

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 6, 2015

MEMORANDUM FOR: S.A. Stokes, Technical Director
FROM: R.K. Verhaagen and J.W. Plaue
SUBJECT: Los Alamos Report for Week Ending November 6, 2015

DNFSB Staff Activity: C. Berg attended meetings of the Tritium Focus Group and walked down the Dome 375 Permacon used to store the inappropriately remediated nitrate salt wastes.

Plutonium Facility–Nuclear Material Management: On Monday, the six sigma improvement team issued their report on streamlining selection and use of containers for the storage of nuclear materials inside gloveboxes (see 7/3/2015 weekly). Plutonium Facility management initiated this effort following a technical safety requirement violation; however, the Site Representatives note that the scope aligned well with a number of topics discussed in the Board’s Technical Report 39, *Opportunities for Risk Reduction at the Los Alamos National Laboratory Plutonium Facility through the Minimization of Material-At-Risk*. Overall, the team identified a dozen recommendations, including: (1) creating a software filter to ensure only those containers that meet facility requirements are displayed to operators on the LANMAS database interface; (2) investing in additional SAVY containers to ensure availability; (3) investigating changes to bag-out bags that would enable overpacking containers in the next larger size rather than skipping a size; (4) developing a qualification standard covering containers; (5) simplifying credited heights for various containers in the safety basis; and (6) developing a requirements document to support a potential new in-glovebox container with cost and usability benefits. Facility management is currently determining a path forward on these recommendations.

Area G–Safety Basis: Last month, NNSA Headquarters approved LANL’s request to expand the restricted airspace zone above the laboratory by roughly 20 percent. One of the benefits of this expansion is to include airspace above Area G. According to existing approved safety analysis, an aircraft crash at Area G is one of the accident scenarios at LANL with mitigated consequences that exceed the DOE Evaluation Guideline of 25 rem. LANL analysts believe that approval of this expansion will lower the chance of an aircraft crash and in combination with other measures under consideration would result in a crash scenario no longer being credible as determined by DOE-STD-3014, *Accident Analysis for Aircraft Crash into Hazardous Facilities*. NNSA is currently working a request for the expansion approval with the Federal Aviation Administration.

Plutonium Infrastructure Strategy: On Monday, LANL transmitted revision 2 of the Safety Design Strategy for the PF-4 Equipment Installation (PEI) subproject. The PEI subproject impacts 17 gloveboxes that will house analytical chemistry and materials characterization equipment. Thirteen of these gloveboxes are existing installed equipment that will be repurposed as part of the subproject. Eight of the repurposed gloveboxes do not meet the existing safety basis requirement for Performance Category 2 seismic criteria. LANL’s submittal includes safety and nuclear criticality safety analyses indicating that the benefit of upgrading these glovebox stands is minimal (~2 mrem offsite per stand) and is outweighed by the cost and schedule impacts to the project. LANL therefore concluded that the existing safety controls for each glovebox were adequate and committed to reflect this information in a page change to the safety basis prior to submittal of the Critical Decision 2/3 design packages.