

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 17, 2010

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending September 17, 2010

Staff member J. Pasko was onsite this week for Conduct of Operations training.

Weapons Engineering Tritium Facility (WETF): The startup authority for the WETF function test activity authorized operations last week following satisfactory closure of pre-start findings identified during the contractor readiness assessment. WETF personnel successfully completed the first and most programmatically critical of a series of planned function tests earlier this week. In addition to the function test campaign, WETF personnel are also pursuing risk reduction activities that include shipping excess material-at-risk to the Savannah River Site and providing more robust confinement for roughly 75 tritium-bearing vessels that may or are known to exceed their maximum allowable working pressure and are not currently protected by any credited confinement barrier.

Waste Operations: Following NNSA site office approval of the Evaluation of the Safety of the Situation (ESS), Material Disposal Area-B (MDA-B) personnel returned the contaminated soil located in Enclosure 1 to the pit and covered the material with a 4 inch minimum overburden. LANL personnel also packaged a contaminated pipe that had been retrieved in a Type A container and removed this item from MDA-B. These actions reduce the material-at-risk (MAR) at MDA-B below radiological facility levels (i.e. 0.52 Pu-239 equivalent Ci). The site office approval of the ESS included a condition of approval that precludes additional excavation activities until LANL can demonstrate a robust radioactive material monitoring system. On Friday, LANL submitted a path forward for real-time excavation monitoring to identify high activity material prior to removal from the excavation pit. A low energy gamma detection monitor will be attached to the excavation boom to identify the high MAR material. These materials will remain in the pit and be covered with at least a 4 inch overburden. LANL contends that the new monitoring system will allow safe excavation of soil and debris from MDA-B.

Plutonium Facility: This week, facility personnel submitted a revised ESS related to the presence of ammonium nitrate in safety class high efficiency particulate air (HEPA) filter plena. The revised ESS augments the set of compensatory measures that were proposed in the previous submittal to replace HEPA filters affected by ammonium nitrate generation (i.e second stage glovebox exhaust HEPA filters) prior to resuming aqueous nitrate processing operations. Replacing these filters and removing residual ammonium nitrate from filter plena housings will eliminate any potential explosive hazard this material may present (site rep weekly 9/10/11).

Chemistry and Metallurgy Research Building (CMR): This week, two CMR laboratory personnel discovered contamination on their booties during routine monitoring activities. A Radiological Control Technician responded, confirmed the presence of contamination and provided replacement booties. Room surveys identified up to 1 million dpm removable contamination in an area below an open front hood where one of the operators was working. Subsequent isotopic analysis indicated that the contamination was Pu-238. No Pu-238 analytical chemistry operations have been performed in this laboratory room in recent history. CMR personnel decontaminated the room and continue to investigate the source of contamination.