Radiation Work Permit/Special Work Permit Compliance

All requirements contained in a Radiation Work Permit/Special Work Permit are there for a reason: to protect you and your coworkers from receiving unnecessary dose. Therefore, it is important for you to ensure the requirements and the intent of the requirements are met. Plant management and your supervisor expect you to always be in full compliance with all Radiation Work Permit/Special Work Permit requirements. Not complying with the requirements established by the Radiation Work Permit/Special Work Permit may result in a radiological event, increased dose, spread of contamination, or other radiological problems. This could also result in regulatory action, as well as possible disciplinary action.

Note: At Pilgrim Station, two contractor repairmen were assigned to repair a valve in the clean waste tank room; however, the repairmen mistakenly entered the sludge tank room. The repairmen spent less than six minutes in the sludge tank room before discovering their error. Instructions had been provided regarding access and location of the component-requiring repair but were insufficient to prevent the workmen from entering the wrong area. Entrance to the sludge tank room required circumventing a locked inner door by climbing over a barrier. The clean waste tank room, where the men were supposed to work, had a general area dose rate of 300 mrem/hr, whereas the sludge tank room had a general area dose rate of 30 rem/hr. This exposure brought the quarterly dose for the two workers to 3.56 and 2.91 rem. Circumvention of the locked high radiation barrier by the workmen and their unfamiliarity with the plant layout contributed to this event.

Change in Conditions

Note: At the Brunswick 2 Station, two mechanics were attempting to free a valve that was stuck closed in the backwash receiver tank transfer line of the reactor water cleanup system. The work area dose rate was initially measured to be approximately 300 mrem/hr. Three entries were made to work on the valve. The first lasted 15 minutes and the second, 20 minutes. By the completion of the second entry the workers had successfully opened the valve. At this point, the work area was resurveyed. The dose rate in the vicinity of the valve had increased to 30 rem/hr. More work was needed to complete the job so the two workers were instructed to work as quickly as possible and entered the area again for about six minutes.

The area dose rate was resurveyed again and the dose rate was found to have increased to 45 rem/hr. The mechanic with the higher dose received a whole-body exposure of 3.992 rem. It is believed that the increase in dose rate was caused by movement of depleted resin slurry that had been trapped above the valve. There was no evidence of the Radiological Work Permit having been revised to reflect the increased area dose rate. Inadequate assessment of the potential for an increase in the dose rate was a contributing factor in this event.