

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 16, 2026

TO: Technical Director
FROM: Oak Ridge Resident Inspectors
SUBJECT: Oak Ridge Activity Report for Week Ending January 16, 2026

Building 9215: CNS continues to experience system issues with the new metal purification process, also known as electrorefining, including ongoing reliability issues in the oxygen and moisture sensors. During the federal readiness assessment (FRA), the FRA team wrote a post-start finding on the high failure rate and lack of alarms associated with the failure of these sensors. CNS entered the issue into their contractor assurance system, identifying several actions to resolve the problems. The closure evidence provided by CNS showed the issue concerning the reliability of these sensors had been resolved prior to the beginning of the FRA (see 9/26/2025 report). The contractor assurance system showed that the only action left open was to track and trend subsequent failures and issue a system health report. The resident inspectors have observed several operations involving the metal purification process in the recent months and have noted a high failure rate of the same moisture sensors and oxygen analyzers. The YFO maintenance program manager's position has not changed on the importance of starting a system health report to capture reliability of the metal purification process system prior to full operation. With the creation of the system health report, CNS would be able to track outstanding equipment issues and identify whether there are sufficient critical spares to maintain the health of the system. CNS has a due date of August 2026 to complete this final action and has stated their intention to follow that schedule. The resident inspectors are following the outcome of the final action on the post-start finding, as well as the progression of the metal purification process to produce a usable purified product.

Uranium Processing Facility (UPF): A resident inspector attended the second UPF commissioning summit led by the federal Y-12 project management office (PMO). PMO's stated goal for the summit was to identify risks, gaps, and/or barriers that could impact the path to UPF commissioning and identify efficiencies, along with opportunities to improve project delivery. Topics included updates from the July 2024 UPF commissioning summit (see 08/02/2024 report), project status, and a graded approach in support of readiness. In addition, CNS provided an update to the early casting direction it received in November 2025, when NNSA directed the acceleration of the demonstration timeline for the UPF microwave-casting capability. CNS is currently developing a plan to meet the accelerated timeline and has briefed the actions taken to date to meet the new milestone. PMO also facilitated multiple small group sessions to foster discussion on alternate strategies for operational readiness reviews during the summit. The summit was attended by CNS, PMO, YFO, DOE HQ, industry experts, and other managers from across the DOE complex.