

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 8, 2013

MEMORANDUM FOR: Steven Stokes, Acting Technical Director
FROM: Jonathan Plaue, DNFSB Site Representative
SUBJECT: LLNL Activity Report for Week Ending February 8, 2013

Livermore Field Office: As part of an enterprise-wide change, the Livermore Site Office was recently renamed the Livermore Field Office (LFO).

Waste Storage Facilities: On February 7, 2013, the laboratory contractor declared a Potential Inadequacy of the Safety Analysis (PISA) regarding the application of the *MELCOR Accident Consequence Code Systems 2* software for determination of radiological consequences to the public. The PISA concerns whether the contractor's approach meets NUREG 1.145, position 3, as required by Department of Energy Directives. Initial information suggests that the currently analyzed consequence values are lower than those that would result from correct application of 95th percentile meteorology. The contractor discovered the issue, which likely existed since the 2004 timeframe, while investigating questions from the Board's staff. In response to the PISA, the facility manager issued a timely order providing the following compensatory measures:

- Suspended TRUPACT II loading operations (not planned until 2015)
- Relocated and locked out a bridge crane away from waste drums
- Reduced the combustible loading from 7 to 2 lbs/ft² (typical values are 0.25 lbs/ft²)
- Increased the periodicity of combustible loading surveys from annual to quarterly
- Prohibited hot work without the facility manager's approval
- Required LFO notification for receipt of new transuranic (TRU) waste drums and use of fueled vehicles in the locations currently storing TRU waste

Nuclear Materials Management: On Tuesday, program personnel presented a work permit to repurpose an existing glovebox in the Plutonium Facility in support of repackaging and videography of TRU waste. The scope for this activity will be limited to drums that do not contain plutonium-238 materials and were generated after January 2009. Workers will don personnel protective equipment and open each waste drum in front of the intake for the room ventilation system. The workers will then bag-in individual parcels into the glovebox for sorting and videography before bagging-out the new parcels and placing them in a new waste drum.

The contractor is currently completing vendor testing of the new Consolidated Waste Glovebox Line (CWPL), which the contractor plans to operate later this year. The CWPL has several engineered features (e.g, a ventilated enclosure for drum opening) that represent significant safety enhancements above the repurposed glovebox previously discussed. The need to operate the repurposed glovebox is driven by a goal to repackage 80 drums during this fiscal year. LFO and the contractor determined this goal as a suitable demonstration of progress for the year without a well-defined technical or programmatic basis. Specifically, LFO and the contractor do not currently have a formal plan guiding TRU waste repackaging activities, but expect to develop one by the end of the year. The Site Representative notes that in the interim, it is difficult to assess the need for the repurposed glovebox without a clearly defined end-state, system assumptions and capacities, schedule, or a documented risk ranking of the drum population.