

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 25, 2002

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending January 25, 2002

Chemistry and Metallurgical Research Building (CMR): This week, CMR management curtailed operations, since CMR has had 7 contamination events so far this month, 6 of which occurred in the last two weeks (4 bootie, 2 personal article, and 1 skin contamination). This is prudent. Each of these events individually involved low risk; however, collectively, they could be viewed as precursors to a potentially more significant future event. Contamination control is a recurring problem in CMR due to legacy contamination, increased workload, and occasional poor work practices in unforgiving radiological conditions (e.g., researchers working with contaminated hoods). Last September, CMR provided DOE an action plan to reduce the number of contamination events in the long term. Key elements included changing worker behavior and awareness (e.g., peer review, recognition of good practices and habits); reviewing the history and condition of individual rooms (e.g., legacy contamination); and clarifying personnel protective equipment requirements (e.g., use of gloves). This is a good start. The issue warrants continuing close management attention in detail to execution.

Decontamination and Volume Reduction System (DVRS): DOE and LANL have agreed upon a path forward to start up the DVRS as a radiological facility, process a small number of the fiberglass-reinforced crates with low TRU waste inventory, and then transition the facility to Hazard Category 3 (HC-3) operations. The possibility remains that a small number of packages may have inventory exceeding the HC-3 threshold and will require processing, in future years, in either a HC-2 facility or in DVRS with appropriate short-term compensatory measures (site rep weeklies 11/2/01, 12/21/01).

The Inventory Control Plan considers startup in 3 phases: (1) cumulative inventory of containers processed not to exceed 85% of the HC-3 threshold; (2) additive inventory not to exceed the HC-3 threshold, based on subtracting out assayed waste streams; and (3) full HC-3 operations with appropriate controls. Readiness assessments (RAs) would be performed before Phases 1 and 3. The site rep understands that shear-bailer operations (e.g., for glovebox size reduction) will not be permitted until HC-3 operations are authorized. One clear advantage of this approach is the early experience that will be gained by starting on the low activity packages. Thorough RAs are advisable to assess preparations for these manually intensive radiological operations. The pre-RA management self assessment is scheduled to begin next week.

Chlorine Dioxide Event: LANL is investigating the vessel rupture event of January 8th using methodology from the DOE accident investigation guide (G 225.1A). DOE has a representative working with the LANL team. The site rep understands that the team is approaching this investigation with a level of rigor equivalent to a Type B accident and has targeted having a draft report for factual accuracy review within the next two weeks (site rep weekly 1/11/02).

LANL Authorization Bases (ABs): This week, LANL submitted to DOE the proposed authorization basis for the Weapons Engineering Tritium Facility (WETF). This is the first major AB submittal under the new master schedule and should be a good test case on whether DOE and LANL have improved their processes for delivery and approval of major safety analyses (site rep weekly 1/4/02).