

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 2, 2007

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: B. Broderick and C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending March 2, 2007

Broderick was off-site this week.

Price Anderson Enforcement Letter: NNSA has sent the former LANL contractor (UC) a preliminary notice of violation for the March 2005 Pu uptakes, the July 2005 Am-241 contamination event, and the Oct 2005 DOE-OA review findings (site rep weeklies 2/3/06, 1/27/06, 4/29/05). In May 2006, LANL (UC) issued an integrated corrective action plan (ICAP) to address related needs involving integrated work management; behavior based safety; oversight and assessment processes; radiological protection; safety basis; conduct of engineering; vital safety systems; and configuration management. The new LANL contractor (LANS) updated and committed to the ICAP in Sep 2006.

The site reps understand that LANL has embedded the ICAP corrective actions in the new issue management system (LIMITS), which is part of the contractor assurance system (CAS); however, LANL management does not appear to have an explicit mechanism in place for closely monitoring ICAP progress and quickly focusing attention on lagging elements of the ICAP when they arise.

Nuclear Infrastructure: LANL has a fiscally-driven imbalance between TA-55's needs to send and TA-54's ability to receive, certify, and ship transuranic (TRU) waste; this has mission and safety implications (site rep weekly 8/25/06). TA-55 has a significant backlog of plutonium residues that either need to be processed by TA-55 or shipped via TA-54 to WIPP for disposal. On several occasions, the Board has advocated disposal (e.g., Board ltr 11/21/01), and TA-55 has increasingly pursued disposal, particularly for higher-risk residues (e.g., Pu-238). However, TA-54 has its own challenges, such as a consent order commitment to close Area G by 2015; this requires shipping the aboveground and retrievable belowground TRU waste inventory to WIPP within the next 3 to 5 years. As of mid-2006, this inventory stood at about 300 kCi in about 43,000 drum-volume-equivalents.

To relieve the bottleneck, an alternate course under discussion involves TA-55 establishing interim capability to certify and ship newly generated TRU waste to WIPP in near-real-time, thereby decoupling TA-55 from TA-54 while avoiding a waste buildup in TA-55. Although initial investment would be needed, this course could expedite both TA-54 de-inventory and TA-55 residue disposition, leading to earlier risk reduction and enhanced mission performance for both operations.

Chemistry and Metallurgy Research Building (CMR): The following are noteworthy: • Two Wing 2 workers on Monday recognized intermittent alarming hand probes as an abnormal condition and called a radiological controls technician (RCT); the RCT discovered a contaminated probe and a glovebox glove with greater than 1 M dpm alpha (possibly legacy Pu-238); appropriate actions were taken, and no spread of contamination resulted; • CMR has reported 2 toxic-gas stainless-steel bottles that did not meet safety basis administrative controls, indicating a safety program lapse; the bottles are being stored in fume hoods pending proper disposition; • CMR is poised to begin installing new fire doors on wing entrances to the spinal corridor, thereby addressing the wing-to-wing flash-over concern; the effort has been delayed while NNSA and LANL negotiated a safety basis interpretation for all the CMR fire doors; NNSA and LANL would be well-served to formally capture the safety basis interpretation so that the safety basis accurately reflects the facility's nuclear safety requirements.