

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 19, 2006

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director

FROM: C. H. Keilers, Jr.

SUBJECT: Los Alamos Report for Week Ending May 19, 2006

Authorization Basis (AB): LANL now has about four dozen AB submittals at the NNSA Site Office for action, and LANL and NNSA are starting to lose track of them, including LANL's most recent recommendations for the TA-55 confinement strategy issue. On the positive side, NNSA's operational staff (FRs) are increasingly involved in federal review of proposed safety basis controls.

Contract Transition: Preparations continue for the June 1st contract transition from UC to LANS. LANS has rolled out its mid-level operations management structure, which evolved logically from the current LANL responsible division leader (RDL) structure. Their basic facility model consists of a facility operations director who will oversee mostly-matrixed functional managers for operations, maintenance, engineering, security, safety and health, waste services, and other support functions.

For the nuclear facilities, LANS has populated this management structure with an appropriate balance of new and incumbent staff, who are to complete an interim qualification process by June 1st and to achieve full qualification within 6 months. LANS is also preparing a deliberate operations plan that involves a detailed review of all on-going work within the first two months, as well as expectations that new work will be reviewed for full compliance with the integrated work management (IWM) process and that management will be engaging the workforce and observing operations.

Integrated Safety Management: Last Friday (5/12), a TA-55 pipe-fitter became contaminated (10k dpm) when he was sprayed by low-activity water while cutting an acid liquid waste line that had been flushed. The pipe-fitter was in anti-Cs and a respirator but not the waterproof acid suit required by procedure. Others involved, including safety personnel, did not interdict. The assigned supervisors were not present because they lacked respirators. While this event had minimal safety consequences, it seems to be a near-miss since the line could have had higher-activity acid waste. As a result, TA-55 suspended non-routine crafts work and held lessons-learned sessions with crafts and supervisors. TA-55 also intends to perform a causal analysis to identify further corrective actions.

TA-55 has been leading the lab in evolving a human-performance perspective on operational issues, which would apply here (site rep weekly 2/25/05). Most such events are due to latent organizational weaknesses. In this case, work-scope growth, schedule pressure, difficult work conditions, and fatigue seem to have created an environment rich in pitfalls, increasing the probability that someone was going to make an error with safety consequences; also, the waste lines are normally locked out, and the presence of water indicates a system configuration control issue. High-reliability organizations focus on learning from such events and on developing processes with defense-in-depth against errors. TA-55 seems to be on that track and needs to successfully apply these principles, particularly given TA-55's backlog of crafts work, due in part to the recent unscheduled sprinkler replacement outage.

Radioactive Liquid Waste Treatment Facility (RLWTF): Friday morning (5/19), a RLWTF tank leaked about 1,500 gal of low-activity water to a sump from where it was automatically pumped to another tank. Personnel entered the room to investigate and then within minutes evacuated when the continuous air monitor (CAM) alarmed. Preliminary data indicates no radionuclide uptakes; bioassay results will be available within 2 weeks. The cause of the leak is under investigation.