

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 17, 2000

TO: K. Fortenberry, Technical Director

FROM: M. Sautman and S. Stokes, Hanford Site Representatives

SUBJ: Activity Report for the Week Ending March 17, 2000

A. Tank 241-SY-101 surface Level Rise Remediation Project. CH2M Hill Hanford Group (CHG) completed a 259,200 gallon back dilution on 3/15/00. This is the last planned back-dilution. Based on gas release phenomenon and neutron mapping of tank contents, CHG believes that the solid material remaining at the tank surface is incapable of significant gas retention and that the surface level rise phenomenon has been remediated. CHG's next steps are to aggressively mix the tank to maximize the dissolution of solids then observe the tank for a period of 90 days during which time the mixer pump will not be run. The goal of this activity is to determine if the tank is capable of further buoyant displacement gas releases. CHG anticipates that following this period of observation, sufficient information will have been collected to remove SY-101 from the flammable gas watch list and resume receipt of wastes into this tank. (3-A)

B. Integrated Water Treatment System (IWTS). Start-up testing suffered minor problems this week due to issues associated with submersible pump wiring, kinking of the flexible submerged piping, and failure of a rupture disk associated with the primary settlers. The test was begun on 3/15/00 and discontinued very shortly after its initiation since one of the 3 submersible pumps clearly displayed signs of cavitation and the nearly complete blockage of the flexible pipe. After physically removing the kink in the flexible pipe, testing was resumed and it was discovered that one of the pumps was improperly wired and running in reverse. Testing was then discontinued, wiring repairs were made later the same day and the test resumed. At the time the rupture disk failed, all 3 submersible pumps were operating however, the test had not been fully completed. Following resolution of the rupture disk failure, the submersible pumps will again be run, their operational testing completed, and the integrated in-pool testing resumed.

C. 233-S/Rec. 95-2: Phase II of the Bechtel Hanford Integrated Safety Management System Verification Review was conducted this week. Mr. Sautman discussed concerns with the conduct of the review with the Department of Energy-Richland Deputy Manager. (1-C)

Work restarted in the process hood after a hiatus of six months. Surveys around the L-18 cubicle found radiation dose rates up to 80 mrem/hr and contamination levels up to 20 million dpm. There continues to be debate concerning the adequacy of gloves used for size reducing contaminated equipment. The use of 8 mil Nitrile gloves has been stopped. A facility representative issued a stop work action for all work with cutting or puncture hazards because of concerns with the technical basis of canners (orange latex rubber) gloves. Program personnel later lifted this action if canners or canvas gloves were used. As a comparison, the gloves Rocky Flats use for size reduction are made with Kevlar/leather, Kevlar/rubber, or Kevlar/nitrile gloves (3-B).

cc: Board members