DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 12, 2016

TO: Steven Stokes, Technical Director
FROM: William Linzau and Rory Rauch, Site Representatives
SUBJECT: Oak Ridge Activity Report for Week Ending September 9, 2016

Infrastructure Sustainment: Last April, in response to a CNS report documenting recommended actions for developing an Extended Life Program (ELP) for Buildings 9204-2E and 9215, NPO issued a letter requesting that CNS develop an ELP safety strategy for NPO approval that would allow NPO, CNS, and other key stakeholders to agree on "scope, priority and actions required to execute the proposed risk reductions and resolve any gaps in meeting applicable requirements" early in the planning process (see 4/22/16 report). CNS submitted the safety strategy to NPO in June and NPO approved the strategy last week. As documented in the approval letter, NPO and the NNSA Office of the Chief of Defense Nuclear Safety (CDNS) determined that the CNS safety strategy report documents a suitable strategy and a series of key decisions necessary to continue safe operations in Buildings 9215 and 9204-2E. NPO attached to its approval letter a CDNS advice memorandum that contains four items for consideration moving forward. In one of these items, CDNS observes that the safety strategy, when approved, will not be executable without a funding commitment and suggests that a roadmap be developed to identify recommended projects and schedules, with proposed funding mechanisms and relative priorities. CNS has a separate commitment to NPO to develop an ELP implementation plan by November 1, 2016, which could serve as a starting point for addressing CDNS's suggestion.

Emergency Management (EM): This week, CNS conducted an EM functional exercise with a scenario involving the spill of a drum of acetonitrile on the Building 9225-3 loading dock. The exercise tested Y-12's ability to respond to an emergency using alternate support facilities. The scenario's entry conditions placed the Technical Support Center, the Health and Safety Team's coordination facility and the Onsite Monitoring Team's duty location in an inoperative condition, which forced the use of the alternate locations for each of these functions. Emergency response personnel simulated key field-based elements on a terrain map but other functional elements of the response were exercised in full. CNS EM personnel will document their observations and findings from the exercise in an after-action report.

Building 9215/Nuclear Criticality Safety (NCS): Earlier this year, CNS Special Nuclear Materials Operations (SNMO) personnel began enriched uranium chip rinsing operations at a new chip rinsing station in Building 9215 (see 3/4/16 report). Three weeks ago, after SNMO and NCS personnel identified some procedure improvement opportunities at the new station, SNMO management made the decision to temporarily return to the prior method of chip rinsing, which involves manually rinsing chips at a vacant machining station. Subsequently, while observing these operations, an NCS engineer identified fissile material staged in a nearby in-process storage array, which was inconsistent with the definition of a "vacant machine" in the applicable NCS evaluation. This week, the site reps observed a CNS fact-finding meeting that was convened to discuss the circumstances surrounding the NCS infraction and identify actions to prevent recurrence. In general, SNMO management identified opportunities to improve the formality with which operations transitioned from the chip rinsing station to chip rinsing at a vacant machine. This included the timing, level of detail, and target audience for associated pre-job briefings and the rigor with which the storage configurations for nearby in-process storage arrays were controlled. Subsequent to the fact-finding meeting, the site reps reviewed the original implementation plan (IP) for the applicable NCS controls and provided an observation to SNMO management that the approach used during this latest chip rinsing campaign deviated from several items in the IP. For example, SNMO personnel did not limit operations to two specific machines, nor did they take the applicable in-process storage arrays out of service.