

## 20 Hot Spots

A hot spot is that small area in pipes, valves, pumps, etc., where contact dose rate is higher than 100 mrem/h and higher than five times the background radiation level. It is common to have very localized hot spots in reactor coolant systems (RCS), ranging in the order of tenths to hundreds of rem/h.

- In order to estimate the dose expected from each hot spot, the following factors should be taken into account:
  1. Identify the location of individual hot spots within a room.
  2. The total number of hours/y residence near each hot spot.
  3. Assign an effective dose rate to each hot spot.
  4. Calculate the dose contribution for each hot spot.
  
- Once an estimate of each hot spot's dose contribution has been made, a decision should be taken as to which, if any, of the following removal/control methods available would be most effective and cost justified:
  1. System flush removal.
  2. Maintenance removal (component replacement/cleaning).
  3. Temporary shielding.
  4. Permanent Shielding.
    - shadow shielding on framework.
    - shielding directly applied to plant structure.
  5. Installation of hydrolasing or flushing taps.
  6. Installation of permanent eye hooks and hangers for temporary shielding.
  
- Finally, a periodic report should be issued to keep track of problematic locations, total exposure expended for flushing, etc.