

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 25, 1997

MEMORANDUM FOR: G. W. Cunningham, Technical Director

FROM: J. Kent Fortenberry / Joe Sanders

SUBJECT: SRS Activity Report for Week Ending April 25, 1997

HB-Line Deinventory Project - Previous plans to move low assay and miscellaneous Pu-238 material to a cold storage array in the 235F facility are changing. Staff concerns about the packaging and storage plans for this material (see 2/7/97 weekly report and 3/5/97 Tontodonato trip report) may be allayed because DOE has now decided that dissolution and disposal of the low assay Pu-238 material to waste is a "superior alternative to storage in 235- F." The low assay material consists of about 7.5 kg of plutonium in 39 containers. The Pu-238 content ranges from 18 to 66% for a total of about 2.3 kg. The HLW Tank Farms has agreed to accept this material, diluted 160 to 1 with ferrous sulfamate (iron serves to poison the Pu-239). In addition, it appears likely that 2.5 kg of miscellaneous plutonium materials (standards, laboratory returns, etc.), with an average of about 79% Pu-238, will be sent to LANL. Preparations for shipping this material would include calcination to remove residual moisture. Schedule details, potential impacts on current stabilization activities and preparations for dissolution are being assessed by DOE in reaching a final decision. The most likely outcome is two months of dissolution starting May 1998 and resulting in some delay in the start of Np solution stabilization. Dissolving this material in the HB-Line is a "new" mission for H-area and will result in extending HB-Line activities for about half a year.

ITP Conduct of Operations Improvement Plan - Recent assessments by ITP facility representatives show that conduct of operations at ITP is on a downward trend. Discussions with ITP facility management indicate that they recognize this trend and are working to reverse it. A Senior Management Monitoring/Coaching program was initiated in late March. More recently, a Conduct of Operations Improvement Plan was developed. The improvement plan focuses on three areas: status control, verbatim compliance, and management involvement. Discussions with facility management emphasized the need to resolve generic conduct of operations problems before meeting the challenge of implementing a new safety strategy with associated new equipment, TSRs, and procedures. Accordingly, it is good that facility management is working to turn around the current trend in conduct of operations. The site representatives will monitor progress on this effort.

HLW Tank Closure - Closure of Tank 20 has begun with the pouring of a one-foot layer of reducing grout to bind up ~1000 gallons of residual sludge. Dry grout will be added to bind up sludge displaced during this first pour, followed by a second one-foot layer pour. The tank will then be filled with low strength grout, followed by a high strength cap.

Closure of Tank 17 depends on reducing the residual sludge to less than 700 gallons, as required by the Tank 17 closure module. Sludge removal from Tank 17, using a water jet to sweep the sludge toward an air powered diaphragm pump, has not progressed as quickly as planned. Similar to Tank 20, a new riser must be drilled in Tank 17 before it can be grouted.

Tritium Reservoir Overheating - The Pantex Weekly Report of 4/4/97 discussed a USQD regarding reservoir overheating while in storage. At SRS, reservoirs stored in the 217-H vault are located either in the new Highly Invulnerable Encased Safes (HIVES) or the remaining Stanley-Vidmar cabinets. A dedicated air conditioning system maintains the room air temperature at ~65 deg F in order to maintain the reservoir temperatures below 120 deg F. In addition, one of the loaded HIVES has been thermally instrumented to validate modeling results. During intra-area transport, reservoirs are covered but are not stored in insulated cases; heat up above 160 deg F is not a concern.

A representative from Sandia Livermore indicated that the four reservoirs potentially exposed to elevated temperatures during storage at Pantex will probably be sent to SRS for unloading and metallographic examination. Potential impacts on the reservoir life storage program, which assumes a maximum temperature of 160 deg F, have not yet been assessed.

H-Canyon Safety Equipment Classification - Twenty-five H-Canyon components are being upgraded to safety equipment: twenty-three general service components are being upgraded to safety significant, and two other non-safety components are being upgraded to safety class (see weekly reports from 2/21/97, 3/14/97, and 4/4/97). Discussions with DOE-SR and WSRC indicate an initial position that the BIO and TSRs do not need to be revised to accommodate these additions (i.e., references to a low-level steam interlock which had been interpreted to mean the level transmitter, interlock relays and alarms would now include additional components such as the steam isolation valve). Also, the existing surveillance procedures used to meet TSR operability requirements are thought to adequately cover these newly classified components. The use of the existing procedures would require that these components have no specific or unique operability requirements. Using the steam isolation valve example, the current surveillance does check that the valve closes, but does not specify a maximum closure time, or any leak rate requirements.