

INTERFACE GUIDELINES
between
EMERGENCY PROCEDURES
and
INADEQUATE CORE COOLING INSTRUCTIONS

This instruction relating to Inadequate Core Cooling (ICC) is based upon a small break loss of coolant accident as the initiating event.

The primary symptom of the ICC phenomena will be excessively high core exit temperatures. A primary symptom of this condition will be a number core exit thermocouples which have readings at or near the top of their range. Based on the ICC analyses and upon an evaluation of the core exit thermocouple system, a workable symptom of ICC is:

A condition of Inadequate Core Cooling exists when 5 or more core exit thermocouples exhibit readings at or above 1200°F.

The choice of the 5 thermocouples to monitor should be based on prior knowledge of high temperature locations in the core during power operation, and should also be chosen to cover a large area of the core (i.e., avoid choosing 5 adjacent thermocouples if possible).

In certain plants, and under certain conditions, it may not be possible to obtain high temperature readings from the thermocouples (for example, if the plant computer is unavailable). In those conditions, the wide range hot leg RTD's will constitute the only direct information to the operator. However, the use and interpretation of these instruments for ICC purposes is not straight forward and unambiguous. The readout of this system stops at 700°F.

Under certain conditions, if the wide range hot leg RTD's exceed 700°F, it may be an indication that an ICC condition exists. However, for certain LOCA's within the design basis the hot leg fluid temperature can be expected to exceed 700°F and an ICC condition will not exist. As a result, the use of the wide range hot leg RTD reading as the primary symptom of ICC is not recommended.

However, if high range readings from the core exit thermocouples are not available, and, if SI flow is not being delivered to the RCS and if AFWS is not being delivered to the intact steam generators and if the wide range hot leg RTD's read 700°F (pegged high), then an ICC condition may be occurring.

Under these conditions, the use of the ICC Instruction is appropriate.