

NUCLEAR PLANT OPERATIONS
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IPOP05-EO-FRH3 REV. 5

RESPONSE TO STEAM GENERATOR HIGH LEVEL

STATION PROCEDURE

SAFETY RELATED

W. H. K. K.
PLANT MANAGER

7-1-88
DATE APPROVED

7-13-88
DATE EFFECTIVE

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PURPOSE

This procedure provides actions to respond to a steam generator high level condition and to address the steam generator overflow concern.

SYMPTOMS OR ENTRY CONDITIONS

This procedure is entered from:

1. IPOP05-EO-FU03, HEAT SINK CRITICAL SAFETY FUNCTION STATUS TREE, on a YELLOW condition.
2. IPOP05-EO-FRH2, RESPONSE TO STEAM GENERATOR OVERPRESSURE, Step 3.0, IF the affected S/G N/R LVL is high.



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*
*
*
*
* IF S/G N/R LVL has increased to > 92% [77%
* Adverse CNTMT], an evaluation should be made
* for S/G overfill considerations. STW should
* NOT be released from any S/G with LVL > 92%
* [77% Adverse CNTMT] prior to overfill
* evaluation.
*

CAUTION

NOTE

Throughout this procedure, "AFFECTED" refers to any
S/G in which N/R LVL is > 87% [69% ADVERSE CNTMT]

NOTE

Secondary Operator Addendum should be handed out.



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{S} 1.0 IDENTIFY Affected S/G(s).

1.1 N/R LVL - > 87% [69%
ADVERSE CNTMT]
Primary-ERFDADS(3005)
Alternate-QDPS(H)-MCB IND
(1-CP006)

SG LEVEL
S/G 1A S/G 1C
1*FW-LI-0519 1*FW-LI-0539
1*FW-LI-0571 1*FW-LI-0573

S/G 1B S/G 1D
1*FW-LI-0529 1*FW-LI-0549
1*FW-LI-0572 1*FW-LI-0574

IF < 87% [69% ADVERSE CNTMT] in all
S/G(s), THEN RETURN to procedure and
step in effect.

{S} 2.0 VERIFY FW ISOL.
Primary - ERFDADS(3005)
Alternate - MCB IND
(1-CP006)

2.1 S/U Feed Pump - Tripped
S/U SGFP 14
2.2 MN FW Pumps - Tripped.
SGFP 11, 12, 13
2.3 Flow CONT VLVs - Closed.

NORM
1*FW-FV-0551 (S/G 1A)
1*FW-FV-0552 (S/G 1B)
1*FW-FV-0553 (S/G 1C)
1*FW-FV-0554 (S/G 1D)

TRIP Pumps.
CLOSE VLVs.

CON'T ON NEXT PAGE



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-----2.4 Flow CONT BYP VLVs -
Closed.

CLOSE VLVs.

LOW PWR

1*FW-FV-0551A (S/G 1A)
1*FW-FV-0552A (S/G 1B)
1*FW-FV-0553A (S/G 1C)
1*FW-FV-0554A (S/G 1D)

FW ISOL VLVs - Closed.

CLOSE VLVs.

FWIV

1*FW-FV-7141 (S/G 1A)
1*FW-FV-7142 (S/G 1B)
1*FW-FV-7143 (S/G 1C)
1*FW-FV-7144 (S/G 1D)

ISOL BYPASS VLVs - Closed.

CLOSE VLVs.

FWIB

1*FW-FV-7148A (S/G 1A)
1*FW-FV-7147A (S/G 1B)
1*FW-FV-7146A (S/G 1C)
1*FW-FV-7145A (S/G 1D)

PREHEATER BYPASS VLVs -
Closed.

CLOSE VLVs.

PREHTR BYPASS

1*FW-FV-7189 (S/G 1A)
1*FW-FV-7190 (S/G 1B)
1*FW-FV-7191 (S/G 1C)
1*FW-FV-7192 (S/G 1D)



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CONTINGENCY ACTION

[S]__3.0 ISOLATE AFW Flow to Affected S/G(s).
(1-CP006)
AFW REG
1*AF-FV-7525 (S/G 1A)
1*AF-FV-7524 (S/G 1B)
1*AF-FV-7523 (S/G 1C)
1*AF-FV-7526 (S/G 1D)

OCIV
1*AF-MOV-0048 (S/G 1A)
1*AF-MOV-0065 (S/G 1B)
1*AF-MOV-0085 (S/G 1C)
1*AF-MOV-0019 (S/G 1D)

IF SI is actuated AND AFW OCIV's will not close:
(1-CP001)
a. RESET SI actuation (1-CP006)
b. RESET AFW actuation
c. CLOSE AFW OCIV(s) for Affected S/G(s)



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CONTINGENCY ACTION

[S] 4.0 CHECK Affected S/G(s) LVL.
(1-CP006)

4.1 N/R LVL - < 92% [77%
Adverse CNTMT].

GO to Step 5.0.

4.2 N/R LVL - Decreasing.

GO to Step 5.0.

4.3 CONTROL AFW Flow to
maintain N/R LVL between
5% [21% Adverse CNTMT] and
50%.

AFW REG

1*AF-FV-7525 (S/G 1A)
1*AF-FV-7524 (S/G 1B)
1*AF-FV-7523 (S/G 1C)
1*AF-FV-7526 (S/G 1D)

4.4 RETURN to procedure and
step in effect.



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[S] 5.0 IF S/G 1D is Affected, THEN
CLOSE MN STM Supply VLVs to
TURB Driven AFW Pump.
(1-CP006)

5.1 STM LN ISOL VLV - Closed.
MN STM ISOL
1*MS-MOV-0143

5.2 TURB Trip and THROT VLV -
Closed.
TURB TRIP/THROT
1*MS-MOV-0514

[S] 6.0 CLOSE Affected S/G(s) MSIVs
and MSIBs.
(1-CP006)

MSIV
1*MS-FV-7414 (S/G 1A)
1*MS-FV-7424 (S/G 1B)
1*MS-FV-7434 (S/G 1C)
1*MS-FV-7444 (S/G 1D)

MSIB
1*MS-FV-7412 (S/G 1A)
1*MS-FV-7422 (S/G 1B)
1*MS-FV-7432 (S/G 1C)
1*MS-FV-7442 (S/G 1D)



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[US] 7.0

CHECK Affected S/G(s) RAD -
Normal.

Primary - ERFDADS(8110)

Alternate - QDPS(SEC-2)

MCB IND

RM-11 Display System
(AUX Computer Console)

Main Steam Lines

1*RA-RT-8046

1*RA-RT-8047

1*RA-RT-8048

1*RA-RT-8049

Blowdown Lines

1*RA-RT-8022

1*RA-RT-8023

1*RA-RT-8024

1*RA-RT-8025

IF any of the following procedures in effect, THEN RETURN to procedure and step in effect. IF NOT, THEN GO to IPOP05-EO-E030, STEAM GENERATOR TUBE RUPTURE, Step 1.0.

a. IPOP05-EO-E030, STEAM GENERATOR TUBE RUPTURE

b. IPOP05-EO-ES30, POST SGTR COOLDOWN USING BACKFILL

c. IPOP05-EO-ES32, POST SGTR COOLDOWN USING BLOWDOWN

d. IPOP05-EO-ES33, POST SGTR COOLDOWN USING STEAM DUMP

e. IPOP05-EO-EC31, SGTR WITH LOSS OF REACTOR COOLANT - SUBCOOLED RECOVERY DESIRED

f. IPOP05-EO-EC32, SGTR WITH LOSS OF REACTOR COOLANT - SATURATED RECOVERY DESIRED

g. IPOP05-EO-EC33, SGTR WITHOUT PRESSURIZER PRESSURE CONTROL



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ACTION / EXPECTED RESPONSE

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NOTE

When a safety Injection or Feedwater Isolation actuation is reset, the Steam Generator Blowdown Valves and Sample Isolation Valves must be reset locally prior to opening.

[S] 8.0 ESTABLISH BLWDN from
Affected S/G(s):

8.1 OPEN BLWDN ISOL VLVs.
(1-CP006)

BLWDN ISOL
1*SB-FV-4153 (S/G 1A)
1*SB-FV-4152 (S/G 1B)
1*SB-FV-4151 (S/G 1C)
1*SB-FV-4150 (S/G 1D)

Perform Addendum 2 to Reset FWI Valves.

8.2 OPEN BLWDN Flow CONT VLVs.
(1-CP018)

BLWDN FLOW CONT
1*SB-FK-4157 (S/G 1A)
1*SB-FK-4156 (S/G 1B)
1*SB-FK-4155 (S/G 1C)
1*SB-FK-4154 (S/G 1D)

[S] 9.0 RETURN to procedure and step
in effect.



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CONTINGENCY ACTION

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1.0 Main FD WTR CONT VLV
Reduce flow CONT VLV Signal to
0% output

1*FW-FV-551
1*FW-FV-553
1*FW-FV-554

2.0 Main FD WTR BYP VLV
Reduce flow CONT VLV Signal to
0% output

1*W-FV-551A
1*FW-FV-553A
1*FW-FV-552A
1*FW-FV-554A

3.0 S/G BLDN ISOL VLV
Reduce flow CONT VLV Signal to
0% output

1*SB-FV-4157
1*SB-FV-4154
1*SB-FV-4156
1*SB-FV-4155



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4.0 S/G SAMP ISOL VLV
PLACE handswitch in CLOSE

1*SB-FV-4189 1*SB-FV-4189A
1*SB-FV-4188 1*SB-FV-4188A
1*SB-FV-4187 1*SB-FV-4187A
1*SB-FV-4186 1*SB-FV-4186A

5.0 VERIFY SI Reset
TR A B C

RESET S I
TR A B C

6.0 VERIFY FWI Reset

RESET F W I
TR A B C

7.0 DISPATCH EAS operator to depress
each handswitch on table to RESET
valves



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FEEDWATER ISOLATION LOCAL RESETS

Handswitch	Description	AUX Relay Rack	EAB	SWGR
HS 4153	S/G (A) BD ISOL VLV	ERR 132B	35' EL	
HS 4189A	S/G (A) SAMP ISOL VLV	ERR 132B	35' EL	
HS 4150	S/G (D) BD ISOL VLV	ERR 131B	35' EL	
HS 4186A	S/G (D) SAMP ISOL VLV	ERR 132B	35' EL	
HS 3551B	FW CONT VLV			
	FCV 0551, 552, 553, & 554	ERR 131B	35' EL	
HS 7151B	FW BYPASS CONT VLV			
	FV 7151, 7152, 7153, & 7154	ERR 131B	35' EL	
HS 4151	S/G (C) BD ISOL VLV			
HS 4187A	S/G (C) SAMP ISOL VLV	ERR 119A ERR 118A	10' EL 10' EL	
HS 3551A	FW CONT VLV			
	FCV 0551, 552, 553, & 554	ERR 129A	10' EL	
HS 7151A	FW BYPASS CONT VLV			
	FV 7151, 7152, 7153, & 7154	ERR 129A	10' EL	
HS 4152	S/G (B) BD ISOL VLV			
HS 4188A	S/G (B) SAMP ISOL VLV	ERR 134C ERR 134C	60' EL 60' EL	

8.0 NOTIFY Controlroom
valves have been RESET