

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 28, 2002

**TO:** J. K. Fortenberry, Technical Director  
**FROM:** D. F. Owen, RFETS Site Representative  
**SUBJECT:** RFETS Activity Report for the Week Ending March 29, 2002

The site rep. will be out of the office on Friday.

**Plutonium Stabilization and Packaging System (PuSPS).** Since startup last June, PuSPS operations to stabilize and package plutonium oxides have been restricted by the Building 371 Basis for Interim Operation (BIO) to oxides containing at least 80% plutonium. Kaiser-Hill is making preparations to stabilize the inventory of oxides with less than 80% plutonium and had submitted a BIO change to DOE-RFFO. Kaiser-Hill has proposed that the less than 80% oxide inventory be split into two sub-populations: (1) oxides where Kaiser-Hill has determined that process history indicates the impurities do not include organic compounds and there is evidence that the oxides had undergone prior thermal stabilization; there are 18 item description codes (IDCs) included under this determination, and (2) all other oxide IDCs that may have organic impurities and will require additional stabilization process controls that are yet to be determined (e.g., feed sampling and/or restricted thermal heat-up profiles).

Kaiser-Hill proposed in the BIO change that stabilization of the 18 oxide IDCs be authorized without the need for additional stabilization process controls. Authorization of the second sub-population will be the subject of a future BIO change proposal. Late last week, DOE-RFFO approved the BIO change to allow the 18 oxide IDCs to be stabilized. Kaiser-Hill projects it will be several weeks before implementation of the BIO change and the start of operations on these oxides. The DOE-RFFO approval documentation is being provided to the staff. (3-A)

**Work Planning.** As reported last week, upon cutting a lathe machining coolant drain line coming from a glovebox in Building 707, a pressurized spray reaching about 5 feet and lasting about 20 seconds occurred resulting in personnel skin and room contaminations. Room decontamination work continued through this week. Fact-finding will be completed when decontamination is completed and personnel can inspect the lathe glovebox for the drain line piping/valving configuration upstream of the cut. So far, however, Kaiser-Hill believes that the drain line had not been fully drained and that radiolysis of organic fluids in the machining coolant pressurized the line during the approximately 13 years since the lathe had been used.

The engineering input into the work planning for removal of this drain line had assumed that the line had been drained and did not specify draining or a tap/drain verification check. Based on the dry condition of the machining coolant recirculating line removed prior to the drain line, the work crew did not question whether the drain line was drained and proceeded to make the drain line pipe cut. DOE-RFFO is reviewing the work planning performed for this work and the corrective actions being developed by Kaiser-Hill. (1-C)

cc: Board Members