

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 6, 2007

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: B. Broderick and C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending April 6, 2007

Keilers was offsite this week. T. Davis was onsite to augment site rep coverage.

Los Alamos Throughput Improvement Plan (LATIP): The acting NNSA site office manager introduced the LATIP this week. This plan represents a prioritized list of focus areas for site office management across the breadth of organizational responsibilities (i.e. safety, security, business systems, etc.). Items identified as warranting the most urgent attention include improving the training and qualification status of the existing workforce and addressing site office staffing deficiencies; developing an integrated site office assessment plan; ensuring the laboratory contractor assurance system is open and responsive to site office issues; and, supporting required actions to achieve timely sitewide risk reduction through the disposition of legacy transuranic waste.

Pajarito Laboratory (TA-18): This week, TA-18 was formally downgraded from a Hazard Category 2 nuclear facility to a low hazard radiological facility. Approval to downgrade followed the successful completion of a laboratory management self assessment that verified the reduced facility inventory and confirmed that adequate controls were in place to safely operate and maintain TA-18 as a radiological facility. This downgrade culminates several years of intense effort to de-inventory significant quantities of special nuclear material (see site rep weeklies 6/2/06, 5/20/05, 10/1/04). The new radiological categorization was based on a segmentation strategy where remaining material (mostly large chunks of natural and depleted uranium packaged for shipment to the Nevada Test Site) was split amongst 3 physically separated transportainers to preclude interaction. The balance of TA-18 was identified as a fourth facility segment. Material inventories in the 3 transportainers constitute 83%, 82%, and 50% of the Hazard Category 3 threshold defined in DOE Standard 1027.

Plutonium Facility: TA-55 is currently operating under a safety analysis report that is more than a decade old and a set of interim technical safety requirements (TSR) that were originally slated to expire in July 06. LANL submitted an updated documented safety analysis (DSA) and TSR document last November. The site office recently formally responded to this submittal noting that the documents were deemed noncompliant with the Nuclear Safety Management rule (10 CFR 830) and were not approvable. Identified areas of noncompliance included the use of non-conservative analytical assumptions, inadequate flowdown of credited DSA controls into the TSR, generation of safety-affecting data using computer programs that lacked appropriate software quality assurance, and inconsistencies between fundamental input documents (e.g. the Fire Hazard Analysis) and the DSA. Prior to resubmitting the documents, LANL has communicated an intent to comprehensively review the detailed comments generated by the NNSA review, convene a workshop with NNSA to discuss lessons learned and develop a common understanding of expectations, and subject final revisions to an independent internal review followed by an external review using LANS corporate parent resources.

Developing a rule-compliant safety basis that accurately reflects current facility conditions and operations and identifies effective, well defined controls that are clearly traceable to rigorous hazard and accident analyses is critically important for the operation of TA-55. However, this is a necessary but not sufficient step; material condition and infrastructure issues must also be understood and addressed to ensure the facility can reliably and sustainably support its ambitious future mission.