

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 10, 2026

Oak Ridge Resident Inspectors Activity Report for Week Ending April 10, 2026

Building 9212: A resident inspector observed the final qualification board for an enriched uranium operations production supervisor. The board selected questions for the candidate that adequately covered topics such as nuclear criticality safety, abnormal scenarios involving safety-basis-credited systems, and work controls. The board was well conducted, and the board members did not ask leading questions, which would have provided additional information to unduly lead the candidate to successfully answer the question. Make-or-break questions were appropriately identified with specific parts of the answers marked as critical attributes in advance of the board. The attributes informed the board of the minimum amount of knowledge required to be demonstrated to pass the question. The final grading of the candidate's responses, and how the candidate performed overall during the board, was clear and in accordance with the CNS oral board procedure.

Building 9204-2E: A resident inspector attended an event investigation and subsequent critique for an incorrectly wired electrical junction box that caused sparking. The electrical junction box was part of the nuclear facility electrical modernization project that was installed in 2017 (see 9/2/2022 report). CNS operators were restoring power to one of the large ventilation systems after a maintenance outage when they observed sparking and heard a sizzling sound coming from an electrical junction box. CNS secured and locked out the electrical junction box and conducted an inspection of the internal circuits. CNS discovered multiple electrical code violations, including the density to which the junction box was overly packed with wiring and connections. CNS started the initial investigation and then had to pause the investigation to perform thermal scans of the electrical junction box in question to validate that it was in a safe configuration. CNS also performed thermal scans of the other electrical junction boxes installed by the project and did not find any anomalies. Although these thermal scans were performed, the size of the junction boxes does not allow a scan of this type to penetrate much past the exterior of the box, which limits the value of the thermal scans. CNS generated work orders to open the other electrical junction boxes completed as part of the nuclear facility electrical modernization project. However, these are not scheduled to be completed for approximately two months. CNS views the risk of running the systems for the two months prior to performing the follow-up inspections as acceptable.

While performing maintenance inspections associated with the repair of the melted wiring and connections in the initial electrical junction box, one of the wires contacted the scaffolding and produced a spark. CNS had locked out all electrical that was running to the junction box prior to the repair work but subsequently discovered 110 VAC wiring for lighting circuits that were not on the drawings. CNS filed an occurrence report for the 110 VAC event but not for the initial sparking issue with the high voltage, even though both events fit the occurrence reporting criteria for a 2D(2)L event for "any discovery of an uncontrolled hazardous energy source (e.g., live electrical power circuit, etc.)." The reporting criteria in the CNS procedure also has further site-specific guidance that states, "This criteria is used for a hazardous electrical energy control process or program issue found during a hazardous electrical energy evolution that did not result in a person coming into contact with or the discovery of live electrical power circuits or parts."