PLANT OPERATIONS MANUAL

Volume 5 | 05-S-01-EP-10

Section 1 | Revision A

Date:

EMERGENCY PROCEDURE

REACTIVITY CONTROL

SAFETY RELATED

Prepared: _____ Date _____

Reviewed: _____ Date _____
Technical Review

Reviewed: _____ Date _____
Operations Superintendent

Reviewed: _____ Date _____
Nuclear Plant Quality Superintendent

Approved: _____ Date _____
Assistant Plant Manager

PSRC: _____ Date _____

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1.0 PURPOSE

The purpose of this procedure is to reduce reactor power, following an ATWS, to a level that can be safely absorbed by the available heat sink. Entry into Containment Control Emergency Procedure #3 is performed concurrently, as required.

2.0 ENTRY CONDITIONS

Condition exists that requires a reactor scram and:

- o Reactor Power > 3% on APRM's or > Z* on inserted IRM's or
- o Reactor Power cannot be determined

*Z = Maximum allowable IRM reading at 3.5 minutes (insertion time)

3.0 OPERATOR ACTIONS

3.1 Depress manual scram buttons and place "Reactor Mode Switch" in Shutdown.

3.2 Open circuit breakers CB2A (52-1C71102), CB8A (52-1C71108), CB2B (52-1C71202), and CB8B (52-1C71208) supplying power to the RPS channels A, C, B and D respectively, from the RPS buses A (Panel 1C71P001) and B (Panel (1C71P002).

3.3 If turbine has tripped or if MSIV's have closed, trip Reactor Recirculation Pumps.

If not, run recirc flow to minimum (LFMG on; valves closed).

3.4 If reactor power is >6% or cannot be determined, initiate SLCS and perform steps 3.11, 3.12, and 3.13.

3.5 If reactor power is < 6% and an SRV is open or cycling, trip reactor recirculation pumps and start RCIC in Test Mode.

3.6 Observe control rod positions and if all rods are inserted at or below position 06, enter ONEP 05-1-02-I-1 (Reactor Scram). If not all at < 06, reset scram and attempt a second manual scram.

If scram cannot be reset, perform step 3.9.

3.7 Observe scram valve positions and, if all are not open, open them by deenergizing the scram solenoids or isolating and venting the scram air header.

3.8 Observe control rod position again and, if all < 06, enter ONEP 05-1-02-I-1 (Reactor Scram).

If not, reset scram and scram individual rods via test switches (if containment is accessible).

3.9 If all control rods cannot be inserted < 06 by the preceeding, and/or if the reactor scram cannot be reset, perform the following:

- o Start a second CRD pump
- o Close HCU accumulator charging water header isolation valve
- o Attempt manual control rod insertion

3.10 If/when all control rods are fully inserted (< 06 position), complete ONEP 05-1-02-I-1.

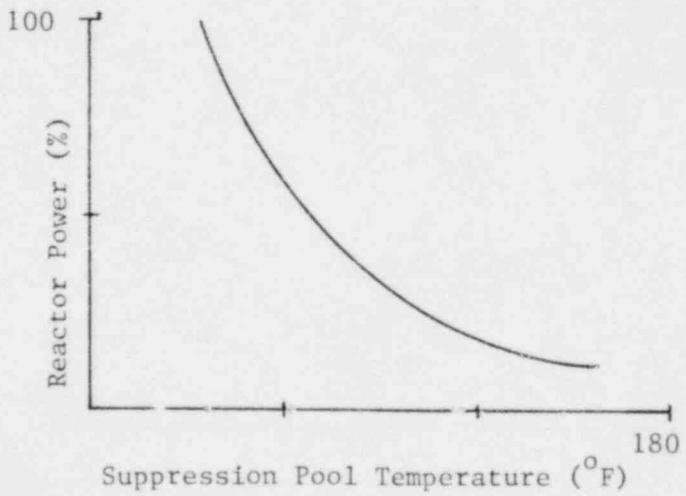
3.11 If excessive power is still being discharged to the suppression pool as determined by:

- o Any SRV open or cycling or
- o Containment pressure > 2 psig and
- o Suppression Pool temperature > 115°F

Then reduce RPV level to optimum level (later inches) by terminating all injection into the RPV except CRD.

3.12 Observe SLCS operation and if not functioning, inject an alternate liquid (poison) solution (instructions later).

3.13 When reactor power has been reduced below region 2, as determined from the figure below, observe control rod positions and perform steps 3.6, 3.7, 3.8, 3.9 and/or 3.10 until all control rods are fully inserted (< 06 position).



(Grand Gulf specific figure to be provided at a later date.)