

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 6, 2015

MEMORANDUM FOR: S.A. Stokes, Technical Director
FROM: R.K. Verhaagen and J.W. Plaue
SUBJECT: Los Alamos Report for Week Ending February 6, 2015

Area G–Conduct of Operations: On Wednesday, Area G management issued a standing order to clarify terminology and the expected response to certain abnormal conditions associated with the nitrate salts. Management previously developed a special *Response Plan* for these waste materials; however, an event late last month revealed weaknesses in the plan and an overall lack of awareness amongst key responders. Specifically, Area G experienced an electrical power transient on a Saturday afternoon, which apparently caused the control management unit for the Continuous Air Monitors (CAM) in the Dome 375 Permacon to go into audible alarm. The control management unit remained in audible alarm for more than 17 hours until Sunday morning when a radiological control technician (RCT) entered the Dome, noticed the alarm, and responded per normal procedures for a CAM alarm. However, given the circumstances with the nitrate salts, the *Response Plan* dictates a different response approach involving additional assets for a CAM alarm and other abnormal conditions. The standing order reminds operators of the *Response Plan* until management can convert its elements into an Abnormal Operating Procedure to define clear entry conditions, response actions, and associated responsibilities.

Waste Characterization Reduction and Repackaging Facility (WCRRF)–Emergency Management: On Wednesday, WCRRF personnel conducted their annual emergency exercise. This year’s scenario involved a postulated explosion and fire associated with processing of nitrate salt waste. The exercise employed a wide spectrum of artificiality. On the realistic side, safety class vehicle barriers were lowered to allow fire department apparatus and personnel directly into the facility complex, hoses were pulled, and responding RCTs arrived in full protective equipment and respirator. On the artificial side, glovebox workers wore modesty clothing instead of coveralls and fire department personnel were pre-approved to simulate supplied air use and contaminated patient handling. At the hotwash, a manager indicated there was a need for the entire Technical Area 55/50 complex, which includes three nuclear facilities, to better integrate responses and participate in joint exercises. WCRRF has been in cold standby since last summer, but facility personnel have recently been working to develop a drill program that they expect to deploy at Area G in coming months.

Confinement Vessel Disposition (CVD) Project: Assay results for the first processed confinement vessel have been obtained (see 12/19/14 weekly). The results indicate that the remaining nuclear material in the sphere exceeds the decontamination goals identified in the procedure by nearly three times. Project personnel are considering alternate paths forward including modifying the procedure decontamination goals to allow the sphere to be shipped without further decontamination to Area G for final disposition. In parallel, project personnel are moving forward with activities necessary to move the second sphere from Technical Area 55 to the Chemistry and Metallurgy Research Building for its cleanout.

Transuranic Waste Management: LANL submitted to the field office for review and approval a revision to the Area G technical safety requirements. This revision will allow up to 90 percent more material-at-risk risk under existing inventory limits for waste stored in pipe overpack containers (see 1/23/15 weekly).