

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

TO: Steven Stokes, Acting Technical Director
FROM: William Linzau and Rory Rauch, Site Representatives
SUBJECT: Oak Ridge Activity Report for Week Ending August 23, 2013

Uranium Processing Facility (UPF): Last week, an NNSA Independent Peer Review (IPR) team issued a report documenting its June 2013 review of the UPF project. The scope of the review included evaluations of technology readiness, safety basis issues, and the readiness of the project to establish its performance baseline at Critical Decision (CD)-2. The team noted in the report that some of the process technologies are not currently sufficiently mature to establish the project baseline. The team recommended additional demonstrations that they believed would mature these technologies to an acceptable level. One of the issues noted by the sub-team reviewing safety basis issues is that the latest revision of the Preliminary Safety Design Report (PSDR) will not be consistent with the design evolution at CD-2. The sub-team recommended updating the Safety Design Strategy to define the package needed to support CD-2. The report notes that the most significant risk to the CD-2 schedule appears to be the delay in transition to the new Management and Operating (M&O) contract for Y-12 and Pantex and the team believes it is critical that the new contractor takes ownership of the baseline.

In July 2013, UPO directed B&W to develop an alternate CD strategy considering the delay in award and transition to the new M&O contract. UPO asked that the plan maintain CD-3 approval schedule for start of construction (October 2015) and complete actions unlikely to be affected by contract transition by September 30, 2013, without submitting a complete CD-2 performance baseline. The plan provided by B&W combined the CD-2 submittal with the CD-3 request for start of construction for the UPF Main Building. The plan has submission of the CD-2/3 package in October 2014 and approval in October 2015. Late last week, UPO directed B&W to proceed with this CD-2/3 strategy. It should be noted that the IPR team's observation regarding the PSDR does not account for this change in CD strategy.

Continued Safe Operability Oversight Team (CSOOT): This week, the CSOOT issued its annual report on the adequacy of Buildings 9212, 9215, and 9204-2E to support continued safe operations. This was the sixth annual report in response to a Board letter dated March 13, 2007, that highlighted the safety risks associated with continuing to operate Building 9212. Late last year, B&W expanded the CSOOT charter to include an evaluation of Buildings 9215 and 9204-2E (see 1/4/13 report). In its annual report, the CSOOT did not identify any safety issues that warranted consideration for the broad curtailment of operations in these facilities. Some noteworthy observations and recommendations identified by the team include the following:

- Building 9212 has encountered several equipment and infrastructure problems in the past year. Some of these issues indicate that Building 9212 may be nearing the age where the failure rate of its systems begins to increase significantly.
- Budget projections raise concerns that maintenance funding will not be adequate to address the expected increase in system failures as these facilities age.
- The NNSA Fiscal Year 2014 Stockpile and Stewardship Management Plan reports that completion of the transition of Building 9215 and 9204-2E operations to UPF will not occur until 2038. The latest Facility Risk Review for these facilities assumes a transition date of 2030. This change reinforces the need for CSOOT to revisit certain aspects of this Facility Risk Review in fiscal year 2014.
- Y-12 management should continue expediting the development and installation of Direct Electrolytic Reduction and Electrorefining technologies in Building 9215 as the primary path forward to begin the shutdown of enriched uranium operations in Building 9212.