

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 12, 2019

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** Matthew Duncan and Brandon Weathers, Resident Inspectors  
**SUBJECT:** Oak Ridge Activity Report for Week Ending July 12, 2019

**Waste Shipments:** Last week, CNS notified NPO and the Nevada National Security Site (NNSS) that shipments of a Y-12 waste stream had been sent to the NNSS Radioactive Waste Management Complex that were not in compliance with the waste acceptance criteria. Since identifying the noncompliance, shipments have been suspended for all waste streams from Y-12 to NNSS. CNS filed an 8-6 level I occurrence under DOE Order 232.2A and commissioned a team to conduct an investigation of the noncompliant shipments. DOE has directed its Office of Enterprise Assessments to perform a DOE-wide assessment of the Department's procedures and practices for packaging and shipping radioactive waste.

**Nuclear Criticality Safety:** NPO recently completed assessments of CNS's implementation of ANSI/ANS 8.26, *Criticality Safety Engineer Training and Qualification Program* and ANSI/ANS 8.19, *Administrative Practices for Nuclear Criticality Safety*.

The overall objective of the ANSI/ANS 8.26 assessment was to confirm that the NCS training program ensures employees are vested with the necessary knowledge and experience to safely perform NCS tasks. This assessment identified a performance problem in that CNS's implementing document does not address implementation of the ANSI/ANS standards regarding familiarity with their assigned operations and equipment. However, the assessors noted that the qualified engineers demonstrated adequate familiarity during interviews and concluded that the overall objective of the assessment was met.

The overall objective of the ANSI/ANS 8.19 assessment was to confirm that management accepts overall responsibility for safety of operations and that continuing commitment to safety should be evident. This assessment identified the following four performance problems: (1) documentation did not have all fields (printed name, signed name and date) to prove that personnel attend nuclear criticality safety hazard evaluations and criticality safety officers are not listed as a participant on a form even though it is one of their duties, (2) increasing personnel errors indicating the operating organization does not have an effective critique process to prevent recurrence, (3) CNS partially updated only a single criticality safety evaluation in the last fiscal year even though the applicable procedure states that Y-12 will strive to update all criticality safety evaluations within five years from their most recent revisions, and (4) operational review schedules were not being developed as required by procedure. The assessment team determined that the overall objective was partially met for this assessment.

A previous NPO assessment from 2018 included observations from the NNSA Criticality Safety Support Group and NNSA headquarters nuclear safety staff that also noted the need for criticality safety evaluations to be reviewed on a periodic basis for reaffirmation or be performed using a formal hazard analysis (see 1/4/2019 report). A formal hazard analysis process was not consistently implemented for existing criticality safety evaluations.