

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 September 27, 2013

Transuranic Waste Processing Center (TWPC): Wastren Advantage, Inc. (WAI) recently reported two operational events at TWPC. In the first event, WAI declared a technical safety requirement (TSR) violation after failing to ensure that the differential pressure across one of the HEPA filters for the safety-significant process building ventilation system was within the range required by the TSRs. The failure occurred during the first facility round after bringing the subject ventilation train on line. During this round, the operator reported a satisfactory differential pressure to the shift superintendent despite recording an out-of-specification value on the round sheet. A different operator subsequently identified that the differential pressure indicator for this HEPA filter was inoperable and reported this condition to the shift superintendent. All subsequent actions were performed in accordance with the limiting conditions of operation for the process building ventilation system; however, by this time, WAI had not complied with one of the surveillance requirements for the ventilation system, which states that the differential pressure across the HEPA filters must be verified as satisfactory within one hour after placing the train on line.

The second event occurred during remote drum operations in the box breakdown area of TWPC's main process building. While attempting to vent a drum with a high density lid, operators (who were performing the operation remotely, per a specific administrative control) observed the ram for the venting device disengage from the rest of the apparatus and eject approximately 5 feet in the air. The event occurred during a Wednesday night shift. WAI filed an internal safety observation report the following day, but did not notify OREM of the event until the following Monday. WAI subsequently declared a potential inadequacy in the safety analysis because this unexpected malfunction of the device represented both a different accident initiator than previously analyzed in the documented safety analysis and had the potential to affect the safety function of other safety systems in the facility.

Following these events, the OREM contracting representative for TWPC issued a letter to the WAI General Manager indicating that OREM has become increasingly concerned with the rigor of operations and safety processes associated with the operation of TWPC. The letter cites nine separate events during the last six months as validation for the concern and directs WAI to perform a formal causal analysis of these events. The letter also directs WAI to use the results of the causal analysis to develop a formal plan to improve the rigor of operations and safety processes at TWPC. The causal analysis and plan are due by November 1, 2013.

Oxide Conversion Facility (OCF): During the past six weeks, B&W has performed several different tests in an attempt to identify the location of the suspected hydrogen fluoride (HF) leak in the OCF vaporizer enclosure (see 8/9/13 report). These included visual inspections, an argon leak test, ultrasonic leak test, helium leak test, a gross helium leak check, and pressure decay tests. Last week, B&W issued a report that summarizes these efforts and concludes that there is no evidence of leaking in the HF process piping and tubing. The report postulates that the HF detector alarms in the vaporizer enclosure were most likely caused by the migration of HF vapor entrained in the scrubber system back into the enclosure upon restart of the scrubber pump. To minimize the potential for this to recur, the report recommends draining the HF from the vaporizer, then simultaneously purging the system and running the scrubber for 30 minutes. B&W plans to resume hydrofluorination bed operations early next week.