DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 12, 2008

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending December 12, 2008

Pasko was onsite this week to attend the Integrated Nuclear Planning workshop.

Formality of Operations: Recently, the site office met with LANL to provide comments on the Fiscal Year (FY) 2008 Conduct of Engineering products including Vital Safety System Assessments (VSSAs), System Health Reports, Operability Determinations and System Design Descriptions. For the VSSAs, the site office noted that the depth of assessments were inadequate in many cases (inadequate document review, interviews and walkdowns, failure to evaluate surveillance test procedures). In addition, the site office noted that the assessment team members were intimately involved with the system being assessed in many cases (e.g., the system engineer or maintenance manager), which may have adversely impacted the assessment outcome. For example, several assessment issues were identified as 'opportunities for improvement' instead of deficiencies in cases where the issue could impact system operability. This feedback was provided informally to LANL with the expectation of improving the Conduct of Engineering products during FY 2009.

This week, LANL personnel noted that a revised VSSA procedure that addresses these issues is planned in the near future. However, the bulk of the VSSAs and other engineering products completed during the later part of FY 2008 were done on safety class systems at LANL facilities (i.e., the most important safety systems). Because of the issues identified by the site office, LANL may need to revisit the Conduct of Engineering products for these important facility safety systems.

Radioactive Liquid Waste Treatment Facility Replacement Project (RLWTF-R): Last week, LANL submitted the Recommendation 2004-2 confinement ventilation evaluation and the material selection recommendations to the site office. For the confinement ventilation evaluation, LANL concluded that the system classification of "important to safety" (defense in depth) is appropriate based on a conservative analysis of the worst case accident scenario (full facility fire). Dose consequences for this accident scenario are estimated to be 0.76 rem offsite and 45 rem to the collocated worker. LANL evaluation of the confinement ventilation system against the Ventilation System Evaluation Guidance document did not identify any gaps. For the material selection recommendation, LANL concluded that lined stainless steel was appropriate for the majority of the facility safety significant tanks and pumps. Although fiberglass-reinforced plastic was identified as a preferred material because of compatibility with the process streams and cost, use of this material would significantly increase the facility fire loading and was therefore not considered a viable option. The site office is reviewing these products, which represent two of the documents identified by the site office in late-October that are required prior to proceeding into final design (site rep weekly 10/3/08).

Integrated Nuclear Planning: This week, LANL, the NNSA site office and NNSA Headquarters held a workshop to discuss the waste management programs and projects. For the Transuranic Waste Facility Project, NNSA decided to postpone the Energy Systems Acquisition Advisory Board meeting that was scheduled for later this month to support a critical decision-1 (approve alternative selection and cost range) for the project. NNSA and LANL plan to revisit the overall solid transuranic waste program to identify the best option (within current constraints) that supports the enduring waste mission at LANL.