

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

TO: Timothy Dwyer, Technical Director
FROM: Wayne Andrews and David Kupferer, Site Representatives
SUBJECT: Oak Ridge Activity Report for Week Ending December 31, 2010

Building 9212 Safety Analysis. In response to a February 28, 2006 Board letter, B&W designated four fire suppressions systems in Building 9212 as safety-class. In 2007, B&W submitted its first *annual update* of the Building 9212 Safety Analysis Report (SAR), which included revising the designation of these four suppressions systems from safety-class to safety-significant. YSO approved B&W's revision to the SAR; however, YSO directed B&W to maintain the safety-class designation of the suppression systems until B&W incorporates the bounding Airborne Release Fraction value for metal into the accident analysis (see the 4/18/08 report). Last month, B&W submitted its second *annual update* of the Building 9212 SAR in which B&W formally re-designated the four subject fire suppression systems as safety-class systems. B&W has not yet incorporated the bounding Airborne Release Fraction into its accident analysis in the Building 9212 SAR.

Last week, YSO approved B&W's second *annual update* of the SAR for Building 9212. In its approval letter, YSO stated that B&W's accident analysis in the SAR assumes material quantities that are significantly larger than can be justified based on realistic bounding assumptions. Due to B&W's conservative material-at-risk assumptions, YSO is concerned that the consequences of events evaluated in the SAR are overly conservative and asserts that the controls to mitigate or prevent these events (i.e., the fire suppression systems) could potentially be downgraded. YSO directed B&W to develop a plan by February 15th for updating the accident analysis to include updated material-at-risk and consequence assessment parameter values (e.g., Airborne Release Fractions and Damage Ratios).

Recently, YSO encouraged B&W to investigate the possibility of downgrading some or all of the safety controls that are credited for fire prevention and mitigation in the Highly Enriched Uranium Materials Facility (see the 11/5/10 report). It is unclear to the site representatives what benefit YSO is hoping to achieve by potentially downgrading the fire suppression systems in either Building 9212 or the Highly Enriched Uranium Materials Facility.