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THREE MILE ISLAND NUCLEAR STATION
UNIT #2 EMERGENCY PROCEDURE 2202-1.9
LOSS OF INTERMEDIATE CLOSED COOLING WATER

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Unit 1 Staff Recommends Approval

Approval NA Date —
Cognizant Dept. Head

Unit 2 Staff Recommends Approval

Approval NA Date —
Cognizant Dept. Head

Unit 1 PORC Recommends Approval

NA Date —
Chairman of PORC

Unit 2 PORC Recommends Approval

R P Warren Date 8/30/78
V-Chairman of PORC

Unit 1 Superintendent Approval

NA Date —

Unit 2 Superintendent Approval

J J Colitz Jr Date 9/1/78

Manager Generation Quality Assurance Approval NA Date —

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THREE MILE ISLAND NUCLEAR STATION

UNIT #2 EMERGENCY PROCEDURE 2202-1.9

LOSS OF INTERMEDIATE CLOSED COOLING WATER

1.0 SYMPTOMS

1.1 I.C. System Flow Low Alarm, 8.F14, 550 GPM.

1.2 I.C. System CRD Cooling Flow Low Alarm, 8.A15, 138 GPM.

1.3 I.C. Surge Tank Level Hi/Lo Alarm, 8.A14.

1.4 I.C. Cooler Outlet Temp. Hi Alarm, 8.E14.

1.5 CRD Stator Temp. Hi, Computer Points 625 through 693 Setpoint 160°F.

1.6 R.C. Pump Cooling Water Temp. Hi, Computer Point 451, 452, 453, & 454.

1.7 Any of the following valves closed due to E.S. testing, 4 pound E.S. Signal, or valve malfunction:

IC-V2, 3, 4, or 5.

1.8 Letdown isolation valve, MU-V376 closes on Hi Temperature of 135°F which secures letdown.

2.0 IMMEDIATE ACTIONS

2.1 Automatic Actions

2.1.1 Standby I.C. Pump starts on low flow (550 GPM) or breaker trip.

2.2 Manual Actions

2.2.1 Verify automatic start of Standby I.C. pump at a low flow of 550 g.p.m. or running pump breaker trip.

2.2.2 If standby I.C. pump has not started, verify an indicated level in the I.C. surge tank and attempt to start manually by turning control switch to "ON".

2.2.3 Check CRD pressure gages locally for CRD filter d/p. Change to standby filter if alarming at 10 psid. Note maximum d/p permitted is 12 psid. Utilize procedure 2104-1.6C for procedure to shift filters.

2.2.4 RCP operation may continue if normal seal injection is maintained.

2.2.5 Closely monitor RCP parameters to insure within the limits specified in 2103-1.4.

3.0 FOLLOW-UP ACTION

3.1 Try to isolate any leakage and/or while filling surge tank from DW-V-46 (Panel 8) isolate portions of system to keep flow in CRD's. Establish normal 18.5 inch surge tank level.

3.2 Verify on Panel 15 that IC-V-5 is open if CRD coolant flow is low. (Alarmed at 138 GPM).

3.3 Verify normal Nuclear Services River Water System Pressure of 17-21 psig on Panel #8, NR-PI 340 thru 343, NR pump discharge pressure gages.

3.4 At or before stator temperature 160°F assign one CRD stator temperature of the controlling CRD group to analog trend recorder.

3.5 If CRD Temp. is High (>170°F) on one rod, reduce power to 60%, drive rod in and de-energize.

3.6 If more than one CRD High Temp. exists (>180°F), reactor must be tripped.

3.7 Backwash IC cooler if High outlet temp. alarm (120°F) has actuated.

3.8 Check flow control and isolation valves for correct positions. (Should be secured in position and position logged on O.P. Checkoff List).

3.9 Re-establish at least the minimum 45 GPM letdown flow.

3.10 If letdown flow cannot be re-established, unit must be shutdown at 385 inches in pressurizer.

3.11 Place standby IC cooler in service for continued High outlet temp. or leakage.

3.12 If RC pump seal temperatures T_1 or T_4 are >180°F, or T_3 is >170°F, shut down and inspect the RCP seals.