

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 2, 2004

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending January 2, 2004

LANL declared the new EOC operational last week before closing for the holidays (12/25/03-1/2/04). LANL management is also pursuing engaging with an industrial partner to help improve operations in nuclear and high hazard facilities.

Waste Operations: Last week, NNSA approved the updated safety basis for RANT - the Radioassay and Nondestructive Testing Facility (TA-54-38), subject to 16 conditions of approval. RANT has been up-rated to a Hazard Category 2 (HC-2) nuclear facility. RANT does nondestructive testing of TRU waste packages and loads them into TRUPACT containers for shipment to WIPP. Approved safety-class engineered controls include vented waste packages, building structure, fire suppression, TRUPACTs, pipe over-packs (for sealed sources). The interior fire wall and bridge crane were designated as safety-significant. The main administrative controls (LCOs) are on material inventory and the fire suppression system operability. WIPP shipments have been on hold since October (site rep weekly 10/3/03). Resuming safe shipments is key to LANL reducing TA-54 risks via the Quick to WIPP program.

NNSA directed that the RANT safety basis (BIO, TSRs) expire in 5 years (12/08) and that cost-benefit analyses be done on seismic vulnerabilities. While LANL believes the facility met code when it was constructed (1989), it's questionable it meets either PC-1 or PC-2 requirements now. NNSA also questioned the adequacy of the fire suppression to activate during small to medium fires.

Welding Issues: LANL has identified, via self-assessment, that some welding processes used on site may not have complied with national consensus codes and that this may have resulted in (a) welding not being done by welders who were qualified and holding current certification; (b) welding procedures not appropriately reviewed and approved prior to use; and (c) welding equipment and materials not procured and controlled to defined procedures. The site rep understands these issues extend to some nuclear facilities (e.g., CMR) and that LANL is preparing a corrective action plan.

Chemistry and Metallurgical Research Building (CMR): NNSA owes the Board a rapid response on safety system functional classification issues at CMR – particularly, whether that portion of the electrical distribution system that supplies power to supply and exhaust fans warrant functional classification as safety-significant (ref: Board letter 8/19/03). The current CMR Safety Basis (a BIO) credits ventilation as the safety-significant backup to the safety-class fire suppression system to protect the public. In discussion with the staff, NNSA has asserted that the passive ventilation mode provides adequate protection (i.e., no power requirement), but justification is lacking. CMR functional classification is expected to be examined when the BIO is updated. The BIO update has slipped from January 2004 to March 2004.

Critical Experiments Facility (TA-18): NNSA also owes the Board a response on the ability of new TA-18 safety-class temperature scram systems to perform their safety function (Board letter 7/9/03). The response is due prior to LANL removing interim safety controls or by September 2004, whichever occurs first. Last month, NNSA Albuquerque Service Center conducted an independent review of the new systems installed in SHEBA and Planet. The number of issues raised by this independent review indicate there would be value to including this project in a site-wide lessons-learned review of conduct of engineering, if one were to be conducted as discussed last week.