DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 30, 2008

TO: J. Kent Fortenberry, Technical Director
FROM: M. P. Duncan and M. T. Sautman, Site Representatives
SUBJECT: Savannah River Site Weekly Report for Week Ending May 30, 2008

Solid Waste Management Facility (SWMF): Two Technical Safety Requirement violations were declared because the surveillance requirement (SR) to verify that the radiological inventory of waste containers met Documented Safety Analysis limits prior to receipt was not performed. The critique of the first event identified a litany of conduct of operations weaknesses and a troubling attitude. N-Area Hazardous Waste Mixed Waste Storage Building personnel believed that it was so vital to meet a shipment date (to avoid further sampling) that it was acceptable to perform an activity outside the facility fence to avoid invoking what were perceived to be time-consuming facility requirements. This strategy fell apart when an operator, unaware of this plan, brought the containers inside the fence without performing the surveillance. Other issues include: 1) the facility procedure used did not address the actual work performed outside the fence; 2) the activity was pre-screened as a routine activity although it was really a first time evolution; 3) the shift manager did not approve the safe work permit (SWP) or authorize the activity to be performed; 4) the SWP, the only document that discussed working outside the fence, was not discussed at the pre-job briefing (PJB); 5) the PJB was performed after the violation had already occurred; 6) there really was no Person-In-Charge (PIC) since the person identified as the PIC was not part of operations, was unaware of this assignment, and was not qualified for that role; and 7) no one above the first line manager (FLM) was aware of the plans. When the FLM was told the containers were inside the fence, he did not stop work or notify the SM, but rather told the worker to get the containers out of the facility (without a procedure). It then took an additional 5 days before the violation was identified. As a result, operations at this facility were significantly restricted. In the second event, SWMF performed the surveillance for one planned shipment from F-Canyon, but received the other shipment planned for that day. F-Canyon did not specifically identify which shipment was being sent and SWMF assumed that "S1" meant the first shipment. In addition, SWMF personnel did not verify the shipment number when they accepted it at the gate.

The Site Rep observed workers vent a bulged drum. The Site Rep questioned the safety of having an operator place his arm over the top of the drum to clean it vigorously with a sandpaper tool, especially when hydrogen concentrations as high as 58% hydrogen have been found in these bulged drums. Furthermore, the venting equipment repeatedly malfunctioned while trying to insert filters. This routine malfunction requires the operator to take actions (e.g., reset emergency stops, unplug compressors), which are not part of the operating procedure, to resume the operation.

Tritium Facilities: A mechanic inadvertently performed a functional check on the wrong safety-significant glovebox oxygen monitor. When the alarms went off during the test, a control room operator dismissed the alarm as expected without properly announcing the alarm. Proper annunciation of the alarm would likely have alerted someone in the control room that the alarm was associated with the wrong oxygen monitor. The error was not detected until the mechanic was in the middle of testing a second incorrect oxygen monitor. Management is evaluating the need for second person verification, changes to labeling, and revisions to procedures.

Emergency Preparedness (EP): The Site Reps observed field and Emergency Operations Center activities during the annual EP evaluated exercise involving a simulated transportation accident.