

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 4, 2003

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending April 4, 2003

Waste Treatment Plant (WTP): As part of the recent Bechtel National Inc. (BNI) and Office of River Protection (ORP) effort to reduce costs, they recently completed an exercise where they examined whether the WTP could solely rely on the passive confinement boundary (e.g., structure, process vessel vent system, HEPA filters) rather than active safety features. It is a bit surprising that they would even consider a strategy that would not try to prevent hydrogen detonations and cesium ion exchange resin fires/acid reactions, but rather see if they could accept the consequences. Fortunately, BNI and ORP ultimately decided not to pursue this strategy although they are still investigating whether the second Important to Safety emergency diesel generator train can be eliminated. (BNI and ORP have already approved a trend to eliminate the third one). The joint team also agreed to pursue using padlocks versus gamma ray and shield door interlocks to prevent personnel access to high and very high radiation areas. (I-C)

BNI instituted a Quality Stand Down on all concrete placements after ORP identified that two pieces of rebar were missing during a placement after the pour card was signed, workers violated technical specifications by cold bending rebar protruding from the cold joint, and BNI identified that a pour card was missing drawing and specification revision numbers. Other recent quality issues include a placement that was performed without the construction superintendent's authorization on the pour card, concrete drop heights exceeding 5 feet, and a design violation that occurred when rebar was cut after Quality Control had signed off the pour card. (I-C)

Spent Nuclear Fuel Project (SNFP): This week the SNFP implemented the Safety Analysis Report (SAR) revision supporting sludge retrieval from K-East Basin and issued the process standard which serves as a SAR implementing mechanism. A Site Rep review of the SAR identified that no mention was made of a control identified as important to nuclear safety in the process standard. This control to close valves ensures that fuel pieces do not bypass the Safety Significant (SS) strainer vessel and enter the sludge container. In addition, controls to close valves as well as installation of a SS spray shield are identified to mitigate a spray release of sludge. While the need to close the valves is discussed in the accident analysis, it is not incorporated into the Technical Safety Requirement Administrative Controls. (I-C)

Tank Farms: An ORP assessment of the Best Basis Inventory (BBI) data identified a number of assumptions that lead to both over- and underestimation of the concentrations and inventories used in the design basis accidents. Other findings addressed nuclear safety's understanding of how to use the BBI data, incomplete documentation of the processes for derivation of templates and adjustment of data, and that the BBI application data and tools are not maintained as "record material." The impacts of these findings on the safety analysis are to be evaluated. (I-C)
cc: Board Members