

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 12, 2002

TO: J. K. Fortenberry, Technical Director
FROM: D. F. Owen, RFETS Site Representative
SUBJECT: RFETS Activity Report for the Week Ending July 12, 2002

Plutonium Stabilization and Packaging System (PuSPS). As previously reported, Kaiser-Hill has been preparing to stabilize and package their inventory of oxides containing less than 80% plutonium; processing of these oxides is not expected to begin until mid-August. A portion of the less-than-80% oxides contain substantial chloride contaminants. Due to concern with potential damage to the stabilization furnaces from off-gassing of the chlorides, Kaiser-Hill is attempting to justify lowering the oxide stabilization temperature for this sub-population from that required by DOE-STD-3013 (from 950 °C to 800 °C). As part of this justification, Kaiser-Hill plans to run a batch of such oxides in a PuSPS furnace first to 800 °C, perform thermogravimetric analysis (TGA), and run the same batch to 1025 °C followed by TGA. Kaiser-Hill believes this test will provide data on stabilization performance at 800 °C. The furnaces will be inspected after each run to identify any signs of corrosion and/or salt buildup on furnace internals. To support this effort, Los Alamos National Laboratory will perform multiple furnace cycles using surrogate oxides with high chloride content to provide additional data on any furnace damage.

The site rep. and staff discussed the plans for this test with DOE-RFFO and Kaiser-Hill personnel. Kaiser-Hill will perform safety screening and specific work planning for the test. The batch to be run is about 70% plutonium and has a good pedigree indicating the material should not contain organic contaminants. Kaiser-Hill stated that the slower thermal heat-up profile to be used for less-than-80% oxides (see site rep. report of May 30th) will be implemented for this run. (3-A)

Conduct of Operations/Work Planning. A worker in a crew from a central support group cut a pressurized instrument air line in Building 776. The line was not intended to be cut during that evolution and had not been addressed in the pre-evolutionary briefing, but was connected to a pneumatic control panel that was to be removed in the following days. Since the panel was addressed in the equipment removal work package, the worker believed it was depressurized and proceeded on his own to make the cut. Actions to address this conduct of operations deficiency and those from other recent events are to be developed as part of a DOE-RFFO/Kaiser-Hill senior management interchange on the state of conduct of operations at RFETS that started this week.

Fact-finding also identified that the pneumatic control panel removal was added late in work planning without a detailed walk-down; the engineer assumed the panel had no pressurized air lines. The site rep. has inquired with DOE-RFFO on the status of actions in response to a cut of a pressurized machining coolant line (see April 19th site rep. report). Actions were to be taken in Buildings 776 and 707 regarding joint line management/engineering walk-downs of engineering input and physical checks by work crews on piping systems prior to removal. (1-C)

Public Interaction. The site rep. presented an update to the RFETS Citizens Advisory Board. PuSPS operations, recent actions under Recommendation 2000-2, and DOE's response to the Board's letter of March 19th on work planning and cause determination were discussed.