

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 August 22, 2014

Building 9212: Last week, a Nuclear Criticality Safety Engineer (NCSE) was reviewing a revised steam system drawing and noticed that the steam supply pressure to the Oxide Dissolver was greater than indicated in the process description. The steam system had been modified and the NCSE was conducting the review as part of change package closure activities. The error was introduced in January 2010 when the utility operator roundsheet had been revised without adequate configuration management and the error was carried forward when the current revision to the drawing referenced the roundsheet value. The higher steam pressure exceeded the pressure assumed in the basis calculation for operation of an automatic isolation valve that prevents condensate with fissile material from being released to an uncontrolled geometry. Subsequent analysis conducted by CNS engineers determined that the automatic isolation valve would adequately perform its protective function with a steam pressure higher than the value listed on the drawing. CNS management is pursuing several corrective actions including developing a review approach for future changes to operating parameters and reviewing other roundsheets for similar discrepancies.

NPO Oversight: The Site Integrated Assessment Plan (SIAP) is a consolidated list of scheduled NPO assessments of contractor systems, NPO self-assessments, and external reviews for a given fiscal year. The NPO Y-12 Deputy Assistant Manager for Nuclear Safety and Engineering (DAMNSE) has taken a unique approach to performing the SIAP assessments under his purview. Rather than performing several smaller scope assessments, the NPO Y-12 DAMNSE has elected to perform fewer more resource-intensive team-based assessments that integrate oversight activities from several areas: fire protection, nuclear criticality safety, safety basis, and safety system oversight. Each “integrated assessment” is facility-centric, focusing on one or two high-hazard facilities at a time, with the goal of providing coverage of all nuclear facilities within a three year period.

An NPO integrated team recently completed an assessment of Buildings 9204-2 and 9206. The review team identified one finding for Building 9204-2, five findings associated with the 9206 Complex, and two plant-wide issues. One of the site-wide issues reiterated a concern about maintaining operability of criticality accident alarm systems, an issue originally noted during a contractor system health validation (see 6/7/13 report). Three of the findings in the 9206 Complex are associated with nuclear criticality safety requirements as they relate to delayed plans to deactivate the facility. The 9206 Complex has been shut down since 1994, but still has fissile material hold-up in several systems. NPO is concerned that the safety basis for these legacy deposits does not address changing conditions as the facility continues to age. Lastly, there is a finding associated with corrective maintenance on fire suppression systems. These maintenance issues were identified by the contractor’s system engineers and include deficiencies with pipe hangers and sprinkler heads.

Oak Ridge Office of Environmental Management (OREM): Last week, OREM completed Safety Evaluation Reports approving the Justification for Continued Operation (JCO) documents created by WAI and UCOR to address a detonation hazard in specific stored containers (see 5/23/14 and 7/25/14 reports). OREM’s expectation is that the JCO interim controls have the same status as specific administrative controls and remain in effect no longer than six months.