

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 18, 2022

TO: Christopher J. Roscetti, Technical Director
FROM: Brandon Weathers, Resident Inspector
SUBJECT: Oak Ridge Activity Report for Week Ending February 18, 2022

Building 9204-2E: Several months ago, a resident inspector requested information about four drums that were under administrative control. The posting on the drums referred to a shift manager log from 2013 and the drums had remained under administrative control since then. CNS searched the shift manager logs and did not find any additional details about the drums. Further investigation by CNS and the involvement of a NPO facility representative resulted in identifying some information about the drums. There are still unresolved questions regarding the drum contents, but they have been determined to be non-fissile. However, nuclear criticality safety engineers provided guidance earlier this month for the drums to remain under administrative control because the drums cannot be confirmed to be from an approved source for the storage array that they are in. This week, CNS upgraded the field report to a minor non-compliance and provided guidance to verify the 2013 non-destructive assay data.

Nuclear Criticality Safety: A shift manager notified nuclear criticality safety personnel that a hole had been discovered in a large out-of-service scale in Building 9212 and that it had been placed under administrative control. The scale had significant corrosion that created a hole on the top of the scale's base. Further inspection by nuclear criticality safety personnel identified two additional holes. The presence of the holes and the overall volume and dimensions of the cavity meant that it was not compliant with the Large Geometry Exclusion Area Program. A visual inspection inside the cavity did not find any indications of liquid and the area was dry. Nuclear criticality safety personnel provided guidance to clean the top of the holes to remove loose rust, dry the top of the holes, and cover the holes with tape. They also recommended that the scale base have holes drilled in it or that it be removed from the Large Geometry Exclusion Area. This event was classified as a deficiency.

Last week, production personnel in Building 9212 noticed that the precipitator product from a material process was a different color than expected. They placed the area under administrative control and contacted nuclear criticality safety personnel. The group discussed a similar event that occurred last year (see 7/23/21 report). In the previous event, the precipitator product was further processed, and contaminants were observed in a tube furnace oil bubbler. Only a trivial amount of U-235 was measured in the contaminants last year after draining the oil bubblers. Nuclear criticality safety personnel provided guidance to collect a sample of the material and to proceed with processing the product per the normal method.

CNS finalized the non-destructive assay measurement data for the out-of-service system in Building 9212 that was discovered to contain a greater than expected amount of U-235 (see 12/10/21 and 1/28/22 reports). Based on those results and the configuration of the system and its holdup, CNS determined that the original occurrence reporting criteria could be changed. CNS issued the final occurrence report under the management concern reporting criteria as an informational level report rather than the preliminary reporting criteria of a nuclear criticality safety control violation as a high level report.