

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 13, 2016

TO: Steven Stokes, Technical Director
FROM: William Linzau and Rory Rauch, Site Representatives
SUBJECT: Oak Ridge Activity Report for Week Ending June 10, 2016

M. Helfrich and R. Oberreuter were at Y-12 to observe the annual emergency exercise.

Emergency Management (EM): This week, CNS conducted its annual EM exercise. The exercise scenario involved two separate events. The first, smaller event was a simulated vehicle accident involving a truck used to ship nuclear material and the second, more significant event, was a large fire in Building 9204-2E. The fire event was designed with an unlikely scenario in which two of the facility's fire suppression sprinkler systems were out of service due to maintenance. CNS EM personnel crafted this scenario to involve enough material to cause off-site radiological consequences, trigger a General Emergency, and allow the state and local emergency response teams to exercise protective action protocols. The exercise had a longer duration than previous exercises to allow further development of the scenario including the start of recovery actions. This extended duration provided enough time for field monitoring teams to deploy and for the recovery team to start plans to restore operations in the facility. CNS EM personnel will document their observations and findings in an after-action report expected to be completed within a few months.

Aging Infrastructure: Last week, CNS issued an update to its implementation plan supporting enriched uranium (EU) mission transformation activities (see 2/6/15 report). The retitled *Enriched Uranium Mission Transformation Implementation Plan* captures the tasks required to sustain Y-12's EU mission capabilities while driving down nuclear safety risks, security risks, and mission risks. The updated plan's overarching strategy remains the same, but certain components of the strategy have changed significantly, such as the strategy for expanding and accelerating the reduction of material-at-risk (MAR) in older EU processing facilities. The most significant changes to CNS's MAR reduction strategy involve the plans for processing organic solutions and dispositioning legacy low equity materials. Regarding the former, CNS is now prioritizing processing organics with higher EU content while instituting process changes to reduce the generation rate of certain EU-bearing organic waste streams (see 5/16/16 report). Regarding the latter, previous plans for discarding low equity materials are currently being re-evaluated and a consolidated plan should be available before the end of fiscal year 2016. Notable MAR reduction accomplishments within the last year include significant progress in processing Building 9212's inventory of uranyl nitrate crystals. In addition, CNS has made progress in developing the documentation needed to support the expansion of EU material storage capabilities in the Highly Enriched Uranium Materials Facility (HEUMF) and instituting new capabilities that will allow certain EU material streams to bypass Building 9212 and be sent directly to HEUMF (see 7/10/15 report).

The revised strategy also incorporates strategies that had not been developed at the time the previous revision was issued, such as CNS's Extended Life Program for Buildings 9215 and 9204-2E (see 4/22/16 report).

This week, NNSA's Associate Administrator for Safety, Infrastructure and Operations (NA-50) was at Y-12 to receive briefings on CNS's plans to maintain the site's infrastructure to support completion of program requirements during the next 25 years. This effort supports NNSA's Master Asset Plan (MAP) which will document current infrastructure conditions and risks, and allow prioritization of investments in infrastructure. The results from this review will be incorporated into a complex-wide MAP which will provide an integrated view of NNSA assets.