

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 8, 2011

MEMORANDUM FOR: Timothy Dwyer, Technical Director
FROM: Jonathan Plaue, DNFSB Site Representative
SUBJECT: LLNL Activity Report for Week Ending July 8, 2011

Plutonium Facility: On Wednesday, fissile material handlers completed the replacement of the cracked window on the glovebox used to weld inner DOE-STD-3013 containers (see weekly report dated June 10, 2011). The job was executed well and the benefits of the handlers' preparation efforts were obvious. Management also used the window replacement job as an opportunity to give two handlers experience on this unique task while working with a handler who had previously performed window replacements.

Transuranic Waste Operations: On July 5, 2011, Department of Energy Headquarters approved the Livermore Site Office's (LSO) request for a deviation to the *Contact Handled Transuranic Waste Packaging Instructions* (see weekly report dated May 13, 2011). The approved deviation will allow the contractor to segregate waste parcels potentially containing sharps into separate waste drums. These drums will undergo examination for prohibited items utilizing real-time radiography rather than the normal full demonstration and videography that would otherwise be required by the *Packaging Instructions*. This approach should significantly reduce risk to workers by minimizing the need to unwrap and unnecessarily handle potentially sharp waste items. LSO and the contractor still need to examine and revise waste generating practices to minimize the amount of materials co-mingled with sharps waste.

Hardened Engineering Test Building: On July 1, 2011, LSO issued the safety evaluation report approving the annual update to the safety basis. No significant changes were made to the hazards analysis or control set. The facility remains a hazard category 2 nuclear facility with a control set based on specific administrative controls—there are no safety class or safety significant structures, systems, and components. LSO and the contractor are separately working a safety basis amendment to allow the use of explosive release bolts.

Tritium Facility: On June 22, 2011, two maintenance workers performed unauthorized (i.e., not approved or released) preventative maintenance on a backflow preventer on a portion of the facility's fire suppression system (FSS). The work resulted in an unplanned impairment of the FSS lasting less than five minutes. Upon discovery of the situation, the facility manager paused the ongoing tritium operations until FSS operability was confirmed. As background, the FSS is categorized as Equipment Important to Safety and accordingly does not have Technical Safety Requirements. As a result, there is no documented understanding between the contractor and LSO on what constitutes operability or the actions that need to be taken given a certain type of impairment. These decisions are made at the discretion of the facility manager.

In response to this event, facility management held a critique last week and is preparing the report and associated corrective actions. The direct cause of the event appears to be that the maintenance worker disregarded a step in his work package; however, initial review by the Site Representative suggests that this event exposed a number of weaknesses in work control, conduct of operations, and training. LSO is also reviewing the situation.