

Overview of

NEUTRON EXPOSURES AT THE SAVANNAH RIVER SITE (OCAS-TIB-007, Rev. 0)

Workers at some Department of Energy (DOE) and Atomic Weapons Employer facilities have the potential to receive radiation exposures from neutron sources. The Technical Information Bulletin (TIB), *Neutron Exposures at the Savannah River Site* (OCAS-TIB-007), provides guidance to determine neutron exposures for workers at the Savannah River Site (SRS).

Due to changes in radiation monitoring practices over time at the SRS, employees who worked there prior to 1971 might not have been adequately monitored for neutron exposure. As a result, neutron monitoring records prior to 1971 may under-report actual neutron dose.

Starting with the use of an improved radiation dosimeter in 1971, workers with significant potential for neutron exposure were adequately monitored. However, some workers, depending on their job classification, might have been intermittently exposed to low-level neutron radiation and not monitored, since their exposures were not thought to exceed the DOE criterion for mandatory neutron monitoring in place in the 1970s through the late 1980s. Starting around 1989, SRS began using a lower DOE criterion of potential neutron dose as the basis for who was monitored for neutron exposure.

SUMMARY OF FINDINGS RESULTING FROM THE TECHNICAL REVIEW

The technical contractor for the Advisory Board on Radiation and Worker Health (the Board) reviewed the TIB and produced the two findings summarized below:

Finding #1: Guidance does not specify all occupations that may involve neutron exposure at SRS.

Finding #2: Guidance regarding conditions where the work area is unknown is subjective and contradictory.

RESOLUTION OF FINDINGS

In response to the findings identified above, the National Institute for Occupational Safety and Health (NIOSH) revised the procedure to accommodate the findings. Revision 1 of the TIB was issued on October 15, 2007.

All issues were resolved to the satisfaction of the Board.