

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 13, 2006

**MEMORANDUM FOR:** J. Kent Fortenberry, Technical Director

**FROM:** C. H. Keilers, Jr.

**SUBJECT:** Los Alamos Report for Week Ending October 13, 2006

**Waste Operations:** Last Friday evening (10/6), LANL suspended Area G operations due to high contamination levels found on the bottom of one transuranic waste drum in Dome 33 (i.e., up to 0.5 M dpm alpha). Immediate actions were extensive and appropriate. Dome 33 was isolated, and work areas outside Dome 33 were released later that evening. The drum was over-packed, and access to Dome 33 has been restricted while the affected area is decontaminated. The drum breach appears recent, possibly within the prior week. No environmental, safety, or health impacts resulted.

This was a worker safety issue, but there are public safety implications. LANL appropriately suspended operations to protect the workers because the contamination extent was initially unknown. However, to protect the public, LANL depends on most drums maintaining integrity in the event of a major earthquake or other extreme upset. Due to Area G's proximity to the site boundary, LANL may be unique among DOE sites in designating drums as safety-class; however, many LANL drums are similar to this one, which was retrieved after more than a decade from underground storage and had indeterminate integrity. LANL plans to review Area G's risks and controls in its safety basis later this year and hopes to ship Area G's transuranic waste to WIPP by 2010, which is the ultimate resolution.

**Chemistry and Metallurgy Research Building (CMR):** Per an NNSA request, CMR resumed fire watches this week for rooms that could be potentially susceptible to flash-over across the spinal corridor during a fire. LANL intends to request NNSA approval to remove restrictions following an independent review by the LANL Fire Marshal. LANL is also considering longer-term solutions.

**Pajarito Laboratory (TA-18):** LANL defueled SHEBA this week, which is TA-18's last remaining critical assembly. TA-18 is storing the ~120 L of fuel solution in 20L carboys within 55 gal drums, pending shipment to CMR for storage and treatment. LANL plans to remove all of TA-18's security category III/IV nuclear material by Nov 30<sup>th</sup>, downgrade TA-18 to a radiological facility in Feb 2007, and place TA-18 into a surveillance and maintenance mode by Apr 1<sup>st</sup>, 2007 (site rep weekly 8/11/06).

**Plutonium Facility (TA-55):** On Sep 17<sup>th</sup>, NNSA concurred with a LANL proposed safety-significant (PC-2) switchgear modification that will increase TA-55 electrical power and confinement ventilation reliability and improve nuclear safety; the LANL proposal was submitted to NNSA in phases between Jan and Mar 2006 and has been in the works for several years. When completed, the modification will automatically close breakers to restore off-site power, if available, and will automatically transfer loads to a diesel generator if off-site power is not available. This would help minimize confinement ventilation upsets, such as those that occurred frequently this past summer (site rep weekly 8/18/06).

**Authorization Basis:** When a potential inadequacy in safety analysis (PISA) is discovered, the Nuclear Safety Management rule (10 CFR 830) requires contractors to place or maintain nuclear facilities in a safe condition, notify DOE, perform a USQ determination, and submit to DOE an evaluation of the safety of the situation prior to removing any operational restrictions. LANL currently has a plethora of PISAs; however, NNSA and LANL are exercising insufficient formality in tracking PISAs, and in maintaining and removing operational restrictions due to PISAs; driving PISAs to closure seems to lack priority. The site rep understands that NNSA and LANL are working to correct this situation.