

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 28, 1998

MEMORANDUM FOR: G. W. Cunningham, Technical Director
FROM: J. Kent Fortenberry / Joe Sanders
SUBJECT: SRS Report for Week Ending August 28, 1998

Chuck Keilers, Asa Hadjian, and outside experts Bill Hall, Paul Rizzo, and John Stevenson were onsite this week to discuss site seismic issues, the Actinide Packaging & Storage Facility (APSF), and K-Area Material Storage (KAMS).

K-Area Plutonium Storage - As part of preparations for storing about 7 metric tons of plutonium from RFETS for up to ten years at the SRS K-Reactor facility, WSRC recommended a Contractor Readiness Assessment (RA) as the appropriate level of readiness review. In this recommendation to DOE-SR, WSRC stated that a preliminary USQD concluded that the mission is within the existing safety envelope for the facility and so would not represent a USQ. WSRC also stated that although revisions would be made to the authorization basis documents and TSR's, these changes would be 'basically descriptive' and would not constitute a significant change to the authorization basis. In addition, WSRC stated that although DOE-425.1 requirements would support a line management review, they were recommending a RA due to the importance of the mission. This appears to be a gross misinterpretation of both the purpose of the USQ process and the operational readiness review requirements. DOE-SR has not yet responded to the WSRC recommendation.

Salt Disposition Alternatives (SDA) Risk Evaluation - Members of the SDA team, along with additional subject matter experts, conducted a week-long review of the four technologies currently being considered to replace ITP which include: grouting, crystalline silicotitanate ion exchange, caustic-side solvent extraction, and small tank TPB precipitation. This evaluation was intended to identify safety, technology, and project risks, and to discern additional areas which need to be investigated to support preconceptual design development for the four alternatives. The preconceptual designs and initial cost estimates are scheduled to be completed on 10/5/98, with the final report identifying the preferred alternative(s) being completed on 10/29/98.

Waste Drum Lid Ejection During Repackaging - While preparing to remove the lid from a drum containing trichloroethane-contaminated sorbent (kitty litter), the lid was ejected several feet due to slight pressurization of the container. While not struck with the lid, the operator inhaled noxious gas (potentially phosgene, hydrochloric acid gas, or chlorine gas from the decomposition of trichloroethane) and was taken to the hospital and released. For this case, the inner 55-gallon galvanized steel drum within the outer drum was found to be severely corroded. These drums were being opened for sampling to evaluate whether they contained mixed or just hazardous waste. A Hazards Assessment (HA) was performed for this activity which identified the potential for noxious gases being released from the drum and, in fact, required the individual removing the drum lid and taking samples to wear an Air Purifying Respirator (APR). However, the operator that removed the closing bolts and lid seal ring was not required to wear an APR. The individuals responsible for developing the procedure and performing the activity HA apparently did not consider the potential for pressure buildup and premature opening of the lid. This sampling activity is being reassessed and additional controls are expected. Other similar activities, such as TRU waste drum venting, have controls to address drum pressurization.