

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 23, 2007

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: M.T. Sautman, SRS Site Representative
SUBJECT: SRS Report for Week Ending February 23, 2007

Mr. Contardi was on leave. The Board's Technical Director, Mr. Fortenberry, attended a Citizens Advisory Board meeting to discuss the Board's recent letter on the Salt Waste Processing Facility.

H Tank Farms: Flushing reduced the radiation rates associated with the 3H Evaporator lift to background levels and no contamination was found at the gang valve blank. (Site Rep weekly 2/16/07). Preliminary findings suggest that collapsing vapor within the blanked-off lift line may have created a strong enough vacuum within the piping to pull waste from the evaporator pot and up the lift supply line to a point outside the evaporator cell shield wall. Engineers are evaluating possible solutions such as opening a valve after evaporator shutdowns to tie the lift supply line vapor spaces together to try to prevent a vapor collapse pulling waste. However, opening this valve makes a transfer into Tank 37 only a single failure away. The facility is also considering requiring radiation monitors to be in service when personnel enter the evaporator buildings without radiation control organization coverage.

H-Canyon: Following heavy rains, the control room received several ventilation alarms, but operations personnel were unable to use the public address system from either the main or alternate control rooms. In addition, power was lost to part of the canyon and the new warm crane, which was lifting an evaporator column at the time. An investigation found that water had leaked from the warm canyon roof (not at an expansion joint) onto the crane power rails, tripping a feeder breaker. While alternate power was established and the alarms were cleared, the warm crane still has a suspended load. Efforts are ongoing to repair the leak and restore power to the crane.

HB-Line: DOE-STD-3013 cans that are opened as part of the K-Area Interim Surveillance project will be processed at HB-Line afterwards. One item of concern is that the oxide in some of the cans will contain in excess of 60,000 ppm chloride. Research and testing is ongoing to determine the possible corrosion impacts to the dissolvers and downstream tanks in H-Canyon. Another possible concern is that some of the chlorides may enter the process vessel vent system. Engineers are also evaluating whether an oxide washer is required.

Shortly after the North Line Scrap Recovery glovebox vacuum controllers began oscillating, two low vacuum alarms activated and it took some effort to stop further oscillations and alarms. An inspection found that two glovebox ventilation dampers were stuck, one fully closed and the other only 10% open. A Limiting Condition for Operations and Warm Standby mode were entered. No spread of contamination has been found so far while personnel try to repair the controllers.

Defense Waste Processing Facility: After a maintenance worker inside the Contact Decontamination and Maintenance Cell became ill, he exited and had his plastic suit hood removed. Some beta contamination was found on his cheek, probably due to cross-contamination during the doffing process.