

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 30, 2002

**TO:** J. K. Fortenberry, Technical Director  
**FROM:** D. F. Owen, RFETS Site Representative  
**SUBJECT:** RFETS Activity Report for the Week Ending May 31, 2002

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

**Plutonium Stabilization and Packaging System (PuSPS).** As reported on May 3<sup>rd</sup>, the Board's staff had previously inquired about the potential for less-than-80% plutonium oxides with small (i.e., not readily visually detectable) amounts of organics being inadvertently introduced into a stabilization furnace. Processing of less-than-80% plutonium oxides is planned to start in July. DOE-RFFO had requested Kaiser-Hill to address applying more conservative heat-up profiles for this sub-population of oxides. This week, the site rep. and staff discussed with RFETS personnel the status of Kaiser-Hill's evaluation and actions on this issue. Kaiser-Hill personnel noted that:

- The natural circulation airflow into and out of the furnace is not well understood;
- Kaiser-Hill intends to modify the back access port of the furnace with spring-loaded fasteners to allow a larger vent path upon any substantial pressurization of a furnace; and
- Kaiser-Hill intends to slow the furnace heat-up profile to allow about ½ hour of additional heat-up time at temperatures below 450 °C to allow any organics time to burn at these lower temperatures. This increases time for furnace heat-up from about 30 minutes to 60 minutes.

DOE-RFFO is evaluating these proposals. The site rep. and staff questioned whether more time than proposed could be prudently allotted to furnace heat-up and will continue follow-up. (3-A)

**Conduct of Operations.** As reported last week, there were two occurrences in Buildings 707 and 371 where operations personnel failed to notify on-duty shift management of non-compliant or deficient conditions as required. Building 707 personnel had not notified on-duty shift management of an overloaded transuranic waste drum (1080 lbs vs 800 lbs limit), and personnel in Building 371 had not immediately notified on-duty shift management of deficiencies found during the course of a fire protection system surveillance. Subsequent to these occurrences, late last week in Building 776 workers were consolidating the contents of one transuranic waste drum into another drum and exceeded the criticality mass limit (206 grams plutonium versus the 200 gram limit) for the drum. Mass values of the drums' contents were apparently mis-read. The workers upon realizing the criticality mass limit violation did not stop the operation and report the violation to on-duty shift management as required; the workers instead proceeded to remove the waste items to their original drum. Supervision upon learning of the violation reported the event.

As noted last week, corrective actions regarding proper on-duty shift management notification upon discovery of non-compliant, deficient or other unexpected conditions were in development. With this latest occurrence, the corrective actions determined by Building 776/707 project management contain a new requirement that all pre-evolutionary briefings include a specific discussion of the kinds of situations applicable to the operation where reporting is expected/required. This action is being considered for site-wide application. (1-C)