

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 3, 2005

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: T. D. Burns Jr. and C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending June 3, 2005

Integrated Safety Management: LANL's integrated work management (IWM) process probably has the greatest potential of any LANL initiative to directly improve day-to-day worker safety, including worker safety in nuclear facilities (site rep weeklies 10/31/03, 1/16/04, 5/7/04, 9/24/04). LANL Audits and Assessments (AA) examined IWM implementation in Nov 2003, Jun 2004, and Mar 2005. Most recently, AA reports seeing some improvements, but there is still a persistent wide range in implementation. Furthermore, 47 of 97 (48 %) of workers interviewed do not believe the process improves safety. LANL management is committed to the IWM approach, but progress has lagged (e.g., guidance and training development). It is worthwhile for LANL to press ahead, particularly on IWM process improvement and training. Any training ought to reiterate the problems that IWM is intended to solve; this might best be done by a discussion of previous accidents (e.g., those cited in previous site rep reports) and how the IWM process, if properly used, might have prevented them.

Training: NNSA has completed its assessment of LANL performance-based training and provided the results to LANL. At this point, LANL's institutional training issues are well-understood, but they permeate the entire laboratory (e.g., IWM implementation). They include: insufficient training staff; weaknesses in management/supervisor training and instructor training; weak job/task analysis, which is key to using a systematic approach to training; ineffective training materials; and no defined process for systematic evaluation of training programs in nuclear facilities. LANL intends to address these issues under the multi-year Operational Efficiency (OE) Project; this will be a massive task.

Plutonium Facility (TA-55): The LANL readiness assessment (RA) for the new Pu-238 scrap recovery line began this week on schedule; the NNSA RA team leader and team remain undefined. NNSA had a uniquely well-qualified team leader selected to review the new line, but he has been reassigned to lead the NNSA operational readiness review for the trailer pad discussed last week.

In December 2004, TA-55 identified that several employees received measurable Pu-238 uptakes last June while working in a Pu-239 lab room (site rep weekly 4/15/05). LANL has thoroughly investigated this event to determine the point of origin, including reviewing 13 months of fixed air sample results (i.e., roughly 62,000 data points). This event appears well understood; appropriate actions have been taken; and the effort has provided a useful investigative tool for future events.

Fire Protection: For most LANL nuclear facilities, fire dominates the high-consequence end of the risk spectrum. NNSA and LANL rely on installed fire protection systems and on LANL and Los Alamos County emergency response personnel to mitigate consequences of a nuclear facility fire.

NNSA has directed LANL to discontinue efforts to establish a long-term contract with Los Alamos County for fire response services. Since 1997, LANL has maintained service via short-term contracts; this has impacted development of a long-term strategy on fire response staffing and resource needs. In mid-2004, LANL completed a Baseline Needs Assessment (BNA) that discussed these needs. Lack of a long-term contract is a likely root cause of many of the BNA issues. It is unclear now how NNSA intends to address these issues, which affect LANL's ability to respond to a nuclear facility fire.

Waste Operations: LANL has made 8 WIPP shipments since mid-April, shipping a total of 134 drums, including 100 from the Quick-to-WIPP set. Characterization activities using conveyors continue (site rep weekly 5/20/05). Prohibited item removal is the rate limiting step at present.