DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 3, 2014

MEMORANDUM FOR: S.A. Stokes, Technical Director
FROM: R.K. Verhaagen and J.W. Plaue
SUBJECT: Los Alamos Report for Week Ending October 3, 2014

DNFSB Staff Activity: R.K. Verhaagen observed an Integrated Nuclear Planning workshop held at DOE Headquarters. The objectives of the workshop were to validate the projected mission set for LANL nuclear facilities, provide an update on plutonium operations, and provide an update on line-item facility projects.

Area G–Nitrate Salts: On Wednesday, as part of hazards analysis discussions, a chemist raised concerns about the efficacy of the instant temperature measurements on the lids of the Standard Waste Boxes to detect reliably the presence of elevated temperatures within the nested drums. Safety analysis assumed this temperature monitoring would provide sufficient indication of a potential reaction to protect operators who need to enter the Permacon environment to conduct rounds and take headspace gas samples. Recent modeling questioned this assumption by highlighting the insulation capabilities of the wheat-based kitty litter and cardboard drum liners. After hearing the concern, Area G management paused activities in the Permacon until work control documents were revised to include respiratory protection. Rounds and headspace gas sampling resumed Thursday evening.

Plutonium Facility–Safety Systems: On Monday, LANL submitted their response to the field office request regarding the Facility Control System (see 9/26/14 report). Field office personnel are reviewing the detailed response and are planning to meet with personnel from the DOE Office of Enterprise Assessments next week to discuss the path forward. In the response, LANL noted that the September 2013 version of the safety basis reflects an improved description of the systems and their relationship to the credited surveillance procedure.

Plutonium Facility–Worker Safety: Programmatic operations remain restricted in several plutonium-238 laboratories while the operations group continues to investigate and repair gloveboxes with material condition concerns (see 8/8/14 weekly). The group recently replaced several longstanding cracked glovebox windows. Post replacement inspection revealed damage to both layers of glass, contradicting previous assessments by the system engineers. Separately, the group identified a failed gasket on a spool piece attached to the only glovebox capable of bagouts in this area. The group identified this failure when the joint obviously failed a smoke test (i.e., considerable smoke passed through the joint into the glovebox). This condition likely contributed to several recent instances of unexpected contamination in this room. Radiation protection staff used tape to restore this joint temporarily to support an upcoming campaign of waste bagouts needed to reduce combustible loading. The group's investigation also revealed that several abandoned conduits and tubes that remain in communication with glovebox environments are only sealed with tape. The group is actively pursuing engineered solutions to all these problems. The Site Representatives note that LANL management has not considered any of these conditions significant enough to declare these safety significant systems as inoperable.

Transuranic Liquid Waste (TLW) Subproject: Last week, LANL transmitted to the field office revision 3.1 of the Safety Design Strategy. The revision addressed field office comments (see 8/22/14 weekly).