

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 27, 2002

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending December 27, 2002

The laboratory was closed Wednesday through Friday.

Plutonium Facility (TA-55): On December 17th, NNSA sent LANL a preliminary notice of violation for unauthorized TRU waste staging and storage in PF-185 (site rep weeklies 8/24/01, 9/7/01).

Authorization Basis (AB): On December 11th, the NNSA site office established a standard site boundary for safety analyses. NNSA has observed several variations on the assumed site boundary in dose calculations for postulated nuclear facility accidents. The standard site boundary appears more conservative than that assumed in some prior analyses - particularly, the use of the full length of East Jemez Road in addition to the Royal Crest Trailer Park boundary.

The site boundary question is complicated since LANL has commercial ventures on site and public access roads passing through the site. Per DOE STD-3009, NNSA considers such roads to be within the site boundary if NNSA or LANL has the capability to control the road during an emergency. By agreement, commercial ventures on LANL property are subject to LANL emergency evacuation procedures and are not considered public receptors. NNSA expects the standard site boundary to be incorporated in the next annual update of nuclear facility safety analyses, if not made sooner.

Pajarito Laboratory (TA-18): The site rep understands that the unanticipated gamma dosimetry results for two individuals in October have been traced to an evolution that was conducted off site (site rep weekly 11/22/02). It appears that the dosimetry results may not represent actual doses to the individuals, but this is still being investigated. Weaknesses in controls may have contributed to this event (e.g., dosimetry requirements during off-site activities and during betatron operations).

Decommissioning Activities: LANL is pursuing removal of reactor components from the Omega West Reactor (site rep weekly 11/22/02). The radioactive inventory is principally tritium and cobalt-60 in the beryllium reflector and its supporting steel and aluminum framework. Estimated contact radiation levels are 1,100 R/hr, necessitating short-duration and remote operations.

NNSA has specified a number of administrative controls at the safety-significant level, including: minimize local combustible loading; secure unrelated local operations; secure operations if there is a loss of ventilation; inspect and certify lifting and rigging equipment; reevaluate rigging if remote video inspection identifies reflector damage occurring during the lift; remove as single unit to minimize releases; and ship in a shielded cask and dispose in TA-54 within one day of packaging.

Waste Management: NNSA and LANL have identified weaknesses in interpretation of surveillance requirements for the TA-50 Waste Characterization, Reduction, and Repackaging Facility (WCRR), a HC-2 nuclear facility. The weaknesses mainly involve the frequency and extent of inspections verifying waste drum inventory. LANL is invoking stricter data recording on daily drum movements and will revise operations and facility procedures by end of February. Longer-term, LANL is preparing a proposed updated authorization basis for WCRR operations that may address the weaknesses.