

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 19, 2005

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

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

**SUBJECT:** Los Alamos Report for Week Ending August 19, 2005

**Weapons Engineering Tritium Facility (WETF):** On Wednesday (8/17), WETF suspended programmatic operations due to emergent questions on (a) whether WETF was operating under an NNSA approved set of technical safety requirements (TSRs) and (b) whether WETF had correctly used the LANL unreviewed safety question (USQ) process to determine if facility modifications required NNSA approval. The former question has been resolved; the latter remains under review.

**Waste Operations:** LANL has responded to NNSA's request to justify continued operation of the TA-50/54 waste facilities (site rep weekly 8/5/05). Overall, LANL has increased emphasis on conduct of operations and on management walk-downs and reviews as a start for long-term improvements.

Actions taken so far appear appropriate. Among these, LANL: (a) assessed key areas such as life safety, pressure safety, fire suppression, drum integrity; (b) secured some activities due to deficiencies found in assessments; (c) continued other activities with compensatory measures such as time and temperature restrictions for workers in personnel protective equipment, air quality verification before work in normally unmanned spaces, increased communication on status of activities, and increased support by external operations experts; and (d) established an expert-based Facility Operations Safety Committee (FOSC) that reviews work planning and controls for liquid waste operations. LANL plans to expand the FOSC reviews to cover all waste operations. LANL also has assessments underway to determine extent of condition for safety basis implementation issues involving waste operations.

**Plutonium Facility (TA-55):** While TA-18 Early Move activities are proceeding, the related path-forward for the TA-55 safeguarded trailer pad still appears open (site rep weekly 7/8/05). On August 9<sup>th</sup>, the LASO Manager proposed to NNSA Headquarters (NA-10) a path forward for readiness review and startup. The proposal does not require redoing the readiness assessment process (i.e., ORRs) but instead focuses on thorough federal and contractor followup on the known issues. While commitment to rigorous closure has been expressed, many details are missing. NA-10 action is forthcoming.

**Critical Experiments Facility (TA-18):** The path-forward is still open for the remaining Planet and Comet experiments, including defining the readiness assessment needs and considering whether to perform the experiments later in Nevada instead (site rep weekly 7/22/05). On August 15<sup>th</sup>, LANL proposed to NA-10 retaining required parts at TA-55 and performing the experiments in TA-18. It has been longer than a year since critical assembly operations. The Comet and Planet experiments are expected to take 10 to 20 days and 18 to 36 days, respectively. A detailed baseline is due by Sep 30<sup>th</sup>.

**Chemistry and Metallurgy Research Building (CMR):** In late 2003, LANL determined that some welding processes used on site may not have complied with national consensus codes, and in April 2004, LANL began a program to ensure appropriate quality in new welds and to screen accessible existing welds in nuclear facility safety systems (site rep weeklies 3/26/04, 4/26/04). As part of that screening, CMR identified 1,221 suspect welds – the most by far in any LANL nuclear facility. Since May 2005, LANL has had a team of system engineers and welding experts (including certified weld inspectors) inspect and evaluate for service the suspect welds and select other welds in CMR; results, including photographs, are documented in an extensive database. Out of about 2,000 welds evaluated, CMR found 28 unacceptable welds and one missing beam clamp. CMR has issued non-conformance reports on these deficiencies to begin disposition.