

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

TO: Steven Stokes, Technical Director
FROM: William Linzau and Rory Rauch, Site Representatives
SUBJECT: Oak Ridge Activity Report for Week Ending October 3, 2014

R. Oberreuter was at Y-12 to observe a DOE Office of Enterprise Assessments evaluation of Y-12 work planning and control.

Building 9212/Nuclear Criticality Safety (NCS): Last March, the CNS Nuclear Procurement Engineering and Quality organizations conducted a recertification review of the vendor that supplies carbon billets for use in Building 9212's enriched uranium casting process. During the team's review, they noted that the vendor was not adhering to the specified American Society for Testing and Materials (ASTM) Standard for testing the density of the carbon during its commercial grade dedication process. In April, a Production Support Specialist performed an approximate density measurement (using nominal dimensions to calculate the volume, then weighing the component) of 197 carbon components already on-site. While not conclusive, the results from this sampling provided the team confidence that the site's carbon inventory was below the maximum density specification used in the criticality safety evaluations for Building 9212 casting operations. In the following months, the team worked with the vendor to better understand its process, and to document and raise awareness about the lack of surety of the carbon density being used in casting and other operations. The issue first received broad awareness several weeks ago when more accurate testing conducted by the site's Quality organization revealed that the density of one randomly selected billet was greater than the maximum NCS limit. Since May, shipments of carbon from this vendor have been held at Y-12's receiving facility. Last week, the Enriched Uranium Operations Manager placed fissile casting operations on hold, pending the development and completion of a controlled, statistically-sound plan for sampling the density of the current inventory of carbon billets.

Quality Assurance (QA): Last week, a member of NPO's QA staff observed Technology Development staff place a new shipment of HEPA filters in a storage location that did not comply with site QA requirements. The equipment specifications for these HEPA filters required a quality level "B" storage configuration (designated for equipment that is deemed sensitive to environmental conditions and must be stored in a location that prevents exposure to moisture or temperature extremes). The filters in question were placed in an uncontrolled environment with several other excess HEPA filters from previous shipments. The fact-finding meeting for the event revealed a broader problem in which the Technology Development organization failed to establish a quality level "B" storage area or properly tag and control HEPA filters after the site's implementation of ASME NQA-1 2008 went effective in 2010. QA personnel stated that they initially prioritized the validation of the implementation of these requirements in higher hazard areas with more stringent QA requirements. CNS management is developing corrective actions and performing an extent-of-condition review.

Building 3019: The UT-Battelle Utilities organization repaired the buried fire water supply line that ruptured two weeks ago (see 9/19/14 report). Subsequently, the ORNL Fire Department was able to restore normal water supply to the building's fire suppression system. Excavation of the line revealed that three locations had signs of leaking prior to the pressure transient and the transient caused these leaks to enlarge. The Utilities organization cut out and replaced the leaking section of pipe and refilled the excavation. The Building 3019 Operations Manager anticipates restoration of the area to be completed this week.