

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 2, 2010

MEMORANDUM FOR: Timothy Dwyer, Technical Director
FROM: Jonathan Plaue, DNFSB Site Representative
SUBJECT: LLNL Activity Report for Week Ending April 2, 2010

On April 1, 2010, the staff held follow-up teleconferences on work planning and control and quality assurance for weapons response.

Training: This week, Nuclear Materials Technology Program (NMTP) management sponsored Human Performance Improvement training provided by experts from the Los Alamos National Laboratory. NMTP required all individuals with roles in the nuclear facilities to attend one of the four hour sessions. NMTP previously sponsored this course in 2006 and recognized the need for additional sessions due to employee turnover and the integration of personnel from Radioactive and Hazardous Waste Management.

Work Planning and Control: On March 30, 2010, the Laboratory issued the report from the Incident Analysis (IA) associated with the beryllium machining incident that occurred in the Building 321 Machine Shop on February 11, 2010. The incident involved a machinist who performed work on a classified legacy beryllium part, which had been improperly identified as tantalum. As a result, beryllium contamination was spread to several areas and potentially exposed 10 employees. The IA team identified 11 judgements of need, of which the following may have applicability to the nuclear facilities:

- Laboratory management needs to ensure defense-in-depth practices are applied whenever materials with an uncertain pedigree are handled, transported, modified, or transferred [1a],
- Management needs to ensure adherence to existing Environment, Safety and Health (ES&H) requirements for labeling and transporting hazardous materials [2b],
- ES&H and the Emergency Management Department need to prepare criteria for how to classify the severity of an unexpected event and when to declare an emergency [6a],
- Management needs to prepare and communicate the process for establishing and communicating command and control during a nonemergency incident [6b], and
- ES&H needs to establish and practice processes for responding to events where individuals are possibly chemically contaminated [6c].

Plutonium Facility: On March 26, 2010, a maintenance activity on the building paging system (which supports the safety significant fire detection and alarm) resulted in the inadvertent generation of a sound similar to a facility safety alarm. The legacy cable that triggered the sound was not on the drawing used to support the activity and the source of the sound has not been located. Facility management critiqued the event and separately analyzed the response actions; results from these activities are expected shortly.

Tritium Facility: The recently discovered components potentially containing explosives were confirmed to have been fired (see weekly report dated March 26, 2010).

Hardened Engineering Test Building: On March 31, 2010, the Livermore Site Office approved without condition the safety basis amendment supporting experiments in the facility involving up to 20 grams of plutonium oxide (see weekly report dated March 12, 2010).