DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 14, 2014

MEMORANDUM FOR: S.A. Stokes, Technical Director
FROM: R.T. Davis, R.K. Verhaagen, and J.W. Plaue
SUBJECT: Los Alamos Report for Week Ending February 14, 2014

DNFSB Staff Activity: R. T. Davis remained deployed to the Waste Isolation Pilot Plant (WIPP) to monitor the accident investigation of the underground fire involving a salt handling truck.

Chemistry and Metallurgy Research (CMR) Building–Criticality Safety: LANL personnel identified two criticality safety infractions during the past two weeks. In one instance, workers were unable to determine readily whether material quantities complied with nuclear criticality safety limit approval (CSLA). In another instance, a supervisor identified that the combination of material types in a staging location did not comply with the applicable CSLA. In both cases, facility personnel took appropriate actions and facility management conducted critiques of the event. Facility management directed additional causal analysis to formally evaluate the root causes of these infractions. Facility management also requested an external team to conduct an extent of condition review. The review team is to determine whether issues identified in a causal analysis of criticality safety issues in the Plutonium Facility extend to CMR, as well as to evaluate the effectiveness of the flow-down and implementation of institutional criticality safety requirements.

CMR–Confinement Vessel Disposition (CVD) Project: This week, the field office approved LANL's corrective action plan for the CVD Operational Readiness Review (see 1/24/14 weekly).

Plutonium Facility–Criticality Safety: On Monday, the field office concurred with the listing of 275 fissile material operations judged to have an adequate technical basis (see 1/31/14 weekly). The field office acknowledged compliance issues with some of these operations, but noted the issues do not have a substantive impact on nuclear safety due to the inherent criticality control provided by material mass, form, container requirements, and geometry.

Recently, criticality safety analysts completed a technical document defending the sub-criticality of 520 g of plutonium-239 in any form. This document is the first of several general case limits intended to provide a robust technical underpinning and an accelerated development time for new or revised criticality safety evaluations.

Startup and Restart: On Thursday, the field office approved the quarterly startup notification report with direction to LANL to conduct a federal readiness assessment (checklist type) for retrieval and storage operations of the corrugated metal pipes (CMPs). The CMPs are 20-foot long metal pipes that contain cemented nuclear materials and are currently in buried locations at Area G. The CMPs will ultimately require size reduction prior to disposition at the WIPP.

Area G–Safety Basis: On Thursday, facility management requested and received dispensation from the field office to the LANL requirement to evaluate New Information for applicability of a Potential Inadequacy of the Safety Analysis (PISA) within nine working days. In this instance, facility management entered the New Information process after a recent staff review (see 1/31/14 weekly) raised questions on the adequacy of vehicle barriers for stopping certain pieces of heavy moving equipment. Engineering staff require additional time to complete revised calculations to determine whether a PISA exists. In the interim, facility management restricted the movement of all heavy moving equipment.