

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 30, 2000

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers / R. T. Davis
SUBJECT: SRS Report for Week Ending June 30, 2000

Staff members Ralston, Robinson, and Ogg were on site this week reviewing the AmCm project.

Canyon Utilization: The Mark42/EBR-II stabilization campaign is waiting on the Spent Nuclear Fuel Management Record of Decision (ROD). The ROD is more than a month late. The F-Canyon dissolvers have been under-utilized since before August 1999 (site rep weekly 3/10/00).

HEU Blend-down Program: DOE expects the interagency agreement with TVA to be signed in August, but this may be in jeopardy because of a recent TVA economic analysis on using the Browns Ferry reactors. Since February, TVA has been evaluating using off-specification fuel in the Browns Ferry reactors (BWRs) because of a conflicting request from DOE to use both Sequoyah reactors (PWRs) for tritium production (site rep weekly 2/11/00). TVA intends to discuss the economic analysis with DOE next month.

H-Canyon Unreviewed Safety Question (USQ): This week, WSRC declared an Unreviewed Safety Question on the leak from the H-Canyon exhaust tunnel into the old HB-Line exhaust duct (site rep weekly, 5/5/00). This leak provides a potential release pathway during an accident for canyon exhaust to bypass the sand filter. This is a degradation in a Safety Class system and is contrary to the Authorization Basis. H-Canyon has discontinued Mark-22 dissolutions until a Justification for Continued Operation is developed.

Americium-Curium (AmCm) Stabilization: The AmCm stabilization project consists of two parts: pretreatment and in-cell vitrification. WSRC has completed the pretreatment design and has been authorized to proceed with its construction (site rep weekly 6/9/00). A subcontractor team led by Teledyne-Brown Engineering is preparing the detail design for the in-cell vitrification system. During this week's review, the staff identified concerns with the designation and qualification of safety systems for both parts. An example is the process vessel vent system, which will be required to perform a Safety Class function even though it was not designed and built to Safety Class requirements. It would be prudent for WSRC to evaluate these systems in accordance with a recently approved site procedure for backfit analysis. WSRC also does not intend to classify as "safety systems" those systems that ensure initial conditions are as assumed in accident analyses. This may warrant reconsideration. This issue was identified in a Board letter last year on the Replacement High Level Waste Evaporator (11/22/99).

9975 Shipping Containers: This week, WSRC successfully completed drop tests on three 9975 shipping containers with the redesigned closure (site rep weeklies 4/7/00, 6/16/00). The redesign replaces the closure ring with a bolted flange. The outer drum and lid deformed plastically without rupture. The celotex was not exposed. DOE intends to use the 9975 containers not only for shipping plutonium but also for storage for up to 10 years in SRS facilities (i.e., K-Area Material Storage). These tests are important not only for shipping container certification but also for demonstrating that the containers can provide required protection in these storage facilities.