

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 26, 2010

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B.P. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending February 26, 2010

Staff members Galaska, March, Moury and Pasko held a teleconference with NNSA and LANL personnel to discuss fire protection issues including plans to address recommendations from the 2009 Baseline Needs Assessment and improvements in fire fighter training and facility familiarity.

Plutonium Facility: This week, LANL declared a Potential Inadequacy in the Safety Analysis (PISA) based on a potential issue with the safety class ceiling armor for the Isotope Fuel Impact Test (IFIT) facility. The ceiling armor is designed and implemented to prevent a projectile from breaching the facility (projectiles are gas propelled in the vertical direction). The technical safety requirements note that the armor is designed to withstand a projectile with speeds up to 200 m/s; however, there are no safety class controls that protect this assumption (e.g., a relief valve that would limit the maximum projectile velocity is installed but is not credited as safety class). This issue was identified during the recently completed laboratory readiness assessment. The NNSA readiness assessment is scheduled to begin the week of March 8th.

Weapons Engineering Tritium Facility (WETF): During LANL's continuing evaluation of issues identified by NNSA site office safety system oversight engineers (see last week's report), WETF management declared a PISA for the Building TA-16-450 (the building adjacent to WETF's primary tritium processing facility) safety significant fire suppression system. In the basement of this building, lighting fixtures physically block fire suppression system sprinkler heads. LANL has been aware of this vulnerability for several years (the issue was noted in a September 2007 Fire Hazards Analysis) and there is an upgrade planned to resolve the issue; however, this vulnerability is not identified in the safety basis and the PISA process was not pursued until this week. This issue was also not identified in a vital safety system assessment that was performed for the system. A walkdown by site office and LANL fire protection engineering concluded that with the current combustibles in the basement, the sprinkler system could perform its safety function. WETF management has established access control to help ensure additional combustibles are not added while a system upgrade is completed to resolve this issue.

Fire Protection: Last October, a LANL memorandum to the site office suggested that the standing Cooperative Agreement between NNSA and Los Alamos County be revised to address several recommendations in the Baseline Needs Assessment. Last week, the NNSA site office issued a response to the LANL memorandum asserting that gains in fire and emergency response effectiveness and timeliness can be achieved without modifying the existing Cooperative Agreement. The NNSA response directs the laboratory to take a series of actions that contribute to satisfying BNA recommendations and improve response services. Directed actions include coordinating with the Los Alamos County Fire Department to develop Fire Chief's Directives that describe and document laboratory-specific fire and emergency response issues and to develop response time metrics that can be tracked and trended to identify opportunities for improvement.