

N358. Some Good ALARA Practices At Big Rock Point (Part I)

1) Surge Tank Access and Cleaning - Two holes were cut into the reactor deck flooring to access the fuel pool surge tank, the bottom of the tank had become laden with corrosion products and was inaccessible with vacuum attachments. A high radiation area had resulted from the years of buildup in a high traffic area in containment. The result of cleaning was a reduction in dose rates from ~2.0 Rem/hr contact to <100 mrem/hr and general area dose rates from 150 mrem/hr to 13 mrem/hr. Removable plates were installed on the reactor deck for future cleaning when it becomes necessary.

2) Radwaste Piping replacement - High radiation piping in the radwaste area which had been covered with 1/2" of lead for 1 year was cut out and replaced with piping that has removable pipe plugs that allows for the insertion of flexible hydrolyzing equipment.

3) Dose reduction Term Meeting - A dose reduction term composed of members from the plant staff was assembled and looked at the high dose jobs that were coming up during the refueling outage. The main jobs looked at were the repair of the C/U System blowdown valves and the heavy schedule of ISI. Included in the term were members of the field maintenance services which had to travel several hundred miles to attend. Their involvement was crucial in the ISI planning as they install the scaffolding and prepare all welds to be inspected. The fact that these two jobs were significantly reduced in total dose reflects the efforts that were put forth.

4) Pan and Tilt Camera Usage - Pan and Tilt cameras were installed in the pipe tunnel during power operation to identify problems and reduce the amount of time spent by the operations department in accessing this area which is a high radiation area. The cameras were in turn removed from the pipe tunnel when shutdown to aid in technicians during job coverage and to point out areas to workers prior to entry. All 3 cameras again are installed in the pipe tunnel and are a very useful ALARA tool in dose reduction.

5) Communication Devices - Radio headsets were borrowed from the Palisades Plant during the refueling outage for use during the ISI work. This resulted in far better communication between inside/outside workers. This was one of the suggestion that had come out of the dose reduction team meetings.

6) Mock Up Training - During the refueling outage, mock-up training was done on several jobs that had significant dose implications. This included having plant welders practice welding left handed prior to accessing the Regen/Non Regen Hx. Room to weld on a leaking drain line that was in a very confining area of the room. Also performed was the setup of automated ultrasonic equipment outside the radiation control area prior to the actual setup in the low steam drum area. Another of the recommendations from the dose reduction team that looked at ISI work.

For more, "BWR Owners' Group Radiation Protection/ALARA Committee Plant Status Report," by E.Garrison. For further information, contact E.Garrison at (616)/547-8128.