

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 18, 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 April 18, 2014

DNFSB Staff Activity: R.K. Verhaagen and B.P. Broderick continued monitoring the recovery associated with the radioactive material release event at the Waste Isolation Pilot Plant.

Emergency Management: On Thursday, Plutonium Facility personnel participated in the annual emergency response exercise required by DOE Order 151.1C, *Comprehensive Emergency Management System*. This year's scenario was a nuclear criticality. Accordingly, the exercise also fulfilled the exercise requirement in ANSI/ANS-8.23-2007, *Nuclear Criticality Accident Emergency Planning and Response*. In addition to the immediate evacuation of personnel from the facility, the scenario included two injured workers, radiation levels encountered at a muster point, and a vehicle access gate that did not open as intended to facilitate response by the Los Alamos County Fire Department. During the post-exercise critiques, participants noted numerous opportunities for improvement, particularly with respect to communications between the Facility Incident Command, Incident Command, Facility Operations Center, and simulated Emergency Operations Center. Emergency Management personnel will develop an after-action report detailing these observations and providing corrective actions.

Plutonium Facility–Criticality Safety: On Monday, Plutonium Facility personnel briefed members of the institutional Nuclear Criticality Safety Committee on the implementation approach for the Evaluation of the Safety of the Situation/Justification for Continued Operations submitted to the field office last week. The committee expects to issue a formal position on this approach. On Wednesday, program personnel completed movements of fissile material required as immediate actions to place the facility in a safe and stable configuration (see 4/11/14 weekly).

Plutonium Facility: On Monday, facility personnel identified 13 containers that were potentially not included in the material-at-risk (MAR) surveillance required by the safety basis. Facility management entered the applicable limiting condition for operation until the containers could be included and verified to comply with the surveillance limits. During investigation of the issue, the system engineer determined that the software used to perform the surveillance (MAR Tracker) does not properly evaluate containers that are nested beyond a certain level. A software correction has been implemented.

Chemistry and Metallurgy Research (CMR) Building–Safety Basis: On Wednesday, the field office approved revision 3.2 of the CMR safety basis required to support startup of the Confinement Vessel Disposition project. CMR management briefed the field office that they expect to initiate disposition of the first sphere by June 14, 2014.

Transuranic Waste Facility Project: On Thursday, the field office transmitted to LANL a letter approving the exemption request from the requirement in DOE Order 420.1B, *Facility Safety*, to provide fire protection to the safety-class seismic switches. The safety function of these seismic switches is to isolate electrical power from certain portions of the facility during a design basis seismic event to prevent an electrical fault fire. NNSA-HQ approved the request with the concurrence of the Central Technical Authority and provided the following recommendations: (1) verification that the as-built conditions reflect those stated in the exemption request, (2) marking the area around the switches using paint and signage, and (3) implementing an administrative control for combustible materials prior to operations.