

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 April 3, 2015

Board member Daniel Santos and staff members Robert Oberreuter and Dibesh Shrestha visited Oak Ridge this week. The Board member and staff walked down Buildings 9212, 9215, 9204-2E, 9204-2, and the Highly Enriched Uranium Materials Facility at Y-12; and the Transuranic Waste Processing Center, Building 3019, and Building 2026 at ORNL.

Building 9204-2E/Conduct of Operations: On March 10, a calibration crew attempted to calibrate the temperature probe on an operating production oven in Building 9204-2E. This action caused the oven's automatic high temperature interlock to activate and de-energize the oven. There were a number of opportunities to prevent this error such as the plan of the day meeting and the early morning work start meeting but the nature of the discussions during these meetings was informal and never provided the calibration crew an up-to-date operating status for that specific oven. CNS held a critique for the event last week. During the critique, the Assembly/Disassembly Operations Manager discussed several corrective actions to address the identified issues. These included the conduct of a human performance improvement review to identify what caused the breakdown in communications that led to this event.

Building 9212/Conduct of Operations: Last week, Production personnel identified a non-compliance with a nuclear criticality safety (NCS) requirement during a preparatory inspection for an activity to repair a tear in the stainless steel flooring of one of the fissile solution processing areas in Building 9212. The NCS analysis for the activity contains a requirement for fissile material salvage tanks above the tear in the floor to be empty when the cap on an inspection port above the tear is removed. The responsible criticality safety officer communicated the need to empty the tanks to the Production supervisor during the pre-job briefing for the activity. Subsequently, the supervisor gave Production operators, who were not present at the pre-job briefing, work start approval to remove the cap on the inspection port above the tear in the floor. The supervisor was interrupted before he could caveat the approval with the need to ensure the salvage tanks had been drained before removing the cap. When the supervisor returned to the work site, the operators had already removed the cap on the port. The NCS analysis for the activity was a Technical Deviation (TD), which is a special type of analysis for temporary or less complex work activities. The site reps are evaluating whether a lack of formality in the process for implementing TDs or a failure to adhere to the TD implementation process were contributing causes of the event.

Building 9212/Radiological Control: Last week, during a preventive maintenance activity on the casting furnace line in E-Wing, a hose that supplied breathing air to a worker's respiratory protection equipment became disconnected. The worker was performing maintenance to lubricate various pieces of equipment inside the airborne radiological area (ARA) boundary associated with furnace equipment. The worker was able to exit the ARA while breathing through the particulate filters on his mask and support personnel responded quickly to aid the worker and prevent the spread of contamination. The hose became unthreaded at a fitting near the quick-release connection attached to the worker's belt. Last September, a similar event occurred and one of the corrective actions was to check threaded hose connections prior to work, but this action was not formally documented or uniformly implemented. CNS management has taken several actions to prevent recurrence including briefings to all affected work crews about the need to ensure each fitting on breathing air hoses is properly connected.