

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 24, 2008

TO: Timothy Dwyer, Technical Director
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending December 26, 2008

Mr. Owen was out of the office Wednesday through Friday. Mr. Kupferer will be out of the office Thursday and Friday.

Equipment Degradation. This past week, the following systems in nuclear facilities unexpectedly deteriorated:

- Sunday, an operator in the Enriched Uranium Operations Building discovered a crack in the top glass section of one of the primary extraction columns. The crack was within a few inches of the top of the column and the liquid level was below the crack. Therefore, no liquid had leaked out of the system. Subsequent to the discovery, the subject column was drained into safe bottles and operations personnel inspected all of the other glass components in the area to ensure no other damage had occurred. B&W is hoping to replace the cracked column section with an on-site spare next week.
- On Monday, following an extended period of freezing weather, the Fire Department received a flow alarm for the safety-significant fire suppression system in Building 9206. A flange that connects segments of the fire suppression system had cracked and a significant quantity of water was released prior to the fire department isolating the system. Facility personnel entered the appropriate Limiting Condition of Operation (LCO), initiated hourly fire patrols, and placed heaters in facility to raise the temperature of the system. Also, Building 9212 operations personnel were taking temperature measurements of the safety-class fire suppression system in B-1 wing and alerted the Shift Manager that sections of the piping were reading 27 °F. Again, B&W entered the appropriate LCO, initiated hourly fire patrols, and placed heaters in facility to raise the temperature of the system. The site reps. believe an evaluation of administrative controls related to cold weather operations is warranted.
- Last Friday evening, security personnel observed water collecting in the hallway outside the Material Access Area (MAA) in the Assembly/Disassembly Building. Facility personnel reported to the operations areas inside the MAA and discovered that the filter housing in a water coolant line had failed and been the source of the leak. The subject water line fed a pump that supports oven operations. B&W estimates that 500 gallons of water leaked from the system. Both B&W and YSO are evaluating whether B&W's response to this incident was appropriate and are considering evaluating whether unattended systems, such as this cooling system, should be monitored.

Quality Evaluation Relocation. B&W has completed its Readiness Assessment (RA) for startup of the octagonal glovebox in the Assembly/Disassembly Building. The review team identified 3 findings (2 pre-start, 1 post-start), 5 observations, and 2 proficiencies. The findings included the following: 1) procedures do not ensure that equipment (i.e., lathes and mills) is de-energized prior to performing maintenance on that equipment, (2) operator and supervisor response to the discovery of a valve misalignment was inconsistent, and (3) glovebox window fasteners did not meet industry requirements (i.e., inadequate nut-thread engagement and a couple instances of loose bolts). B&W expects to issue its RA report next week. YSO observed the RA and is planning to issue a report next week that documents its observations.