

### 7.6.1 Hypothetical Accident Analyses for LWRs

Addressing first the last category of faults (limiting faults) in light water reactors (see USAEC 1973, USNRC 1975), this category includes but is not confined to the following postulated accidents:

1. Major rupture of the primary coolant loop pipes (PWR and BWR) leading to a *loss of coolant accident* (LOCA).
2. Major rupture of the secondary coolant loop pipes (PWR).
3. Steam generator rupture (PWR).
4. Locked rotor on a coolant pump.
5. Fuel handling accident.
6. Failure of control rod mechanism housing.
7. Tornadoes, flooding, earthquakes, etc.

The focus here will be on the first item, the loss of coolant accident (LOCA) since it has been judged the postulated accident most likely to lead to the release of radioactive material.