

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 10, 2006

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: B. Broderick and C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending November 10, 2006

Brett Broderick reported for duty here this week as a DNFSB site representative. Merritt and Plaue were also here this week reviewing NNSA and LANL nuclear safety oversight and operations.

Plutonium Facility (TA-55): TA-55 has increased operating tempo and is close to demonstrating a six pit per quarter surge capacity, either this quarter or next. Longer term, LANL intends to accelerate and complete a legacy pit production run by FY-09, then shift to building a Reliable Replacement Warhead (RRW) demonstration unit in 2010 and a first production unit in 2012. The maintenance tempo has also increased for upgrading equipment and is moving to an extended-hour work schedule, likely requiring extended-hour infrastructure support (e.g., site emergency services). Programmatic pressure is increasing on RLWTF receiving transuranic liquid waste by February 2007, on TA-55 processing, repackaging and consolidating residues, on LANL streamlining waste & excess glove-box disposition, and on LANL shipping excess plutonium to Savannah River Site (site rep weekly 8/25/06).

Chemistry and Metallurgy Research Building (CMR): TA-55's pit manufacturing depends on CMR providing analytical chemistry; future use of Wing 9 is also being considered. However, CMR is five-decades-old, and over-sized for the mission; near-term operational cuts are being considered, although CMR is increasingly difficult to maintain; an update to the 1998 safety basis is at least a year away.

In 1998, NNSA accepted the risk of CMR operation to 2010 but the replacement facility (CMRR) is not expected to be operational until 2013 or later. LANL did complete a CMR upgrade project in 2002, but otherwise, there has been little focused study since the 1998 decision of the risks associated with extending CMR operation past 2010; such a study appears warranted to enable risk-informed decision-making among the mission options and the alternatives to continuing CMR operations.

Radioactive Liquid Waste Treatment Facility (RLWTF): LANL expects to replace the leaking caustic waste receipt tank next weekend (11/18) using the existing two lifting lugs. This week, LANL determined that the tank top is structurally sound after removing paint in spots that interfered with previous ultrasonic measurements. LANL intends to inspect, load cycle, and then reinspect the existing lugs and their welds before removing the existing tank. The tank replacement is on schedule, but TA-55's programmatic needs to process a multiple-year residue backlog may drive RLWTF to subsequently treat transuranic waste before RLWTF's deteriorated treatment systems are upgraded.

Federal Oversight: On Oct 1st, the NNSA Site Office (LASO) began their oversight pilot. The week before, an external NNSA team concluded that LASO is prepared to implement the pilot, but it also identified significant gaps; for example, only 4 of the 26 people on the three integrated oversight teams (IOTs) are fully qualified: two facility reps (RLWTF, CMR), one safety analyst, and one project manager; only one IOT team member has unescorted access to TA-55 plutonium operations (PF-4).

Since Oct 1st, pivotal LASO management positions have become vacant, such as the SES Technical Deputy Manager, the Operations Assistant Manager, and the Senior Technical Advisor; several other key positions are temporarily filled. LASO's intent is • to have the Technical Deputy assume the Senior Technical Advisor responsibilities and not fill the latter position; • to compete the other key positions, subject to headquarters approval; • to self-assess the pilot in March; • to prepare for a Chief Defense Nuclear Safety review of the pilot, originally scheduled for January but now proposed for May.