

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 November 21, 2014

Staff members D. Shrestha and D. Winters were in Oak Ridge this week to meet with Oak Ridge Office of Environmental Management personnel and several of its operating contractors.

Material-at-Risk (MAR) Reduction: In August, the Uranium Program Manager (UPM) issued a memorandum to NPO that provided direction on Area 5 deinventory and the reduction of MAR in Building 9212 (see 8/15/14 report). The letter focused on the physical relocation of MAR but also included direction to provide a schedule to formally reduce MAR limits in safety basis documentation. In early October, CNS provided a plan for expansion and acceleration of MAR inventory reductions, which included options to execute the reduction of safety basis MAR limits. More recently, NPO sent a letter to CNS that expanded on an option from the plan and directed CNS to initiate actions to reduce approved safety basis MAR limits in Building 9212 by 40 percent. The letter also directed the development of an implementation plan to incorporate reductions in MAR limits in safety basis documents for Buildings 9215 and 9204-2E.

This week, CNS provided a response indicating that Production has issued a standing order that administratively reduces MAR limits for Building 9212 by 40 percent. The response indicates that CNS will also lower administrative MAR limits in the 9215 Complex by the end of January 2015. In addition, CNS committed to submit an implementation plan to revise Building 9212 and 9215 safety basis documents to the lower limits. The plan is due by January 28, 2015. Lastly, CNS notes that a reduction of the analyzed MAR in Building 9204-2E will be included in a safety basis upgrade planned for next year.

Nuclear Criticality Safety (NCS): In 2011, a contractor Production representative raised a potential concern to NCS personnel regarding the lack of an NCS analysis for activities involving hand carrying up to 5 kg of enriched uranium samples from Building 9204-2E, Building 9215, or Building 9212 to Building 9995. At that time, the NCS personnel considered the resolution of the concern an enhancement to the existing analysis and therefore did not believe it needed to be addressed urgently. In September 2014, the Y-12 Chief NCS Engineer sought to add the analysis covering sample carrier operations to an in-progress change to a criticality safety evaluation. NCS personnel encountered several challenges while attempting to update the analysis. Eventually, the Y-12 Chief NCS engineer realized that the NCS analysis supporting sample carrier operations was inadequate, and recommended that Production suspend sample carrier operations. During this time, NCS personnel also recognized that there may be a similar NCS safety management program (SMP) gap for operations involving the transfer of waste with low levels of EU contamination from Building 9204-2E. CNS determined that these issues constituted a violation of the NCS SMP, suspended the affected operations on November 5, and reported the issue as an ORPS category 3C(4) - a deficiency in a criticality safety analysis.

The following week, safety basis personnel evaluated these issues for a potential inadequacy in the safety analysis (PISA). They determined that these issues did not constitute a PISA because the unanalyzed activities were no longer occurring and violations of SMPs are not evaluated in a backward-looking manner. The site reps have preliminary concerns with the basis for this determination and plan to hold a follow-up discussion with engineering management. Additionally, the CNS Safety and Process Engineering Manager recognizes the need to improve the timeliness with which NCS personnel address issues that could potentially impact the safety basis and plans to develop criteria and training to improve NCS personnel recognition and timely reporting of these issues.