

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 3, 2026

Oak Ridge Resident Inspectors Activity Report for Week Ending April 3, 2026

ORNL Building 2026: During initiation of the routine monthly diesel generator test, both safety significant confinement ventilation system (CVS) fans lost power and could not be immediately restarted. The loss of the fans resulted in actuation of the safety significant low differential pressure alarms, causing the facility to enter an unplanned limiting condition for operation (LCO) and complete the required technical safety requirement (TSR) actions. Electricians identified that a breaker had unexpectedly tripped due to an electrical fault during the test and suspended the generator testing. Electricians restored normal power to the fans once they determined it was safe to do so. Upon restoration of power, the facility manager verified the TSR surveillance requirements were met, declared the system operable, and exited the LCO. Isotek initially filed an occurrence report for performance degradation of a safety significant system, as the loss of the electrical support system prevented satisfactory performance of the fans' design function when the system was required to be operable. Isotek staff, along with OREM staff, met to further discuss the cause of the abnormal condition, the effects on the equipment, and the occurrence reporting criteria in DOE Order 232.2A, *Occurrence Reporting and Processing of Operations Information*. Isotek concluded that loss of the safety significant fans was the result of a tripped electrical breaker that performed its intended function of removing power due to an electrical fault in the system. Although the area fell below the TSR-required differential pressure due to an unexpected condition, fan function was reestablished by restoring the normal power supply. The physical primary confinement boundaries remained intact, and support components in the safety significant boundary operated as expected and were not degraded. Based on meeting these conditions, Isotek determined that this abnormal condition does not meet the criteria of an occurrence report and canceled the initial notification. A resident inspector reviewed the circumstances around the occurrence report and its subsequent cancellation, the credited functions of the CVS, and the TSR. The resident inspector concluded that the loss of the electrical support system, which leads to the unplanned loss of a safety significant fan and entry into an unplanned LCO, meets the occurrence reporting criteria in DOE Order 232.2A.

Building 9215: A resident inspector attended an operational safety board meeting for the electrorefining process. During the meeting, the process engineer revealed that CNS has unknowingly been operating the system with approximately 1.6 kilograms more enriched uranium in the electrorefining cell than the mass tracking software or the personnel operating the equipment had accounted for since the startup in October 2025. Following the meeting, CNS entered this issue as an event in the contractor assurance system and started the formal investigation process. During the initial startup of the electrorefining process, there was a problem with data transfer between the software system the plant analytical laboratory uses and the mass tracking software. CNS personnel manually entered enriched uranium concentration values into the mass tracking software without understanding that the software would not run the subsequent calculation that would have accounted for the additional material. CNS placed the electrorefining operations on hold pending the completion of the investigation and corrective actions.