

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 21, 2008

**MEMORANDUM FOR:** T. J. Dwyer, Technical Director  
**FROM:** B. Broderick and R.T. Davis  
**SUBJECT:** Los Alamos Report for Week Ending November 21, 2008

Anderson, Pasko and Plaue were onsite this week to review the Transuranic Waste Facility Project.

**Weapons Engineering Tritium Facility (WETF):** A number of 1980s-vintage tritium-bearing components are stored for surveillance at WETF in credited containment vessels known as Standard Tubs. As a credited containment vessel, the maximum allowable working pressure (MAWP) of Standard Tubs is required to be defined and protected. This summer, WETF personnel rediscovered a previously-identified discrepancy between the actual bolts installed on the Standard Tubs and those assumed in MAWP derivations. Given this discrepancy, calculations indicated that under worst-case conditions, failure and venting of the legacy components could exceed the MAWP of some tubs.

In July, based on these discoveries, facility management concluded that the situation did not constitute a PISA and could instead be handled through the non-conformance reporting (NCR) process. While LANL's approved PISA process currently provides wide latitude to use NCRs rather than declaring PISAs, there is an expectation to perform an unreviewed safety question determination (USQD) if conformance cannot be restored within hours. The Standard Tub NCR remained open for roughly four months and no USQD was performed. The final NCR closure package determined that the actual MAWP of the Standard Tubs would not be challenged by failure of the legacy components. However, WETF management decided to declare a TSR violation based on the length of time the operability of the credited Standard Tubs was indeterminate and the failure to perform a timely USQD, as required.

**Transuranic Waste Facility Project:** Solid transuranic waste operations are currently conducted in the 'limited-life' WCRR repackaging and RANT shipping facilities, and at Area G which is required to close by 2015 under a March 2005 Consent Order with the State of New Mexico. The Transuranic Waste Facility Project is intended to design and construct a facility that can provide all necessary solid transuranic waste handling capabilities (i.e. staging, characterization, repackaging, size reduction, and shipping) required to support LANL's future programmatic missions. This week, the Critical Decision-1 (CD-1), *Approve Alternative Selection and Cost Range*, package including the conceptual design report, project execution plan and preliminary hazard analysis report was completed and endorsed by the site office. A decision on CD-1 approval is expected in mid-December. However, if CD-1 is approved, LANL plans to conduct a series of value engineering studies to evaluate, among other things, the feasibility of extending the life of existing facilities (e.g. WCRR and RANT) in order to decrease the scope and cost of this project. If these studies result in significant changes to the project's scope, design, and/or safety strategy following CD-1 approval, then commensurate independent evaluation of the adequacy of these changes appears warranted.

**Confinement Vessel Disposition:** The Bolas Grande project is currently scoped to remediate 14 six-foot diameter legacy confinement vessels in Wing 9 of CMR. This scope does not include remediating four additional six-foot vessels containing transuranic waste that are staged at Area G and have no defined disposition path. An additional 23 three-foot diameter legacy confinement vessels are also staged at Area G with no defined disposition path. Some of the options that are currently under consideration for dispositioning the three-foot vessels would involve new or prolonged use of the Chemistry and Metallurgy Research Building.