DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 12, 2010

TO: Timothy Dwyer, Technical Director
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending February 12, 2010

Radiological Controls/Work Planning. This week, B&W conducted critiques of two skin contamination events. Both of these events occurred in Building 9212.

On Monday, a chemical operator became contaminated on his upper arm while performing Oxide Dissolver System operations. The operator believes he incidentally came into contact with the contamination while making a long reach to remove a can from the contaminated oxide feed hood. During the critique of this event, B&W management stated that the radiological work permit must be revised to require more protective anti-contamination clothing (e.g., require plastic arm sleeves or plastic coveralls). As a longer-term corrective action, B&W committed to evaluate the design of the oxide feed hood to identify potential modifications that would allow operators to more easily access the hood. Due to the skin contamination level exceeding the occurrence reporting threshold, B&W has externally reported this event.

In mid-January, a maintenance worker became contaminated on his forearm (below the occurrence reporting threshold) while repairing a leaking pipe flange to a Secondary Extraction System valve. B&W's critique of this event was delayed until this week due to unavailability of involved personnel. The piping had been drained, but residual liquid was expected upon breaching the system. The worker loosened the flange, some liquid was collected, but no splashing was observed by several personnel present. B&W determined that while the applicable radiological work permit called for "splash-proof coveralls," the actual coveralls worn by the worker (believed to be splash-proof) were found to have arm sleeves with seams that are not designed to be splash-proof. B&W is developing actions to address correct identification and use of the proper coveralls. Additionally, no engineered contamination controls for breaching this highly contaminated system were specified. B&W management identified the need to conduct an evaluation of work planning practices/use of engineered controls for hazardous radiological work.

Pressurized Drum Event – Update. Based on a near-miss event where the lid of an unvented 55-gallon drum was forcefully ejected upon loosening of the drum closure ring by an operator, B&W initiated certain response actions (see the 4/10/09 and 6/19/09 site rep. reports). A new Standing Order providing restrictions on opening unvented drums is still in place. B&W has developed training on pressurized drum hazards and controls. Lastly, B&W was to develop a new site-wide procedure on drum hazards and controls, however, B&W has changed this action. In lieu of a site-wide procedure (with definitive requirements/controls), B&W now intends to develop a guidance document/bulletin. B&W personnel stated that the guidance document has been drafted and is to be issued by mid-March. Lacking definitive requirements and controls for management, handling and opening of unvented drums, pressurized drum events may not be prevented in the future. The site reps. discussed this observation with Y-12 management.

Nuclear Facility Clean-up. Two weeks ago, the site rep. observed B&W conducting its second two-day effort to de-inventory Building 9215 of contaminated waste and legacy equipment (see the 12/5/08 site rep. report).