

FNP-1-ARP-1.1  
July 13, 1993  
Revision 26

FARLEY NUCLEAR PLANT  
ANNUNCIATOR RESPONSE PROCEDURE  
FNP-1-ARP-1.1

MAIN CONTROL BOARD  
ANNUNCIATOR PANEL A

PROCEDURE USAGE REQUIREMENTS	SECTIONS
CONTINUOUS USE - Each step of the procedure is to be read prior to performing that step. Each step is to be performed in the sequence given. Where required, each step is to be signed off as complete before proceeding to the next step.	ALL
REFERENCE USE - The procedure is to be referred to periodically to confirm that all required parts of a work activity have been performed. Where required, steps are to be signed off to show that procedure requirements have been met.	
INFORMATION USE - An activity may be performed from memory, but the procedure should be available for use as needed and for training.	

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Approved:

*Sam P. Crane (for)*  
Manager - Operations

Date Issued: 8-16-93

OPS/ARP-3  
DOC. 4/5/3

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Do Not Use In Safety  
Related Activity

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PDR ADDOCK 05000348  
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## LIST OF EFFECTIVE PAGES

PAGE NO.	REV.#	REVISION NO.									
		23	24	25	26	27	28	29	30	31	32
ANNUNCIATOR WINDOW PANEL											
1	18	X									
2	16	X									
AA1	17	X		X	X						
AA2	17	X		X	X						
AA3	17	X		X	X						
AA4	17	X		X	X						
AA5	21	X	X	X	X						
AB1	16	X		X	X						
AB2	16	X		X	X						
AB3	16	X		X	X						
AB4	19	X		X	X						
AB5	21	X	X	X	X						
AC1	17	X	X	X	X						
AC2	17	X	X	X	X						
AC3	17	X	X	X	X						
AC4	16	X	X	X	X						
AC5	16	X	X	X	X						
AD1 (1)	22	X		X							
(2)	22	X		X							
AD2 (1)	17	X		X							
(2)		X									
(3)		X									
(4)		X		X	X						
AD3 (1)	16	X		X							
(2)		X									

## LIST OF EFFECTIVE PAGES

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AD3 (3)		X									
(4)		X		X	X						
AD4	16	X	X	X	X						
AD5	16	X	X	X	X						
AE1 (1)	22	X		X							
(2)	22	X		X							
AE2	16	X		X	X						
AE3	16	X		X	X						
AE4	16	X	X	X	X						
AE5	16	X		X	X						
AF1	16	X		X	X						
AF2	16	X			X						
AF3	16	X			X						
AF4 (1)	15	X									
(2)	16	X									
AF5	19	X	X	X	X						
AG1	16	X			X						
AG2	16	X			X						
AG3	20	X	X	X	X						
AG4	13	X		X	X						
AG5	16	X		X							
AH1	16	X			X						
AH2	16	X			X						
AH3	16	X		X	X						
AH4	13	X		X							
AH5	16	X			X						

MAIN CONTROL BOARD PANEL A

A1	LA CCW PUMP OVERLOAD TRIP	B1	LA CCW RM CLR FAULT	C1	<del>LA CCW HX SW ON COW FLOW DS</del> <i>Deleted</i>	D1	RW PUMP RM A TRN FLOODING	E1	RW PUMP RM B TRN FLOODING	F1	SEL SWITCH IN LOCAL CONT
A2	LB CCW PUMP OVERLOAD TRIP	B2	LB CCW RM CLR FAULT	C2	<del>LB CCW HX SW ON COW FLOW DS</del> <i>Deleted</i>	D2	RW PRESS A TRN LO	E2	RW PUMP TRIPPED	F2	RWIS ALARM
A3	LC CCW PUMP OVERLOAD TRIP	B3	CCW PUMP IN LOCAL CONT	C3	<del>LC CCW HX SW ON COW FLOW DS</del> <i>Deleted</i>	D3	RW PRESS B TRN LO	E3	SWIS FLOODING	F3	SWIS ALARM
A4	CCW SRG TK LVL A TRN HI-LO	B4	CCW SRG TK LVL B TRN HI-LO	C4	CCW PUMP RM FLOODING LVL 10 IN	D4	SW PRESS A TRN LO	E4	SW PUMP TRIPPED	F4	CTMT CLR SW FLOW HI-LO
A5	CCW SRG TK LVL A TRN LO-LO	B5	CCW SRG TK LVL B TRN LO-LO	C5	CCW PUMP RM FLOODING LVL 18 IN	D5	SW PRESS B TRN LO	E5	SW TO AUX BLDG HDR PRESS A OR B TRN LO	F5	SW TO TURB BLDG A OR B TRN FLOW HI

TCN 26A

MAIN CONTROL BOARD PANEL A

G1	RIVER LVL A TRN HI	H1	RIVER LVL B TRN HI
G2	RIVER LVL A TRN LO	H2	RIVER LVL B TRN LO
G3	SW POND LVL A TRN LO	H3	SW POND LVL B TRN LO
G4	SW WET PIT LVL B TRN LO	H4	SW WET PIT LVL B TRN LO
G5	DILUTION DISCH TEMP HI	H5	MIMS ALARM

LOCATION AA1

SETPOINT: Variable Current/Time

- ORIGIN: 1. Ø1, Ø2, or Ø3 Overcurrent Relay (50/51 - DG04).  
2. Ground Relay (50G-DG04).

AI

1A  
CCW PUMP  
OVERLOAD  
TRIP

PROBABLE CAUSE

1. 1A CCW Pump overloaded.
2. 1A CCW Pump electrical or mechanical fault.

AUTOMATIC ACTION

1. Trips breaker DG04 for 1A CCW Pump.
2. Closes breaker DG05 to start 1B CCW Pump, if 1B CCW Pump is lined up to B Train.

IMMEDIATE ACTION

1. VERIFY 1A CCW PUMP HAS TRIPPED.
2. VERIFY AUTO START OF STANDBY PUMP, IF ALIGNED TO AFFECTED TRAIN.
3. IF THE STANDBY PUMP FAILS TO START OR IS NOT IN SERVICE, THEN PERFORM THE ACTIONS REQUIRED BY FNP-1-AOP-9.0, LOSS OF THE ON SERVICE TRAIN OF COMPONENT COOLING WATER.

SUPPLEMENTARY ACTION

1. Ensure sufficient CCW Flow for plant conditions.
2. Refer to FNP-1-AOP-9.0, LOSS OF THE ON SERVICE TRAIN OF COMPONENT COOLING WATER.
3. Refer to Technical Specification 3.7.3 for LCO requirements with a loss of the on service train of component cooling water.
4. IF 1B CCW Pump is aligned to B train, THEN rack out 1A CCW Pump supply breaker DG04.
5. Notify Plant Personnel to determine and correct the cause of the fault.

NOTE

Resetting lockout relay could prevent proper operation of the standby pump in the event of an LOSP.

6. Do not reset lockout relay without Shift Supervisor approval.

References: D-177184; D-177187; A-177048, Sh. 269; A-177100, Sh. 51;  
B-175810, Sh. 22; Technical Specification 3.7.3

LOCATION AA2

SETPOINT: Variable Current/Time

- ORIGIN:
1. Ø1, Ø2, or Ø3 Overcurrent Relay (50/51 - DF05).
  2. Ground Relay (50G-DF05).
  1. Ø1, Ø2, or Ø3 Overcurrent Relay (50/51-DG05)
  2. Ground Relay (50G-DG05)

A2

1B  
CCW PUMP  
OVERLOAD  
TRIP

PROBABLE CAUSE

1. 1B CCW Pump overloaded.
2. 1B CCW Pump electrical or mechanical fault.

AUTOMATIC ACTION

- 1B CCW Pump lined up to A(B) Train.
1. Trips breaker DF05 (DG05) for 1B CCW Pump.
  2. Closes breaker DF04 (DG04) to start 1C(1A) CCW Pump.

IMMEDIATE ACTION

1. VERIFY 1B CCW PUMP HAS TRIPPED.
2. VERIFY AUTO START OF STANDBY PUMP, IF ALIGNED TO AFFECTED TRAIN.
3. IF THE STANDBY PUMP FAILS TO START OR IS NOT IN SERVICE, THEN PERFORM THE ACTIONS REQUIRED BY FNP-1-AOP-9.0, LOSS OF THE ON SERVICE TRAIN OF COMPONENT COOLING WATER.

SUPPLEMENTARY ACTION

1. Ensure sufficient CCW Flow for plant conditions.
2. Refer to FNP-1-AOP-9.0, LOSS OF THE ON SERVICE TRAIN OF COMPONENT COOLING WATER.
3. Refer to Technical Specification 3.7.3 for LCO requirements with a loss of the on service train of component cooling water.
4. Notify Plant Personnel to determine and correct the cause of the fault.

References: D-177183; D-177184; D-177185; D-177187; A-177048, Sh. 256;  
A-177048, Sh. 270; A-177100, Sh. 52; B-175810, Sh. 23;  
Technical Specification 3.7.3

LOCATION AA3

SETPOINT: Variable Current/Time

- ORIGIN: 1. Ø1, Ø2, or Ø3 Overcurrent Relay (50/51 - DF04).  
2. Ground Relay (50G-DF04).

A3

1C  
CCW PUMP  
OVERLOAD  
TRIP

PROBABLE CAUSE

1. 1C CCW Pump overloaded.
2. 1C CCW Pump electrical or mechanical fault.

AUTOMATIC ACTION

1. Trips breaker DF04 for 1C CCW Pump.
2. Closes breaker DF05 to start 1B CCW Pump, if 1B CCW Pump is lined up to A Train.

IMMEDIATE ACTION

1. VERIFY 1C CCW PUMP HAS TRIPPED.
2. VERIFY AUTO START OF STANDBY PUMP, IF ALIGNED TO AFFECTED TRAIN.
3. IF THE STANDBY PUMP FAILS TO START OR IS NOT IN SERVICE, THEN PERFORM THE ACTIONS REQUIRED BY FNP-1-AOP-9.0, LOSS OF THE ON SERVICE TRAIN OF COMPONENT COOLING WATER.

SUPPLEMENTARY ACTION

1. Ensure sufficient CCW Flow for plant conditions.
2. Refer to FNP-1-AOP-9.0, LOSS OF THE ON SERVICE TRAIN OF COMPONENT COOLING WATER.
3. Refer to Technical Specification 3.7.3 for LCO requirements with a loss of the on service train of component cooling water.
4. IF 1B CCW Pump is aligned to A train, THEN rack out 1C CCW Pump supply breaker DF04.
5. Notify Plant Personnel to determine and correct the cause of the fault.

NOTE

Resetting lockout relay could prevent proper operation of the standby pump in the event of an LOSP.

6. Do not reset lockout relay without Shift Supervisor or approval.

References: D-177183; D-177185; A-177048, Sh. 255; B-175810, Sh. 22;  
A-177100, Sh. 53; Technical Specification 3.7.3



LOCATION AA4

SETPOINT: 1. HI: 50 + 3 inches  
           - 5  
           2. LO: 33 + 5 inches  
           - 3

ORIGIN: 1. Level Switch (N1P17LSH3027A-A).  
           2. Level Switch (N1P17LSL3027A-A).

A4

CCW SRG  
 TK LVL  
 A TRN  
 HI-LO

PROBABLE CAUSE

1. HI - In leakage from Reactor Coolant, Service Water, or through a Makeup Water Valve.
2. LO - Rupture or leakage of an A Train CCW component or pipe.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

CHECK A TRAIN CCW SURGE TANK LEVEL INDICATION AND DETERMINE WHETHER LEVEL IS HI OR LO.  
 HI LEVEL - DETERMINE SOURCE OF IN LEAKAGE AND ISOLATE IF POSSIBLE.  
 LO LEVEL - 1. DETERMINE SOURCE OF OUT LEAKAGE AND ISOLATE IF POSSIBLE.  
           2. ATTEMPT TO FILL CCW SURGE TANK PER FNP-1-SOP-23.0, COMPONENT COOLING WATER SYSTEM, TO MAINTAIN LEVEL ABOVE THE LO LEVEL ALARM POINT.

SUPPLEMENTARY ACTION

1. Refer to FNP-1-AOP-9.0, LOSS OF THE ON SERVICE TRAIN OF COMPONENT COOLING WATER.
2. Refer to Technical Specification 3.7.3 for LCO requirements with a loss of the on service train of component cooling water.
3. Notify appropriate personnel to locate and correct the cause of the HI-LO level.

References: A-177100, Sh. 54; B-175810, Sh. 101; B-175968; D-175002, Sh. 1;  
 D-177183; Technical Specification 3.7.3

LOCATION AA5

SETPOINT: 20 + 5 inches  
 - 3

ORIGIN: Level Switch (Q1P17LSLL3027CA-A)

A5
CCW SRG TK LVL A TRN LO-LO

PROBABLE CAUSE

Rupture or leakage of an A Train CCW component or pipe.

AUTOMATIC ACTION

NOTE

The running CCW pumps aligned to A Train will NOT trip on a Lo-Lo Surge Tank level with an SI signal present.

1. Trips the running A train CCW pumps (Q1P17LSLL3027CB-A, Q1P17LSLL3027CC-A)
2. Closes CCW Valves (Q1P17HV3096A&B) to isolate CCW to/from Evaporator Packages and H<sub>2</sub> Recombiners. (Q1P17LSLL3027CD-A)
3. Trips closed Q1P17HV2229, CCW to sample cooler (Q1P17LSLL3027CD-A).

IMMEDIATE ACTION

1. ENSURE THAT THE AUTOMATIC ACTIONS HAVE OCCURRED.
2. IF CCW FLOW HAS BEEN LOST TO THE SECONDARY HEAT EXCHANGER HEADER, THEN PERFORM THE ACTIONS REQUIRED BY FNP-1-AOP-9.0, LOSS OF THE ON SERVICE TRAIN OF COMPONENT COOLING WATER.

SUPPLEMENTARY ACTION

1. Refer to FNP-1-AOP-9.0, LOSS OF THE ON SERVICE TRAIN OF COMPONENT COOLING WATER.
2. Refer to Technical Specification 3.7.3 for LCO requirements with a loss of the on service train of component cooling water.
3. Notify appropriate personnel to locate and correct the cause of the LO-LO level.

References: A-177100, Sh. 55; D-175002, Sh. 1 & 2; B-175968, Sh. 6; D-177183; D-277185; D-177092; D-177670; D-177853; B-175810, Sh. 9, 22, 23 & 101; Technical Specification 3.7.3

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LOCATION AB1

SETPOINT: 1. Diff. Pressure: 1.5 + 0.25" H<sub>2</sub>O  
          - 0.0  
          2. Overload: Variable Current/Time

ORIGIN: 1. Differential pressure switch  
          (N1E16PDSL3302A-N)  
          2. Thermal Overload Aux. Relay (49x)

B1
LA
CCW
RM CLR
FAULT

PROBABLE CAUSE

1. Low differential pressure across fan 10 sec. after fan started.
2. Fan tripped on overload.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

START 1B CCW PUMP ROOM COOLER FAN.

SUPPLEMENTARY ACTION

1. Notify appropriate personnel to determine and correct the cause of the problem.
2. Refer to Technical Specification 3.7.3 for LCO requirements.

References: A-177100, Sh. 56; B-175968, Sh. 7; D-177243; D-177183;  
D-177185; B-175810, Sh. 95; Technical Specification 3.7.3

LOCATION AB2

SETPOINT: 1. Diff. Pressure: 1.5 + 0.25" H<sub>2</sub>O  
  - 0.0  
          2. Overload: Variable Current/Time

ORIGIN: 1. Differential pressure switch  
              (N1E16PDSL3302B-N)  
          2. Thermal Overload Aux. Relay (49x)

B2

1B  
CCW  
RM CLR  
FAULT

PROBABLE CAUSE

1. Low differential pressure across fan 10 sec. after fan started.
2. Fan tripped on overload.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

START 1A CCW PUMP ROOM COOLER FAN.

SUPPLEMENTARY ACTION

1. Notify appropriate personnel to determine and correct the cause of the problem.
2. Refer to Technical Specification 3.7.3 for LCO requirements.

References: A-177100, Sh. 57; B-175968, Sh. 7; D-177243; D-177184;  
D-177187; B-175810, Sh. 95; Technical Specification 3.7.3

LOCATION AB3

SETPOINT: Not Applicable

- ORIGIN:
1. 1C CCW Pump Selector Switch
  2. 1B CCW Pump (A Train) Selector Switch
  3. 1B CCW Pump (B Train) Selector Switch
  4. 1A CCW Pump Selector Switch

E3

CCW  
PUMP  
IN  
LOCAL CONT

PROBABLE CAUSE

Selector Switch at Hot Shutdown Panel for 1A, 1B or 1C CCW Pump in Local position.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

NO ACTION IS NECESSARY IF ALARM IS DUE TO PREPLANNED OPERATIONAL OR MAINTENANCE ACTIVITIES; OTHERWISE SEND APPROPRIATE PERSONNEL TO DETERMINE THE CAUSE OF THE ALARM.

SUPPLEMENTARY ACTION

Return Selector Switch to remote position as soon as possible.

References: D-177183; D-177184; D-177185; D-177187; A-177100, Sh. 58;  
B-175810, Sh. 101

LOCATION AB4

SETPOINT: 1. HI: 50 + 3 inches  
           - 5  
           2. LO: 33 + 5 inches  
           - 3

ORIGIN: 1. Level Switch (N1P17LSH3027B-B)  
           2. Level Switch (N1P17LSL3027B-B)

B4

CCW SRG  
 TK LVL  
 B TRN  
 HI-LO

PROBABLE CAUSE

1. HI - In Leakage of Reactor Coolant, Service Water, or through a Makeup Water Valve
2. LO - Rupture or Leakage of a B Train CCW component or pipe.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

CHECK B TRAIN CCW SURGE TANK LEVEL INDICATION AND DETERMINE WHETHER LEVEL IS HI OR LO.  
 HI LEVEL - DETERMINE SOURCE OF INLEAKAGE AND ISOLATE IF POSSIBLE.  
 LO LEVEL - 1. DETERMINE SOURCE OF OUTLEAKAGE AND ISOLATE IF POSSIBLE.  
           2. ATTEMPT TO FILL CCW SURGE TANK PER FNP-1-SOP-23.0, COMPONENT COOLING WATER SYSTEM, TO MAINTAIN LEVEL ABOVE THE LO LEVEL ALARM POINT.

SUPPLEMENTARY ACTION

1. Refer to FNP-1-AOP-9.0, LOSS OF THE ON SERVICE TRAIN OF COMPONENT COOLING WATER.
2. Refer to Technical Specification 3.7.3 for LCO requirements with a loss of the on service train of component cooling water.
3. Notify appropriate personnel to locate and correct the cause of the HI-LO level.

References: A-177100, Sh. 59; B-175810, Sh. 101; B-175968, Sh. 6; D-175002, Sh. 1; D-177184; Technical Specification 3.7.3

SETPOINT: 20 + 5 inches  
 - 3

ORIGIN: Level Switch (Q1P17LSLL3027DA-B)

B5
CCW SRG
TK LVL
B TRN
LO-LO

PROBABLE CAUSE

Rupture or leakage of a B Train CCW component or pipe.

AUTOMATIC ACTION

NOTE

The running CCW pumps aligned to B Train will NOT trip on a Lo-Lo Surge Tank level with an SI signal present.

1. Trips the running B train CCW pumps (Q1P17LSLL3027DB-B, Q1P17LSLL3027DC-B)
2. Closes CCW Valves (Q1P17HV3096A&B) to isolate CCW to/from Evaporator Packages and H<sub>2</sub> Recombiners. (Q1P17LSLL3027DD-B)
3. Trips closed Q1P17HV2229, CCW to sample cooler (Q1P17LSLL3027DD-B).

IMMEDIATE ACTION

1. ENSURE THAT THE AUTOMATIC ACTIONS HAVE OCCURRED.
2. IF CCW FLOW HAS BEEN LOST TO THE SECONDARY HEAT EXCHANGER HEADER, THEN PERFORM THE ACTIONS REQUIRED BY FNP-1-AOP-9.0, LOSS OF THE ON SERVICE TRAIN OF COMPONENT COOLING WATER.

SUPPLEMENTARY ACTION

1. Refer to FNP-1-AOP-9.0, LOSS OF THE ON SERVICE TRAIN OF COMPONENT COOLING WATER.
2. Refer to Technical Specification 3.7.3 for LCO requirements with a loss of the on service train of component cooling water.
3. Notify appropriate personnel to locate and correct the cause of the LO-LO level.

References: A-177100, Sh. 60; D-175002, Sh. 1 & 2; B-175968, Sh. 6; D-177183; D-277185; D-177092; D-177670; D-177853; B-175810, Sh. 9, 22, 23 & 101; Technical Specification 3.7.3

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LA  
CCW HX  
SW OR CCW  
FLOW LO

SETPPOINT: 1. 2000 + 300 GPM  
- 0

- ORIGIN: 1. LA CCW Hx SW Discharge Flow  
Switch (N1P16FSL3009A-B)  
2. LA CCW HX CCW Inlet Flow  
Switch (N1P17FSL3043A-B)

NOTE

This alarm will actuate if one, but not both, of the above listed flow switches sense flow setpoint.

PROBABLE CAUSE

1. Improper SW or CCW valve lineup to LA CCW Heat Exchanger.
2. Failure of Flow Control Valve Q1P16FV3009A.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

CHECK INDICATIONS AND DETERMINE WHICH FLOW IS LOW (SW OR CCW).  
 SW FLOW LO - REFER TO FNP-1-AOP-10.0, LOSS OF TRAIN A OR B SERVICE WATER  
 CCW FLOW LO- REFER TO FNP-1-AOP-9.0, LOSS OF THE ON SERVICE TRAIN OF COMPONENT COOLING WATER.

SUPPLEMENTARY ACTION

1. Notify plant personnel to determine and correct the cause of the alarm.
2. Closely monitor CCW temperatures and the temperature of any components cooled by CCW.
3. Refer to Technical Specification 3.7.3 and 3.7.4 for LCO requirements.

References: A-177100, Sh. 61; B-175968, Sh. 5 & 6; D-175002, Sh. 1;  
 D-175003, Sh. 1; D-177856; B-175810, Sh. 101;  
 Technical Specifications 3.7.3 and 3.7.4

TCN 26A



LOCATION AC2

SETPOINT: 1. 2000 + 300 GPM  
- 0

C2

1B  
CCW HX  
SW OR CCW  
FLOW LO

- ORIGIN: 1. 1B CCW Hx SW Discharge Flow  
Switch (N1P16FSL3009B-B)  
2. 1B CCW HX CCW Inlet Flow  
Switch (N1P17FSL3043B-B)

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NOTE

This alarm will activate if one, but not both,  
of the above listed flow switches sense flow  
setpoint.

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PROBABLE CAUSE

1. Improper SW or CCW valve lineup to 1B CCW Heat Exchanger.
2. Failure of Flow Control Valve Q1P16FV3009B.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

CHECK INDICATIONS AND DETERMINE WHICH  
FLOW IS LOW (SW OR CCW).  
SW FLOW LO - REFER TO FNP-1-AOP-10.0, LOSS  
OF TRAIN A OR B SERVICE WATER  
CCW FLOW LO- REFER TO FNP-1-AOP-9.0, LOSS  
OF THE ON SERVICE TRAIN OF  
COMPONENT COOLING WATER.

SUPPLEMENTARY ACTION

1. Notify plant personnel to determine and correct the cause of the alarm.
2. Closely monitor CCW temperatures and the temperature of any components cooled by CCW.
3. Refer to Technical Specification 3.7.3 and 3.7.4 for LCO requirements.

References: A-177100, Sh. 62; B-175968, Sh. 5 & 6; D-175002, Sh. 1; D-175003,  
Sh. 1; D-177856; B-175810, Sh. 101; Technical Specifications 3.7.3  
and 3.7.4

LOCATION AC3

SETPOINT: 1. 2000 + 300 GPM  
- 0

C3

1C  
CCW HX  
SW OR CCW  
FLOW LO

- ORIGIN: 1. 1C CCW HX SW Discharge Flow  
Switch (N1P16FSL3009C-A)  
2. 1C CCW HX CCW Inlet Flow  
Switch (N1P17FSL3043C-A)

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NOTE

This alarm will actuate if one, but not both,  
of the above listed flow switches sense flow  
setpoint.

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PROBABLE CAUSE

1. Improper SW or CCW valve lineup to 1C CCW Heat Exchanger.
2. Failure of Flow Control Valve Q1P16FV3009C.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

CHECK INDICATIONS AND DETERMINE WHICH  
FLOW IS LOW (SW OR CCW).

SW FLOW LO - REFER TO FNP-1-AOP-10.0, LOSS  
OF TRAIN A OR B SERVICE WATER

CCW FLOW LO- REFER TO FNP-1-AOP-9.0, LOSS  
OF THE ON SERVICE TRAIN OF  
COMPONENT COOLING WATER.

SUPPLEMENTARY ACTION

1. Notify plant personnel to determine and correct the cause of the alarm.
2. Closely monitor CCW temperatures and the temperature of any components cooled by CCW.
3. Refer to Technical Specification 3.7.3 and 3.7.4 for LCO requirements.

References: A-177100, Sh. 63; B-175968, Sh. 5 & 6; D-175002, Sh. 1; D-175003, Sh. 1; D-177856; E-175810, Sh. 101; Technical Specifications 3.7.3 and 3.7.4

SETPOINT: 10 ± 1 inches

- ORIGIN: 1. Level Switch (N1P16LSH3084A-N)
- 2. Level Switch (N1P16LSH3084B-N)

C4
CCW PUMP RM FLOODING LVL 10 IN

PROBABLE CAUSE

NOTE

Receipt of this alarm in conjunction with other alarms may indicate CCW pump room flooding from a source other than the service water system and should be handled accordingly.

Rupture of a Service Water pipe in the CCW Heat Exchanger Room.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

- 1. NOTIFY PLANT PERSONNEL TO MONITOR CCW PUMP ROOM WATER LEVEL TO DETERMINE IF ALARM IS VALID.
- 2. CLOSE SERVICE WATER A TRAIN TO AUX. BUILDING ISOLATION VALVE (Q1P16MOV3084A) ~~BREAKER PV-W2~~ ~~AND CLOSE WAVE~~ Q1P16MOV3084A if deemed necessary.

SUPPLEMENTARY ACTION

- 1. IF level continues to rise (flooding is NOT isolated), THEN open Service Water A Train to Aux. Building isolation valve Q1P16MOV3084A and perform immediate action of FNP-1-ARP-1.1/AC5, CCW PUMP RM FLOODING LVL 18 IN.
- 2. IF level stops rising, THEN refer to FNP-1-AOP-10.0, LOSS OF TRAIN A OR B SERVICE WATER.
- 3. Refer to Technical Specification 3.7.4 for LCO requirements with a loss of train A or B service water.

References: A-177100, Sh. 64; B-175968, Sh. 5; D-175003, Sh. 1; D-177624; B-175810, Sh. 101; Technical Specification 3.7.4

TCN 26A

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TCN  
26A

LOCATION ACS

SETPOINT: 18 + 0.25 inches  
- 1.0

ORIGIN: 1. Level Switch (N1P16LSHH3084A-N)  
2. Level Switch (N1P16LSHH3084B-N)

C5  
CCW  
PUMP RM  
FLOODING  
LVL 18 IN

PROBABLE CAUSE

NOTE

Receipt of the alarm in conjunction with other alarms may indicate CCW pump room flooding from a source other than the service water system and should be handled accordingly.

Rupture of a Service Water pipe in the CCW Heat Exchanger Room.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

1. ENSURE THAT SERVICE WATER A TRAIN TO AUX. BUILDING ISOLATION VALVE Q1P16MOV3084A IS OPEN.
2. CLOSE SERVICE WATER B TRAIN TO AUX. BUILDING ISOLATION VALVE ~~(Q1P16MOV3084B) BEFORE PUTTING~~ ~~AND CLOSE VALVE Q1P16MOV3084B FROM MCR. HAVE~~ ~~VALVE PUT OPEN AFTER VALVE IS CLOSED.~~

SUPPLEMENTARY ACTION

1. Monitor CCW Pump Room water level and verify that the flooding has been isolated.
2. Refer to PNP-1-AOP-10.0, LOSS OF TRAIN A OR B SERVICE WATER.
3. Refer to Technical Specification 3.7.4 for LCO requirements with a loss of train A or B service water.
4. Notify appropriate personnel to locate and correct the cause of flooding

References: A-177100, Sh. 65; B-175968, Sh. 5; D-177623; B-175810, Sh. 101; Technical Specification 3.7.4

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TCN  
26A

LOCATION AD1

SETPOINT: 7 3/8" + 1" (Above the Floor)  
- 0

ORIGIN: 1. Level Switch QSW34LS501-A  
2. Level Switch QSW34LS502-A

DI
RW PUMP RM A TRN FLOODING

PROBABLE CAUSE

1. River Water (A Train) Header ruptured.
2. Improper valve lineup.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

1. STOP THE OPERATING A TRAIN RIVER WATER PUMPS ON UNIT 1 AND UNIT 2 MCB.
2. CLOSE VALVE QSP25V514, RW HDR TO POND ISO A TRAIN.
3. DISPATCH PLANT OPERATOR TO LOCATE AND ISOLATE THE CAUSE OF THE FLOODING.
4. PERFORM ANY ACTIONS REQUIRED FOR ANNUNCIATOR AD2, RW PRESS A TRN LO.
5. SECURE POWER TO THE A TRAIN PORTION OF THE RIVER WATER STRUCTURE AS FOLLOWS:
  - 5.1 OPEN SUPPLY BREAKER TO STATION SERVICE TRANSFORMER 1H BREAKER DH-02-1.
  - 5.2 OPEN SUPPLY BREAKER TO STATION SERVICE TRANSFORMER 2H BREAKER DH-02-2.
6. IF FLOODING IS DUE TO HIGH RIVER LEVEL, THEN PERFORM ANY ACTIONS REQUIRED FOR ANNUNCIATORS AG1 AND AH1 RIVER LVL A (B) TRN HI.

(continued from page 1)

LOCATION AD1

## SUPPLEMENTARY ACTION

---

NOTE

FW hdr to pond iso A Train may be in the closed position as a result of immediate actions.

---

1. IF the cause of the flooding is isolable AND the A Train River Water Header can be returned to operation, THEN refer to FNP-0-SOP-25.0, RIVER WATER SYSTEM and return the header to service.
2. Notify appropriate plant personnel to correct the cause of the flooding.
3. Return the A Train River Water Header to service as soon as possible.

References: A-177100, Sh. 66; A-170750, Sh. 8; D-170119, Sh. 6;  
D-173497

LOCATION AD2

SETPOINT: 20 ± 1.0 PSIG

ORIGIN: 1. Pressure Switch QSP25PS512-A  
2. Pressure Switch QSP25PS513-A

D2
RW PRESS A TRN LO

PROBABLE CAUSE

1. Ruptured A Train River Water Header.
2. Loss of suction to A Train River Water Pumps.
3. A Train River Water Pumps tripped.
4. Failed open recirculation valve QSP25V527.
5. Improper valve lineup.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

1. CHECK INDICATIONS AND ATTEMPT TO IDENTIFY THE CAUSE OF A TRAIN RIVER WATER LOW PRESSURE.
2. IF THE LOW PRESSURE WAS CAUSED BY LOSS OF A RIVER WATER PUMP, THEN START ANOTHER RIVER WATER PUMP IN THE A TRAIN.
3. IF THE CAUSE IS OTHER THAN LOSS OF A RIVER WATER PUMP OR PRESSURE CAN NOT BE IMMEDIATELY RESTORED, THEN TRIP THE OPERATING A TRAIN RIVER WATER PUMPS.

SUPPLEMENTARY ACTION

1. Notify plant personnel to determine and correct the cause of the A Train River Water low pressure.
2. Return the A Train River Water System to service as soon as possible.
3. Verify proper Unit 1 service water system operation as indicated by service water pressure above 60 psig and service water wet pit level greater than 184'4" and stable or increasing.

(continued from page 1)

LOCATION AD2

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NOTE

- \* The following actions should be taken for Unit 1 as required to ensure proper SW System operation as determined in step 3.0 above.
- \* Notify Unit 2 operators to take actions per step 4 below.

---

3.1 Open SW A HDR and B HDR EMERG RECIRC TO POND Q1P16V539 and Q1P16V538.

\*\*\*\*\*

CAUTION

All liquid effluent releases must be suspended prior to the following step due to the loss of SW dilution flow.

\*\*\*\*\*

---

NOTE

Power is removed from Q1P16V549 due to Appendix R. The breaker for Q1P16V549 is HS-J4.

- 
- 3.2 Close SW TO DILUTION LINE Q1P16V549.
  - 3.3 WHEN steps 3.1 AND 3.2 are completed, THEN open Breakers FN-G2 for Q1P16V539 and FP-A6 for Q1P16V538 to prevent deadheading the SW Pumps on a spurious valve closure.
  - 3.4 Verify closed LIQUID WASTE RAD. CONT. VLV. 1-LWP-RCV-018 (N1G21V113) (100' LWPP).
  - 3.5 Close UNIT ONE COOLING TOWER BLOWDOWN N1P16V586-N (1B DG Room).
  - 3.6 IF service water pond level falls to 184'4", THEN refer to FNP-0-AOP-31.0, LOSS OF SERVICE WATER POND.
  - 3.7 WHEN the river water system is returned to service, THEN return the service water system to normal as follows:
    - 3.7.1 Open SW TO DILUTION LINE Q1P16V549.
    - 3.7.2 Close breakers FN-G2 for Q1P16V539 and FP-A6 for Q1P16V538.
    - 3.7.3 Close SW A HDR and B HDR EMERG RECIRC TO POND Q1P16V539 and Q1P16V538.
    - 3.7.4 Verify open breaker HS-J4 for Q1P16V549.



(continued from page 2)

LOCATION AD2

- 3.7.5 Verify open SW TO POND EAST and WEST HDR ISO QSP16V507 and QSP16V508 (Unit 2 Main Control Board).
- 3.7.6 Verify closed SW TO WET PIT EAST and WEST HDR ISO QSP16V505 and QSP16V506 (Unit 2 Main Control Board).
- 3.7.7 IF required, THEN open UNIT ONE COOLING TOWER BLOWDOWN N1P16V586-N (1B DG Room).
4. Notify Unit 2 to verify proper Unit 2 service water system operation as indicated by service water pressure above 60 psig and service water wet pit level stable or increasing above 184'4".

---

 NOTE

The following actions should be taken for Unit 2 as required to ensure proper SW system operation as determined in step 4.0 above.

- 
- 4.1 Open SW A HDR and B HDR EMERG RECIRC TO POND Q2P16V539 and Q2P16V538.

\*\*\*\*\*

CAUTION

All liquid effluent releases must be suspended prior to the following step due to the loss of SW dilution flow.

\*\*\*\*\*

---

 NOTE

Power is removed from QP16V549 due to Appendix R. The breaker for Q2P16V549 is HCC-D3.

- 
- 4.2 Close SW TO DILUTION LINE Q2P16V549.
- 4.3 WHEN steps 4.1 AND 4.2 are completed, THEN open breakers FCC-B5 for Q2P16V539 and FDD-B5 for Q2P16V538 to prevent deadheading the SW Pumps on a spurious valve closure.
- 4.4 Verify closed LIQUID WASTE RAD. CONT. VLV. 2-LWP-RCV-018 (N2G21V113) (100' LWPP).
- 4.5 Close UNIT 2 COOLING TOWER BLOWDOWN N2P16V586-N (155' Rad. side).
- 4.6 IF service water pond level falls to 184'4", THEN refer to FNP-0-AOP-31.0, LOSS OF SERVICE WATER POND.

(continued on page 4)

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(continued from page 3)

LOCATION AD2

- 4.7 WHEN the river water system is returned to service, THEN return the service water system to normal as follows:
- 4.7.1 Open SW TO DILUTION LINE Q2P16V549.
  - 4.7.2 Close breakers FCC-B5 for Q2P16V539 and FDD-B5 for Q2P16V538.
  - 4.7.3 Close SW HDR A and B EMERG RECIRC TO POND Q2P16V539 and Q2P16V538.
  - 4.7.4 Verify open breaker HCC-D3 for Q2P16V549.
  - 4.7.5 Verify open SW TO POND EAST and WEST HDR ISO QSP16V507 and QSP16V508.
  - 4.7.6 Verify closed SW TO WET PIT EAST and WEST HDR ISO QSP16V505 and QSP16V506.
  - 4.7.7 IF required, THEN open UNIT TWO COOLING TOWER BLOWDOWN N2P16V586-N (155' Rad. side).
- 4.8 Refer to Technical Specification 3.7.6.2 for LCO requirements.

References: A-177100, Sh. 67; A-170750, Sh. 6; D-170119, Sh. 6;  
D-173497; Technical Specification 3.7.6.2

LOCATION AD3

SETPOINT: 20 ± 1.0 PSIG

ORIGIN: 1. Pressure Switch QSP25PS514-B  
2. Pressure Switch QSP25PS515-B

D3
RW PRESS B TRN LO

PROBABLE CAUSE

1. Ruptured B train River Water Header.
2. Loss of suction to B train River Water Pumps.
3. B train River Water Pumps tripped.
4. Failed open recirculation valve QSP25V526.
5. Improper valve lineup.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

1. CHECK INDICATIONS AND ATTEMPT TO IDENTIFY THE CAUSE OF B TRAIN RIVER WATER LOW PRESSURE.
2. IF THE LOW PRESSURE WAS CAUSED BY LOSS OF A RIVER WATER PUMP, THEN START ANOTHER RIVER WATER PUMP IN B TRAIN.
3. IF THE CAUSE IS OTHER THAN LOSS OF A RIVER WATER PUMP OR PRESSURE CAN NOT BE IMMEDIATELY RESTORED, THEN TRIP THE OPERATING B TRAIN RIVER WATER PUMPS.

SUPPLEMENTARY ACTION

1. Notify appropriate plant personnel to determine and correct the cause of the B train River Water low pressure.
2. Return the B train River Water System to service as soon as possible.
3. Verify proper Unit 1 service water system operation as indicated by service water pressure above 60 psig and service water wet pit level greater than 184'4" and stable or increasing.

(continued from page 1)

LOCATION AD3

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NOTE

- \* The following actions should be taken for Unit 1 as required to ensure proper SW System operation as determined in step 3.0 above.
- \* Notify Unit 2 operators to take actions per step 4.0 below.

---

3.1 Open SW A HDR and B HDR EMERG RECIRC TO POND Q1P16V539 and Q1P16V538.

\*\*\*\*\*

CAUTION

All liquid effluent releases must be suspended prior to the following step due to the loss of SW dilution flow.

\*\*\*\*\*

---

NOTE

Power is removed from Q1P16V549 due to Appendix R. The breaker for Q1P16V549 is HS-J4.

- 
- 3.2 Close SW TO DILUTION LINE Q1P16V549.
  - 3.3 WHEN steps 3.1 AND 3.2 are completed, THEN open breakers FN-G2 for Q1P16V539 and FP-A6 for Q1P16V538 to prevent deadheading the SW Pumps on a spurious valve closure.
  - 3.4 Verify closed LIQUID WASTE RAD. CONT. VLV. 1-LWP-RCV-018 (N1G21V113) (100' WPP).
  - 3.5 Close UNIT ONE COOLING TOWER BLOWDOWN N1P16V586-N (1B DG Room).
  - 3.6 IF service water pond level falls to 184'4", THEN refer to PNP-0-AOP-31.0, LOSS OF SERVICE WATER POND.
  - 3.7 WHEN the river water system is returned to service, THEN return the service water system to normal as follows:
    - 3.7.1 Open SW TO DILUTION LINE Q1P16V549.
    - 3.7.2 Close breakers FN-G2 for Q1P16V539 and FP-A6 for Q1P16V538.
    - 3.7.3 Close SW A HDR and B HDR EMERG RECIRC TO POND Q1P16V539 and Q1P16V538.
    - 3.7.4 Verify open breaker HS-J4 for Q1P16V549.

(continued from page 2)

LOCATION AD3

- 3.7.5 Verify open SW TO POND EAST and WEST HDR ISO QSP16V507 and QSP16V508 (Unit 2 Main Control Board).
- 3.7.6 Verify closed SW TO WET PIT EAST and WEST HDR ISO QSP16V505 and QSP16V506 (Unit 2 Main Control Board).
- 3.7.7 IF required, THEN open UNIT ONE COOLING TOWER BLOWDOWN N1P16V586-N (1B DG Room).
4. Notify Unit 2 to verify proper Unit 2 service water system operation as indicated by service water pressure above 60 psig and service water wet pit level stable or increasing above 184'4".

---

 NOTE

The following actions should be taken for Unit 2 as required to ensure proper SW system operation as determined in step 4.0 above.

- 
- 4.1 Open SW A HDR and B HDR EMERG RECIRC TO POND Q2P16V539 and Q2P16V538.

\*\*\*\*\*

CAUTION

All liquid effluent releases must be suspended prior to the following step due to the loss of SW dilution flow.

\*\*\*\*\*

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 NOTE

Power is removed from QP16V549 due to Appendix R. The breaker for Q2P16V549 is HCC-D3.

- 
- 4.2 Close SW TO DILUTION LINE Q2P16V549.
- 4.3 WHEN steps 4.1 AND 4.2 are completed, THEN open breakers FCC-B5 for Q2P16V539 and FTD-B5 for Q2P16V538 to prevent deadheading the SW Pumps on a spurious valve closure.
- 4.4 Verify closed LIQUID WASTE RAD. CONT. VLV. 2-LWP-RCV-018 (N2G21V113) (100' LWPP).
- 4.5 Close UNIT 2 COOLING TOWER BLOWDOWN N2P16V586-N (155' Rad. side).

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LOCATION AD3

- 4.6 IF service water pond level falls to 184'4", THEN refer to FNP-0-AOP-31.0, LOSS OF SERVICE WATER POND.
- 4.7 WHEN the river water system is returned to service, THEN return the service water system to normal as follows:
- 4.7.1 Open SW TO DILUTION LINE Q2P16V549.
  - 4.7.2 Close breakers FCC-B5 for Q2P16V539 and FDD-B5 for Q2P16V538.
  - 4.7.3 Close SW HDR A and B EMERG RECIRC TO POND Q2P16V539 and Q2P16V538.
  - 4.7.4 Verify open breaker HCC-D3 for Q2P16V549.
  - 4.7.5 Verify open SW TO POND EAST and WEST HDR ISO QSP16V507 and QSP16V508.
  - 4.7.6 Verify closed SW TO WET PIT EAST and WEST HDR ISO QSP16V505 and QSP16V506.
  - 4.7.7 IF required, THEN open UNIT TWO COOLING TOWER BLOWDOWN N2P16V586-N (155' Rad. side).
- 4.8 Refer to Technical Specification 3.7.6.2 for LCO requirements.

References: A-177100, Sh. 68; A-170750, Sh. 6; D-170119, Sh. 6;  
D-173497; Technical Specification 3.7.6.2

LOCATION AD4

SETPOINT: 60 ± 4 PSIG for Q1P16PS504-N  
60 ± 3 PSIG for Q1P16PS505-N

ORIGIN: 1. Pressure Switch (Q1P16PS504-A)  
2. Pressure Switch (Q1P16PS505-A)

D4
SW PRESS A TRN LO

PROBABLE CAUSE

1. A Train Service Water Pump tripped.
2. Improper valve lineup on A Train Service Water.
3. A Train Service Water Minimum Flow Bypass Valve (Q1P16V577) has failed open.
4. Rupture of an A Train Service Water pipe.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

1. CHECK INDICATIONS AND ATTEMPT TO IDENTIFY THE CAUSE OF A TRAIN SERVICE WATER LOW PRESSURE.
2. IF THE LOW PRESSURE WAS CAUSED BY LOSS OF A SERVICE WATER PUMP, THEN START ANOTHER SERVICE WATER PUMP IN A TRAIN.
3. IF THE CAUSE IS OTHER THAN LOSS OF A SERVICE WATER PUMP OR PRESSURE CAN NOT BE IMMEDIATELY RESTORED, THEN PERFORM THE ACTIONS REQUIRED BY FNP-1-AOP-10.0.

SUPPLEMENTARY ACTION

1. Refer to FNP-1-AOP-10.0, LOSS OF TRAIN A OR B SERVICE WATER.
2. Refer to Technical Specification 3.7.4 for LCO requirements with a loss of train A or B service water.
3. Notify plant personnel to determine and correct the cause of the A Train Service Water low pressure.
4. Return the System to a normal lineup as soon as possible.

References: A-177100, Sh. 69; D-170119, Sh. 1 & 2; C-170617;  
A-170750, Sh. 65; B-170033, Sh. 19; B-175968; B-175803  
Technical Specification 3.7.4

LOCATION AD5

SETPOINT: 60 ± 4 PSIG

ORIGIN: 1. Pressure Switch (Q1P16PS502-B)  
2. Pressure Switch (Q1P16PS503-B)

D5
SW
PRESS
B TRN
LO

PROBABLE CAUSE

1. B Train Service Water Pump tripped.
2. Improper valve lineup on B Train Service Water.
3. B Train Service Water Minimum Flow Bypass Valve (Q1P16V579) has failed open.
4. Rupture of a B Train Service Water pipe.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

1. CHECK INDICATIONS AND ATTEMPT TO IDENTIFY THE CAUSE OF B TRAIN SERVICE WATER LOW PRESSURE.
2. IF THE LOW PRESSURE WAS CAUSED BY LOSS OF A SERVICE WATER PUMP, THEN START ANOTHER SERVICE WATER PUMP IN B TRAIN.
3. IF THE CAUSE IS OTHER THAN LOSS OF A SERVICE WATER PUMP OR PRESSURE CAN NOT BE IMMEDIATELY RESTORED, THEN PERFORM THE ACTIONS REQUIRED BY FNP-1-AOP-10.0, LOSS OF TRAIN A OR B SERVICE WATER.

SUPPLEMENTARY ACTION

1. Refer to FNP-1-AOP-10.0, LOSS OF TRAIN A OR B SERVICE WATER.
2. Refer to Technical Specification 3.7.4 for LCO requirements with a loss of train A or B service water.
3. Notify plant personnel to determine and correct the cause for the B Train Service Water low pressure.
4. Return the System to a normal lineup as soon as possible.

References: A-177100, Sh. 70; A-170750, Sh. 20; D-170119, Sh. 1 & 2;  
C-170617; B-170033, Sh. 19; B-175968; B-175803;  
Technical Specification 3.7.4



LOCATION AE1

SETPOINT: 7 3/8" + 1" (Above the Floor)  
- 0

ORIGIN: 1. Level Switch QSW34LS503-B  
2. Level Switch QSW34LS504-B

E1
RW PUMP RM B TRN FLOODING

PROBABLE CAUSE

1. B Train River Water Header ruptured.
2. Improper valve lineup.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

1. STOP THE OPERATING B TRAIN RIVER WATER PUMPS ON UNIT 1 AND UNIT 2 MCB.
2. CLOSE VALVE QSP25V513 RW HDR TO POND ISO TRAIN B.
3. DISPATCH PLANT OPERATOR TO LOCATE AND ISOLATE THE CAUSE OF THE FLOODING.
4. PERFORM ANY ACTIONS REQUIRED FOR ANNUNCIATOR AD3, RW PRESS B TRN LO.
5. SECURE POWER TO THE TRAIN B PORTION OF THE RIVER WATER STRUCTURE AS FOLLOWS:
  - 5.1 OPEN SUPPLY BREAKER TO STATION SERVICE TRANSFORMER 1J BREAKER DJ-01-1.
  - 5.2 OPEN SUPPLY BREAKER TO STATION SERVICE TRANSFORMER 2J BREAKER DJ-01-2.
6. IF FLOODING IS DUE TO HIGH RIVER LEVEL, THEN PERFORM ANY ACTIONS REQUIRED FOR ANNUNCIATORS AG1 AND AH1 RIVER LVL A (B) TRN HI.

(continued from page 1)

LOCATION AE1

## SUPPLEMENTARY ACTION

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NOTE

RW hdr to pond iso B Train may be in the closed position as a result of immediate actions.

---

1. IF the cause of the flooding is isolable AND the B Train River Water Header can be returned to operation, THEN refer to FNP-0-SOP-25.0, RIVER WATER SYSTEM, and return the header to service.
2. Notify appropriate plant personnel to correct the cause of the flooding.
3. Return the B Train River Water Header to service as soon as possible.

References: A-177100, Sh. 71; A-170750, Sh. 9; D-170119, Sh. 6;  
D-173497

LOCATION AE2

E2
RW PUMP TRIPPED

SETPOINT: Not Applicable

ORIGIN: 52-b Contact on any one of the following breakers

1. DJ03-#4 RW Pump
2. DJ04-#5 RW Pump
3. DH03-#8 RW Pump
4. DH04-#9 RW Pump
5. DH05-#10 RW Pump

PROBABLE CAUSE

#4, #5, #8, #9 or #10 River Water Pump tripped  
due to an overload or an electrical fault.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

1. CHECK INDICATIONS AND DETERMINE WHICH RIVER WATER PUMP HAS TRIPPED.
2. START ANOTHER RIVER WATER PUMP IN THE SAME TRAIN AS THE TRIPPED PUMP.

SUPPLEMENTARY ACTION

1. IF a loss of flow in either train of RW has occurred, THEN perform the actions required for annunciator AD2, RW PRESS A TRN LO, or AD3, RW PRESS B TRN LO, as applicable.
2. Notify appropriate personnel to determine and correct the cause of the alarm.
3. Return the River Water electrical and component lineup to normal as soon as possible.

References: A-177100, Sh. 72A, B & C; D-172875; D-172876; D-172877; D-172878;  
D-172879

LOCATION AE3

SETPOINT: 10" + 1" (Above the Floor)

ORIGIN: 1. Level Switch QSW36LS501  
2. Level Switch QSW36LS502

E3
SWIS FLOODING

PROBABLE CAUSE

Rupture of Service Water Header inside the Service Water Structure.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

1. DETERMINE FROM PLACE INSTRUMENTATION WHICH SERVICE WATER TRAIN, (A OR B) HAS THE RUPTURE.
2. STOP THE OPERATING SERVICE WATER PUMPS IN THE AFFECTED TRAIN.
3. NOTIFY PLANT PERSONNEL TO LOCATE AND ISOLATE THE CAUSE OF THE FLOODING.
4. PERFORM ANY ACTIONS REQUIRED BY FNP-1-AOP-10.0, LOSS OF TRAIN A OR B SERVICE WATER.

SUPPLEMENTARY ACTION

1. IF the cause of the flooding can NOT be isolated AND the affected Service Water Train returned to service, THEN perform the actions required by FNP-1-AOP-10.0, LOSS OF TRAIN A OR B SERVICE WATER.
2. IF the cause of the flooding is isolable AND the affected Service Water Header returned to service, THEN refer to FNP-1-SOP-24.0, SERVICE WATER SYSTEM, Section 4.2.
3. Notify appropriate plant personnel to correct the cause of the flooding.
4. Return the affected portion of the Service Water System to service as soon as possible.
5. Refer to Technical Specification 3.7.4 for LCO requirements.

References: A-177100, Sh. 76; A-170750, Sh. 21; D-170119, Sh. 1;  
D-173497; Technical Specification 3.7.4

LOCATION AE4

SETPOINT: Not Applicable

E4

SW  
PUMP  
TRIPPED

ORIGIN: 52-b Contact on any one of the following breakers.

1. DK03-1A SW Pump
2. DK04-1B SW Pump
3. DK05-1C SW Pump A Train
4. DL05-1C SW Pump B Train
5. DL03-1D SW Pump
6. DL04-1E SW Pump

PROBABLE CAUSE

1A, 1B, 1C, 1D or 1E Service Water Pump tripped due to an overload or an electrical fault.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

1. CHECK INDICATIONS AND DETERMINE WHICH SERVICE WATER PUMP HAS TRIPPED.
2. START ANOTHER SERVICE WATER PUMP IN THE SAME TRAIN AS THE TRIPPED PUMP.

SUPPLEMENTARY ACTION

1. Refer to FNP-1-AOP-10.0, LOSS OF TRAIN A OR B SERVICE WATER.
2. Refer to Technical Specification 3.7.4 for LCO requirements with a loss of train A or B service water.
3. Refer to FNP-1-SOP-24.0, SERVICE WATER SYSTEM, step 4.5 or step 4.6 as required to align 1C service water pump to A or B train.
4. Notify appropriate personnel to determine and correct the cause of the alarm.
5. Return the Service Water electrical and component lineup to normal as soon as possible.

References: A-177100, Sh. 74A, B & C; D-172747; D-172748; D-172749; D-172750; D-172751; D-172752; Technical Specification 3.7.4

LOCATION AE5

SETPOINT: 50 + 10 Psig  
 - 0

ORIGIN: 1. Pressure Switch (N1P16PSL3001A-B)  
 2. Pressure Switch (N1P16PSL3001B-A)

E5

SW  
 TO AUX BLDG  
 HDR PRESS  
 A OR B TRN  
 LO

PROBABLE CAUSE

1. A or B Train Service Water Pump tripped.
2. Improper Service Water valve lineup.
3. Service Water line ruptured.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

1. CHECK INDICATIONS AND DETERMINE WHICH TRAIN, A OR B HAS THE LOW PRESSURE.
2. IF THE LOW PRESSURE WAS CAUSED BY LOSS OF A SERVICE WATER PUMP, THEN START ANOTHER SERVICE WATER PUMP IN THE AFFECTED TRAIN.
3. IF THE CAUSE IS OTHER THAN LOSS OF A SERVICE WATER PUMP OR PRESSURE CAN NOT BE IMMEDIATELY RESTORED, THEN PERFORM THE ACTIONS REQUIRED BY FNP-1-AOP-10.0, LOSS OF TRAIN A OR B SERVICE WATER.

SUPPLEMENTARY ACTION

1. Refer to FNP-1-AOP-10.0, LOSS OF TRAIN A OR B SERVICE WATER.
2. Refer to Technical Specification 3.7.4 for LCO requirements with a loss of train A or B service water.
3. Notify plant personnel to determine and correct the cause of the low pressure.
4. Return the system to a normal lineup as soon as possible.

References: A-177100, Sh. 75; B-175968, Sh. 5; D-175003, Sh. 1;  
 D-170119, Sh. 2; B-175810, Sh. 107; Technical Specification 3.7.4

LOCATION AF1

SETPOINT: Not Applicable

F1  SEL SWITCH IN LOCAL CONT
--

ORIGIN: Selector Switch for any of the following breakers or controls:

1. DK03-1A SW Pump
2. DK04-1B SW Pump
3. DK05-1C SW Pump A Train
4. DL05-1C SW Pump B Train
5. DL03-1D SW Pump
6. DL04-1E SW Pump
7. DJ03-#4 RW Pump
8. DJ04-#5 RW Pump
9. DH03-#8 RW Pump
10. DH04-#9 RW Pump
11. DH05-#10 RW Pump
12. Boric Acid to Charging Pump  
Valve QLE21MOV8104-B
13. EG06-1A Station Service Air Compressor
14. Motor Driven Fire Pump

PROBABLE CAUSE

One or more of the Selector Switches listed above, in the local position

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

NO ACTION IS NECESSARY IF THE ALARM IS DUE TO PREPLANNED OPERATIONAL OR MAINTENANCE ACTIVITIES; OTHERWISE SEND APPROPRIATE PERSONNEL TO DETERMINE THE CAUSE OF THE ALARM.

SUPPLEMENTARY ACTION

1. Return the Selector Switch to the Remote position as soon as possible
2. Refer to Technical Specification 3.7.4 for LCO requirements.

References: A-177100, Sh. 76A, B & C; C-172745; D-172875; D-172876; D-172877; D-172878; D-172879; D-172747; D-172748; D-172749; D-172750; D-172751; D-172752; D-177601; C-172869; Technical Specification 3.7.4

LOCATION AF2

SETPOINT: N/A

ORIGIN: Local and power failure relay alarm  
contact in River Water Structure  
local annunciator panel.

F2

RWIS  
ALARMPROBABLE CAUSE

Initiation of any of the alarms on the River Water  
Structure local annunciator panel.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

DISPATCH OPERATOR TO CHECK RIVER WATER STRUCTURE LOCAL  
ANNUNCIATOR PANEL FOR CAUSE OF ALARM.

SUPPLEMENTARY ACTION

Refer to FNP-0-ARP-9, RIVER WATER STRUCTURE, for specific  
actions to be taken in response to any of the alarm  
initiating conditions.

References: A-177100, Sh. 77; D-173187; FNP-0-ARP-9, RIVER WATER STRUCTURE



LOCATION AF3

SETPOINT: N/A

F3

SWIS  
ALARM

ORIGIN: Local and power failure relay alarm  
contact in Service Water Structure  
local annunciator panel.

PROBABLE CAUSE

Initiation of any of the alarms on the Service Water  
Structure local annunciator panel.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

DISPATCH OPERATOR TO CHECK SERVICE WATER STRUCTURE LOCAL  
ANNUNCIATOR PANEL FOR CAUSE OF ALARM.

SUPPLEMENTARY ACTION

Refer to FNP-0-ARP-8, SERVICE WATER STRUCTURE, for specific  
actions to be taken in response to any of the alarm  
initiating conditions.

References: A-177100, Sh. 78; D-173186; FNP-0-ARP-8, SERVICE WATER STRUCTURE

LOCATION AF4

- SETPOINT: 1. Lo Flow Range (< 1980 GPM):  
Diff. Flow HI: 300 + 0 GPM  
                        - 75
2. Hi Flow Range (> 1980 GPM):  
Diff. Flow HI: 750 + 0 GPM  
                        - 30

F4

CTMT CLR  
SW FLOW  
HI-LO

- ORIGIN: 1. Flow Switch (Q1P16FDSH3013AA-N)  
2. Flow Switch (Q1P16FDSH3013AB-N)  
3. Flow Switch (Q1P16FDSH3013BA-N)  
4. Flow Switch (Q1P16FDSH3013BB-N)

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NOTE

The appropriate alarm range is selected automatically in response to existing flow conditions; Lo Range for for inlet flow < 1980 gpm and Hi Range for inlet > 1980 gpm. The alarm comes in based on high diff flow from inlet to outlet.

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PROBABLE CAUSE

1. Improper Service Water to Containment Cooler valve lineup.
2. Rupture or leak in Service Water piping.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

1. CHECK INDICATIONS AND DETERMINE WHICH SERVICE WATER TRAIN, A OR B, HAS THE HIGH DIFFERENTIAL FLOW ACROSS THE COOLERS.
2. ISOLATE SERVICE WATER TO THE CONTAINMENT COOLERS IN THE AFFECTED TRAIN.

(continued from page 1)

Location AF4

## SUPPLEMENTARY ACTION

1. Refer to FNP-1-SOP-12.1, CONTAINMENT AIR COOLING SYSTEM.
2. Have plant personnel determine the cause for the containment cooler service water high differential flow.
3. IF high differential flow is due to improper valve lineup, THEN have plant personnel correct the valve lineup in the affected train.
4. IF high differential flow is due to rupture in line, THEN isolate the affected CTMT cooler service water inlet valves (1-SW-MOV-3019A, B, C, D) and outlet valves (1-SW-MOV-3024A, B, C, and D and 1-SW-MOV-3023A, B, C and D).
5. Return system to normal lineup as soon as possible.

References: A-177100, Sh. 79; B-175968; D-175003, Sh. 1; U-199344; U-199361

LOCATION AF5

SETPOINT: 9.0 + 1.5 PSID (~15,000 GPM)

- ORIGIN:
1. Diff. Pressure Switch (Q1P16PDS565-A)
  2. Diff. Pressure Switch (Q1P16PDS566-B)
  3. Diff. Pressure Switch (Q1P16PDS568-A)
  4. Diff. Pressure Switch (Q1P16PDS569-B)

F5

SW TO  
TURB BLDG  
A OR B TRN  
FLOW HI

PROBABLE CAUSE

Rupture of the Service Water piping in the Turbine Building.

AUTOMATIC ACTION

Service Water to Turbine Building A and B Train isolation valves will close if service water flow in either train to the turbine building turbine building exceeds -17,600 GPM (11 + 1.5 PSID).

IMMEDIATE ACTION

1. IF SERVICE WATER FLOW HAS BEEN LOST TO THE TURBINE BUILDING, THEN ATTEMPT TO RESTORE SERVICE WATER FLOW.
2. IF SERVICE WATER FLOW CAN NOT BE IMMEDIATELY RESTORED, THEN PERFORM THE ACTIONS REQUIRED BY FNP-1-AOP-7.0, LOSS OF TURBINE BUILDING SERVICE WATER.

SUPPLEMENTARY ACTION

1. IF annunciator LJ3, HYDROGEN TEMPERATURE HI, alarms, THEN trip the reactor and refer to FNP-1-EEP-0, REACTOR TRIP OR SAFETY INJECTION.
2. Refer to FNP-1-AOP-7.0, LOSS OF TURBINE BUILDING SERVICE WATER.
3. Notify appropriate personnel to locate and correct the cause of the alarm.

References: A-177100, Sh. 80; D-172674, Sh. 1 & 2; D-170119, Sh. 2; A-170750, Sh. 19

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LOCATION AG1SETPOINT: 124' 0"  $\pm$  0.5"

ORIGIN: Level Switch QSP25LS554A

G1

RIVER LVL  
A TRN  
HIPROBABLE CAUSE

1. Excessive rain and runoff.
2. Instrument failure.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

DISPATCH OPERATOR TO DETERMINE IF ALARM IS DUE TO AN ACTUAL HIGH LEVEL CONDITION OR AN INSTRUMENT FAILURE.

SUPPLEMENTARY ACTION

1. Monitor building sump levels to insure site facilities are not flooded.
2. IF flooding of the River Water Structure occurs, THEN perform the following actions:
  - 2.1 Stop all river water pumps.
  - 2.2 Perform the actions required for annunciator AD1, RW PUMP RM A TRN FLOODING, and for AE1, RW PUMP ROOM B TRN FLOODING.
  - 2.3 Implement EIP-9, Guideline 4, Notification of Unusual Event or EIP-9, Guideline 3, Alert, depending on severity of flood and effect on plant operation.
3. IF alarm is due to an instrument failure, THEN have appropriate plant personnel investigate and correct the cause of the failure.

References: A-177100, Sh. 81; A-170750, Sh. 6; B-170270, Sh. 12;  
D-170119, Sh. 6; D-173497

LOCATION AG2SETPOINT: 74' 0"  $\pm$  0.5"

ORIGIN: Level Switch QSP25LS555-A

G2
RIVER LVL A TRN LO

PROBABLE CAUSE

1. Excessive drought conditions.
2. Instrument failure.
3. Excessive amount of trash on intake screens.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

DISPATCH OPERATOR TO DETERMINE IF ALARM IS DUE TO AN ACTUAL LOW LEVEL CONDITION, AN INSTRUMENT FAILURE OR CLOGGED INTAKE SCREENS.

SUPPLEMENTARY ACTION

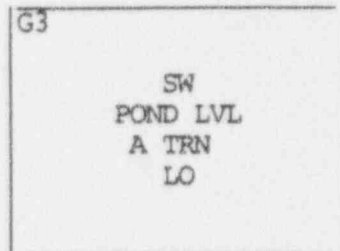
1. Monitor river level. IF River Water System intake level drops to 67', THEN trip the River Water and Screen Wash Pumps per FNP-0-SOP-25.0, RIVER WATER SYSTEM. Perform the actions required for annunciator AD2, RW PRESS A TRN LO and AD3, RW PRESS B TRN LO.
2. IF alarm is due to an instrument failure, THEN have appropriate plant personnel investigate and correct the cause of the failure.
3. IF alarm is due to trash on intake screens, THEN wash screens until clean.

References: A-177100, Sh. 82; A-170750, Sh. 6; B-170270, Sh. 12;  
D-170119, Sh. 6; D-173497

LOCATION AG3

SETPOINT: 184' 4" + 1"  
- 0

ORIGIN: Level Switch QSP25LS508-A



PROBABLE CAUSE

1. Failure of Service Water Pond Level control switches QSP25LS510-A and/or QSP25LS511-B.
2. Rupture of River Water Normal Makeup to pond pipe.
3. River Water System inoperable.

AUTOMATIC ACTION

Starts #6, 7, 8, 9 and 10 River Water Pumps.

IMMEDIATE ACTION

1. VERIFY AUTOMATIC ACTIONS HAVE OCCURED.
2. DISPATCH APPROPRIATE PERSONNEL TO DETERMINE CAUSE OF ALARM.
3. PERFORM THE ACTIONS REQUIRED FOR ANNUNCIATOR AD2, RW PRESS A TRN LO AND AD3, RW PRESS B TRN LO.

SUPPLEMENTARY ACTION

1. Monitor pond level. IF level continues to decrease, THEN refer to Technical Specifications, Section 3.7.6.2 for LCO requirements, and refer to FNP-0-AOP-31.0, LOSS OF SERVICE WATER POND.
2. IF river water pump operation restores the service water pond level to normal operating level, THEN return system to normal operation at a level of 185' 6".
3. Have appropriate plant personnel correct the cause of the alarm.
4. Return system to normal operation as soon as possible.

References: A-177100, Sh. 83; A-170750, Sh. 7; D-170119, Sh. 6 & 7;  
D-172780; D-172782; D-172877; D-172878; D-172879;  
D-202877; D-202878; Technical Specification 3.7.6.2

LOCATION AG4SETPOINT: 170' 0"  $\pm$  0.5"ORIGIN: Service Water Wet Pit Low Level  
Switch QSP25LS550-A

G4

SW  
WET PIT LVL  
A TRN  
LOPROBABLE CAUSE

1. Loss of Service Water Pond.
2. Instrument Failure.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

1. Ensure #6, 7, 8, 9 and 10 River Water Pumps are running.
2. Ensure the River Water Emergency Supply to Service Water Wet Pit Valve QSP25V517A is open.
3. Check MCB indication to determine validity of alarm.
4. Dispatch plant personnel to determine cause of alarm.

SUPPLEMENTARY ACTION

1. Refer to FNP-0-AOP-31.0, LOSS OF SERVICE WATER POND.
2. Refer to Technical Specification, Section 3.7.6.2 for LCO Requirements with a Loss of the Service Water Pond.
3. Have appropriate plant personnel correct the cause for the alarm.
4. Return systems to normal operation as soon as possible.

References: A-177100, Sh. 84; A-170750, Sh. 6; D-170119, Sh. 7;  
Technical Specification 3.7.6.2



LOCATION AG5

SETPOINT: 98 ± 3°F

ORIGIN: Temperature Indicator IN-58  
(N1P16TR4130).

G5

DILUTION  
DISCH  
TEMP  
HIPROBABLE CAUSE

1. Loss of Service Water to the Dilution Line.
2. High effluent temperature or flow from:
  - a. Cooling Tower Blowdown
  - b. Rad Waste Discharge

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

1. CHECK INDICATIONS AND VERIFY THAT SERVICE WATER DISCHARGE TO DILUTION LINE VALVES ARE OPEN.
2. START AN ADDITIONAL A OR B TRAIN SERVICE WATER PUMP AS REQUIRED TO LOWER SERVICE WATER DISCHARGE TEMPERATURE BY INCREASING DILUTION LINE BYPASS FLOW.

SUPPLEMENTARY ACTION

1. Notify the Environmental Group of the Dilution Discharge high temperature.
2. Notify appropriate personnel to determine and correct the cause for the Dilution Discharge high temperature alarm.

References: A-177100, Sh. 85; D-170119, Sh. 2

LOCATION AH1SETPOINT: 124' 0"  $\pm$  0.5"

ORIGIN: Level Switch QSP25LS556-B

HI  RIVER LVL B TRN HI
------------------------------------

PROBABLE CAUSE

1. Excessive rain and runoff.
2. Instrument failure.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

DISPATCH OPERATOR TO DETERMINE IF ALARM IS DUE TO AN ACTUAL HIGH LEVEL CONDITION OR A INSTRUMENT FAILURE.

SUPPLEMENTARY ACTION

1. Monitor building sump levels to insure site facilities are not flooded.
2. IF flooding of the River Water Structure occurs, THEN perform the following actions:
  - 2.1 Stop all river water pumps.
  - 2.2 Perform the actions required for annunciator AD1, RW PUMP RM A TRN FLOODING, and for AE1, RW PUMP ROOM B TRN FLOODING.
  - 2.3 Implement EIP-9, Guideline 4, Notification of Unusual Event, or EIP-9, Guideline 3, Alert, depending on severity of flood and effect on plant operation.
3. IF alarm is due to an instrument failure, THEN have appropriate plant personnel investigate and correct the cause of the failure.

References: A-177100, Sh. 86; A-170750, Sh. 7; B-170270, Sh. 12;  
 D-170119, Sh. 6; D-173497

LOCATION AH2SETPOINT: 74' 0"  $\pm$  0.5"

ORIGIN: Level Switch QSP25LS557-B

H2

RIVER LVL  
B TRN  
LOPROBABLE CAUSE

1. Extended drought conditions.
2. Instrument failure.
3. Excessive amount of trash on intake screens.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

DISPATCH OPERATOR TO DETERMINE IF ALARM IS DUE TO AN ACTUAL LOW LEVEL CONDITION, AN INSTRUMENT FAILURE OR CLOGGED INTAKE SCREENS.

SUPPLEMENTARY ACTION

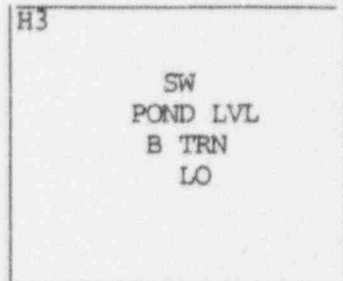
1. Monitor river level. IF River Water System intake level drops to 67', THEN trip the River Water and Screen Wash pumps per FNP-0-SOP-25.0, RIVER WATER SYSTEM. Perform the actions required for annunciator AD2, RW PRESS A TRN LO and AD3, RW PRESS B TRN LO.
2. IF alarm is due to an instrument failure, THEN have appropriate plant personnel investigate and correct the cause of the failure.
3. IF alarm is due to trash on intake screens, THEN wash screens until clean.

References: A-177100, Sh. 87; A-170750, Sh. 7; B-170270, Sh. 12;  
D-170119, Sh. 6; D-173497

LOCATION AH3

SETPOINT: 184' 4" + 1"  
- 0

ORIGIN: SW Pond Low Level Switch  
(QSP25LS509-B)



PROBABLE CAUSE

1. Failure of Service Water Pond Level control switches QSP25LS510-A and/or QSP25LS511-B.
2. Rupture of River Water normal makeup to pond pipe.
3. River Water System inoperable.

AUTOMATIC ACTION

Starts #1, 2, 3, 4 and 5 River Water Pumps. |

IMMEDIATE ACTION

1. VERIFY AUTOMATIC ACTIONS HAVE OCCURED.
2. DISPATCH APPROPRIATE PERSONNEL TO DETERMINE CAUSE OF ALARM.
3. IF RIVER WATER SYSTEM IS DETERMINED TO BE INOPERABLE, THEN PERFORM THE ACTIONS REQUIRED FOR ANNUNCIATOR AD2, RW PRESS A TRN LO AND AD3, RW PRESS B TRN LO.

SUPPLEMENTARY ACTION

1. Monitor pond level. IF level continues to decrease, THEN refer to Technical Specifications, Section 3.7.6.2 for LCO Requirements and to FNP-0-AOP-31.0, LOSS OF SERVICE WATER POND. Take appropriate action.
2. IF River Water Pump operation restores the Service Water Pond Level to normal operating level, THEN return system to normal operation at a level of 185' 6".
3. Have appropriate plant personnel correct the cause of the alarm.
4. Return system to normal operation as soon as possible.

References: A-177100, Sh. 88; A-170750, Sh. 7; D-170119, Sh. 6 & 7;  
D-172791; D-172793; D-172875; D-172876; D-202875;  
D-202876; D-202879; Technical Specification 3.7.6.2

LOCATION AH4SETPOINT: 170' 0"  $\pm$  0.5"ORIGIN: Service Water Wet Pit Low  
Level Switch QSP25LS551-B

H4

SW  
WET PIT LVL  
B TRN  
LOPROBABLE CAUSE

1. Loss of Service Water Pond.
2. Instrument failure.

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

1. ENSURE #1, 2, 3, 4 and 5 RIVER WATER PUMPS ARE RUNNING.
2. ENSURE THE RIVER WATER EMERGENCY SUPPLY TO SERVICE WATER WET PIT VALVE QSP25V518-B IS OPEN.
3. CHECK MCB INDICATION TO DETERMINE VALIDITY OF ALARM.
4. DISPATCH PLANT PERSONNEL TO DETERMINE CAUSE OF ALARM.

SUPPLEMENTARY ACTION

1. Refer to FNP-0-AOP-31.0, LOSS OF SERVICE WATER POND.
2. Refer to Technical Specifications, Section 3.7.6.2 for LCO Requirements with A Loss of the Service Water Pond.
3. Have appropriate plant personnel correct the cause for the alarm.
4. Return systems to normal operation as soon as possible.

References: A-177100, Sh. 89; A-170750, Sh. 6; D-170119, Sh. 6;  
Technical Specification 3.7.6.2

LOCATION AH5

SETPOINT: N/A

ORIGIN: Metal Impact Monitoring  
System Panel

H5

MIMS  
ALARMPROBABLE CAUSE

1. Loose parts in reactor vessel.
2. Loose parts in steam generator(s).

AUTOMATIC ACTION

NONE

IMMEDIATE ACTION

1. NOTIFY SHIFT SUPERVISOR IMMEDIATELY.
2. DETERMINE ALARM SOURCE CHANNEL AND MONITOR MIMS FOR RECURRING METALLIC NOISES.
3. IF CH. 755 IS ALARM SOURCE, THEN
  - A. START THE TEMPORARY MIMS RECORDER BY PUSHING THE REC AND FWD BUTTONS
  - B. HAVE THE B-MAN TAKE RCP VIBRATION DATA IMMEDIATELY.

SUPPLEMENTARY ACTION

1. Record alarm receipt in Operator's Log.
2. Notify on-call Operations Manager of MIMS condition.

References: A-177100, Sh. 90; PCN S-83-1412; U-214743

PROCEDURE REQUEST FORM

1. Procedure Number FNP-1-ARP-1.1 Revision Number 26  
 Procedure Title MAIN CONTROL BOARD  
ANNUNCIATOR PANEL A

- Safety Related  Non-Safety Related
- New Procedure Request
- Procedure Revision.....New Revision Number \_\_\_\_\_
- Procedure To Be Voided
- Temporary Change Effective Until Next Permanent Revision.....TCN 26A
- Temporary Change To Be Voided.....TCN \_\_\_\_\_
- Temporary Change One-Time-Only or Req'd by Plant Conditions.....TCN \_\_\_\_\_
- \_\_\_\_\_ Dates this Temporary Change is effective: From \_\_\_\_\_ Through \_\_\_\_\_
- This Procedure is an infrequently performed test or evolution.

2. Change Summary  
 2.1 Procedure Page Number(s) Affected by Change(s): AC1, AC2, AC3,  
AC4, AC5

2.2 Description of Change(s): Deleted Annunciators AC1, AC2,  
AC3 and modified content for AC4 and AC5

2.3 Reason(s) for Change(s): reflect implementation of  
PCN's 885-1-3376 and 893-1-8485.

3. Prepared By: C F Wertz Shift Foreman 3-29-94  
Signature Title Date

4. Reviewed By: Michael Smith Grp. Sr. 3-29-94  
Signature Title Date

5. Cross-Disciplinary / PORC Review

Group	Signature	Title	Date
_____	_____	_____	_____
_____	_____	_____	_____

6. Temporary Change Approval (Signature/Date)

- Member Group Staff Michael Smith / 3-29-94
- Shift Foreman \_\_\_\_\_ / \_\_\_\_\_
- Senior Reactor Operator C F Wertz / 3-29-94
- General Manager - Nuclear Plant \_\_\_\_\_ / \_\_\_\_\_

7. Final Approval (Signature/Date, required within 60 days of temporary approval)

- Group Supervisor \_\_\_\_\_ / \_\_\_\_\_
- Manager \_\_\_\_\_ / \_\_\_\_\_
- MSAER \_\_\_\_\_ / \_\_\_\_\_
- Vice-President - Nuclear \_\_\_\_\_ / \_\_\_\_\_
- \_\_\_\_\_ / \_\_\_\_\_
- General Manager - Nuclear Plant \_\_\_\_\_ / \_\_\_\_\_

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FARLEY NUCLEAR PLANT		10 CFR 50.59 EVALUATION		SHEET 1 OF 1	
A	Unit Number:	<input checked="" type="checkbox"/> One	<input type="checkbox"/> Two	<input type="checkbox"/> Shared	
	Document Number:	FNP-1-ARP-1.1	Revision or TCN Number:	TCN 26A	
B	<b>10 CFR 50.59 SCREENING</b> Does the document to which this evaluation applies represent:				
	1. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No A change to the plant as described in the FSAR?  <b>Basis for answer:</b> This change reflects the deletion of 3 annunciator windows and the change to 2 windows under PCN B85-1-3376 and PCN B93-1-8485 which were implemented in accordance with 10CFR50.59.				
	2. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No A change to procedures as described in the FSAR?  <b>Basis for answer:</b> This change reflects PCN B85-1-3376 and PCN B93-1-3485 which were implemented in accordance with 10CFR50.59.				
	3. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No A test or experiment not described in the FSAR?  <b>Basis for answer:</b> This change does not constitute a test or experiment per the definition in FNP-0-AP-88.				
	4. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No A change to the Technical Specifications?  <b>Basis for answer:</b> Reviewed Technical Specification requirements and verified no changes are required.				
<b>If ANY of the four questions in Section B are answered "Yes", then PORC review of the safety evaluation is required prior to implementation.</b>					
C	Preparer: <u>C. J. West</u> Date: <u>3-29-94</u> Reviewed By: _____ Date: _____ Reviewer: <u>Michael J. [Signature]</u> Date: <u>3-29-94</u> Reviewed By: _____ Date: _____ Reviewed By: _____ Date: _____ Approved By: _____ Date: _____ Reviewed By: _____ Date: _____ FNP Approved By: _____ Date: _____ Reviewed By: _____ Date: _____ PORC Review By: _____ Date: _____ Reviewed By: _____ Date: _____ NORB Review By: _____ Date: _____				

Figure 1