

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 20, 2000

TO: J. K. Fortenberry, Technical Director
FROM: D. F. Owen, RFETS Site Representative
SUBJECT: RFETS Activity Report for the Week Ending October 20, 2000

Electrical Near Miss. During deactivation activities in Building 776, an electrician cut into a 1-inch electrical conduit containing an energized 480 volt line. Fortunately, the electrician was not injured. The hand-held saw blade had burn marks. Initial 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 electrical panel prior to the cutting operation. This circuit appears to have been improperly installed, grounded and labeled many years ago. All energized electrical work has been suspended. Kaiser-Hill is determining several actions in Building 776 and site-wide to improve procedures and practices for planning and conducting work on electrical equipment (and in particular for deactivation and removal of electrical equipment). DOE-RFFO has asked Kaiser-Hill to review their actions to address this near miss with DOE-RFFO during the week of October 23, 2000. (3-B)

Inner Tent Chamber (ITC) Startup. Initial operations in the new ITC in Building 771, employing plasma-arc cutting of gloveboxes and related equipment, continued this week. Based on these initial operations, minor ITC modifications were completed to better shield the ITC inner walls against cutting sparks. The site rep. will continue to follow the initial ITC operations. (3-B)

Use of Robotics for Size Reduction. Use of robotics to perform equipment size reduction is currently under development by Oceaneering International and a team of subcontractors. Kaiser-Hill continues to evaluate the cost-benefit of the robotics system and a firm decision on its deployment at RFETS is not expected for a number of weeks. A demonstration of the full system, including ventilated cutting chamber and waste handling areas, has been scheduled at a sub-contractor in Minnesota for November 1st and 2nd. (3-B)

Conduct of Operations. In June 2000, it was determined that operations personnel performing plutonium metal size reduction activities were skipping procedural steps designed to prevent an inadvertent criticality due to over-batching plutonium into a can (see site rep. report of June 30, 2000). The operators believed the "intent" of the procedure was being met. A site-wide improvement action was developed to institute planned "follow-up operational surveillances" in ongoing nuclear activities. The intent of such surveillances is for line management to specifically review the activity for any operational drift or perturbations and to elicit feedback from operations personnel to improve operational effectiveness, efficiency and/or safety. This concept is being implemented by Kaiser-Hill via their readiness review process, whereby readiness review teams make recommendations and line management schedule and perform such surveillances at appropriate periodicity. (1-C)

cc: Board Members