

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 14, 2001

TO: K. Fortenberry, Technical Director
FROM: D. Grover and M. Sautman, Hanford Site Representatives
SUBJ: Activity Report for the Week Ending December 14, 2001

Plutonium Finishing Plant: Mr. Sautman observed an emergency preparedness drill where a leaking acetylene gas cylinder was assumed to explode and whose simulated consequences included a breach of the new Project W-460 Stabilization and Packaging Equipment glovebox line, several casualties, and a stack continuous air monitor high radiation alarm. The potential for this being an intentional event triggered a lockdown which greatly hindered emergency responders, as evidenced by the long time it took for radiation control technicians to arrive at the scene. The formal classification of the event as an alert was not timely. In fact, the event was not correctly classified as a general emergency before the drill was terminated, partly because the stack alarm reading was not recognized as being off-scale. These issues led to the unusual situation that a Take Cover was issued for the 200 West area with the exception of PFP, a Take Cover siren was never sounded for 200 East and 600 areas as required. Roles and responsibilities were not clear in the field, among radiation protection personnel, or in the incident command post. Due to the delay in turnover between the building emergency director and incident commander as well as command being shared between the incident commander and security lead, there were 3 individuals giving commands at times. Communications were problematic across the board. These issues were identified by the controllers and players during the critiques. (I-C)

Tank Farms: While workers were moving a taut nylon rope up the exterior of the AY-101 primary tank, the rope passed across a section that appeared to have a heavy layer of corrosion (or some other deposit). The rope passed underneath part of the rust and was then raised, peeling a section of material several feet high and wide off the tank wall which dropped into the annulus. The newly exposed area of the tank wall was heavily discolored and appeared to be very corroded. This videotape was taken in a part of the tank which has only received minor characterization so far. In addition, videotapes taken in the AY-102 annulus from 2 new risers show corrosion that begins on the dome extending down onto the primary tank wall. The corrosion spreads out horizontally along some welds and water streaks are visible. Video inspections taken from inside the tank show only light pitting on the wall. (III-A)

Recommendation 95-2: The FY2002 Richland Integrated Management System Self-Assessment found significant improvement and that most of the products that define the work processes have been developed. However, independent and self assessments need to be strengthened and roles and responsibilities need better definition, which is consistent with staff observations. (I-ABC)

Waste Treatment Plant (WTP): The WTP project is considering adding a third category of important to safety (ITS) structures, systems, and components (SSCs) to the current designations of safety class (SC) and safety significant (SS). This other ITS group will include SSCs that enable the facility to achieve safe shutdown or return to normal operation, provide a non SC or SS primary containment, provide secondary containment for a SC or SS primary containment, or provide a significant contribution to safety in accident analyses. WTP is currently developing a proposal for approval by the Office of River Protection Office of Safety Regulation. (I-C)