

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 28, 2006

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director

FROM: C. H. Keilers, Jr.

SUBJECT: Los Alamos Report for Week Ending April 28, 2006

Anderson, Bamdad, Jones, Jordan, and Kasdorf were here this week reviewing the CMRR Project.

Waste Operations: Last Friday (4/21), DOE restored funding, thereby allowing LANL to continue transuranic waste characterization and avoid a drop in WIPP shipments after the Quick-to-WIPP campaign is finished. It seems appropriate for DOE, NNSA, and LANL to further study and more explicitly consider the safety risks associated with LANL transuranic waste in future budget decisions.

This week, NNSA approved: (1) changes to material-at-risk limits for the TRUPACT loading facility – RANT – that align the drum limit with the WIPP acceptance criteria; (2) continuing to operate RANT through July 2007 without seismic upgrades; and (3) loading cemented drums into TRUPACTs using a mobile loader outside the RANT building. These drums came from solidifying sludge at the Radioactive Liquid Waste Treatment Facility (RLWTF) and have low-activity. These actions generally support improving the shipping rate (site rep weeklies 4/14/06, 1 /20/06).

Chemistry and Metallurgy Research Facility Replacement Project (CMRR): The staff team that was here this week observed that the CMRR nuclear safety strategy document is a step-forward, but it's implementation needs more engineering involvement (site rep weekly 3/17/06). Design is an iterative and evolutionary process, and this project's design is clearly still evolving.

Essentially, the safety analysts, who developed the strategy, still need to define clear functional requirements for safety systems during upsets (i.e., more specific than "fire-resistant," "impact-resistant," and "no material release"); the engineers and designers still need to select applicable codes and standards and develop designs that clearly meet those requirements; both parties – the safety analysts and the engineers – need to work continuously and closely together to develop a satisfactory design. One area warranting attention is ensuring plutonium confinement during and following a design basis earthquake, including ensuring adequate safety system reliability and redundancy.

Fire Protection: On Tuesday (4/24), the NNSA Site Office (LASO) and LANL provided NNSA headquarters an updated status of LANL fire protection improvements (ref: Board ltr 5/31/05, NNSA ltr 1/12/06). Ensuring adequate staffing of contractor fire protection engineers and of fire-fighters remain central unresolved issues. In June, LANL plans to complete the scope of the partial site-wide fire alarm system upgrades in LANL plutonium facilities, which is positive (site rep weekly 11/18/05). Last week, LANL imposed outdoor work restrictions due to growing wild-land fire concerns.

Lightning Protection: Several LANL nuclear facilities rely on their lightning protection systems to perform a safety function; concerns with functionality of these systems were the subject of Board correspondence in 2002 and 2003. On Apr 6th, LASO provided LANL a report on a federal lightning protection assessment that was performed in October 2005; LASO's primary concern was timely correction of deficiencies found during inspections. In response to the federal review and their own reviews, LANL has centralized inspections, improved trending and tracking, and obtained the services of external certified inspectors; senior management attention this year on lightning protection has started to make a difference, but there is still much to be done (site rep weeklies 2/10/06, 6/4/04).