

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 29, 2011

MEMORANDUM FOR: Timothy Dwyer, Technical Director
FROM: Jonathan Plaue, DNFSB Site Representative
SUBJECT: LLNL Activity Report for Week Ending July 29, 2011

Plutonium Facility: On July 28, 2011, materials management personnel appropriately stopped work and notified management when they encountered a bulging juice can. The juice can was overpacked in a larger drum, which contained additional items. Following initial discussion with facility management, personnel in appropriate protective equipment secured the drum lid and then attached a bag to the top. Later, at the recovery meeting, management directed that the drum-bag configuration be introduced into the air glovebox line where the juice can and its contents had originated.

During the critique later in the day, program personnel determined that the juice can was packed on June 8, 2011, and contained salts with an undetermined amount of plutonium-238. The salts resulted from scraping dried material from the glovebox floor that had leaked from bulging plastic bottles (see weekly report dated November 27, 2009). Personnel also determined that the material had not been calcined or placed in a vented container as required by the Facility Safety Plan. The critique process should identify why these controls were not implemented. Next week, program personnel will develop a work permit to disposition the juice can and its contents.

Tritium Facility: On July 20, 2011, the facility manager declared an as-found discrepant condition related to the fire suppression system (FSS). During a recent review, the Board's staff identified a missing pressure gauge on the supply side of a check valve on a sprinkler riser manifold. The pressure gauge is necessary to confirm water is actually supplied to the facility and is required by National Fire Protection Association code (NFPA). The FSS is designated as Equipment-Important-to-Safety (EITS) in the safety basis, which also states that the system meets NFPA code. In response, the facility manager instituted a timely order for notification when sustained water pressure drops are detected at the Plutonium Facility and requested an operability analysis from the Fire Marshal. The Fire Marshal's analysis considered this condition to be a minimal deviation based on assertions of water pressure monitoring at locations elsewhere at the laboratory and the ability of impairment control policies to maintain control of water supply valves. The analysis did not include a verification of the flow path from the point of current pressure monitoring in the Plutonium Facility to the riser in question. Facility personnel initiated a work package and expect to install the gauge in the next few weeks.

The Site Representative notes that a documented evaluation to confirm that the FSS meets applicable NFPA code, which is a safety basis commitment, has not been performed by either the contractor or LSO. The FSS has experienced two other code discrepancies in the last two years. Further, this discrepant condition is the fourth discovered on EITS systems in the last two years.

Startup and Restart: On July 28, 2011, the Livermore Site Office approved the startup notification report for the fourth quarter. The projected dates for all previous listed activities again slipped several months. Though only for planning purposes, the contractor's record at meeting these projected dates continues to be poor (e.g., chlorination has slipped several years). A new activity was added for the Plutonium Facility. This activity will require a safety basis modification to support work involving special nuclear material and small quantities of explosives. LSO will be the startup authority with a readiness assessment projected for February 2012.