

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 22, 2013

MEMORANDUM FOR: Steven Stokes, Acting Technical Director
FROM: Jonathan Plaue, DNFSB Site Representative
SUBJECT: LLNL Activity Report for Week Ending February 22, 2013

Waste Storage Facilities: This week, Livermore Field Office (LFO) personnel prohibited the laboratory contractor from relocating several containers of low-level waste from a location also containing transuranic waste. The contractor notified LFO of the proposed move as part of the compensatory measures taken in response to the recent Potential Inadequacy of the Safety Analysis (see weekly report dated February 8, 2013). In prohibiting the relocation, LFO cited the lack of a regulatory driver for the move and the need for revised consequence calculations.

Separately, LFO approved the transfer of a single mixed transuranic waste drum containing about 0.45 plutonium-239 equivalent curies from the Plutonium Facility to the Waste Storage Facilities. The drum is approaching its limit for storage in the accumulation area governed by Environmental Protection Agency regulations. The contractor plans to keep the drum separated from the existing transuranic waste to increase the distance during the transfer operation.

Nuclear Material Programmatic Operations: On Thursday, the contractor provided LFO personnel a briefing on potential future programmatic activities to be performed in the Plutonium Facility. The intent of the briefing was to increase the knowledge of LFO personnel of potential programmatic activities to facilitate scoping the next annual update for the safety basis. The contractor discussed the following activities:

- Analytical chemistry and materials characterization, including acquisition of additional instrumentation
- High-precision small target fabrication
- Plutonium-238 recovery and process development
- Design definition development, including a new material recycle capability
- Transuranic waste drum remediation and videography
- Risk reduction through legacy workstation removal
- Support for environmental and surety tests

The contractor acknowledged continued uncertainty regarding the desire to perform future environmental and surety tests at LLNL, but advocated preserving the capability in the safety basis until a final decision is reached. Overall, the contractor concluded that there were not significant benefits to reducing the material-at-risk limits in the facility. In particular, the contractor noted that the planned continued use of plutonium-238 and plutonium hydride dominated the radiological consequences to the public and drove the need to maintain safety class controls. LFO expects to reach agreement on the Scope and Key Issues Statement in mid-March.