

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 27, 2000

TO: J. K. Fortenberry, Technical Director
FROM: D. F. Owen, RFETS Site Representative
SUBJECT: RFETS Activity Report for the Week Ending October 27, 2000

Electrical Near Miss Follow-up. As reported last week, during electrical equipment removal activities in Building 776, an electrician cut into a 1-inch electrical conduit containing an energized 480 volt line. Follow-up revealed that the conduit contained a second electrical circuit that had not been identified during planning for the job and therefore was not disconnected at the main electrical panel prior to the cutting operation. This second circuit is believed to be routed through a junction box to a hoist disconnect box labeled "leads lifted abandoned equipment." While there was a clear run of conduit from the conduit being cut to the hoist disconnect box via the junction box, no investigation (e.g., voltage check) for a potential energized circuit was performed at the hoist disconnect box based on this label prior to cutting the conduit.

While this activity was planned under the "minor maintenance" category, involving a lower level of planning and review than other job planning categories, a Job Hazard Analysis (JHA) was still required. The JHA performed for this activity, however, did not define the basic steps of the work nor identify specific controls for ensuring a de-energized line (e.g., power/voltage checks or circuit verification, lifting of leads, etc.) as required by RFETS work planning procedures. The JHA only called for use of the Kaiser-Hill manual on electrical safety. In discussions with the site rep., DOE-RFFO and Kaiser-Hill management indicated that the hazard analysis and definition of controls performed for this activity was improper and inadequate.

Kaiser-Hill briefed DOE-RFFO on actions to address this near miss. Several actions are in progress in Building 776 and site-wide including evaluation of electrical safety practices/requirements and development of a site-wide strategy for deactivation and removal of electrical equipment. As previously reported, efforts to implement revised work planning procedures including revised JHA guidance and training are in progress. The site rep. will continue follow-up on these issues. (3-B, 1-C)

Recommendation 94-1. DOE-RFFO proposed to DOE-Headquarters that the DOE 94-1 Implementation Plan milestone to complete repackaging of Ash residues by December 2000 be deleted and that Ash residues be included in the milestone to complete repackaging of all remaining residues by May 2002. DOE-RFFO also proposed that the milestone to start packaging plutonium metal and oxide into DOE-STD-3013 containers be changed from October 2000 to January 2001. The DOE-RFFO proposal with their reasons and justifications for the changes is being transmitted to the staff for review. (3-A)

Use of Robotics for Equipment Size Reduction. The demonstration of the full robotics system (including ventilated cutting chamber and waste handling areas) at a contractor in Minnesota has been delayed from November 1st and 2nd to November 15th and 16th. (3-B)