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R4-5A23

CNS OPERATIONS MANUAL ALARM PROCEDURE 2.3_SW-GLND-B SW GLAND WATER SUPPLY PANEL - ANNUNCIATOR 1B	CLASS: CONTINUOUS ⊕ EFFECTIVE: 1/19/04 APPROVAL: SORC/IQA OWNER: OSG SUPV DEPARTMENT: OPS
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PANEL/WINDOW LOCATION: 1B/A-3

**GLAND WATER
SYSTEM B
LOW PRESSURE**

SETPOINT	CIC
Relay operation caused by:	SW-REL-CR(B)
1. Gland Water B Subsystem < 14 psig	1. SW-PS-388
2. SW Gland Water Subsystem B < 14 psig for 18 seconds	2. SW-PS-388 and SW-REL-TR(B) timing out
3. Loss of power to DPIS-1B	3. None

1. AUTOMATIC ACTIONS

1.1 SW-MO-2129, SW GLD SEAL SUPP FROM LOOP B, opens if closed.

NOTE - Annunciator 1B/C-3, FP FLOW TO GLAND SEAL, alarming indicates SW-SSV-10 is de-energized/open.

1.2 SW-SSV-10, FIRE PROTECTION BACKUP TO SW PUMPS GLAND SEAL, opens when SW Gland Water Subsystem A or B < 14 psig plus an 18 second time delay.

2. OPERATOR OBSERVATION AND ACTION

NOTE - If gland water supply from SW pump discharge prior to alarm, FP backup and Riverwell supplies are isolated.

2.1 If SW pump discharge supplying gland water at time of alarm and alarm due to low gland water system pressure:

2.1.1 Check Gland Water Subsystem B for leaks.

2.1.2 If Zurn Strainer B D/P > 6 psid, ensure strainer in backwash operation.

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- 2.1.3 If SW Pump B gland water flow < 1.5 gpm on SW-FIS-361B, SEAL WATER TO SW PUMP B SEALS:
 - 2.1.3.1 Contact Control Room to start another available SW pump.
 - 2.1.3.2 Inform Control Room to secure SW Pump B.
 - 2.1.3.3 Notify SM to determine SW Pump B OPERABILITY.
- 2.1.4 If SW Pump D gland water flow < 1.5 gpm on SW-FIS-361D, SEAL WATER TO SW PUMP D SEALS.
 - 2.1.4.1 Contact Control Room to start another available SW pump.
 - 2.1.4.2 Inform Control Room to secure SW Pump D.
 - 2.1.4.3 Notify SM to determine SW Pump D OPERABILITY.
- 2.2 If Riverwell supplying gland water at time of alarm and alarm due to low Gland Water System pressure:
 - 2.2.1 Ensure SW-MO-2129, SW GLD SEAL SUPP FROM LOOP B, open.
 - 2.2.2 Ensure SW-SSV-10 open.
 - 2.2.3 Check Gland Water Subsystem B for leaks.
 - 2.2.4 If Zurn Strainer B D/P > 6 psid, ensure strainer in backwash operation.
 - 2.2.5 Perform any of following to obtain 40 to 50 psig on SW-PI-394, SEAL WATER TO SW PUMP B&D SEALS:
 - 2.2.5.1 Adjust SW-PIC-361B, SEAL WATER TO SW PUMPS B AND D.
 - 2.2.5.2 Throttle SW-1237, RIVERWELL SEAL WATER SUPPLY TO SW PUMPS B AND D.
 - 2.2.5.3 Throttle SW-27, PCV-361B BYPASS.

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- 2.2.6 If pressure on SW-PI-394, 40 to 50 psig and SW Pump B gland water flow < 1.5 gpm on SW-FIS-361B, SEAL WATER TO SW PUMP B SEALS:
 - 2.2.6.1 Contact Control Room to start another available SW pump.
 - 2.2.6.2 Inform Control Room to secure SW Pump B.
 - 2.2.6.3 Notify SM to determine SW Pump B OPERABILITY.

- 2.2.7 If pressure on SW-PI-394, 40 to 50 psig and SW Pump D gland water flow < 1.5 gpm on SW-FIS-361D, SEAL WATER TO SW PUMP D SEALS:
 - 2.2.7.1 Contact Control Room to start another available SW pump.
 - 2.2.7.2 Inform Control Room to secure SW Pump D.
 - 2.2.7.3 Notify SM to determine SW Pump D OPERABILITY.

- 2.2.8 If gland water supply transferred to another source and SW System Engineer has not determined effect on SW Pumps B and D OPERABILITY:
 - 2.2.8.1 Notify SM to declare SW Pumps B and D inoperable.
 - 2.2.8.2 Initiate Notification for Engineering Evaluation.

- 2.2.9 If SW-MO-2129 opened and not needed, at SW Gland Water Control Panel 1B, close SW-MO-2129.

- 2.2.10 If SW-SSV-10 opened and not needed, perform following:
 - 2.2.10.1 At SW Gland Water Control Panel 1A, check SYSTEM NORMAL light is on.
 - 2.2.10.2 At SW Gland Water Control Panel 1B, press RESET button.
 - a. Check SYSTEM NORMAL light turns on.

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PANEL/WINDOW LOCATION: 1B/A-3

2.2.10.3 Check SW Gland Water Panel B, Annunciator 1B/C-3, FP FLOW TO GLAND SYSTEM, is clear.

2.3 If FP supplying gland water at time of alarm and alarm due to low Gland Water System pressure:

2.3.1 Ensure SW-MO-2129, SW GLD SEAL SUPP FROM LOOP B, open.

2.3.2 Check Gland Water Subsystem B for leaks.

2.3.3 If Zurn Strainer B D/P > 6 psid, ensure strainer in backwash operation.

2.3.4 Perform any of following to obtain 40 to 50 psig on PI-394, SEAL WATER TO SW PUMP B&D SEALS:

2.3.4.1 Adjust SW-PIC-361B, SEAL WATER TO SW PUMPS B AND D.

2.3.4.2 Throttle SW-27, PCV-361B BYPASS.

2.3.5 If pressure on SW-PI-394, 40 to 50 psig and SW Pump B gland water flow < 1.5 gpm on SW-FIS-361B, SEAL WATER TO SW PUMP B SEALS:

2.3.5.1 Contact Control Room to start another available SW pump.

2.3.5.2 Inform Control Room to secure SW Pump B.

2.3.5.3 Notify SM to determine SW Pump B OPERABILITY.

2.3.6 If pressure on SW-PI-394, 40 to 50 psig and SW Pump D gland water flow < 1.5 gpm on SW-FIS-361D, SEAL WATER TO SW PUMP D SEALS:

2.3.6.1 Contact Control Room to start another available SW pump.

2.3.6.2 Inform Control Room to secure SW Pump D.

2.3.6.3 Notify SM to determine SW Pump D OPERABILITY.

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2.3.7 If gland water supply transferred to another source and SW System Engineer has not determined effect on SW Pumps B and D
OPERABILITY:

2.3.7.1 Declare SW Pumps B and D inoperable.

2.3.7.2 Initiate Notification for Engineering Evaluation.

2.3.8 If SW-MO-2129 opened and not needed, at SW Gland Water Control Panel 1B, close SW-MO-2129.

2.4 If loss of power to DPIS-1B caused alarm and FP supply to gland water isolated, perform following when power restored:

2.4.1 At SW Gland Water Control Panel 1A, check SYSTEM NORMAL light is on.

2.4.2 At SW Gland Water Control Panel 1B, press RESET button.

2.4.2.1 Check SYSTEM NORMAL light turns on.

2.4.3 Check SW Gland Water Panel B, Annunciator 1B/C-3, FP FLOW TO GLAND SYSTEM, is clear.

3. PROBABLE CAUSES

3.1 Loss of Riverwell System.

3.2 Loss of power to DPIS-1A or DPIS-1B.

3.3 SW-PCV-361B failure.

3.4 Loss of service water pumps.

4. REFERENCES

4.1 System Operating Procedure 2.2.71, Service Water System.

4.2 Design Change 90-174B-2.

FP FLOW TO
GLAND SYSTEM

SETPOINT

1. 1 gpm

CIC

1. SW-FS-657

1. AUTOMATIC ACTIONS

1.1 None.

2. OPERATOR OBSERVATION AND ACTION

NOTE - If gland water supply from SW pump discharge prior to alarm, FP backup and Riverwell supplies are isolated.

2.1 Refer to Alarm 1B/A-3 on this panel and/or Alarm 1A/A-3 on SW Gland Water Control Panel 1A, as conditions dictate.

3. PROBABLE CAUSE

3.1 Loss of power to Panel DPIS-1A or DPIS-1B.

3.2 Loss of Riverwell System and SW supply.

4. REFERENCES

4.1 Annunciator Procedure 2.3_SW-GLND-A, SW Gland Water Supply Panel - Annunciator 1A.