

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 25, 2016

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

Staff member J. Meszaros was on site shadowing site rep activities.

Highly Enriched Uranium Materials Facility (HEUMF)/Fire Protection: Earlier this month, CNS Y-12 Fire Protection Operations (FPO) personnel initiated an annual surveillance activity on four credited fire protection systems at HEUMF. During the surveillance activity, the diesel fire pump shut down unexpectedly after 30 minutes. FPO personnel restarted the pump to continue the surveillance activity and once again it shut down after running for 30 minutes. FPO personnel restarted the pump again and completed the surveillance. Because the cause of the shutdown was unknown, the HEUMF shift manager conservatively declared the diesel fire pump inoperable and entered the appropriate limiting conditions of operation.

CNS subsequently held a fact-finding meeting for the event. During the meeting, the responsible system engineer presented the results of a review of the vendor manual and data from the pump controller. The system engineer noted that the pump was designed to shut down after 30 minutes if initiated using the “engine test” button, which was the method used to start the pump for this evolution. Personnel had initiated the diesel fire pump in this manner during prior surveillance activities, but FPO recently initiated a change to combine all four surveillances in the same procedure thereby extending the length of time the pump needed to run. As a result of this event, CNS plans to reevaluate the method used to start the diesel fire pump and review other HEUMF systems for opportunities to better communicate critical design functions of these systems to workers.

Conduct of Operations/Fire Protection: The fact-finding meeting described above also identified several conduct of operations errors that occurred during the FPO annual surveillance activity. First, FPO personnel started the diesel fire pump, which was contrary to the surveillance procedure direction to “request the utility operator to start the diesel fire pump...” Second, FPO personnel failed to pause work and notify the shift manager when the pump shut down unexpectedly. Finally, not all of the personnel required to support the job were present at the pre-job briefing. FPO management identified specific remedial training actions to address these errors, but also indicated that it would consider adjustments to ongoing conduct of operations improvement initiatives as a result of these events.

This week, the site reps received an update from FPO management on FPO conduct of operations improvement initiatives. FPO initiated many of these improvement actions in early fiscal year 2015 following a series of missed fire patrols and a conduct of operations error that led to a technical safety requirement violation (see 11/14/14 and 12/12/14 reports). Key enduring elements of FPO’s improvement strategy include institution of conduct of operations refresher training as well as increased management emphasis on the need for FPO supervisors to be proactive in coaching and mentoring conduct of operations. FPO management also indicated that it has been performing quarterly reviews to ensure FPO activities are conducted consistent with applicable conduct of operations management standards. FPO management acknowledged that the approach to these quarterly reviews has been informal to date—the results of the reviews or the basis for selecting certain review areas had not been documented—and indicated that improvements to the rigor of the review process may be warranted.