

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 30, 1999

**MEMORANDUM FOR:** G. W. Cunningham, Technical Director  
J. Kent Fortenberry, Deputy Technical Director  
**FROM:** C. H. Keilers / R. T. Davis  
**SUBJECT:** SRS Report for Week Ending April 30, 1999

**Highly-Enriched Uranium (HEU) Solutions** - On April 23, 1999, DOE-MD and Tennessee Valley Authority (TVA) signed a letter of intent for converting DOE surplus HEU to low-enrichment fuel for use in TVA reactors. Disposition of this material is a Recommendation 94-1 commitment, and timely off-site shipment is key to ensuring uninterrupted H-Canyon operations. WSRC has a contingency plan if this path becomes unviable (site rep report 2/26/99). The letter of intent states that DOE and TVA will use their best efforts to finalize an Interagency Agreement by June 1, 1999. Per the letter, TVA vendors would obtain NRC licensing for shipping, storing, and converting uranyl nitrate to oxide, and TVA would start taking delivery in July 2001.

**Canyon Exhaust Systems Upgrade Project** - The canyon exhaust systems must be reliable to maintain differential pressure and thereby mitigate accident releases. Some of the equipment used dates from the 1950s. WSRC has initiated a high-priority project (S-4404, \$75.8M) to replace the fan buildings' power distribution systems (including diesel generators), F and H Canyon exhaust fans, and old HB Line fans, as well as upgrade other portions of the system. Construction of new Safety Class diesel generator buildings has started. F and H-Area fan building work packages are still being prepared. Scheduled project completion is October 2001.

**Tritium Facility Modernization and Consolidation Project (TCON)** - The TCON project is a line item project (approximately \$122 to \$142 Million) to replace operations currently conducted in building 232-H including tritium extraction, recovery, and isotopic separation, reservoir life storage, weapon material R&D, and function test operations. The project includes a new building (234-7H) and equipment installation in the north end of building 233-H, which is available for expansion. Design of the new building and the 233-H expansion is approximately 90 and 20 percent complete, respectively. The project is expected to be completed in 2004. Available space in the North end of 233-H is limited and significantly increases the difficulty of design and construction. Construction activities are further complicated by the need to continue tritium operations in 233-H during construction activities.

**Formality of Operations at the Tritium Facilities** - Because of the number and significance of tritium occurrences and near-misses over the last month (1 unusual, 3 off-normal, 2 non-routine, and 3 near-misses), WSRC management is emphasizing the importance of worker involvement and focus on safety and attention to detail. WSRC conducted all-hands meetings this week to describe these recent problems and communicate corrective actions to improve operations. These corrective actions include a change to the pre-job brief so that workers will now lead these discussions using a generic one-page form (based on integrated safety management functions), an increase in the number of post-job briefs, and increased number of evolutions observed by management. WSRC expects that these changes along with continued management emphasis will help improve operations and worker safety.