DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 1, 2011

MEMORANDUM FOR: Timothy Dwyer, Technical Director
FROM: Jonathan Plaue, DNFSB Site Representative
SUBJECT: LLNL Activity Report for Week Ending April 1, 2011

Livermore Site Office (LSO): LSO has been operating under a new organizational structure for about two months (see weekly report dated January 28, 2011). Completion of human resource approvals and development of the administrative infrastructure to support the new organization is progressing slowly. For example, the *Functions, Responsibilities, and Authorities Manual* has not been updated to reflect the new structure and most of the new Assistant Manager positions are being filled in an acting capacity. The schedule to complete these and other necessary actions to fully implement the reorganization has not been determined.

Emergency Management: The contractor recently approved a revision to Document 22.1 of the *Environment, Safety & Health Manual*. The revision established an institutional requirement for Emergency Planning Hazard Assessment (EPHA) facilities—all of the Nuclear Materials Technology Program (NMTP) nuclear facilities are EPHA facilities—to have a documented, internal facility-level drill program to address postulated accidents and off-normal events. Issuance of this revision closes one of the outstanding corrective actions associated with findings from the November 2008 inspection by the Department of Energy's Office of Emergency Management Oversight (see weekly report dated December 10, 2010). Implementation of this requirement is required to achieve full compliance with DOE Order 151.1C, *Comprehensive Emergency Management System* and DOE Order 426.2, *Personnel Selection, Training, Qualification, and Certification Requirements for DOE Nuclear Facilities.* LSO and NMTP have not yet defined a schedule to develop and execute documented processes to meet the drill program requirement.

Tritium Facility: On March 30, 2011, the Facility Manager declared a Potential Inadequacy in the Safety Analysis for a discrepant as-found condition related to the facility's tritium stack monitors. The stack monitors are categorized in the safety basis as Equipment Important to Safety (EITS) with a contribution to safety of providing indication of gross leakage of tritium from each of the two facility increments. The safety basis further describes that the monitors function by "drawing air through an ion chamber." Late last year, contractor personnel were troubleshooting the stack monitoring system in response to the unexplained high level stack alarm (see weekly report dated October 15, 2010). Continued recent efforts and questions from the LSO Facility representative resulted in the observation that the overall configuration did not support the expected flow path into the ion chamber. In fact, flow was deadheaded against the diaphragm of the pressure differential switch. Apparently, this discrepant condition was not detected earlier because the monitors have detected some low level releases in the past—likely through diffusion.

Contractor personnel restored the configuration for Increment 2 and plan to restore Increment 1 in the future. In the interim, the Facility Manager determined that both monitors continue to meet their function of detecting gross leakage and that operational restrictions were not warranted. Equipment that is categorized as EITS is not required by the safety basis to be operable.