

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 26, 1998

MEMORANDUM FOR: G. W. Cunningham, Technical Director
FROM: J. Kent Fortenberry / Joe Sanders
SUBJECT: SRS Report for Week Ending June 26, 1998

WSRC Contract Performance (10/97 to 3/98) - DOE-SR rated WSRC performance as 'exceeding expectations' in all of the award fee areas, resulting in an award value of almost 84% of the available \$20 million award fee for this 6 month period. However, DOE-SR reduced the awarded value by \$1,000,000 due to failure to start ITP operations this year. The start-up of ITP was incentivized under a \$2 million performance based incentive with a special provision that would result in a \$1 million forfeiture from the award fee if startup did not occur this year. The awarded value for this period was also reduced another \$100,000 due to continued deficiencies in waste certification. Besides the award fee, WSRC earned a performance based incentive payment of \$300,000 for DWPF canister production.

K-Area Plutonium Storage - SRS is currently awaiting an amendment to the Record of Decision for the Storage and Disposition of Weapons-Usable Fissile Materials Final Programmatic Environmental Impact Statement in order to begin preparing the K-Reactor Facility for storage of plutonium from RFETS. The ROD needs to be amended to address the environmental impact of utilizing the K-Reactor facility for plutonium storage, the possibility that plutonium stabilization would be done at SRS instead of at RFETS, the shipment of plutonium to SRS before the APSF storage vault is operational, the shipment of some materials from RFETS that are less than 50% plutonium, and the need to utilize direct metal casting in FB-Line to de-classify some of the RFETS material. The provision in the current ROD that material would not be shipped from RFETS unless the decision has been made to locate the plutonium immobilization mission at SRS will not be changed. The amended ROD is expected to be issued next month. SRS had planned starting construction at K-Reactor June 1, 1998. About a 2 month delay is expected due to the delay in issuing the amended ROD.

Plutonium Storage Temperature Test Plan - As noted in the weekly report of 6/5/98, the current APSF design assumes that the alpha-beta phase change temperature limit (100°C), as defined in DOE-STD-3013, will be eliminated as a design constraint. Representatives from LANL and SRS met this week and completed a test plan for investigating the impact of alpha-beta (115°C) and beta-gamma (~205°C) phase changes on the integrity of the nested container storage system. WSRC will develop finite element models of the storage containers and the plutonium metal geometries. These models will be developed/validated using the LANL phase change test results from 1997 and an additional test to be performed later this year. The projected date for completion of the program is 2/10/99. DOE-SR had hoped to complete the program before the end of the year. If the results do not support relaxation of the temperature limit, this could have a significant impact on the APSF project schedule. Furthermore, if the one additional test at LANL is not adequate to support model validation, additional experiments may be necessary which would further extend the project completion date.