

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 20, 1998

MEMORANDUM FOR: G. W. Cunningham, Technical Director
FROM: J. Kent Fortenberry / Joe Sanders
SUBJECT: SRS Report for Week Ending February 20, 1998

Joe Sanders was on travel this week attending training.

HB-Line Phase I (Scrap Recovery) Operation - The HB-Line Phase I operation will dissolve plutonium-239 scrap into a nitrate solution for subsequent processing. The DOE Operational Readiness Review for this operation was completed this week and concluded that operations could be safely restarted following closure of several pre-start findings. WSRC is expected to resolve these findings quickly. Scrap material dissolution could start by March 3, 1998.

H-Canyon Phase II Restart - Following the suspension of the DOE Readiness Assessment, WSRC is now performing repair and replacement of problem equipment. Facility operators have been given additional training related to authorization basis requirements, conduct of operations, and the use of the programmable logic controller. Starting the first week of March the facility will begin two weeks of cold runs to further exercise the equipment and the operators. Beginning March 16, WSRC plans to conduct two weeks of formal "demonstration runs" with the expectation of declaring readiness to allow resumption of the DOE Readiness Assessment by March 30. Hot operations are not expected until May.

Plutonium Storage at K-Reactor - The storage of plutonium at K-Reactor will rely primarily on the protection of the 6M and 9975 shipping packages. WSRC expects that the 105-K structure will provide additional protection from natural phenomenon hazards such as earthquake, tornado, etc. Other major hazards that would have to be controlled include fire, damage from operational errors (e.g., fork lift), and potential effects from long term storage in the shipping packages. It is likely that controls will be required for all of these hazards. Suggested fire controls identified in a preliminary fire evaluation include limiting combustibles, a minimum ventilation requirement to limit the severity of the fire, and a maximum fire department response time (maybe 30 minutes) to ensure packages exposed to fire are allowed to cool. The development and implementation of these controls will be important since the release of material-at-risk from a single plutonium storage container exceeds offsite evaluation guidelines.

There is a potential that 6M and 9975 packages would be opened to accommodate accountability requirements and/or shipping container in-service-inspection requirements. If this is done at K-Reactor additional confinement measures would be required. Planned safety analysis for storing plutonium at K-Reactor include revisions to the K-Area Basis for Interim Operation, Technical Safety Requirements, Preliminary Hazard Analysis, Fire Hazard Analysis, Functional Classification Report, and Shielding Analysis. This work, including analysis to support EIS supplemental analysis, has been estimated to require about 20 months to complete.