

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 January 30, 2015

Building 9204-2E: The site reps accompanied the NPO Fire Protection and Industrial Safety subject matter experts (SMEs) and the CNS Fire Chief on a walkdown of Building 9204-2E. The SMEs noted several discrepancies including damaged storage cabinets for flammable materials. The SMEs also noted items stored on racks 12 feet above the floor, which is not in compliance NFPA code and could inhibit sprinkler effectiveness. The SMEs communicated these discrepancies to the on-duty Building 9204-2E shift manager.

Software Quality Assurance (SQA): Last week, CNS held a fact finding meeting to understand the events that allowed software to be used to support nuclear safety analysis applications without the appropriate SQA validation. Several years ago, a new version of this software, called SCALE, was installed in several workstations, but one workstation could not be updated at that time. The new version received the appropriate SQA validation but the old version did not. Earlier this month, an analyst was resolving output discrepancies for the same draft nuclear criticality safety (NCS) calculation performed on different workstations and noted that one of the workstations still had the old version of the SCALE software. As an immediate corrective action, CNS management directed that all work done using the non-validated software be identified and suspended. As part of the follow-on review for this corrective action, NCS analysts determined that several calculations from this workstation had been approved, but none of the associated work had commenced.

Building 9212: In October, an event occurred in which contamination was spread from a ventilation exhaust, Stack 47 (see 11/7/14 and 12/19/14 reports). This week, the CNS Action Officer in charge of driving corrective actions on this issue briefed NPO senior management on the completed and planned actions. Most notably, CNS engineers have implemented a minimum ventilation air flow requirement for the operations that have the potential to feed Stack 47 to ensure adequate air flow through a separate ventilation path that has a scrubber. The air flow requirement was based on guidelines from the American Conference of Governmental Industrial Hygienists and the air flow rate will be verified through a quarterly surveillance. In addition, maintenance personnel have commenced installation of heat trace and insulation on the Stack 47 fan housing to prevent the build-up of condensation from changes in ambient temperatures. Lastly, Production management is making plans to replace the Stack 47 fan to remove the source of the residual contamination that was released in the October 2014 event.

Building 9212: This week, an electrician received minor skin contamination while repairing an electrical conduit in a special processing area of Building 9212. The event occurred when the electrician bumped the handle of a ball valve, which allowed a small amount of contaminated uranyl nitrate extract solution to exit a pour spout. A chemical operator supporting this work shut the valve, but not before the solution contacted the electrician's knee and soaked through the protective clothing. In August 2013 a similar event occurred (see 8/30/13 report), and in both events the pre-job walkdowns of the area failed to identify and mitigate this hazard.

Emergency Management (EM): CNS EM personnel completed an after action report documenting an evaluation of the emergency response to the spill of acetonitrile at Building 9225-3 (see 12/19/14 report). The report notes that all emergency response objectives were met and provides some opportunities for improvement. The site reps monitored the site's response to this operational emergency and concur with the conclusions in the report.