

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 21, 2007

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: B. Broderick and C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending December 21, 2007

Transuranic Waste Operations: LANL is poised to approve resumption of characterization activities involving one real-time radiography (RTR) unit at Area G. Operations at both RTR units have been suspended since October when a subcontractor employee sustained a serious foot injury. To address judgements of need from the accident investigation, the waste characterization subcontractor revised procedures and integrated work documents to ensure adequate hazard identification and activity-level controls, strengthened conduct of operations through additional training and mentoring, and validated the adequacy of engineered safety features (site rep weekly 10/12/07).

Criticality Safety: NNSA has approved a justification for continued operations (JCO) that allows limited material movements in 4 vault rooms and a basement storage location in the Plutonium Facility (site rep weeklies 11/30/07, 9/21/07). Items may be retrieved from shelf and floor locations in the 4 rooms and drawers in the basement storage cabinet. No items may be added; retrievals and inventory activities must be conducted under a suite of temporary TSR-level controls. Retrieval of material from drawers in 2 vault rooms is not allowed since the safety margin for credible overmass upsets (i.e. material drops) for these activities has yet to be analyzed. New criticality safety evaluations (CSE) for vault rooms are in development, and most rooms are scheduled to be operating under approved, compliant CSEs by February.

Chemistry and Metallurgy Research Building (CMR): Last Friday, 3 KSL workers had nasal smears positive for uranium (192 dpm max. activity) following a CAM alarm in a Wing 4 lab room. The workers were performing D&D activities that involved removing and downsizing potentially internally-contaminated copper piping. Due to communication issues, the workers believed an RCT had lifted respirator requirements for pipe cutting. In actuality, the removed piping had not been surveyed by an RCT and was later found to have internal alpha contamination of 490k dpm.

The radiological work permit for this job requires continuous RCT coverage. However, RCTs are staffed at the 50% level at CMR on Fridays, and the RCT assigned to this job was distracted responding to other potential radiological events and trying to support other on-going work activities. This event highlights the need to augment critical support resources or to scale back operations to a level that can be adequately supported by existing resources.

Management: Approximately 430 employees will be leaving the laboratory by January 10th as part of the voluntary self-selection portion of LANL's workforce restructuring plan. Personnel in some critical functional areas (e.g. cognizant system engineers, criticality safety engineers) were barred from self-selection. However, voluntary staffing reductions were accepted in a number of categories involving key deployed personnel who support nuclear operations such as training coordinators, maintenance technicians, and nuclear work planners.

Staffing reductions in these already overtaxed areas may affect nuclear operations and the timely implementation of important on-going improvement initiatives, such as Formality of Operations. The full impacts of reduced staffing levels are still coming into focus since nuclear facility managers, who use these deployed resources, were not appraised of potential losses during the self-selection process and are only now becoming fully aware of the magnitude of the shortfalls they will be facing.