

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 19, 1997

MEMORANDUM FOR: G. W. Cunningham, Technical Director
FROM: J. Kent Fortenberry / Joe Sanders
SUBJECT: SRS Report for Week Ending December 19, 1997

Storage of West Valley HLW Canisters at SRS - One recommendation of the Complex-Wide EM Integration effort (May 1997) is to ship about 300 vitrified HLW canisters from West Valley to SRS during the 2001-2004 timeframe for storage pending availability of the geological repository. The basis for the recommendation is a \$630M cost savings and early (2005) completion of HLW activities at West Valley. Implementation would require:

- (1) Construction of a load-out facility at West Valley by 2001 (accelerated by 18 years),
- (2) Construction of a HLW canister shipping/receiving facility at SRS starting in 1998 (accelerated by 13 years),
- (3) Construction of the SRS Glass Waste Storage Building #2 starting in 1999 (accelerated by 18 months), and
- (4) HLW transfer and transport cask development and fabrication by 2001.

The 300 West Valley HLW canisters represents a 5% increase in the expected SRS canister inventory. Overall dimensions of both SRS and West Valley canisters are identical, but a larger neck design of the WestValley canisters would require modification to SRS handling equipment. A preliminary evaluation supporting this recommendation was performed jointly by DOE-WV, DOE-SR, West Valley Nuclear Services Company, Inc., and Lockheed Martin Idaho Technologies Corporation. DOE-SR and DOE-WV are preparing briefings for DOE-HQ.

L-Basin Spent Nuclear Fuel Shielded Transfer System (STS)- Many of the offsite fuel shipments to L-Basin utilize the NAC International Legal Weight Truck shipping cask. Because of the height of this cask, the L-Basin does not provide enough submergence to allow the fuel to be removed. Current shipments must be received at the Receiving Basin for Offsite Fuel (RBOF), where the fuel is removed and transferred to another cask for local transportation to the L-Basin. A Shielded Transfer System (STS) has now been installed at the L-Basin that will allow the taller casks to be received directly. Using the new STS, fuel is raised from the dry shipping cask into an above-pool dry shielded transfer cask. This above-pool transfer cask is then repositioned a few feet away, allowing the fuel to be lowered into the pool via an underwater shielded transfer tube. Although hoist position interlocks allow movement of the shielded fuel transfer system only when the fuel is in appropriate positions, a Technical Safety Requirement will be implemented to assure operability of a mechanical torque limiting device and two electrical limit switches that will further reduce the potential for misoperation to deform or shear the fuel. An empty shipping cask will be utilized early January for dry runs on this Shielded Transfer System.