

THREE MILE ISLAND NUCLEAR STATION  
UNIT #1 EMERGENCY PROCEDURE 1202-26B  
LOSS OF FEED TO ONE STEAM GENERATOR

PORC CHAIRMAN  
UNIT 1

CONTROLLED COPY.

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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

C. E. Hartman Date 9/12/79  
Chairman of PORC

Unit 2 PORC Recommends Approval

NA Date —  
Chairman of PORC

Unit 1 Superintendent Approval

G. J. Keelinger Date 9/12/79

Unit 2 Superintendent Approval

NA Date —

Manager Generation Quality Assurance Approval

NA Date —

THREE MILE ISLAND NUCLEAR STATION  
UNIT #1 EMERGENCY PROCEDURE 1202-26B  
LOSS OF FEED TO ONE STEAM GENERATOR

26.1 Symptoms

1. OTSG level decreasing on one OTSG.
2. Feedwater flow to one OTSG decreasing.
3. One feedwater valve closing.
4. Increasing reactor coolant pressure and temperature.
5. Increasing cold leg temperature differential if loss of feedwater to one OTSG.

26.2 Immediate Action

A. Automatic Action

1. ICS trips to track due to FW cross limit (FW error  $>+5\%$ ).
2. Feedwater cross limits reduces reactor demand to drive rods in.

B. Manual Action

NOTE: Key parameters marked with an asterisk require reverification as Follow-up Action.

1. Verify that the ICS is in the tracking mode as indicated by both hand and auto lights lit on the unit load demand H/A station.
- \*2. Verify MWe and reactor power (NI-5, 6, 7, 8) are decreasing.
- \*3. If the reactor is in manual, drive rods in to match neutron power to existing FW flow (from FE-1A and FE-8B).
- \*4. If the turbine generator is in manual, control header pressure at 885 psig (from FE-1A and FE-8B) by depressing decrease button on turbine control console.

5. If OTSG level on the affected OTSG is greater than 30" on startup range, go to manual on H/A station and increase the demand to the associated main FW regulating valve (FW-V17A/B).
6. Verify that the associated feedwater block valve is open (FW-V5A/B).

NOTE: If FW-V16A(B) fails closed, it will close FW-V5A(B) thus causing loss of feed.

### 26.3 Follow-Up Action

#### Objectives:

To reduce reactor power so that heat generation rate matches heat removal rate provided by feed flow to operable steam generator and to restore feedwater flow and steam generator level expeditiously to regain full OTSG heat removal capability. Follow-up action is designed to minimize unnecessary thermal cycles on emergency feed nozzles and thermal shock to lower tubesheet of a dry OTSG.

1. Reverify the parameters marked by an asterisk in Immediate Manual Action using alternate indication where available.
2. If able to restore FW flow prior to reaching OTSG level of 25" on startup range continue normal operation.
3. If unable to restore normal FW flow prior to reaching OTSG level of 15" on startup range, concurrently reduce reactor power to less than 8% full power and take the turbine off line per 1102-1C and restore feedwater flow to affected OTSG using emergency feedwater pump and EF-V30A or B.

4. Raise the OTSG level to 25" on startup range using the emergency feedwater pump and EF-V30A/B. Then restore normal feedwater flow through FW-V16A or B and/or FW-V17A or B and shutdown the emergency feedwater system. (Stop Emerg. FW Pump and Close EF-V30A/B.)

NOTE: In the event the OTSG boils dry limit emergency feedwater flow to 360 GPM to the dry generator.

5. In the event an OTSG boils dry, establish feed flow using the emergency feedwater ~~pump~~ and EF-V30A/B. Follow-up with actions in Step 4 above.
6. If emergency feedwater was used, record feedwater temperature and transient information in Transient Cycle Log.