

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 5, 2003

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director

FROM: C. H. Keilers, Jr.

SUBJECT: Los Alamos Report for Week Ending September 5, 2003

On Thursday, the staff held a video-teleconference with LANL and NNSA on LANL fire protection.

Integrated Safety Management (ISM): Work control is a significant issue at LANL for both facility and programmatic work. On Tuesday, as part of a non-nuclear decommissioning, subcontractor personnel not in appropriate protective equipment cut two locks and accessed an energized 13.2 kV electrical cabinet that they had been incorrectly told was deenergized. While there were no injuries, the potential for arcing and severe injury existed. The site rep also understands that the LANL Electrical Safety Committee has raised concerns with other recent electrical safety near-misses.

Recent LANL investigations indicate that the work control issues are not just limited to facility work, as described above. The needs to complete previously identified corrective actions and, in the short-term, focus on implementation of current safety requirements are clear – i.e., workers understanding and following safety requirements (i.e., formality of operations), adequate work planning to meet requirements, and improving supervision with emphasis on safety requirements. LANL is working on short-term improvements to current requirements, hazard analysis tools, and work control processes.

Longer term, LANL has begun an initiative to integrate work management practices for both facility and programmatic maintenance. The objective is one process for work control, including analyzing hazards and planning and doing work safely and securely. Several internal and external studies during the last 2 years, including LANL accident investigation reports, have identified the need for such integration, and not just for maintenance. Even so, this could be a big step forward when implemented.

Weapons Engineering Tritium Facility (WETF): Last month, WETF curtailed programmatic work to focus on technical safety requirement (TSR) implementation, to be verified by a LANL readiness assessment (RA) at the end of September. NNSA is closely monitoring progress. On Thursday, NNSA approved a reduced inventory limit and a schedule for shifting about 25 % and 50 % of the inventory to more robust containers (at least 165 C fire rated) during the next 4 months and next year, respectively.

On the safety class lightning protection system questions, LANL committed in early 2002 to perform an engineering study on the potential effects of lightning on WETF. In March 2003, a lightning protection expert hired by LANL reported that the WETF system cannot be expected to prevent arcing in tritium storage and handling areas – in other words, it would not fulfill the safety class function. On August 19th, the Board sent NNSA a letter on this. The site rep understands that NNSA and LANL now plan to bring in a different lightning protection expert and have him assess the system. While providing different and beneficial perspective, this appears unlikely to resolve the issues.

Plutonium Facility (TA-55): The NNSA Type B investigation on the 8/5/03 event systematically continues. Initial dose assessments span a wide range but are consistent with those warranting a Type B investigation. Radiography of one suspect container indicates material is outside the inner can.

Decommissioning Activities: The Omega West Reactor site now resembles a dirt parking lot. Only some confirmatory surveys and site restoration (e.g., storm water drainage) remained, as of early August. LANL has reported that the 2-year decommissioning project is 2 ½ months ahead of schedule and under budget. This was a radiologically complex project that was well executed (site rep weeklies 2/7/03, 3/28/03). Omega West Reactor was used for nuclear research between 1956 and 1992.