

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 5, 2018

TO: Steven Stokes, Technical Director  
FROM: Jennifer Meszaros, Resident Inspector  
SUBJECT: Oak Ridge Activity Report for Week Ending February 2, 2018

M. Helfrich and T. Hutain visited Y-12 to observe an emergency response exercise.

**Emergency Preparedness and Response:** This week, the Y-12 emergency services organization held an emergency response exercise that evaluated site response to a simulated spill of lithium hydride. The exercise also simulated asbestos abatement work at the Technical Support Center and thus required utilization of several back-up emergency response facilities. Although DNFSB headquarters staff observers and Y-12 emergency services personnel generally believe that most of the exercise objectives were met, they also identified several weaknesses that warrant corrective action. For instance, during the post-exercise critique, emergency services personnel noted that the plant shift superintendent's office did not issue protective actions in a timely manner. Additionally, they noted that minimal, scenario-specific spill response guidance and a lack of available, real-time airborne monitoring technology further impacted response time. Y-12 emergency management personnel will document their observations and findings in an after-action report.

**Highly Enriched Uranium Materials Facility (HEUMF):** An engineering manager recently identified that certain pressure gauges installed on credited fire suppression systems are not consistent with gauges specified on system drawings. The installed gauges can indicate system pressures up to 160 psi while system drawings require gauges capable of reading pressures up to 300 psi. Facility operations management evaluated the installed gauges using the site's new operability determination process (see 12/1/17 report). They concluded that the impacted systems are operable in the existing configurations because gauge pressure is not listed as an acceptance criterion in the technical safety requirement bases for a particular credited surveillance.

CNS held a fact finding meeting to further discuss the issue. During the meeting, attendees noted that facility personnel replaced the 300 psi gauges in 2012 to address fluctuating pressure readings observed during a surveillance. At that time, engineering and facility operations management selected the 160 psi gauge as an appropriate replacement based on a site exemption from National Fire Protection Association requirements that was approved in 2003. They did not, however, utilize the site change control process to evaluate the replacement and ensure the applicability of the exemption to HEUMF systems. During the fact finding meeting, attendees committed to further evaluating the existing system configuration and updating system drawings, if required. They also committed to reviewing the site change control process.

**Building 9212:** In early January, a worker received skin contamination on his neck area while using a reciprocating saw to perform filter size reduction activities. Last week, CNS personnel held a fact finding meeting to discuss the event. Meeting attendees noted that the worker did not tape the hood of his respirator to his coveralls in accordance with the radiological work permit. They suggested that a radiological control technician (RCT) may have identified the worker's error had they been present continuously during the job. Attendees thus committed to clarifying expectations regarding the presence of RCTs during work execution. Further, attendees committed to evaluating alternate filter cutting methodology so that less airborne contamination is generated during future activities. Filter size reduction activities are currently suspended, pending implementation of improved methodology.