

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 8, 2010

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B.P. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending October 8, 2010

Radioactive Liquid Waste: Last week, LANL provided an interim response to a July NNSA request to evaluate options for providing an enduring radioactive liquid waste capability. A joint NNSA/LANL strategy team evaluated options for sustainment/life extension of the existing capability and for providing a new capability. The team preliminarily assessed that it is not feasible or practical to provide a long-term capability with the existing Radioactive Liquid Waste Treatment Facility. However, the team also assessed that life extension upgrades to this facility could provide an interim capability for the next 10 to 20 years. For the enduring capability, the team identified and evaluated 37 separate options and proposed additional evaluation of two of these options. The first option involves updating mission requirements and reducing the scope of the current project plan. The second option involves some use of existing facilities along with separation of the processing capabilities (e.g., separation of low level and transuranic liquid waste processing). Progress on this study will be discussed during the upcoming Integrated Nuclear Planning workshop scheduled for early November. A final recommendation on the path forward for radioactive liquid waste capabilities is anticipated in late-December (site rep weekly 7/23/10).

Material Disposal Area (MDA)-B: On Tuesday, LANL submitted to the site office a revised Final Hazard Categorization for MDA-B that uses adjusted threshold quantities based on the specific materials and energy sources for the waste being retrieved. The LANL submittal would allow up to 5 plutonium-239 equivalent curies to be retrieved for the individual waste retrieval enclosures at MDA-B. The site office is currently reviewing the categorization to determine if the basis is adequate and whether it is compliant with DOE-STD-1027.

Plutonium Facility – Packaging: On Thursday, the site approved the final Safety Analysis Report for the Fuel Storage Outer (FSO) container in accordance with the requirements of DOE M441.1-1, *Nuclear Material Packaging Manual*. The FSO container is a welded safety class container that is used to robustly store plutonium-238 enriched materials at the Plutonium Facility.

Plutonium Facility – Evaluation of the Safety of the Situation (ESS): This week, the site office approved the ESS for the ammonium nitrate that was identified in the Plutonium Facility exhaust ventilation system. Following implementation of controls identified in the ESS (see site rep weeklies 9/10/10 and 9/17/10), LANL will be able to resume aqueous nitrate operations in the 200 and 400 areas.

Transuranic Waste Operations: LANL continues to pursue startup activities to allow venting of sealed transuranic waste drums at Area G. Drum venting activities have been suspended since a hydrogen deflagration event occurred in November 2008. A robust enclosure has been installed to improve the safety of this operation. This week, the site office approved Technical Safety Requirement page changes that cover drum venting operations. Currently, LANL plans to perform a laboratory readiness assessment prior to resumption of this operation.