DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 9, 2006

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending June 9, 2006

Jones and Jordan were here this week reviewing CMRR and augmenting site rep coverage, respectively.

Plutonium Facility (TA-55): TA-55 has declared a potential inadequacy in the safety analysis (PISA) for Pu-238 residues in higher-loaded containers because of the potential for hydrogen generation if the residues are hydrogenous and the potential for acid generation if the bagging is polyvinyl chloride. Movement of the containers has been restricted, and they will be repackaged on a priority basis.

Chemistry and Metallurgy Research Facility Replacement Project (CMRR): This week, LANL began the formal review process of the first-phase deliverables for the preliminary nuclear facility design. Both the systems engineering approach and the document review process are state-of-the-art, but both require experienced and qualified personnel for the effort to be successful. It remains unclear how NNSA will obtain the resources for the federal review, especially for safety analyses.

Operational Efficiency (OE) Project: While details are sparse, it appears that LANL (LANS) has assigned each of the OE sub-projects and related safety programs (e.g., maintenance) to an associate director and has committed to NNSA to have institutional policies and procedures in place for each by Oct 1st. To support this, LANL has consolidated responsibility for some safety programs at the division level; the new centralized safety basis and training divisions seem particularly promising.

Following Oct 1st, LANL would close out the OE Project, and further evolution of each safety program would be managed and funded through the assigned associate director and his organization. One disadvantage of this is loss of visibility into whether previously identified issues have been addressed and whether these programs have become truly effective. Presumably, the LANL contractor assurance system will provide that insight; it is also sparsely defined now but suppose to be mature by Oct 1st.

Conduct of Engineering: Conduct of engineering is typical of the safety programs within the OE Project. LANL intends that this program apply to both facility and programmatic work and has enlisted Bechtel to compare LANL policies and procedures with those of Savannah River Site and Bechtel. Success hinges on close coordination among, at least, four associate directorships that are separately responsible for engineering, maintenance (including system engineers), operations, and training. The envisioned improvements seem likely to increase efficiency and to facilitate incorporating safety into designs affecting programmatic work. So far, this appears promising.

Federal Oversight: The NNSA Site Office (LASO) continues to struggle with ensuring adequate oversight of nuclear operations (site rep weeklies 4/21/06, 3/10/06). The safety system oversight (SSO) program, which was viable before the LASO stand-down last November, now appears defunct. The facility rep (FR) program is down to 2 of 12 FRs being fully qualified, with a third nearly qualified; they are deployed at LANSCE, CMR, and RLWTF; LASO is again reviewing its FR staffing needs against DOE STD-1063 criteria. LASO still has no apparent plans to bring a criticality safety expert on site full-time, which is illogical given the scale of LANL fissile material operations.