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29.000.08

ENRICO FERMI ATOMIC POWER PLANT
UNIT NO. 2

Type: OPERATIONS PROCEDURE - EMERGENCY

Title: REACTIVITY CONTROL

RECORD OF APPROVAL AND CHANGES

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		Date
Submitted by	<u>Section Head</u>	<u> </u>
		Date
Recommended by	<u>OSRO Chairman</u>	<u> </u>
		Date
Recommended by	<u>Q/A Engineer</u>	<u> </u>
		Date
Approved by	<u>Plant Superintendent</u>	<u> </u>
		Date

Revision No.	OSRO Recommended	Date	QA Recommended	Date	Plant Supt. Approved	Date
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The following is a list of "laters" contained in this procedure. The responsible Section Head during subsequent revisions will update or remove this "later" sheet.

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1.0 Purpose

The purpose of this procedure is to provide the guidelines to recognize and mitigate an Anticipated Transient Without Scram (ATWS). The effects of an ATWS may require the implementation of other Emergency Operating Procedures.

2.0 Entry conditions

2.1 Receipt of a scram signal,

and

Reactor power level cannot be determined,

OR

2.2 Receipt of a scram signal,

and

APRM's greater than or equal to 3%,

OR

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2.3 Receipt of a scram signal,

and

IRM's inserted and reading greater than (Later)%, 3.5 minutes
after Reactor scram.

3.0 Operator Action

(Optional
Checks)

3.1 DEPRESS both Reactor Scram pushbuttons. _____

3.2 Place the Reactor Mode Switch in the SHUTDOWN position. _____

3.3 INSERT the IRM detectors. _____

3.4 Maintain Reactor Water level between 192.5 inches
(Level 4) and 201.5 inches (Level 7). _____

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(Optional

Checks)

3.5 IF Any of the following occur throughout
the performance of this procedure;

3.5.1 RPV water level less than +171.0"
(Level 3), or

3.5.2 Drywell pressure greater than 1.69 PSIG, or

3.5.3 A Reactor isolation which requires or
initiates a Reactor Scram,

THEN ENTER Emergency Operating Procedure
#29.000.01, Level Control, concurrent
with this procedure.

3.6 IF Any of the following occur throughout
the performance of this procedure;

3.6.1 Suppression pool water temperature
above 90°F, or

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3.6.2 Drywell atmosphere temperature
above 138°F, or

3.6.3 Drywell pressure above 1.69 PSIG, or

3.6.4 Suppression pool water level above
(Later) feet, or

3.6.5 Suppression pool water level below
(Later) feet,

THEN ENTER Emergency Operating Procedure
#29.000.03, Containment Control, concurrent
with this procedure.

3.7 IF Main Turbine has tripped, or MSIV's have
closed,

THEN TRIP the Reactor Recirculation pumps,

and

Proceed to step 3.9.

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(Optional
Checks)

3.8 IF Main Turbine has not tripped or MSIV's have closed,

THEN CONFIRM or Runback the Reactor Recirculation pumps to minimum flow,

and

Proceed to Step 3.9.

3.9 MONITOR the Reactor Nuclear Instrumentation.
(Power should be decreasing.)

3.9.1 IF APRM's indicate less than (Later)Z Reactor power,

THEN Proceed to Step 3.10.

3.9.2 IF APRM's indicates greater than (Later)Z Reactor power,

THEN INJECT Standby Liquid.

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CAUTION

Confirm or trip the SLC pumps
at (Later) inches in the SLC
tank.

a. Confirm or isolate the Reactor
Water Cleanup system. _____

b. WHEN SLC is injecting, _____

THEN Proceed to Step 3.10. _____

c. IF SLC is not injecting, _____

THEN Start 2nd SLC pump, _____

and

Proceed to Step 3.10. _____

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(Optional
Checks)

3.10 IF SRV's are closed and not cycling,

THEN Proceed to Step 3.12. _____

3.11 IF SRV's are open or cycling,

THEN TRIP Reactor Recirculation pumps. _____

3.11.1 IF SRV's are closed and not cycling,

THEN Proceed to Step 3.12. _____

3.11.2 IF SRV's are open and cycling,

THEN START HPCI/RCIC in full flow
test mode,

and

Proceed to Step 3.12. _____

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3.12 Verify Control Rod positions.

3.12.1 IF ALL Control Rods are inserted to position 04 or less,

THEN ENTER Abnormal Operating Procedure #20.000.21, Reactor Scram.

3.12.2 IF ALL Control Rods are not inserted to position 04 or less,

THEN Proceed to Step 3.13.

3.13 Verify all Scram valves are open.

3.13.1 IF All Scram valves are not open,

THEN Proceed to step 3.19.

3.13.2 IF ALL Scram valves are open,

THEN RESET the Reactor Scram.

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(Optional
Checks)

1. IF Reactor Scram does not
Reset,

THEN Proceed to Step 3.18. _____

2. IF Reactor Scram is Reset,

THEN Verify that the Scram Discharge
Volume vents and drain valves
open. _____

a. IF Scram Discharge volume
vent and drain valves
do not open,

THEN Proceed to Step 3.16. _____

b. IF Scram Discharge volume
vent and drain valves
open,

THEN Proceed to Step 3.14. _____

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3.14 DEPRESS both Reactor SCRAM pushbuttons.

3.14.1 IF Inward Control Rod motion
has been observed,

THEN Verify Control Rod positions

1. IF ALL Control Rod positions
are at 04 or less,

THEN ENTER Abnormal Operating
Procedure #20.00G.21,
Reactor Scram.

2. IF ALL Control Rods are not
at position 04 or less,

THEN Return to Step 3.13.2.

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(Optional
Checks)

3.14.2 IF Inward Control Rod motion has
not been observed,

THEN Proceed to step 3.15. _____

3.15 RESET the Reactor Scram. _____

3.15.1 IF Reactor Scram does not Reset,

THEN Proceed to Step 3.18. _____

3.15.2 IF Reactor Scram is Reset,

THEN Proceed to Step 3.16. _____

3.16 Scram each withdrawn Control Rod by the use
of the individual SCRAM Test Switch. _____

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3.16.1 IF Inward Control Rod motion
has been observed,

THEN Continue the individual Rod Scram
until all Rods are at 04 or less

OR

Until no inward Control Rod motion
is observed. _____

3.16.2 WHEN NO Inward Control Rod motion is
observed,

THEN Verify Control Rod positions. _____

1. IF ALL Control Rod positions
are at 04 or less,

THEN ENTER Abnormal Operating
Procedure 20.000.21,
Reactor Scram. _____

2. IF ALL Control Rod positions
are not at 04 or less.

THEN Proceed to Step 3.17. _____

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(Optional
Checks)

3.16.3 IF Inward Control Rod motion
 has not been observed,

THEN Proceed to Step ^{3.17}~~27~~.

3.17 RESET Reactor Scram

3.17.1 IF Reactor Scram does not RESET,

THEN Proceed to Step 3.18.

3.17.2 IF Reactor Scram is RESET,

THEN Rapidly insert Control Rods by
 the normal rod insertion method.

1. IF Inward Control Rod motion is
 not observed,

THEN Proceed to Step 3.18.

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2. IF Inward Control Rod motion is
observed,

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THEN Continue to insert Control
Rods by Rod insertion. _____

a. WHEN All Control Rods are at
04 or less,

THEN ENTER Abnormal Operating
Procedure #20.000.21,
Reactor Scram, _____

CR

WHEN Control Rod inward motion is
no longer observed,

THEN Proceed to Step 3.18. _____

3.18 Attempt to RESET Reactor Scram,

and

START 2nd. CRD pump

and

INCREASE CRD Drive Pressure,

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(Optional
Checks)

and

CLOSE HCU Accumulator Charging Water Valves
(113 valve),

and

THEN Rapidly insert Control Rods by the Normal
Rod insertion method. _____

3.18.1 IF Inward Control Rod motion is not
observed,

THEN Return to Step 3.13.2. _____

3.18.2 IF Inward Control Rod motion is observed,

THEN Continue to insert the Control Rods
by normal Rod insertion method _____

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a. WHEN All Control Rods are at
04 or less,

THEN ENTER Abnormal Operating
Procedure #20.000.21,
Reactor Scram, _____

OR

b. WHEN Control Rod inward motion is
no longer observed,

THEN Return to Step 3.13.2. _____

3.19 OPEN Scram Valves with one of the following methods:

3.19.1 Backup manual scram pushbutton _____

OR

3.19.2 De-energize Scram Solenoids by opening
the following breakers:

1. C71A-CB1A, located on Relay Room
Panel H11-P609, _____

and

2. C71B-CB1B, located on Relay Room
Panel H11-P611, _____

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(Optional
Checks)

OR

3.19.3 Isolate and vent the Scram air
header by performing the following:

1. Close F288A, CRD Scram Air
Header Filter Inlet Valve,

and

2. Close (if open) F289, CRD Scram
Air Header Filter Bypass Valve,

and

3. Bleed off air pressure through
the CRD Scram Air Header 5
microhm filter assembly,
-

AND

Keywords: child sexual abuse; disclosure; social support

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