DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 7, 2015

MEMORANDUM FOR: S.A. Stokes, Technical Director
FROM: R.K. Verhaagen and J.W. Plaue
SUBJECT: Los Alamos Report for Week Ending August 7, 2015

DNFSB Staff Activity: R.K. Verhaagen attended training on safety basis development and review at DNFSB Headquarters.

Weapons Engineering Tritium Facility (WETF)–Restart Activities: On Friday, the contractor readiness assessment (CRA) team out-briefed the results of their assessment of tritium gas transfer operations. The team identified 12 findings, noted "dramatic" improvement in facility operations, and concluded that all 17 review objectives were met. The team concluded that the facility was ready to safely operate, subject to satisfactory closure of all pre-start findings. Notable findings included:

- A non-conservative discrepancy between the procedure and the associated engineering calculation related to the volume of a tank and its associated manifold piping
- Procedural execution issues important to Conduct of Operations compliance
- A significant fraction of wet pipe sprinkler maintenance has been deferred or cancelled in the past eight months
- Implementation of issues management and corrective actions do not meet contractor assurance system and quality assurance requirements
- Gaps in the implementation of software quality assurance call into question the readiness of safety software to support restart of operations

The federal readiness assessment is currently projected to start September 28, 2015.

WETF–Emergency Management: On Tuesday, WETF personnel conducted an emergency exercise for the CRA team to observe. The scenario involved an operator performing leak checks who falls from an elevated location, tears a glove creating a low-level tritium release, and sustains a broken arm. Exercise participants and CRA team members noted generally positive views compared to past performance and attributed this improvement to the benefits from the approximately dozen training drills conducted this year. However, based on observation of operations center response and comments from the participants, the CRA team noted that management should place additional emphasis on streamlining the communications process in order to prioritize the exchange of safe approach information from the operations center to the responding units from the fire department. The CRA team could not find a specific requirement related to this concern in DOE Directives or national consensus standards, but nonetheless emphasized the importance of ensuring timely emergency response.

Plutonium Infrastructure Strategy: This week, facility management increased the material-at-risk limit for the Radiological Laboratory Utility Office Building (RLUOB) from 8.4 to 38.6 g of plutonium-239 equivalent. The change in limits was facilitated by implementation of the new limits for a radiological facility using the NNSA Supplemental Directive Guidance 1027, *Guidance on using Release Fractions and Modern Dosimetric Information Consistently with DOE-STD-1027, Hazard Categorization and Accident Analysis Techniques for Compliance with DOE Order 5480.23, Nuclear Safety Analysis Reports, Change Notice No 1,* May 2014. This increase represents an important step towards establishing a capability and capacity for analytical chemistry activities necessary to terminate operations in the aging Chemistry and Metallurgy Research building.