

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 May 22, 2015

Feedback and Improvement Working Group (FIWG): The FIWG is a key part of the feedback and improvement core function of integrated safety management at Y-12. As part of this core function, the FIWG completed its quarterly analysis report of the performance of CNS. In the report, the group identified three positive observations:

- CNS has written an implementation plan to address the highly enriched uranium mission strategy (see 2/16/15 report).
- CNS has completed a systems review of significant events to identify systemic issues and underlying causes that will be used to inform its performance improvements plans.
- CNS's Production organization has implemented a leadership training course for supervisors and managers to improve CONOPs performance (see 3/6/15 report).

In addition, the FIWG identified other observations and concerns, which include:

- Despite on-going corrective actions, conduct of operation (CONOPS) performance did not show significant improvement.
- The rate of change following contractor transition is likely a contributing factor affecting operational performance.
- CONOPS metrics that measure success using statistics based on the number of hours of operation without an event can mask the overall health of the barriers that prevent events.
- Actions to address the accelerated loss of personnel with process knowledge and experience may not fully address near-term impacts.
- The number of issues caused by aging infrastructure and weather-related equipment failures highlights the need to proceed with planned infrastructure upgrades and life extension programs.

This report appears consistent with the purpose of the FIWG in that it identified broad-based trends in performance and elevates these trends to CNS senior management. The report is also consistent with site rep observations regarding CONOPS performance and the impact of change on contractor performance. The FIWG's concerns and observations have not been formally briefed to CNS senior management, but when that occurs, management will have the opportunity to accept and address the observations as appropriate.

Uranium Processing Facility (UPF): NPO has approved the UPF Conceptual Safety Design Report, which provides an analysis of the hazards and documentation of the controls developed during conceptual design. The NPO review team determined that hazards were properly identified and appropriate controls have been selected consistent with the level of design maturity. However, the team's report identified four conditions that need to be addressed in the Preliminary Safety Design Report (PSDR), which will be developed through the next stage of design. The four conditions that need to be addressed in the PSDR are: the assumption in the Preliminary Hazard Analysis on the maximum anticipated quantity of hazardous materials in inventory needs to be protected with controls, additional analysis is required on potential internal explosion events that may impact workers, additional analysis of credible external explosion accidents is needed, and additional analysis is needed to demonstrate that seismic damage to tanks holding fissile solutions do not lead to a criticality. In addition, in the cover letter of the report, the Federal Project Director directed CNS to submit a revised Safety Design Strategy that incorporates a technical evaluation of the confinement ventilation system by July 15, 2015.