

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 29, 2022

TO: Christopher J. Roscetti, Technical Director
FROM: Frank Harshman, Clinton Jones, and Brandon Weathers, resident inspectors
SUBJECT: Oak Ridge Activity Report for Week Ending July 29, 2022

DNFSB Staff Activity: D. Montierth was in Oak Ridge to observe the completion of the DOE Federal Operational Readiness Review for the Initial Processing Campaign at Buildings 3019 and 2026 (see 7/22/22 report).

Building 9215: During the development of a revision to the machining criticality safety evaluation (CSE), the analysts were investigating a specific contingent condition that involved dropping a part into a lathe's chip pan that is filled with machine coolant and chips/turnings. The existing analysis for this contingency referenced a specific set of critical experiment configurations involving large parts with various reflector conditions. CNS discovered that the conditions described in the referenced report do not appropriately bound this contingent condition in the CSE and it was not an appropriate reference to utilize in this case. As a result of this discovery, CNS opened a potential nuclear criticality safety issue and has only allowed machining operations to continue for three specific programs while the issue is investigated. The three specific programs were either bounded by the existing reference, directly analyzed for the component, or are machined in a way that the contingency in question is not applicable.

Conduct of Operations: Operations management in Building 9202, a development facility, was notified of an abnormality while running the arc melter. While investigating the issue, they discovered that the equipment had been in operation without being placed on the plan of the day/week in an approved status from February 16 to July 20. A resident inspector attended the event investigation to further assess conduct of operations problems on the site. This issue, along with CNS's planned assessment of conduct of operations in Building 9204-2E (see 7/8/22 report), is being supported by personnel from the CNS disciplined operations organization. The disciplined operations organization will provide an additional level of input to facility operations management to assist in strengthening the conduct of operations program. The conduct of operations assessment will focus on narrative logs, round sheets, operator aids, shift turnover, control of equipment and system status, and notifications.

DOE Oversight: The DOE Office of Enterprise Assessments (EA), began the onsite portion of an assessment on the effectiveness of CNS's management of safety issues at Y-12. The assessment is focused on issues management and is part of a broader series of similarly focused assessments that EA staff have performed across the DOE Complex. The EA team plans to revisit Y-12 in August to conduct final interviews and then develop the assessment report. The assessment scope at Y-12 included following up on deficiencies that were identified in a 2020 assessment of radioactive waste management at Y-12. In 2019, the DOE Environmental Management Nevada Program suspended the CNS Y-12 waste certification program due to a noncompliance with the waste acceptance criteria for the waste disposal site (see 7/19/19 report). The Y-12 waste certification program remained suspended until March 2021. While the EA team was onsite this week, they were able to observe an audit that Nevada National Security Site (NNSS) personnel were performing for the NNSS Radioactive Waste Acceptance Program.