

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 9, 2000

TO: J. K. Fortenberry, Technical Director
FROM: D. F. Owen, D. J. Grover, RFETS Site Representatives
SUBJECT: RFETS Activity Report for the Week Ending June 9, 2000

Plutonium Stabilization and Packaging System (PuSPS). Senior Kaiser-Hill Management continues to meet weekly on PuSPS status. This week the project met a goal to expedite testing of the water chiller for the furnace exhaust ventilation. To recover schedule, construction work continues to be performed on an 60-hour work week resulting in 4 of the 5 furnaces emplaced with wiring being installed. An additional effort to recover schedule is underway by allowing glovebox testing activities to be performed in parallel with furnace testing rather than in series. Finally, identified items with the potential to negatively impact the schedule involve resolving inspection and acceptance requirements with the DOE-MD and the Savannah River Site. (3-A)

Size Reduction Technology Development. There are three current efforts to apply engineered controls for size reduction of gloveboxes and related equipment. These controls will remove the workers from or greatly reduce the hazardous environment (i.e., airborne radiological contamination). These efforts include development of two generations of the Inner Tent Chamber (ITC) for use in Buildings 771 and 776/777 and a project to apply robotics technology to size reduction (see site rep reports of March 10 and February 18, 2000). Each of these projects have experienced delays over the past few months, but have key milestones approaching.

The modified version of ITC Phase 1 replaces sliding doors with glove ports, has an integral waste box, and will be able to accommodate manual plasma-arc cutting. Design changes and equipment procurement are being completed for a projected October 2000 startup in Building 771. ITC Phase II adds remotely operated manipulator arms to perform the plasma-arc cutting and load the waste boxes. The vendor will provide operational training on the system to RFETS workers as part of a demonstration to completed by mid-July. The Phase II ITCs will then be assembled into Building 771 and Building 776/777 with startups planned for late fall 2000.

The robotics project design development work by Oceaneering International and their team of subcontractors has been delayed and is not expected to be completed until August 2000. However, most of the main robotics and gantry crane design is complete. A demonstration of the robots performing plasma-arc cutting on surrogate gloveboxes and moving the cut pieces to waste boxes is scheduled on July 17, 2000, at a sub-contractor facility in Minnesota. The full system demonstration (including the ventilated enclosure) is planned for September 2000. (3-B)

RFETS Site Computer Network. An on-site electrical fault resulted in an extended loss of power to the central computing facility shutting down RFETS' internal computer network. This failure affected email, web access, and most importantly the shared file network containing draft work control and authorization basis documents, however, the material accountability system remained operational. As a result, the site was mostly limited to performing previously approved work (e.g., residue processing, PuSPS construction, tap and drain, etc.). (3-B)