

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 15, 2008

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: B. Broderick and C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending February 15, 2008

The staff had a video-teleconference with LANL and NNSA this week on the use of the MASS code.

Plutonium Facility (TA-55): On Wednesday, a deflagration occurred in two electrical cabinets in a pump house (PF-10) when an operator pressed a button to start an electrical fire pump. The cause was a natural gas leak elsewhere at TA-55; natural gas migrated down an electrical conduit to the cabinets and ignited when the button was pressed. In response, TA-55 isolated natural gas until the leak was found and patched Wednesday night. There were no injuries and no impact on nuclear operations. Visible damage is limited to bowing of the cabinet doors. TA-55 will conduct full diagnostics before returning affected equipment to service and is investigating the cause of the leak.

Criticality Safety: TA-55 has updated its criticality safety procedure to reduce operator dependency on the MASS code. TA-55 also began a pilot last week on having fissile material handlers use status boards and material transfer worksheets, in place of the traditional pegboards, to track fissile material quantities. The emphasis is on the operator confirming before material transfer that an over-mass condition will not occur at the destination or along the transfer route, which seems appropriate.

DOE Independent Oversight: On Jan 30th, The DOE Office of Independent Oversight (DOE-HS) transmitted to NNSA and LANL its final report from the biennial review conducted last November. DOE-HS was complimentary of the facility operations director (FOD) model, the formality of operations and safety basis improvement initiatives, the site chief engineer and design authority functions, the management review boards, the dashboard metrics management system, and the new Director's institutional assessment program, which is roughly analogous to the facility evaluation boards conducted at other sites. DOE-HS also pointed out continuing weaknesses in LANL implementing an effective integrated work management (IWM) process, integrating IWM with formality of operations, and ensuring that safety systems in nuclear facilities can demonstrably perform their safety functions. On the federal side, DOE-HS asserted that NNSA headquarters and site office oversight is still ineffective. DOE-HS recommendations include accelerating current improvement initiatives; addressing skill-mix issues and staffing shortfalls in engineering, safety basis, and health & safety; and expediting operability determinations and reliability improvements for nuclear facility safety systems. NNSA and LANL corrective action plans are expected in late March.

Transuranic Waste Operations: Approximately 53 unvented drums with the potential to retain flammable gas mixtures have been identified and segregated under a justification for continued operations at Area G. Last week, NNSA approved a DSA Addendum that analyzes drum deflagration scenarios associated with handling and remotely venting these types of drums. A suite of new safety-significant specific administrative controls were identified for these operations that involve: segregation and over-packs or lid restraints for unvented drums, venting only in an enclosure using non-sparking tools and drum grounding, and using only forklifts with enclosed cabs and spotters for movements. A contractor readiness assessment (RA) followed by an NNSA RA will be conducted to verify readiness to perform remote drum venting activities (site rep weeklies 1/11/08, 10/26/07).