DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 31, 1998

MEMORANDUM FOR: G. W. Cunningham, Technical Director
FROM: J. Kent Fortenberry / Joe Sanders
SUBJECT: SRS Report for Week Ending July 31, 1998

Kent Fortenberry was in training this week.

Extraction of P-Reactor Tritium Targets Completed: WSRC completed extracting all P-Reactor tritium targets in Building 232-H (Extraction Facility). The only targets left to extract are from the final K-Reactor discharge. This involves approximately 48 additional extractions which should be completed around 12/99. These targets have very small quantities of tritium due to their low burnup. Following completion of extraction, preparations for facility deactivation should begin.

Status of Carbon Dioxide (CO_2) Fire Suppression Systems at SRS: There are currently two facilities that are known to have operating CO_2 systems at SRS. The first is the fire suppression system in Building 735-2B (Health Protection Calibration Facility) which protects electrical cables located beneath the raised floor of the control room. This system is less than four years old. An analog display on one wall of the control room provides warning of impending discharge and each entrance door has a warning sign indicating that the room is not to be entered when in alarm. The raised floor plates are bolted in place and covered with carpet which should reduce the risk of rapid passage of suppressant from below the floor space. The second system, located at DWPF, provides CO_2 for both tank level instrumentation in the Salt Process Cell (SPC) and instrumentation in fume hoods within the analytical laboratory. A technical evaluation of the flooding potential of any area as a result of an inadvertent discharge of CO_2 will be performed.

There are also three facilities that have CO_2 systems which are either removed or physically disabled.

- The DWPF SPC has a total flooding CO_2 fire suppression system which provides protection against a cell fire. This supply also provides a backup purge to vessels in the event normal air purge is lost. Both lines have an isolation valve that is locked close (other manual valves in the line are closed but not locked out). DOE-SR is evaluating whether to install a double valve lockout isolation for these lines.

- The Replacement High Level Waste Evaporator control room (241-2H) has a high pressure CO_2 fire suppression system to protect cables located underneath the control room floor. This system was tested in 7/95 as part of the original acceptance testing. However, this system has not been placed in service. The actuators have not been connected to the CO_2 cylinders; this prevents the system from being either automatically or manually actuated. Manual bleed valves from the cylinders are closed and "Do Not Operate" tags have been installed.

- The CO_2 fire suppression system in Building 760-1G (Forestry Paint Storage Room) was physically removed in approximately 1989. This condition has been positively verified.