DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 3, 2016

TO: Steven Stokes, Technical Director
FROM: William Linzau, Jennifer Meszaros and Rory Rauch, Site Representatives
SUBJECT: Oak Ridge Activity Report for Week Ending September 30, 2016

W. Linzau completed his assignment as one of the Board's Oak Ridge site representatives. Staff members D. Andersen, R. Jackson, and R. Tontodonato were at Y-12 to observe seismic expert panel walkdowns of Buildings 9204-2E and 9215 as a part of the CNS extended life program.

Material-at-Risk (MAR) Reduction: Last week, NPO issued a safety evaluation report that approves the storage of certain legacy materials at the Highly Enriched Uranium Materials Facility (HEUMF). These materials are currently stored at Building 9212 and the 9215 Complex and are part of the Area 5 de-inventory effort, which seeks to transfer MAR from Buildings 9212, 9215, and 9204-2E in order to reduce overall site risk (see 8/15/14 and 6/10/16 reports). Transfer of legacy materials from the 9215 Complex also clears needed floor space for the Electrorefining Project, which is a key component of NNSA's plan to transition enriched uranium operations from Building 9212 by 2025 (see 9/11/15 report).

Building 9212: Last week, an operator conducting rounds noted a significant increase in the differential pressure across HEPA filters located in a ventilation system that supports certain Building 9212 operations, including the Holden Gas Furnace. The shift manager directed that Building 9212 operations reliant on this ventilation system be placed on hold after a follow-on reading indicated the system's differential pressure had further increased. Utility operators throttled the ventilation system dampers to reduce differential pressure across the HEPA filters and maintain minimal system air flow. CNS is investigating the cause of this issue and will use the results to develop corrective actions prior to resumption of normal operations.

Building 9995/ Nuclear Criticality Safety (NCS): CNS management held a critique this week to discuss a 30 gallon waste drum located in Building 9995 that was found, based on initial sampling results, to exceed an applicable NCS enriched uranium mass limit (see 9/23/16 report). Subsequent inquiry related to this event indicates that the mass of enriched uranium in the drum may not be as high as that reflected by the original sample analysis report. As such, the investigation team assigned to this event is currently performing additional analysis on the drum in order to determine to what extent applicable limits are impacted.

The drum was loaded as part of a "non-accountable" (i.e., contains sufficiently small amounts of uranium to be below site security-related material accountability thresholds) organic waste collection activity and contains multiple samples from Building 9212 waste operations. The critique team noted that these samples had more enriched uranium than previous samples sent from similar Building 9212 operations due primarily to a recent increase in the uranium concentration allowed in non-accountable waste. While the critique team noted no deficiencies associated with the implementation of the new limit at Building 9212, they did identify that impacts to operations at Building 9995 were not fully evaluated as a part of implementation. As such, the critique team identified a follow-on action to review implementation of the new limit and identify where issues may have occurred. The critique team also indicated that Building 9995 non-accountable organic waste collection operations will be reviewed and modified, as appropriate, so that non-NCS safe geometry drums are loaded in a manner that ensures the total enriched uranium mass is less than applicable limits. Waste collection operations remain on hold at Building 9995 pending completion of the actions described above.