin. The growth, which resembles a spider web, has yet to be characterized, but may be biological in nature. SRNL has collected a small sample, but needs a larger sample to characterize the material. Further evaluation still needs to be completed.