

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 3, 2015

MEMORANDUM FOR: S.A. Stokes, Technical Director
FROM: R.K. Verhaagen and J.W. Plaue
SUBJECT: Los Alamos Report for Week Ending July 3, 2015

DNFSB Staff Activity: On Tuesday, the Site Representatives briefed the results of their efforts to identify opportunities to reduce risk at the Plutonium Facility via actions associated with material-at-risk to Field Office and LANL management. Overall, the Site Representatives identified that 21 percent of the material-at-risk on the laboratory floor has been idle for more than three years, leading to questions regarding whether this material could either be eliminated from the facility or moved to hardened storage locations such as the vault or safes. In addition, the Site Representatives identified opportunities that site personnel could explore to improve the utilization of certified containers and strengthen practices for the lifecycle management of nuclear materials.

Plutonium Facility–Nuclear Materials Management: Last month, Plutonium Facility personnel initiated a six-sigma improvement effort to streamline the process to select and log containers used to store nuclear materials within gloveboxes. Management directed this effort as a corrective action from a fact-finding associated with improperly selecting a container type in the nuclear material management database (see 4/24/15 weekly). This effort has the potential to remedy some of the container issues identified by the Site Representatives. For example, only about 13 percent of the containers in use are specified in the database as certified to reduce the radiological source term generated from certain insults.

Plutonium Facility–Restart Activities: On Wednesday, the federal readiness assessment (RA) team completed their review and delivered their report for the Balance of Machining activities. The team presented six pre-start and seven post-start findings. Notably, in addition to the findings, the team recommended that an independent federal team perform an assessment of facility implementation of the criticality safety program prior to commencing the ARIES/Furnace/Casting contractor RA scheduled for December 2015.

Area G–Safety Basis: On Wednesday, LANL responded to an NNSA extent of condition data request for information regarding the use and performance assumptions for pipe overpack containers (POC). This request followed a LANL submittal of an Evaluation of the Safety of the Situation/Justification for Continued Operations (ESS/JCO) that proposed crediting POCs with a damage ratio (DR) of zero as indicated in DOE-STD-5506 (see 5/15/15 weekly). Following several meetings, NNSA, DOE-EM, and LANL personnel determined that a DR of zero for the POCs is not technically defensible. The response to the request for information indicates that LANL currently has five facilities that package, ship, and/or stage POCs. None of these facilities currently credit the POC with a DR of zero; however, the Plutonium Facility is currently using a DR of 0.1 and Area G and the RANT Shipping Facility are approved, but not implemented, to use a DR of 0.1. Additionally, the Transuranic Waste Storage Facility, currently under construction, had planned to use a DR of zero.

Largely due to the conclusion that applying a damage ratio of zero to the POCs is inappropriate, the Field Office has yet to approve the ESS/JCO submitted on May 14, 2015. LANL is expected to withdraw and resubmit a revised ESS/JCO in mid-July. Subsequent to additional review of the technical safety requirements, Area G management determined that it is appropriate to enter the generic limiting

condition for operation that requires the facility to shift to a safer mode. As such, operations personnel commenced transitioning Area G to warm standby yesterday.