

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 9, 2016

**MEMORANDUM FOR:** S.A. Stokes, Technical Director

**FROM:** R.K. Verhaagen and J.W. Plaue

**SUBJECT:** Los Alamos Report for Week Ending September 9, 2016

**Plutonium Facility–Restart Activities:** On Wednesday, the federal readiness assessment team out-briefed the results of their review of the plutonium pyrochemistry operations. The team identified one pre-start finding related to the procedural control on steps used to place a sparging tube above a plutonium metal melt that were insufficiently rigorous to consider it an unlikely upset, as opposed to an expected off normal event in the criticality safety evaluation. The team also identified one post-start finding related to the need to verify the operability of wax coated fire sprinkler heads in accordance with National Fire Protection Association standards. During the out-brief, the team leader praised several LANL and NNSA Field Office readiness practices, opined that they were best in the complex, and announced that these practices are to be adopted for the restart of the Waste Isolation Pilot Plant.

Following successful closure of the corrective actions, LANL will have completed the revised scope of the formal restart project, restoring basic functionality to the facility's manufacturing and surveillance missions. An additional 18 readiness activities are planned for the next two years, including some new activities and some that were de-scoped from the formal restart project such as the aqueous chloride and nitrate operations.

**Federal Oversight:** This week, Mr. Ted Wyka, the current Director of the Office of Safety Management for DOE-EM, commenced an eight month detail to help improve safety management and culture issues affecting the work environment within the NNSA Field Office. Mr. Wyka's presence fulfills one of the corrective actions from the Organization Health Assessment (see 9/2/16 weekly) to seek improvement advice from a senior executive from outside the NNSA chain of command.

**Area G–Safety Basis:** Last week, Area G management declared a Potential Inadequacy of the Safety Analysis (PISA) after preliminary calculations indicated a possibility that several Flanged Tritium Waste Containers may be pressurized with an explosive mixture of hydrogen isotopes and oxygen. The gas buildup is suspected from the radiolysis of tritiated water sorbed to zeolite beds that were loaded above their recommended limit. Some of these containers also have integrity concerns related to potential corrosion issues and non-conformances related to over-torqueing of improper closure bolt types. Management has prohibited all access to the containers.

**Weapons Engineering Tritium Facility (WETF)–Emergency Management:** On Wednesday, WETF personnel conducted their annual emergency exercise. This year's scenario involved a malevolent act by a disgruntled employee that resulted in the release of tritium gas. Participants noted an inconsistency between the actions taken by facility personnel to ensure the safety of local personnel and the formal protective actions that the Emergency Manager declared via a simulated mass notification. Participants also discussed several issues with the integration of response by the protective force and postulated response by Los Alamos Police Department (LAPD). While LAPD did not play in the exercise, participants noted that LAPD officers do not receive the familiarity and the hazard awareness training that is provided to members of the Los Alamos Fire Department. As a result, the participants expressed concerns that the police procedures and response actions may not appropriately account for the unique hazards at certain LANL facilities.