

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 6, 2006

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending January 6, 2006

Contract Transition: NNSA is scheduled to brief the Los Alamos Alliance LLC team today on their unsuccessful bid; more details on LANS transition plans should be available 10 days after this brief.

Federal Oversight: The NNSA Site Office (LASO) is 7 weeks into a 14-week stand-down to prepare for the June Pt contract transition (site rep weekly 11/25/05). In the last month, the 8 federal staff assigned to the authorization basis (AB) group have resumed their duties in order to address a growing backlog. Also, the 3 facility reps (FRs) assigned to WETF, LANSCE, and DARHT are beginning to attend plan of the week/day meetings to increase federal awareness of the higher hazard activities occurring in those facilities; their part-time coverage (15 %) supplements 4 other FRs who are deployed full-time, primarily in plutonium and waste operations (TA-55 and TA-50/54). As a result of these shifts, LASO now has 37 people total working on continuity of LANL operations; the number directly involved with safety oversight has increased from 10 to 15 (i.e., 4 FRs, 8 AB staff, 3 SMEs).

LASO now has 88 internal and 19 external federal staff assigned to preparing for contract transition (107 total), although it doesn't appear that all are full-time. They are divided into 16 teams. While reports have inconsistencies, it appears that these teams are running about 3 weeks behind the baseline schedule on average. Most teams still expect to be done by Feb 28"; however the business model team and the contract transition team now expect to finish in mid-April and end of May, respectively.

Plutonium Facility (TA-55): TA-55 continues to radiologically characterize and to plan recovery from the Pu-239 contamination released into the vault on Dec 19^h (site rep weekly 12/23/05). Initial dose estimates for personnel involved are low (e.g., 10 - 50 mrem CEDE range, which is two orders of magnitude below the annual federal limit). Material movements outside glove-boxes remain restricted.

Based on contamination surveys and radiographs, the source appears to be an archival oxide sample from the early 1980s; the sample was packaged in a plastic screw-lid jar within a plastic bag, both within a taped, slip-lid can; the inner jar and bag failed, releasing powder into the can; the vinyl tape around the lid circumference then possibly failed, causing the release. TA-55 has triple-bagged this container and another similar container, but records indicate that there could be several dozen similar containers in the vault, including about a dozen that are near-identical. Some of these containers were on a list to be repackaged near-term as part of LANL response to Board Recommendations 94-1/00-1, but clearly this effort needs higher priority. A recovery plan is expected to be available next week.

TA-55 Confinement Strategy: This week, NNSA disapproved LANL-proposed performance criteria for safety-class plutonium containers because the criteria did not account for a eutectic-induced failure mode for plutonium metal in stainless steel packaging at above 400 C. NNSA had requested the criteria last September as part of developing a path-forward for the TA-55 confinement strategy issue (site rep weekly 9/23/05). The LANL proposed criteria are based on 10 accident scenarios, mostly involving Pu-238 containers. It's not clear that LANL considered all applicable Pu-239-related scenarios (e.g., vault fire) or whether these criteria will contribute in a readily justifiable manner to addressing the confinement strategy question; the picture is incomplete, particularly due to questions on pedigree of current Pu-238 and Pu-239 packaging. LANL owes refined accident analyses to NNSA this month that hopefully will focus future actions for the confinement issue (site rep weekly 9/16/05).