

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 22, 2016

TO: Steven Stokes, Technical Director
FROM: William Linzau and Rory Rauch, Site Representatives
SUBJECT: Oak Ridge Activity Report for Week Ending April 22, 2016

Aging Infrastructure/Extended Life Program: In 2014, NNSA's long-term approach to maintaining Y-12 enriched uranium capabilities changed due to an increase in the cost of the Uranium Processing Facility (UPF) and recommendations from the Red Team peer review (see 1/24/14 report). The resulting revised approach removed the capabilities housed in Buildings 9215 and 9204-2E from the scope of UPF. As both of these buildings are beyond their design life and now have an enduring mission, the Y-12 contractor undertook actions to develop an Extended Life Program (ELP) for these facilities. In 2015, CNS conducted workshops to gather complex-wide aging management practices while also assigning teams to develop recommended actions related to gaps between facility design and modern codes, infrastructure and equipment condition issues, and the efficiency and effectiveness of maintenance practices (see 2/27/15 and 11/6/15 reports).

CNS completed a report capturing these recommendations in January 2016. Recommendations included continuing risk reduction activities and updating safety analyses for Buildings 9215 and 9204-2E, addressing fire and electrical code gaps and upgrading related infrastructure, convening a seismic expert panel to identify potential structural upgrades, updating the Y-12 aging management program, and transitioning to a more robust facility outage-based maintenance paradigm. Last week, NPO sent a letter to CNS expressing its support for the recommendations from the ELP report and asked CNS to "develop a safety strategy for NPO approval which identifies the scope, priority and actions required to execute the proposed risk reductions and resolve any gaps in meeting applicable requirements captured in the ELP Report." In addition, CNS was directed to update their aging management plan consistent with the report and develop an ELP implementation plan. NPO requested future budget requests include ELP activities and asked CNS to brief NPO periodically on ELP-related activities.

Operational Drills: This week, the site reps observed a facility-level drill in Building 9720-5 in which material handling personnel had to respond to a bulged and ruptured drum of hazardous material. This drill allowed workers to practice their response to a bulged drum consistent with recent training (see 3/18/16 report) and identified opportunities to strengthen their performance.

DOE Order 426.2 requires DOE contractors to develop a continuing training program that includes conducting operational drills. Y-12's Emergency Management organization conducts site-wide drills, but in recent years, there have been few facility-level operational drills. Last year, CNS's Production Support organization recognized the need for this type of training and re-initiated a facility-level drill program. This week's drill was led by members of Production Support's Action Office and they plan to conduct a targeted facility-level drill once per quarter.

Building 9212/Nuclear Criticality Safety (NCS): Recently, the site's new information process was used to communicate two issues related to NCS controls and entry into the potential inadequacy in the safety analysis (PISA) process. Late last month, Mission Engineering personnel identified that passive design features on 4-place can dollies used to transport fissile material may not adequately protect the can-to-can spacing analyzed by NCS. The second issue involved Building 9212's wet vacuum system. During a system walkdown, an engineer noted that the system configuration was different from the analyzed configuration, which raised a question on the adequacy of a calculation supporting a safety basis control. In both cases, the recently revised new information process allowed for timely declaration of a PISA.