

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

TO: Steven Stokes, Technical Director  
FROM: William Linzau and Rory Rauch, Site Representatives  
SUBJECT: Oak Ridge Activity Report for Week Ending October 10, 2014

**NPO Oversight:** This week, NPO issued its Quarterly Issues Management Meeting (QIMM) report. The report documents a new management concern with the CNS safety culture. Specifically, NPO cites a series of recent events at Y-12 and Pantex (e.g., a worker sustaining a fractured leg at the Highly Enriched Uranium Materials Facility and multiple process breakdowns associated with an on-the-spot procedure change in Building 9212, see 8/29/14, 9/5/14, and 9/12/14 reports) that are not only indicative of concerns with Y-12 disciplined operations (as previously communicated in an August NPO letter to CNS), but also indicate a broader safety culture issue in which managers and workers are collectively tolerating an unacceptable level of risk at the floor level. The CNS response to NPO's letter regarding a lack of disciplined operations is imminent and should contain actions that provide a starting point for addressing this concern. The QIMM report also contains an emerging issue related to inadequate performance in the CNS Y-12 Technology Development organization (see below).

**Building 9202 (Technology Development):** Last Friday, a worker discovered radiological contamination on her head during an exit survey after work activities in the Building 9202 foundry. The subject work activity involved separating water and oil from depleted uranium fines. Upon discovery of the contamination, the worker contacted her supervisor, who directed the worker to contact the Plant Shift Superintendent (PSS) and request RCT support because no RCTs were in Building 9202. The PSS arranged for RCTs from Building 9212 to go to Building 9202 and these RCTs successfully decontaminated the worker to less than detectable levels. The radiological work permit for this activity indicated intermittent RCT support was required.

Another fact-finding meeting was held this week to discuss a violation of Y-12's lock-out/tag-out (LO/TO) procedure. A Technology Development staff member changed out an impeller of a small pump during "test and check-out" of a new dissolution system being installed Building 9731. The staff member did not believe a LO/TO was required to isolate electrical power to this hard-wired pump because the power switch was off and clearly under his control.

CNS Y-12 Technology Development managers paused all hands-on work in Building 9202 for a day due to the above issues and other recent events that led to the emerging issue noted in NPO's QIMM report (see 9/19/14 and 10/3/14 reports for examples).

**Uranium Processing Facility (UPF):** This week, the NPO Manager and UPF Federal Project Director jointly approved the latest revision to the Safety Design Strategy (SDS) for the UPF project. This revision is the first to reflect the changes to the project execution strategy that address the recommendations from the Red Team report (most notably to alter the design strategy to one that utilizes multiple buildings appropriately sized and categorized for safety and security requirements, see 4/18/14 and 5/9/14 reports). Of note, the SDS, as part of the discussion of natural phenomena hazard (NPH) design criteria, indicates that the doses from a criticality accident are not to be added to doses associated with radiological release scenarios for the purposes of determining the NPH design category (NDC) for a structure, system, or component (SSC). NNSA determined that this approach is not appropriately conservative for pre-conceptual design and identified a condition of approval requiring the NDC for SSCs to be based on the total radiological consequences, including those from a criticality, caused by the initiating event.