

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 14, 2001

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending December 14, 2001

LANL Authorization Bases (ABs): The AB upgrade schedule is aggressive. The LANL resubmittal for the Weapons Engineering Tritium Facility (WETF) appears to be the highest priority and is expected in late January 2002 (site rep weeklies 11/23/01, 9/28/01).

Plutonium Handling and Processing Facility (TA-55): The following are noteworthy:

- c The ventilation ductwork between the exhaust filter plenums and the building structure is considered to be a Safety Class design feature to prevent an accidental release. The site rep understands that duct inspections done several years ago identified minor internal surface corrosion but that nominal wall thickness was basically the same as during construction. During the next two months, the facility intends to develop a routine preventive maintenance program to monitor the condition of the Safety Class ductwork. The program is currently envisioned to be a visual and an ultrasound inspection every one and five years, respectively.
- c Recently, there have been several contamination events in the aqueous processing operations, including one skin contamination. Several of the events are attributed to service-life failures. The facility has concluded that an increased emphasis on engineered barriers, plant maintenance, and radiological controls practices is warranted. Management has reviewed the events, lessons-learned, and expectations with personnel. Also, work area supervisors are assessing process equipment age, reliability, and risks to identify improvements.

These initiatives are commendable. The site rep believes that the increased, complex-wide emphasis on facility infrastructure and vital safety systems (e.g., Recommendation 2000-2) has raised awareness. In this context, the facility itself – particularly, the facility management and the DOE facility reps – self-identified the specific issues leading to these initiatives. Resources required and available are to be determined.

Decontamination and Volume Reduction Facility (DVRS): System testing and questions on startup requirements have delayed the LANL and DOE readiness assessments (RAs) for DVRS at least a month (site rep weekly 11/2/01). The LANL RA was scheduled to occur this month. The advantage of expeditious startup is timely reduction of TA-54 combustible loading. The disadvantage is that the currently proposed startup strategy could potentially allow incompletely characterized packages to be opened in the facility, leading to unanalyzed conditions.

The basic question is the chemical and radiological hazard categorization at initial startup. LANL has proposed that the facility be started up as a low-hazard, radiological facility and in a year or two transition up to Hazard Category 3 (HC-3), and possibly HC-2. However, recent LANL analyses has reduced by half the number of packages that may be processed before the facility transitions to HC-3. At this time, the project lacks completed safety analyses and functional classification that would support a HC-3 startup. They have drafts. The site rep is still looking for a systematic transition plan to HC-3 and a conservative set of controls on source term, safety equipment, and procedures in the interim. Some but not all of these elements are in place. DOE is reevaluating the startup strategy.