

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 16, 2012

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B.P. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending March 16, 2012

Emergency Preparedness: This week, laboratory, NNSA and Los Alamos County personnel participated in an emergency exercise that simulated an earthquake followed by a wildland fire. The exercise scenario involved a magnitude 5.6 earthquake that initiated a small wildland fire in Technical Area 52. Transportation routes and communications were assumed to be impacted, but no catastrophic structural failures or material releases were postulated for nuclear or high hazard facilities. This is first time in recent years that the laboratory has performed an exercise involving a sitewide rather than facility-specific event. Exercise evaluators are compiling information about performance during the exercise and will issue a report that includes lessons learned and opportunities for improvement. Lab management intends to continue improving emergency response planning and execution for sitewide events by exercising increasingly challenging scenarios over time.

Plutonium Facility: Radiological material is authorized to be staged in several locations within the protected area outside of the Plutonium Facility. Containerized transuranic waste can be staged on an outdoor asphalt pad and material associated with the Offsite Source Recovery Project (OSRP) can be staged in an outdoor transportainer. The Plutonium Facility safety basis credits a specific administrative control (SAC) that prohibits vehicle refueling activities from being conducted within 100 feet of the transuranic waste pad or OSRP transportainer. The intent of this control is to prevent liquid fuel fires from directly impacting the transuranic waste containers or OSRP material.

Recently, an NNSA Facility Representative questioned whether other refueling operations that did not involve vehicles were being conducted near the waste pad or OSRP transportainer that could create the opportunity for liquid fuel fires and violate the intent of the SAC. In evaluating this concern, facility personnel recognized that an underground diesel fuel tank that supplies a pump house for the safety class Plutonium Facility fire suppression system is located approximately 40 feet away from the transuranic waste pad. This roughly 580 gallon tank is refueled about every six months and these operations create the possibility of initiating a liquid fuel fire that could directly impact the containerized transuranic waste staged on the pad. This week, Plutonium Facility management declared a Potential Inadequacy of the Safety Analysis in response to this issue.

Transuranic Waste Operations: The NNSA site office recently approved a revision to the RANT shipping facility Basis for Interim Operation (BIO) and Technical Safety Requirements (TSRs) to incorporate updated details and hydraulic calculations for the fire suppression system (FSS). An assessment of the FSS concluded that the field conditions did not align with system drawings that were used for the hydraulic calculations. The site office approval letter directs LANL to submit an equivalency to National Fire Protection Association (NFPA) Standard 13 within 90 days to resolve a non-compliance with requirements for minimum sprinkler spacing. The BIO notes that the FSS meets NFPA 13 minimum flow density requirements (0.2 gpm/ft^2) despite the non-compliance.

In February, an NNSA Facility Representative identified conflicting requirements in the RANT TSRs for critical lift plans for transuranic waste container handling. The NNSA approval letter also directs a change to the SAC for hoisting and rigging to clarify when critical lift plans are required.