

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 23, 2003

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending May 23, 2003

Work Controls: Last Monday, LANL reported that 9 people received small tritium uptakes (up to 8.3 mrem) when cutting and removing copper piping in the Ion Beam Facility (TA-3-16) and that this was an activity outside the scope of the skill-of-craft work package used to authorize the job.

The Ion Beam Facility is an excess, shutdown facility awaiting disposition. The authorized work included general upkeep and removing loose items for salvage. The workers were removing piping to get to a shield wall. Their intent was to remove part of the wall and thereby gain forklift access to salvage a large pedestal magnet. The room had been downgraded to radiologically uncontrolled status, although tritium contamination had been found in other similar systems in the building and other equipment in the room. During post-job surveys, radcon personnel found tritium contamination inside the pipes – identifying the hazard after the work. LANL management has stopped this job, directed a stand-down of such surveillance and maintenance activities at LANL excess facilities, and is reviewing surveillance and maintenance work requests for similar problems. LANL is also performing a causal analysis of this and similar events to ensure common factors are identified and institutional improvements are pursued.

Plutonium Facility (TA-55): TA-55 reported a Technical Safety Requirement (TSR) violation this week because un-calibrated differential pressure gauges are being used to confirm that HEPA filters are unplugged. TA-55 has a TSR to periodically confirm that differential pressure across filter plenums are within specification. The TSR surveillance procedure requires verifying gauge calibration. The NNSA facility reps recently observed daily rounds and determined that the gauges are not calibrated. LANL previously recognized this condition for about 68 gauges and has been planning to correct it. On Tuesday, NNSA approved continued operation with the un-calibrated gauges. LANL plans to replace the gauges with calibrated ones by June 30th.

On Tuesday, TA-55 had a low-level personnel contamination event when replacement heater elements were moved from one room to another via an introduction hood, glovebox lines, and the trolley system. The source remains to be determined. Seven glove box gloves in two different rooms had contamination but were apparently intact. LANL lines of inquiry include: self-survey requirements during glovebox work within a single line, between lines, and between rooms; worker compliance with these requirements; and the practicality of avoiding skin contact to anti-Cs at the conclusion of work.

The NNSA Site Office has assigned priority to complete by June 1st its review of the process hazard analysis (PrHA) for the new Pu-238 scrap recovery line (site rep weekly 1/17/03). LANL has stated that a need exists for about 9 kg of clean Pu-238 by Sep 04 and that LANL has 1 kg from running the bench-scale unit (a high man-rem activity) and maybe another kg from other sources. LANL has indicated that meeting this schedule requires near-term PrHA approval, Jul-Aug readiness assessments, Sep-Oct startup, and then “sprint mode” operation (i.e., 8 kg/yr rate) for at least part of the remaining period.

Radiochemistry Laboratory (TA-48): The NNSA Site Office has extended LANL authorization to operate TA-48 under the approved Hazard Category 3 safety basis until today (site rep weekly 4/25/03).