

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 18, 2015

TO: Steven Stokes, Technical Director  
FROM: William Linzau and Rory Rauch, Site Representatives  
SUBJECT: Oak Ridge Activity Report for Week Ending December 18, 2015

**Highly Enriched Uranium Materials Facility (HEUMF):** NPO approved the CNS resubmittal of the Justification for Continued Operations (JCO) that addresses an Unreviewed Safety Question (USQ) associated with the Technical Safety Requirement (TSR)-level Surveillance Requirement (SR) for HEUMF smoke detectors (see 8/14/15 and 10/23/15 reports). One of the credited functions of the smoke detectors is to send a signal that activates the facility's Secondary Confinement System (SCS) upon detection of smoke. The testing method in the SR checks the ability of the detector to send a signal to the fire alarm control panel but does not test the operability of the smoke detection function. Earlier this year, NPO expressed concern that the compensatory measures in the earlier submitted JCO did not directly address the reduced surety that the credited safety instruments will initiate actions by the SCS to confine radiological material released during a fire event. The CNS resubmittal includes an additional compensatory measure that will ensure the doors that form the SCS isolation boundary are closed when the material storage areas are not occupied. This measure will ensure that this part of the confinement function is in place when personnel are not present to activate the confinement system manually.

In addition to addressing the immediate need to provide a JCO that supports the safety basis, CNS has been working on solutions that will allow for compliant testing and surveillance of the HEUMF smoke detection and alarm system. CNS briefed NPO on several possible alternatives that included modifications to the existing system or installation of additional equipment that can be tested in a manner that meets the NFPA code and fulfills the intent of the TSR SR for a functional test of the detectors' smoke detection capability.

**Building 9212:** This week, CNS completed the startup plan for operations utilizing a new storage system for the process condensate effluent from the intermediate evaporator and high capacity evaporator systems (see 11/13/15 report). The site reps observed the final startup evolution, a transfer of condensate from the intermediate evaporator to the new storage system. All equipment worked as anticipated during the evolution, though one of the CNS project representatives observed the sporadic illumination of the high level indicator light for a bank of storage tanks that was not configured to receive material. The actual level indication gauges for the tanks remained steady at the expected level, thus the CNS representative did not believe this to be a significant process issue, but nonetheless plans to discuss this observation with the responsible system engineer. The only technical issue during startup occurred previously when operators collected an unanticipated quantity of solution while draining a portion of the system in preparation for a material transfer. The operators took appropriate action to suspend the procedure. The responsible system engineer evaluated the system, determined that the valve alignment needed to be adjusted, and operations resumed following a procedure change. Following completion of the startup plan, designated management oversight personnel recommended that operations involving the new storage system continue without additional management oversight.

**Transuranic Waste Processing Center (TWPC):** Last week, North Wind Solutions, LLC, completed transition to take over the management and operation of TWPC replacing incumbent contractor Wastren Advantage, Inc. (see 10/23/15 report).