HOPE CREEK GENERATING STATION

HC.OP-AR.ZZ-0024(Q) - Rev. 7

CRIDS COMPUTER POINTS BOOK 5
D3624 THRU D4288

USE CATEGORY: II

- Packages and Affected Document Numbers incorporated into this revision:
  CP No. _____ CP Rev. _____ AD No. _____ Rev No. _____ None ✓
- The following OPEX were incorporated into this revision: None
- The following OTSCs were incorporated into this revision: None

REVISION SUMMARY

- Adds Operator Action 5 to D3837 to "**DISPATCH** an operator to the Torus Room (RB 4102, 54 ft elev) to check the drywell shell, drywell pedestal, and drains at the bottom of the drywell air gap for leakage". This enhances the monitoring of the drywell shell. This additional step is for an observation and does not impact any actions. This is an editorial change. (20473157)
- Adds an operator action to "**LOWER** fuel pool level back to normal level band IAW HC.OP-SO.EC-0001(Q), Section 5.17" to D3832 and D3833. This action refers to an approved procedure and is editorial. (70104815-0020)

IMPLEMENTATION REQUIREMENTS **Effective Date 8/24/10**

None

DIGITAL ALARM POINT D3624

NOMENCLATURE	MN TURB QUILL SHAFT FAILURE	**SETPOINT**	>100 rpm with <1.5 rpm
DESCRIPTION	Problem at front standard as indicated by conflicting speed indications	**ORIGIN**	Speed elements

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **ENSURE** proper turning gear operation
   (IF turbine is coasting down, locking out automatic turning gear operation may be necessary to prevent premature engagement.
2. **MAINTAIN** proper bearing oil header pressure.

CAUSE CORRE	CTIVE ACTION
1. Quill Shaft failed OR MSOP Shaft/Gear failed	1A. **ENSURE** TGOP OR EBOP auto starts to maintain bearing header pressure. 1B. **REQUEST** SM/CRS initiate a NOTF.

Associated Annunciator D3 B5

REFERENCES: J-0100-0, Sht. 2, Sht. 12, Sht. 13, Sht. 18

DIGITAL ALARM POINT D3625

NOMENCLATURE TURBINE GEAR MALF/INOP **SETPOINT** N/A

DESCRIPTION INOP/MALF **ORIGIN** N/A

AUTOMATIC ACTION:

None

OPERATOR ACTION:

1. **MAINTAIN** proper bearing oil header pressure.
2. **ENSURE** proper Turning Gear operation.

CAUSE CORRE	CTIVE ACTION
1. Low Speed Switch made up with Turning Gear failure to automatically operate.	1A. Manually **START** Turning Gear (HS-7110) WHEN directed by SM/CRS. 1B. **DETERMINE** cause of failure of automatic operation.
2. Loss of control power to DC638 from MCC B323.	2A. **DETERMINE** cause of power failure AND **RESTORE** the power, IF possible.

Associated Annunciator D3 B5

REFERENCES: J-0100-0, Sht. 2, Sht. 12, Sht. 13, Sht. 18

DIGITAL ALARM POINT D3626

NOMENCLATURE MN TURB EHC PMP A IN AUTO

SETPOINT N/A

DESCRIPTION AP116 not in AUTO WHEN BP116 is running

ORIGIN HS-7064-1

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

IF conditions permit,
PLACE AP116 in AUTO (HS-7064-1).

CAUSE CORRE	CTIVE ACTION
1. AP116 not in AUTO WHEN BP116 is running.	1A. IF conditions permit, **PLACE** AP116 in AUTO.

Associated Annunciator D3 F5

REFERENCES: J-0100-0, Sht. 4, Sht. 17

DIGITAL ALARM POINT D3627

NOMENCLATURE	MAIN TURB EHC PUMP A FILTER DP	**SETPOINT**	100 psid
DESCRIPTION	EHC Pump A discharge filter high differential pressure	**ORIGIN**	PDSH-7075 PDSH-7077

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **DISPATCH** EO to the EHC skid to investigate the problem.
2. **PRESS** HYDR FLUID PUMP B MAN Pb.
3. **PRESS** BP116 START Pb
   AND **ENSURE** HDYR FLUID PUMP B LOW DISCH PRESS is OFF.
4. **SWAP** the AP116 HYDR FLUID PUMP in service Discharge Filter IAW HC.OP-SO.CH-0001(Q).
5. **PRESS** HYDR FLUID PUMP A(B) STOP Pb.
6. **PRESS** HYDR FLUID PUMP A(B) AUTO Pb.

CAUSE CORRE	CTIVE ACTION
1. Clogged filter	1A. **CLEAN** OR **REPLACE** the filter.
2. Hi hydraulic fluid flow	2A. **INVESTIGATE** cause of high flow (Possibilities are pump start, system leak, bypass valve open).

Associated Annunciator D3 F5

REFERENCES: J-0100-0, Sht. 4, Sht. 17 M3TK1-1

DIGITAL ALARM POINT D3628

NOMENCLATURE MAIN TURB EHC PUMP B IN AUTO

SETPOINT N/A

DESCRIPTION BP116 not in AUTO WHEN AP116 is running

ORIGIN HS-7065-1

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

IF conditions permit,
PLACE BP116 in AUTO (HS-7065-1).

CAUSE CORRE	CTIVE ACTION
1. BP116 not in AUTO WHEN AP116 is running.	1A. IF conditions permit, **PLACE** BP116 in AUTO.

Associated Annunciator D3 F5

REFERENCES: J-0100-0, Sht. 5, Sht. 17

DIGITAL ALARM POINT D3629

NOMENCLATURE	MAIN TURB EHC PUMP B FILTER DP	**SETPOINT**	100 psid
DESCRIPTION	EHC Pump B discharge filter high differential pressure	**ORIGIN**	PDSH-7076 PDSH-7078

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **DISPATCH** EO to the EHC Skid to investigate the problem.
2. **PRESS** HYDR FLUID PUMP A MAN PB.
3. **PRESS** AP116 START PB
   AND **ENSURE** HYDR FLUID PUMP A LOW DISCH PRESS is off.
4. **SWAP** the BP116 HYDR FLUID PUMP in service Discharge Filter IAW HC.OP-SO.CH-0001(Q).
5. **PRESS** HYDR FLUID PUMP B(A) STOP PB.
6. **PRESS** HYDR FLUID PUMP B(A) AUTO PB.

CAUSE CORRE	CTIVE ACTION
1. Clogged filter	1A. **CLEAN** OR **REPLACE** the filter.
2. Hi hydraulic fluid flow	2A. **INVESTIGATE** cause of high flow (Possibilities are pump start, system leak, bypass valve open).

Associated Annunciator D3 F5

REFERENCES: J-0100-0, Sht. 5, Sht. 17 M3TKL1-1

DIGITAL ALARM POINT D3630

NOMENCLATURE SETPOINT STEAM SEAL HEADER PRESSURE LOW < 1.5 psig

DESCRIPTION Steam Seal Hdr Pressure low **ORIGIN** PSL-1997

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **CHECK** PI-1998 STEAM SEAL FEED PRESS indicates approximately 4 psig.
2. IF Steam Seal Header Pressure is < 4 psig,
   PERFORM the following:
   a. IF Main Steam is available, throttle OPEN HV-2001 SEALING STM SUPPLY S/U SHUT OFF VLV BYP until Steam Seal Header Pressure is normal.
   b. **ENSURE** HV-2037 SEALING STM SUPPLY AUX STM SHUT OFF is open.
   c. IF Steam Seal Header Pressure cannot be maintained,
      REDUCE Reactor power
      AND **REFER** to HC.OP-AB.BOP-0006(Q), Main Condenser Vacuum.

CAUSE CORRE	CTIVE ACTION
1. Improper valve lineup	1A. **ENSURE** that the following valves are open: 1.1A PSL-1997 Instrument Root Vlv 1.2A 1CA-V012 1.3A HV-1999 1.4A HV-1991 1.5A 1CA-V162
2. Loss of heating steam	2A. **RESTORE** Main or Auxiliary Steam supply WHEN possible.
3. PIC-2038 improperly set	3A. **REQUEST** SM/CRS to initiate corrective action.

Associated with Annunciator C8 F4

REFERENCES: M-29-1

DIGITAL ALARM POINT **D3631**

NOMENCLATURE SETPOINT	STM CONDENSER HIGH PRESSURE	< 5"WC VAC
DESCRIPTION ORIGIN	Stm Packing Exhaust Condenser pressure high	PSH-1988

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **MAINTAIN** Steam Packing Exhaust Condenser pressure at 10-12 inches H_2O as indicated on A2499.
2. IF A2499 indicates pressure oscillations are occurring, THEN **PERFORM** the following:
   a. Throttle **OPEN** V026 (V025) to increase vacuum until pressure oscillations stop. (Vacuum may be increased to a maximum of 20 inches H_2O.)

CAUSE CORRE	CTIVE ACTION
1. Stm Packing Exhaust Fan not running	1A. **ENSURE** that Stm Exhaust Fan A(B)K103 is running.
2. Exhaust fan inlet valve closed	2A. **ENSURE** that valves V026 (V025) are open.
3. Drain Trap DT144 clogged	3A. **CLEAN** AND **REPLACE** drain trap.
4. Condenser Water inlet/outlet valves closed	4A. **ENSURE** that (CONDENSATE - PRI CNDS FLOW PATH) HV-1660& HV-1661 OPEN is on. (Pnl 10C651C)
5. Loss of coolant water to Condenser	5A. **ENSURE** Condensate System is in service IAW HC.OP-SO.AP-0001(Q).

Associated with Annunciator C8 F4

REFERENCES: J-29-0, Sht. 7 M-29-1
M-05-1, Sht. 1

DIGITAL ALARM POINT **D3632**

NOMENCLATURE	SSE LEVEL HI HI **SETPOINT**	12" (80% indicated on LI-2010)
DESCRIPTION	Stm Seal Evap lvl high high **ORIGIN**	LSHH-2010

AUTOMATIC ACTION:

HV-2013 STEAM SEAL EVAP FEED WTR VLV closes.

OPERATOR ACTION:

1. IF__ required,
   MAINTAIN Steam Seal Evaporator level manually by throttling HV-2024 STEAM SEAL EVAP FEED WTR BYP VLV as necessary to maintain LI-2010 (MAIN STEAM INDICATION) STEAM SEAL EVAPORATOR LEVEL at 50%.
2. IF__ required,
   TRANSFER Sealing Steam to Auxiliary Steam System as follows:
   a. **ENSURE** Auxiliary Steam is available.
   b. **ENSURE** HV-2037 SEALING STM SUPPLY AUX STM SHUT OFF is open.
   c. **CLOSE** HV-1999 SEALING STM SUPPLY STM SEAL EVAP SHUT OFF.

CAUSE CORRE	CTIVE ACTION
1. Level Control Valve LV-2003 fail opened	1A. **ENSURE** instrument air is available for Control Valve. 1B. **REQUEST** SM/CRS to initiate corrective action.
2. Level instrument LT-2010 root valves not opened	2A. **ENSURE** V157 & V158 are open.

Associated with Annunciator C8 F4

REFERENCES: J-29-0, Sht. 2, Sht. 4, Sht. 7 Drawing J-L-5000 Sheet 247
M-29-1

DIGITAL ALARM POINT D3633 – D3643

NOMENCLATURE Room Damper Status (see below) **SETPOINT** Closed

	DESCRIPTION	ORIGIN
D3633	STM TUNNEL RM 4316 ISLN DMPR 1	GUZS-9428A1
D3635	STM TUNNEL RM 4316 ISLN DMPR 2	GUZS-9428A2
D3637	HEAT EXCH ROOM 4506 DAMPER 1	GUZS-9429A1
D3639	HEAT EXCH ROOM 4506 DAMPER 2	GUZS-9429A2
D3641	RHR PUMP ROOM 4113 DAMPER 1	GUZS-9432A1
D3643	RHR PUMP ROOM 4113 DAMPER 2	GUZS-9432A2

AUTOMATIC ACTION

Alarm Only

OPERATOR ACTION

1. **NOTIFY** SM/CRS of alarm condition.
2. **REFER** to HC.OP-AB.CONT-0003, Reactor Building, HC.OP-AB.BOP-0005 Main Steam Tunnel Temperature, OR EOP-103 as appropriate.
3. **DIRECT** Operator to monitor operation of exhaust dampers.

CAUSE CORRE	CTIVE ACTION
1. Room High Temperature.	1A **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E1 F5

REFERENCES: M-84-1 sht. 1

DIGITAL ALARM POINT D3644 – D3661

NOMENCLATURE SENSOR FAILURE **SETPOINT** N/A

DESCRIPTION CRT analog/digital point and nomenclature displayed in red **ORIGIN** Various

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

DETERMINE the digital point in alarm
AND **REQUEST** SM/CRS to initiate corrective action.

CAUSE CORRE	CTIVE ACTION
1. A single process instrument input to the 2/3 Feedwater Logic is in the TRIPPED state for one or more of the parameters listed on the first two pages of Attachment F5.	1A. **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator B1 F5

REFERENCES: E-6765-0, Sht. 2
J-31-0, Sht. 6; 7, 8; 13, 14
N1-C32-1050-12, Sht. 7
E-6797-0, Sht. A
J-108-0, Sht. 12

DIGITAL ALARM POINT **D3668**

NOMENCLATURE DRYWELL CLR FAN "A" TROUBLE SETPOINT 1.2 inches water gauge

DESCRIPTION Drywell Cooler Fan(s) malfunction ORIGIN PDSL-9463A1 thru 9463H1

AUTOMATIC ACTION:

Standby fan auto starts.

OPERATOR ACTION:

1. **NOTIFY** SM/CRS of alarm condition.
2. IF necessary,
   ENTER HC.OP-AB.CONT-0001(Q), Drywell Pressure.
3. **DETERMINE** the Drywell Cooler that initiated the trouble alarm.
4. IF Drywell Cooler Fan(s) is stopped
   AND power is available,
   THEN **ATTEMPT** to restart.

CAUSE CORRE	CTIVE ACTION
1. Drywell Cooler stopped due to bus power failure, loss of control power, LOP OR LOCA	1A. **ENSURE** power AND control power are available to the Drywell Cooler Fan Motor(s).
2. Low flow condition	2A. **DETERMINE** IF a low flow condition exists by observing Control Room indication.
3. Fan trip	3A. **RESET** breaker IAW OP-HC-108-106-1001, Equipment Operational Control AND **RESTART**.
	3B. **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E6 A2

REFERENCES: H-86-0, Sht. 1, 3

DIGITAL ALARM POINT D3671

NOMENCLATURE INTAKE STRUCTURE HVAC TROUBLE **SETPOINT** Various

DESCRIPTION Intake Structure HVAC Panel 1EC581 Trouble **ORIGIN** 1EC581

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **DISPATCH** Equipment Operator to Intake Structure HVAC Panel 1EC581 to determine cause of alarm.
2. **ENSURE** compliance with the Service Water operability requirements of Technical Specifications 3.7.1.2.

CAUSE	CORRECTIVE ACTION
1. Intake Structure Supply Fan Low Flow 2. Intake Structure Exhaust Fan Low Flow 3. Traveling Screen Motor Room Fan Low Flow 4. Traveling Screen Motor Room High/Low Temperature	1A. **RESPOND** IAW HC.OP-SO.GQ-0001(Q); Service Water Intake Structure Ventilation System Operation.

Associated Annunciator A1 F1

REFERENCES: E-6792
H-95-0, Sht. 1

DIGITAL ALARM POINT D3678

NOMENCLATURE Room Damper Status **SETPOINT** Closed

DESCRIPTION RHR PUMP ROOM 4109 DAMPER 1 **ORIGIN** GUZS-9433A1

AUTOMATIC ACTION

Alarm Only

OPERATOR ACTION

1. **NOTIFY** SM/CRS of alarm condition.
2. **REFER** to HC.OP-AB.CONT-0003, Reactor Building, HC.OP-AB.BOP-0005 Main Steam Tunnel Temperature, OR EOP-103 as appropriate.
3. **DIRECT** Operator to monitor operation of exhaust dampers.

CAUSE CORRE	CTIVE ACTION
1. Room High Temperature.	1A **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E1 F5

REFERENCES: M-84-1 sht. 1

DIGITAL ALARM POINT D3680

NOMENCLATURE Room Damper Status **SETPOINT** Closed

DESCRIPTION RHR PUMP ROOM 4109 DAMPER 2 **ORIGIN** GUZS-9433A2

AUTOMATIC ACTION

Alarm Only

OPERATOR ACTION

1. **NOTIFY** SM/CRS of alarm condition.
2. **REFER** to HC.OP-AB.CONT-0003, Reactor Building, HC.OP-AB.BOP-0005 Main Steam Tunnel Temperature, OR EOP-103 as appropriate.
3. **DIRECT** Operator to monitor operation of exhaust dampers.

CAUSE CORRE	CTIVE ACTION
1. Room High Temperature.	1A **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E1 F5

REFERENCES: M-84-1 sht. 1

DIGITAL ALARM POINT D3694 – D3698

NOMENCLATURE Room Damper Status (see below) **SETPOINT** Closed

DESCRIPTION	ORIGIN	
D3694	PIPE CHASE 4327 ISLN DAMPER 1	GUZS-9437A1
D3696	PIPE CHASE 4327 ISLN DAMPER 2	GUZS-9437A2
D3698	PIPE CHASE 4329 ISLN DAMPER 1	GUZS-9439A1

AUTOMATIC ACTION

Alarm Only

OPERATOR ACTION

1. **NOTIFY** SM/CRS of alarm condition.
2. **REFER** to HC.OP-AB.CONT-0003, Reactor Building, HC.OP-AB.BOP-0005 Main Steam Tunnel Temperature, OR EOP-103 as appropriate.
3. **DIRECT** Operator to monitor operation of exhaust dampers.

CAUSE CORRE	CTIVE ACTION
1. Room High Temperature.	1A **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E1 F5

REFERENCES: M-84-1 sht. 1

DIGITAL ALARM POINT D3699

NOMENCLATURE SETPOINT HPCI VAC BRKR ISLN HV-F075 N/A

DESCRIPTION ORIGIN HPCI Vac Breaker Vlv HV-F075 not fully open ZS-F075

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

OBSERVE limiting conditions for operation of Emergency Core Cooling Systems in accordance with Technical Specifications 3/4.5.1.

CAUSE CORRE	CTIVE ACTION
1. Vacuum Breaker Valve HV-F075 closed	1A. **OPEN** HV-F075 VAC BRKR ISLN VLV, WHEN possible

Associated Annunciator B1 D5

REFERENCES: J-55-0, Sht. 11

DIGITAL ALARM POINT D3700 - 3702

NOMENCLATURE Room Damper Status (see below) **SETPOINT** Closed

	DESCRIPTION	ORIGIN
D3700	PIPE CHASE 4329 ISLN DAMPER 2	GUZS-9439A2
D3702	TORUS ROOM 4102 ISLN DAMPER 1	GUZS-9436A1

AUTOMATIC ACTION

Alarm Only

OPERATOR ACTION

1. **NOTIFY** SM/CRS of alarm condition.
2. **REFER** to HC.OP-AB.CONT-0003, Reactor Building, HC.OP-AB.BOP-0005 Main Steam Tunnel Temperature, OR EOP-103 as appropriate.
3. **DIRECT** Operator to monitor operation of exhaust dampers.

CAUSE CORRE	CTIVE ACTION
1. Room High Temperature.	1A **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E1 F5

REFERENCES: M-84-1 sht. 1

DIGITAL ALARM POINT D3725

NOMENCLATURE Room Damper Status (see below) **SETPOINT** Closed

DESCRIPTION TORUS ROOM 4102 ISLN DAMPER 2 **ORIGIN** GUZS-9436A2

AUTOMATIC ACTION

Alarm Only

OPERATOR ACTION

1. **NOTIFY** SM/CRS of alarm condition.
2. **REFER** to HC.OP-AB.CONT-0003, Reactor Building, HC.OP-AB.BOP-0005 Main Steam Tunnel Temperature, OR EOP-103 as appropriate.
3. **DIRECT** Operator to monitor operation of exhaust dampers.

CAUSE CORRE	CTIVE ACTION
1. Room High Temperature.	1A **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E1 F5

REFERENCES: M-84-1 sht. 1

DIGITAL ALARM POINT D3731 – D3733

NOMENCLATURE Room Damper Status (see below) **SETPOINT** Closed

	DESCRIPTION	ORIGIN
D3731	HPCI PMP RM 4111 ISLN DAMPER 1	GUZS-9434A1
D3733	HPCI PMP RM 4111 ISLN DAMPER 2	GUZS-9434A2

AUTOMATIC ACTION

Alarm Only

OPERATOR ACTION

1. **NOTIFY** SM/CRS of alarm condition.
2. **REFER** to HC.OP-AB.CONT-0003, Reactor Building, HC.OP-AB.BOP-0005 Main Steam Tunnel Temperature, OR EOP-103 as appropriate.
3. **DIRECT** Operator to monitor operation of exhaust dampers.

CAUSE CORRE	CTIVE ACTION
1. Room High Temperature.	1A **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E1 F5

REFERENCES: M-84-1 sht. 1

DIGITAL ALARM POINT D3737

NOMENCLATURE CW PUMP A DISCHARGE HV-2152A

SETPOINT N/A

DESCRIPTION CW Pump discharge valve not in the proper position

ORIGIN Logic Cabinet 1AC653

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

MONITOR CW Pump amps
AND discharge valve position.

CAUSE CORRE	CTIVE ACTION
1. Malfunction of the CW Pump Discharge Valve Hydraulic Control Unit	1A. **DISPATCH** an operator to inspect the discharge valve, Hydraulic Control Unit, AND associated hydraulic piping for leaks.
2. Bound discharge valve	2A. **REQUEST** the CRS to initiate corrective action.
3. Malfunction of the valve position logic	3A. Same as 2A above.
4. Malfunctioning limit switch	4A. Same as 2A above.

Associated Annunciator A2 D4

REFERENCES: M-09-0, Sht. 1
J-09-0, Sht. 7, Sht. 16

DIGITAL ALARM POINT **D3738**

NOMENCLATURE CS B 24VDC PWR LOSS/CARD OUT **SETPOINT** N/A

DESCRIPTION Core Spray B 24VDC isolator power loss or input card out of file **ORIGIN** N/A

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

OBSERVE Emergency Core Cooling Systems operability limits of T/S 3.5.1.

NOTE

Due to optical isolation card trouble, the following alarms will not be annunciated on the panel. It is recommended that the associated parameters of digital points be monitored

Digital Point/ Indication	Nomenclature	Alarm Window Engraving
D3756	CS B MANUAL INIT SWITCH ARMED	CORE SPRAY MANUAL INIT SW ARMED
D3757	CS CHAN B INVERTER POWER FAIL	CORE SPRAY LOOP B TROUBLE
D3159	CS LOOP B INJECTION LINE PRESS	CORE SPRAY LOOP B TROUBLE
D5492	RHR B/CS B/RCIC ALM TEST/INOP	ECCS B/RCIC TRIP UNIT TEST/INOP
D3768	CORE SPRAY CHAN B AUTO START	CORE SPRAY PUMP B START

Associated Annunciator B3 C4

REFERENCES: N1-E21-1040-383(6A)
J-52-0, Sht. 7, Sht. 6

DIGITAL ALARM POINT D3738

CAUSE	CORRECTIVE ACTION
1. Input isolator card out of file	1A. **CHECK** the file for missing card AND IF missing, **REQUEST** SM/CRS to initiate corrective action.
2. Breaker tripped	2A. **CHECK** AND **UNDER** the direction of SM/CRS **RESET** IF necessary, 120VAC Instrument Bus B 1BJ481, Breaker 1BJ481-18.
3. Blown fuse	3A. **CHECK** AND **REPLACE** IF necessary, 10 amps fuse F41B at Panel C618. 3B. **CHECK** AND **REPLACE** IF necessary, 5 amps fuse F44B at Panel C618.

Associated Annunciator B3 C4

REFERENCES: N1-E21-1040-383(6A)
J-52-0, Sht. 7, Sht. 6

DIGITAL ALARM POINT **D3739**

NOMENCLATURE CS B 125VDC PWR LOSS/CARD OUT **SETPOINT** N/A

DESCRIPTION Core Spray B 125VDC isolator power loss or output card out of file **ORIGIN** N/A

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

OBSERVE Emergency Core Cooling Systems operability limits of T/S 3.5.1.

NOTE

Due to optical isolation card trouble, the following alarms will not be annunciated on the panel. It is recommended that the associated parameters of digital points be monitored

Digital Point/ Indication	Nomenclature	Alarm Window Engraving
D3756	CS B MANUAL INIT SWITCH ARMED	CORE SPRAY MANUAL INIT SW ARMED
D3757	CS CHAN B INVERTER POWER FAIL	CORE SPRAY LOOP B TROUBLE
D3159	CS LOOP B INJECTION LINE PRESS	CORE SPRAY LOOP B TROUBLE
D5492	RHR B/CS B/RCIC ALM TEST/INOP	ECCS B/RCIC TRIP UNIT TEST/INOP
D3768	CORE SPRAY CHAN B AUTO START	CORE SPRAY PUMP B START

Associated Annunciator B3 C4

REFERENCES: N1-E21-1040-383(6A)
J-52-0, Sht. 7, Sht. 6

DIGITAL ALARM POINT D3739

CAUSE	CORRECTIVE ACTION
1. Output isolator card out of file	1A. **CHECK** the file for missing card AND IF missing, **REQUEST** SM/CRS to initiate corrective action.
2. Breaker Tripped	2A. **REFER TO** HC.OP-AB.MISC-0002(Q) Crids / Overhead Annunciators. 2B. **REQUEST** SM/CRS to initiate corrective action.
3. Blown fuse	3A. **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator B3 C4

REFERENCES: N1-E21-1040-383(6A)
J-52-0, Sht. 7, Sht. 6

DIGITAL ALARM POINT **D3756**

NOMENCLATURE CS B MANUAL INIT SWITCH ARMED **SETPOINT** N/A

DESCRIPTION CS B Manual Initiation Switch armed **ORIGIN** S22B MAN INIT SW

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

IF manual initiation is not required,
THEN **DISARM** B MAN INIT.

CAUSE CORRE	CTIVE ACTION
1. CS B Manual Initiation Switch armed	1A. IF manual initiation is not required, THEN **DISARM** the switch.

Associated Annunciator B3 C5

REFERENCES: J-52-0, Sht. 6

DIGITAL ALARM POINT **D3757**

NOMENCLATURE CS CHAN B INVERTER PWR FAIL **SETPOINT** N/A

DESCRIPTION Loss of power from Inverter 1BD481 **ORIGIN** N/A

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **OBSERVE** which instrument indication and alarms have been lost (Chan B).
2. **ENSURE** compliance with the operability requirements of T/S 3.5.1 and 3.6.3.

CAUSE CORRE	CTIVE ACTION
	NOTE Re-energization of the ECCS Trip Units will result in an ESF actuation, NOTIFY I&C to disable the trip units prior to re-energization.
1. Breaker tripped.	1A. IF tripped, **DETERMINE** cause AND **RESET**. 1B. **CHECK** CB 1BJ481-18 Vert Bd, RHR & CS Rly 10C618.
2. Fuse Blown	2A. **CHECK** fuse 9B in Panel 10C618
3. Inverter Failure	3A. **REFER TO** Inverter 1BD481 operating procedure HC.OP-SO.PN-0001(Q)

Associated Annunciator B3 C3

REFERENCES: N1-A41-46-(1)-2
J-52-0, Sht. 7, Sht. 8
M-52-1

DIGITAL ALARM POINT **D3758**

NOMENCLATURE CS C 24VDC PWR LOSS/CARD OUT **SETPOINT** N/A

DESCRIPTION Core Spray C 24VDC isolator power loss or input card out of file **ORIGIN** N/A

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

OBSERVE Emergency Core Cooling Systems operability limits of T/S 3.5.1.

NOTE

Due to optical isolation card trouble, the following alarms will not be annunciated on the panel. It is recommended that the associated parameters of digital points be monitored

Digital Point/ Indication	Nomenclature	Alarm Window Engraving
D3760	CS C MANUAL INIT SWITCH ARMED	CORE SPRAY MANUAL INIT SW ARMED
D3761	CS CHAN C INVERTER POWER FAIL	CORE SPRAY LOOP A TROUBLE
D5493	RHR C TRIP UNIT IN TEST/INOP	RHR C TRIP UNIT TEST/ INOP
D3769	CORE SPRAY CHAN C AUTO START	CORE SPRAY PUMP C START

Associated Annunciator B3 C4

REFERENCES: N1-E21-1040-383(6A)-11
J-52-0, Sht. 7, Sht. 6

DIGITAL ALARM POINT D3758

CAUSE CORRE	CTIVE ACTION
1. Input isolator card out of file	1A. **CHECK** the file for missing card AND IF missing, **REQUEST** SM/CRS to initiate corrective action.
2. Breaker tripped	2A. **CHECK** AND **UNDER** the direction of SM/CRS **RESET** IF necessary, 120VAC Instrument Bus C 1CJ481, Breaker 1CJ481-20.
3. Blown fuse	3A. **CHECK** AND **REPLACE** IF necessary, 10 amps fuse F41A at Panel C617. 3B. **CHECK** AND **REPLACE** IF necessary, 5 amps fuse F44A at Panel C617.

Associated Annunciator B3 C4

REFERENCES: N1-E21-1040-383(6A)
J-52-0, Sht. 7, Sht. 6

DIGITAL ALARM POINT **D3759**

NOMENCLATURE CS C 125VDC PWR LOSS/CARD OUT **SETPOINT** N/A

DESCRIPTION Core Spray C 125VDC isolator power loss or output card out of file **ORIGIN** N/A

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

OBSERVE Emergency Core Cooling Systems operability limits of T/S 3.5.1.

NOTE

Due to optical isolation card trouble, the following alarms will not be annunciated on the panel. It is recommended that the associated parameters of digital points be monitored

Digital Point/ Indication	Nomenclature	Alarm Window Engraving
D3760	CS C MANUAL INIT SWITCH ARMED	CORE SPRAY MANUAL INIT SW ARMED
D3761	CS CHAN C INVERTER POWER FAIL	CORE SPRAY LOOP A TROUBLE
D5493	RHR C TRIP UNIT IN TEST/INOP	RHR C TRIP UNIT TEST / INOP
D3769	CORE SPRAY CHAN C AUTO START	CORE SPRAY PUMP C START

Associated Annunciator B3 C4

REFERENCES: N1-E21-1040-383(6A)
J-52-0, Sht. 7, Sht. 6

DIGITAL ALARM POINT D3759

CAUSE	CORRECTIVE ACTION
1. Output isolator card out of file	1A. **CHECK** the file for missing card AND IF missing, **REQUEST** SM/CRS to initiate corrective action.
2. Breaker Tripped	2A. **REFER TO** HC.OP-AB.MISC-0002(Q) Crids / Overhead Annunciators 2B. **REQUEST** SM/CRS to initiate corrective action.
3. Blown fuses	3A. **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator B3 C4

REFERENCES: N1-E21-1040-383(6A)
J-52-0, Sht. 7, Sht. 6

DIGITAL ALARM POINT **D3760**

NOMENCLATURE CS C MANUAL INIT SWITCH ARMED **SETPOINT** N/A

DESCRIPTION CS C Manual Initiation Switch armed **ORIGIN** S22C MAN INIT SW

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

IF manual initiation is not required,
THEN **DISARM** C MAN INIT.

CAUSE	CORRECTIVE ACTION
1. CS C Manual Initiation Switch armed	1A. IF manual initiation is not required, THEN **DISARM** the switch.

Associated Annunciator B3 C5

REFERENCES: J-52-0, Sht. 6

DIGITAL ALARM POINT **D3761**

NOMENCLATURE CS CHAN C INVERTER PWR FAIL **SETPOINT** N/A

DESCRIPTION Loss of power from inverter1CD481 **ORIGIN** N/A

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **OBSERVE** which instrument indication and alarms have been lost (Chan C).
2. **ENSURE** compliance with the operability requirements of T/S 3.5.1 and 3.6.3.

CAUSE CORRE	CTIVE ACTION
	NOTE Re-energization of the ECCS Trip Units will result in an ESF actuation, NOTIFY I&C to disable the trip units prior to re-energization.
1. Breaker tripped.	1A. IF tripped, **DETERMINE** cause AND **RESET**. 1B. **CHECK** CB 1CJ481-20 Vert Bd, RHR & CS Rly 10C641.
2. Fuse Blown	2A. **CHECK** fuse 9C in Panel 10C641
3. Inverter Failure 1CD481	3A. **REFER TO** Inverter operating procedure HC.OP-SO.PN-0001(Q).

Associated Annunciator B3 C1

REFERENCES: N1-A41-46-(1)-2
J-52-0, Sht. 7, Sht. 8
M-52-1

DIGITAL ALARM POINT **D3762**

NOMENCLATURE CS D 24VDC PWR LOSS/CARD OUT **SETPOINT** N/A

DESCRIPTION Core Spray D 24VDC isolator power loss or input card out of file **ORIGIN** N/A

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

OBSERVE Emergency Core Cooling Systems operability limits of T/S 3.5.1.

NOTE

Due to optical isolation card trouble, the following alarms will not be annunciated on the panel. It is recommended that the associated parameters of digital points be monitored

Digital Point/ Indication	Nomenclature	Alarm Window Engraving
D3764	CS D MANUAL INIT SWITCH ARMED	CORE SPRAY MANUAL INIT SW ARMED
D3765	CS CHAN D INVERTER POWER FAIL	CORE SPRAY LOOP B TROUBLE
D5490	RHR D TRIP UNIT IN TEST/INOP	RHR D TRIP UNIT TEST/ INOP
D3766	CORE SPRAY CHAN D AUTO START	CORE SPRAY PUMP D START

Associated Annunciator B3 C4

REFERENCES: N1-E21-1040-383(6A)
J-52-0, Sht. 7, Sht. 6

DIGITAL ALARM POINT D3762

CAUSE	CORRECTIVE ACTION
1. Input isolator card out of file	1A. **CHECK** the file for missing card AND IF missing, **REQUEST** SM/CRS to initiate corrective action.
2. Breaker tripped	2A. **CHECK** AND **UNDER** the direction of SM/CRS **RESET** if necessary, 120VAC Instrument Bus D 1DJ481, Breaker 1DJ481-20.
3. Blown fuse	3A. **CHECK** AND **REPLACE** IF necessary, 10 amps fuse F41D at Panel C640. 3B. **CHECK** AND **REPLACE** IF necessary, 5 amps fuse F44D at Panel 10C640.

Associated Annunciator B3 C4

REFERENCES: N1-E21-1040-383(6A)
J-52-0, Sht. 7, Sht. 6

DIGITAL ALARM POINT **D3763**

NOMENCLATURE CS D 125VDC PWR LOSS/CARD OUT **SETPOINT** N/A

DESCRIPTION Core Spray D 125VDC isolator power loss or output card out of file **ORIGIN** N/A

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

OBSERVE Emergency Core Cooling Systems operability limits of T/S 3.5.1.

NOTE

Due to optical isolation card trouble, the following alarms will not be annunciated on the panel. It is recommended that the associated parameters of digital points be monitored.

Digital Point/ Indication	Nomenclature	Alarm Window Engraving
D3764	CS D MANUAL INIT SWITCH ARMED	CORE SPRAY MANUAL INIT SW ARMED
D3765	CS CHAN D INVERTER POWER FAIL	CORE SPRAY LOOP B TROUBLE
D5490	RHR D TRIP UNIT IN TEST/INOP	RHR D TRIP UNIT TEST/ INOP
D3766	CORE SPRAY CHAN D AUTO START	CORE SPRAY PUMP D START

Associated Annunciator B3 C4

REFERENCES: N1-E21-1040-383(6A)
J-52-0, Sht. 7, Sht. 6

DIGITAL ALARM POINT D3763

CAUSE	CORRECTIVE ACTION
1. Output isolator card out of file	1A. **CHECK** the file for missing card AND IF missing, **REQUEST** SM/CRS to initiate corrective action.
2. Breaker Tripped	2A. **REFER TO** HC.OP-AB.MISC-0002(Q) Crids / Overhead Annunciators. 2B. **REQUEST** SM/CRS to initiate corrective action.
3. Blown fuse	3A. **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator B3 C4

REFERENCES: N1-E21-1040-383(6A)
J-52-0, Sht. 7, Sht. 6

DIGITAL ALARM POINT **D3764**

NOMENCLATURE CS D MANUAL INIT SWITCH ARMED **SETPOINT** N/A

DESCRIPTION CS D Manual Initiation Switch armed **ORIGIN** S22D MAN INIT SW

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

IF manual initiation is not required,
THEN **DISARM** D MAN INIT.

CAUSE	CORRECTIVE ACTION
1. CS D Manual Initiation Switch armed	1A. IF manual initiation is not required, THEN **DISARM** the switch.

Associated Annunciator B3 C5

REFERENCES: J-52-0, Sht. 6

DIGITAL ALARM POINT **D3765**

NOMENCLATURE CS CHAN D INVERTER PWR FAIL **SETPOINT** N/A

DESCRIPTION Loss of power from Inverter 1DD-481 **ORIGIN** N/A

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **OBSERVE** which instrument indication and alarms have been lost (Chan D).
2. **ENSURE** compliance with the operability requirements of T/S 3.5.1 and 3.6.3.

CAUSE	CORRECTIVE ACTION
	NOTE Re-energization of the ECCS Trip Units will result in an ESF actuation, NOTIFY I&C to disable the trip units prior to re-energization.
1. Breaker tripped.	1A. IF tripped, **DETERMINE** cause AND **RESET**. 1B. **CHECK** CB 1DJ481-20 Vert Bd, RHR & CS Rly 10C640.
2. Fuse Blown	2A. **CHECK** fuse 9A in Panel 10C640.
3. Inverter Failure	3A. **REFER TO** Inverter 1DD481 operating procedure HC.OP-SO.PN-0001(Q)

Associated Annunciator B3 C3

REFERENCES: N1-A41-46-(1)-2
J-52-0, Sht. 7, Sht. 8
M-52-1

DIGITAL ALARM POINT **D3766**

NOMENCLATURE	CORE SPRAY CHAN D AUTO START	**SETPOINT**	-129" RPV(or) Drywell Pressure 1.68 psig
DESCRIPTION	Core Spray Pump D running	**ORIGIN**	LIS-691D or H (or) PIS-N694D or H 1/2 Twice Logic

AUTOMATIC ACTION:

Core Spray Pump D starts
AND Emergency Diesel Generator "D" starts.

OPERATOR ACTION:

1. **ENSURE** valid initiation signal is present.
2. IF not,
   THEN **STOP** DP206 CORE SPRAY PUMP D.
3. **ENSURE** compliance with operability requirements of T/S 3.5.1.
4. **VERIFY** actuations/isolations IAW HC.OP-SO.SM-0001(Q), Isolation Systems Operation.

CAUSE CORRE	CTIVE ACTION
1. Valid initiation signal	1A. **ENSURE** that Core Spray Pump D has started. 1B. **REFER TO** HC.OP-EO.ZZ-0101(Q) and/or HC.OP-EO.ZZ-0102(Q) as applicable.
2. Malfunction of originating device	2A. **STOP** Core Spray Pump D AND **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator B3 A4

REFERENCES: GEK Vol. VII, Part 1
J-52-0, Sht. 7
M-42-1 Sht. 2

DIGITAL ALARM POINT **D3767**

NOMENCLATURE	CORE SPRAY CHAN A AUTO START	**SETPOINT**	-129" RPV (or) Drywell Pressure 1.68 psig
DESCRIPTION	Core Spray Pump A running	**ORIGIN**	LIS-N691A or E (or) PIS-N694A or E 1/2 Twice Logic

AUTOMATIC ACTION:

Core Spray Pump A starts
AND Emergency Diesel Generator "A" starts.

OPERATOR ACTION:

1. **ENSURE** valid initiation signal is present.
2. IF__ not,
   THEN **STOP** AP206 CORE SPRAY PUMP A.
3. **ENSURE** compliance with operability requirements of T/S 3.5.1.
4. **VERIFY** actuations/isolations IAW HC.OP-SO.SM-0001(Q), Isolation Systems Operation.

CAUSE CORRE	CTIVE ACTION
1. Valid initiation signal	1A. **ENSURE** that Core Spray Pump A has started. 1B. **REFER TO** HC.OP-EO.ZZ-0101(Q) and/or HC.OP-EO.ZZ-0102(Q) as applicable.
2. Malfunction of originating device	2A. **STOP** Core Spray Pump A AND **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator B3 A1

REFERENCES: GEK Vol. VII, Part 1
J-52-0, Sht. 7
M-42-1, Sht. 2

DIGITAL ALARM POINT **D3768**

NOMENCLATURE	CORE SPRAY CHAN B AUTO START	**SETPOINT**	-129" RPV(or) Drywell Pressure 1.68 psig
DESCRIPTION	Core Spray Pump B running	**ORIGIN**	LIS-N691B or F (or) PIS-N694B or F ½ Twice Logic

AUTOMATIC ACTION:

Core Spray Pump B starts
AND Emergency Diesel Generator "B" starts.

OPERATOR ACTION:

1. **ENSURE** valid initiation signal is present.
2. IF not,
   THEN **STOP** BP206 CORE SPRAY PUMP B.
3. **ENSURE** compliance with operability requirements of T/S 3.5.1.
4. **VERIFY** actuations/isolations IAW HC.OP-SO.SM-0001(Q), Isolation Systems Operation.

CAUSE CORRE	CTIVE ACTION
1. Valid initiation signal	1A. **ENSURE** that Core Spray Pump B has started. 1B. **REFER TO** HC.OP-EO.ZZ-0101(Q) and/or HC.OP-EO.ZZ-0102(Q) as applicable.
2. Malfunction of originating device	2A. **STOP** Core Spray Pump B AND **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator B3 A3

REFERENCES: GEK Vol. VII, Part 1
J-52-0, Sht. 7
M-42-1 Sht. 2

DIGITAL ALARM POINT **D3769**

NOMENCLATURE	CORE SPRAY CHAN C AUTO START	**SETPOINT**	-129" RPV (or) Drywell Pressure 1.68 psig
DESCRIPTION	Core Spray Pump C running	**ORIGIN**	LIS-N691C or G (or) PIS-N694C or G 1/2 Twice Logic

AUTOMATIC ACTION:

Core Spray Pump C starts
AND Emergency Diesel Generator "C" starts.

OPERATOR ACTION:

1. **ENSURE** valid initiation signal is present.
2. IF not,
   THEN **STOP** CP206 CORE SPRAY PUMP C.
3. **ENSURE** compliance with operability requirements of T/S 3.5.1.
4. **VERIFY** actuations/isolations IAW HC.OP-SO.SM-0001(Q), Isolation Systems Operation.

CAUSE	CORRECTIVE ACTION
1. Valid initiation signal	1A. **ENSURE** that Core Spray Pump C has started. 1B. **REFER TO** HC.OP-EO.ZZ-0101(Q) and/or HC.OP-EO.ZZ-0102(Q) as applicable.
2. Malfunction of originating device	2A. **STOP** Core Spray Pump C AND **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator B3 A2

REFERENCES: GEK Vol. VII, Part 1
J-52-0, Sht. 7
M-42-1 Sht. 2

DIGITAL ALARM POINT **D3770**

NOMENCLATURE CS A 24VDC PWR LOSS/CARD OUT **SETPOINT** N/A

DESCRIPTION Core Spray A 24VDC isolator power loss or input card out of file **ORIGIN** N/A

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

OBSERVE Emergency Core Cooling Systems operability limits of T/S 3.5.1.

NOTE

Due to optical isolation card trouble, the following alarms will not be annunciated on the panel. It is recommended that the associated parameters of digital points be monitored

Digital Point/ Indication	Nomenclature	Alarm Window Engraving
D3772	CS A MANUAL INIT SWITCH ARMED	CORE SPRAY MANUAL INIT SW ARMED
D3158	CS LOOP A OR B LINE BREAK CORE	SPRAY LINE BREAK
D3773	CS CHAN A INVERTER POWER FAIL	CORE SPRAY LOOP A TROUBLE
D3157	CS LOOP A INJECTION LINE PRESS	CORE SPRAY LOOP A TROUBLE
D5491	RHR A/CS A/HPCI ALM TEST/INOP	ECCS A/HPCI TRIP UNIT TEST/INOP
D3767	CORE SPRAY CHAN A AUTO START	CORE SPRAY PUMP A START

Associated Annunciator B3 C4

REFERENCES: N1-E21-1040-383(6A)-11
J-52-0, Sht. 7, Sht. 6

DIGITAL ALARM POINT D3770

CAUSE CORRE	CTIVE ACTION
1. Input isolator card out of file	1A. **CHECK** the file for missing card AND IF missing, **REQUEST** SM/CRS to initiate corrective action
2. Breaker tripped	2A. **CHECK** AND **UNDER** the direction of SM/CRS, **RESET** IF necessary, 120VAC Instrument Bus A 1AJ481, Breaker 1AJ481-19.
3. Blown fuse	3A. **CHECK** AND **REPLACE** IF necessary, 10 amps fuse F41A at Panel C617. 3B. **CHECK** AND **REPLACE** IF necessary, 5 amps fuse F44A at Panel C617.

Associated Annunciator B3 C4

REFERENCES: N1-E21-1040-383(6A)-11
J-52-0, Sht. 7, Sht. 6

DIGITAL ALARM POINT **D3771**

NOMENCLATURE CS A 125VDC PWR LOSS/CARD OUT **SETPOINT** N/A

DESCRIPTION Core Spray A 125VDC isolator power loss or output card out of file **ORIGIN** N/A

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

OBSERVE Emergency Core Cooling Systems operability limits of T/S 3.5.1.

NOTE

Due to optical isolation card trouble, the following alarms will not be annunciated on the panel. It is recommended that the associated parameters of digital points be monitored

Digital Point/ Indication	Nomenclature	Alarm Window Engraving
D3772	CS A MANUAL INIT SWITCH ARMED	CORE SPRAY MANUAL INIT SW ARMED
D3158	CS LOOP A OR B LINE BREAK CORE	SPRAY LINE BREAK
D3773	CS CHAN A INVERTER POWER FAIL	CORE SPRAY LOOP A TROUBLE
D3157	CS LOOP A INJECTION LINE PRESS	CORE SPRAY LOOP A TROUBLE
D5491	RHR A/CS A/HPCI ALM TEST/INOP	ECCS A/HPCI TRIP UNIT TEST/INOP
D3767	CORE SPRAY CHAN A AUTO START	CORE SPRAY PUMP A START

Associated Annunciator B3 C4

REFERENCES: N1-E21-1040-383(6A)
J-52-0, Sht. 7, Sht. 6

DIGITAL ALARM POINT D3771

CAUSE CORRE	CTIVE ACTION
1. Output isolator card out of file	1A. **CHECK** the file for missing card AND IF missing, **REQUEST** SM/CRS to initiate corrective action.
2. Breaker Tripped	2A. **REFER TO** HC.OP-AB.MISC-0002(Q) Crids / Overhead Annunciators. 2B. **REQUEST** SM/CRS to initiate corrective action.
3. Blown fuses	3A. **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator B3 C4

REFERENCES: N1-E21-1040-383(6A)
J-52-0, Sht. 7, Sht. 6

DIGITAL ALARM POINT **D3772**

NOMENCLATURE CS A MANUAL INIT SWITCH ARMED **SETPOINT** N/A

DESCRIPTION CS A Manual Initiation Switch armed **ORIGIN** S22A MAN INIT SW

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

IF manual initiation is not required,
THEN **DISARM** A MAN INIT.

CAUSE	CORRECTIVE ACTION
1. CS A Manual Initiation Switch armed	1A. IF manual initiation is not required, THEN **DISARM** the switch.

Associated Annunciator B3 C5

REFERENCES: J-52-0, Sht. 6

DIGITAL ALARM POINT **D3773**

NOMENCLATURE CS CHAN A INVERTER PWR FAIL **SETPOINT** N/A

DESCRIPTION Loss of power from inverter1AD481 **ORIGIN** N/A

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **OBSERVE** which instrument indication and alarms have been lost (Chan A).
2. **ENSURE** compliance with the operability requirements of T/S 3.5.1 and 3.6.3.

CAUSE	CORRECTIVE ACTION
	NOTE Re-energization of the ECCS Trip Units will result in an ESF actuation, NOTIFY I&C to disable the trip units prior to re-energization.
1. Breaker tripped.	1A. IF tripped, **DETERMINE** cause AND **RESET**. 1B. **CHECK** CB 1AJ481-19 Vert Bd, RHR & CS Rly 10C617.
2. Fuse Blown	2A. **CHECK** fuse 9A in Panel 10C617
3. Inverter Failure 1AD481	3A. **REFER TO** Inverter operating procedure HC.OP-SO.PN-0001(Q).

Associated Annunciator B3 C1

REFERENCES: N1-A41-46-(1)-2
J-52-0, Sht. 7, Sht. 8
M-52-1

DIGITAL ALARM POINT **D3827**

NOMENCLATURE FUEL POOL CLG PMP DISCH TEMP **SETPOINT** 130°F

DESCRIPTION Fuel Pool Cooling Pump discharge temp. above normal **ORIGIN** TE-4683

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

MONITOR the Refuel Pool Water temperature.

CAUSE CORRE	CTIVE ACTION
1. Improper SACS lineup to Fuel Pool Heat Exchanger AE202 and/or BE202.	1A. **ENSURE** SACS is properly aligned to supply cooling to Fuel Pool Heat Exchanger AE202 and/or BE202.
2. Fuel Pool Heat Exchanger Bypass Valve 1EC-V084 is open.	2A. **CLOSE** Fuel Pool Heat Exchanger Bypass Valve 1EC-V084.
3. Fuel Pool F/D system malfunction.	3A. **DISPATCH** an operator to Fuel Pool F/D Panel 10C305 to investigate F/D operation. 3B. IF the F/D System cannot be readily corrected **BYPASS** the F/D System as needed.
4. Loss of SACS cooling to the Fuel Pool Cooling Heat Exchangers.	4A. **REFER TO** HC.OP-AB.COOL-0002(Q), SAFETY/TURBINE AUXILIARIES COOLING SYSTEM.
5. Loss of service water cooling to SACS due to a SSWS malfunction.	5A. **REFER TO** HC.OP-AB.COOL-0001(Q), STATION SERVICE WATER.

Associated annunciator D1 D5

REFERENCES M-53-1, Sht. 1 M-11-1, Sht. 2
M-54-1, Sht. 1

DIGITAL ALARM POINT D3828

NOMENCLATURE SKIMMER SURGE TANK BT208 LEVEL - LSLL-4661B

SETPOINT 22"

DESCRIPTION Lo-lo level existing in Skimmer Surge Tank BT208

ORIGIN LSLL-4661B

AUTOMATIC ACTION:

1. Fuel Pool Cooling Pump BP211 trips.
2. HV-4676B and HV-4678 Fuel Pool Filter Demin Isolation Valves closes.

OPERATOR ACTION:

1. **CONFIRM** AUTOMATIC ACTION.
2. IF unable to re-start a FPCC Pump
   THEN **IMPLEMENT** HC.OP-AB.COOL-0004(Q); Fuel Pool Cooling.

CAUSE CORRE	CTIVE ACTION
1. Loss of Instrument Air to Skimmer Surge Tank Level Control Valve LV-4660.	1A. **RESTORE** Instrument Air to Level Control Valve LV-4660 OR manually **OPEN** valve IF possible. 1B. **ENSURE** valve is in AUTO AND **OPEN** valve LV-4660.
2. Fuel Pool Cooling System process piping leakage.	2A. **ENSURE** proper Fuel Pool Cooling System valve lineup IAW applicable SAP/WCM lineup.

Associated annunciator D1 D5

REFERENCES M-53-1, Sht. 1 J-L 5000(A)-34
J-53-0, Shts. 2, 6, & 10

DIGITAL ALARM POINT D3829

NOMENCLATURE FUEL POOL CLG PUMP B **SETPOINT** Various

DESCRIPTION Malfunction/overload of Fuel Pool Cooling Pump BP211 **ORIGIN** MCC 10B222

AUTOMATIC ACTION:

Fuel Pool Cooling Pump BP211 trips

OPERATOR ACTION:

1. **CONFIRM** AUTOMATIC ACTION
2. IF unable to re-start a FPCC Pump
   THEN **IMPLEMENT** HC.OP-AB.COOL-0004(Q); Fuel Pool Cooling.

CAUSE CORRE	CTIVE ACTION
1. Fuel Pool Cooling BP211 low discharge flow. (Low flow trip enabled 30 seconds after pump start.)	1A. **START** Fuel Pool Cooling Pump AP211. 1B. **INSPECT** pump BP211 for faults.
2. Fuel Pool Cooling Pump BP211 INOP due to: a. breaker tripped b. thermal overloads tripped c. control power fuse faulty d. control power transformer faulty	2A. **DISPATCH** an operator to pump's motor circuit breaker 52-222103 to determine fault. 2B. IF breaker OR thermal overloads have tripped, OR control fuse is blown, **INSPECT** BP211pump/motor for mechanical interference, low lube oil level, high motor temperature. 2C. **NOTIFY** the SM/CRS PRIOR to correcting breaker fault OR IF any pump/motor problems are found.

Associated annunciator D1 D5

REFERENCES J-53-0, Sht. 2 E-0324-0

DIGITAL ALARM POINT D3830

NOMENCLATURE FUEL POOL CLG PUMP A **SETPOINT** Various

DESCRIPTION Malfunction/overload of Fuel Pool Cooling Pump AP211 **ORIGIN** MCC 10B212

AUTOMATIC ACTION:

Fuel Pool Cooling Pump AP211 trips

OPERATOR ACTION:

1. **CONFIRM** AUTOMATIC ACTION
2. IF unable to re-start a FPCC Pump
   THEN **IMPLEMENT** HC.OP-AB.COOL-0004(Q); Fuel Pool Cooling.

CAUSE CORRE	CTIVE ACTION
1. Fuel Pool Cooling AP211 low discharge flow. (Low flow trip enabled 30 seconds after pump start.)	1A. **START** Fuel Pool Cooling Pump BP211. 1B. **INSPECT** pump AP211 for faults.
2. Fuel Pool Cooling Pump AP211 INOP due to: a. breaker tripped b. thermal overloads tripped c. control power fuse faulty d. control power transformer faulty	2A. **DISPATCH** an operator to pump's motor circuit breaker 52-212103 to determine fault. 2B. IF breaker OR thermal overloads have tripped, OR control fuse is blown, **INSPECT** AP211pump/motor for mechanical interference, low lube oil level, high motor temperature. 2C. **NOTIFY** the SM/CRS PRIOR to correcting breaker fault OR IF any pump/motor problems are found.

Associated annunciator D1 D5

REFERENCES J-53-0, Sht. 2 E-0324-0

DIGITAL ALARM POINT D3831

NOMENCLATURE SKIMMER SURGE TANK BT208 LEVEL - LSLL-4661A **SETPOINT** 22"

DESCRIPTION Lo-lo level existing in Skimmer Surge Tank BT208 **ORIGIN** LSLL-4661A

AUTOMATIC ACTION:

1. Fuel Pool Cooling Pump AP211 trips.
2. HV-4676A Fuel Pool Filter Demin Isolation Valve closes.

OPERATOR ACTION:

1. **CONFIRM** AUTOMATIC ACTION.
2. IF unable to re-start a FPCC Pump
   THEN **IMPLEMENT** HC.OP-AB.COOL-0004(Q); Fuel Pool Cooling.

CAUSE CORRE	CTIVE ACTION
1. Loss of Instrument Air to Skimmer Surge Tank Level Control Valve LV-4660.	1A. **RESTORE** Instrument Air to level Control Valve LV-4660 OR manually **OPEN** valve IF possible. 1B. **ENSURE** valve is in AUTO AND **OPEN** valve LV-4660.
2. Fuel Pool Cooling System process piping leakage.	2A. **ENSURE** proper Fuel Pool Cooling System valve lineup IAW applicable SAP/WCM lineup.

Associated annunciator D1 D5

REFERENCES M-53-1, Sht. 1 J-L 5000(A)-34
J-53-0, Shts. 2, 6, & 10

DIGITAL ALARM POINT D3832

NOMENCLATURE SKIMMER SURGE TANK BT208 LEVEL - LSHH-4660 **SETPOINT** 187"

DESCRIPTION Hi-Hi level existing in Skimmer Surge Tank BT208 **ORIGIN** LSHH-4660

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **CONFIRM** level on Level Recorder LR-4661B Panel 10C650D.
2. IF__ required, **LOWER** fuel pool level back to normal level band IAW HC.OP-SO.EC-0001(Q), Section 5.17.

CAUSE CORRE	CTIVE ACTION
1. Failure of Skimmer Surge Tank BT208 level control valve LV-4660 to auto-close on a high Surge Tank level.	1A. **CLOSE** valve LV-4660 electrically OR manually IF possible.
2. Instrument line break down-stream of Excess Flow Check Valve XV-4660.	2A. **CLOSE** valve LV-4660 electrically OR manually IF possible.
3. Excessive makeup to the Fuel Storage Pool from the RHR System.	3A. **REDUCE** OR **STOP** RHR System makeup to the Fuel Storage Pool.
4. Excessive makeup to the Reactor Well from the CST.	4A. **REDUCE** OR **STOP** makeup to the Reactor Well from the CST by closing valves 1EC-V024, 1EC-V027, and/or 1EC-V049.
5. Excessive makeup to the Fuel Storage Pool from the SSWS Loop A and/or B.	5A. **REDUCE** OR **STOP** makeup to the Fuel Storage Pool via SSWS Loop A and/or B.

Associated annunciator D1 D5

REFERENCES M-53-1, Sht. 1 J-L 5000(A)-34

DIGITAL ALARM POINT D3833

NOMENCLATURE FUEL STORAGE POOL LEVEL HI **SETPOINT** 40’ 6”

DESCRIPTION High water level in the Fuel Storage Pool **ORIGIN** LSH 4657

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **CONFIRM** that the Fuel Pool HI/LO alarm setpoint has been reached.
2. **ACKNOWLEDGE** the FUEL POOL LEVEL HI/LO alarm.
3. IF__ required, **LOWER** fuel pool level back to normal level band IAW HC.OP-SO.EC-0001(Q), Section 5.17.

CAUSE CORRE	CTIVE ACTION
1. Excessive makeup to the Fuel Storage Pool.	1A. **ENSURE** HV-4660 SKIMMER SURGE TANK MAKEUP VALVE is closed. 1B. IF aligned, **STOP** makeup to the Fuel Pool Cooling Pumps from the CST. 1C. IF aligned, **STOP** makeup to the Fuel Storage Pool from the RHR System. 1D. IF ON in the Refueling mode, **STOP** the ECCS Pumps. 1E. **ENSURE** valves HV-4647 AND HV-4648 SSWS MAKEUP TO THE FUEL STORAGE POOL are closed. 1F. **ALIGN** the Fuel Pool System to reject the excessive water to the Condensate Storage Tank or CRW as necessary.
2. The Fuel Storage Pool Over-flow Weirs are blocked.	2A. **REQUEST** the SM/CRS to initiate corrective action.

Associated annunciator D1 A5

REFERENCES M-10-0, Sht. 2 M-51-1, Sht. 1; 2
M-53-0, Sht. 1 J-53-0, Sht. 10

DIGITAL ALARM POINT D3834

NOMENCLATURE FUEL STORAGE POOL LEVEL LOW **SETPOINT** 39’ 9”

DESCRIPTION Low water level in the Fuel Storage Pool **ORIGIN** LSH 4657

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **CONFIRM** that the FUEL POOL HI/LO alarm setpoint has been reached.
2. **ENSURE** compliance with the operability requirements of T/S 3.9.9 WATER LEVEL-SPENT FUEL STORAGE POOL.
3. **ACKNOWLEDGE** the FUEL POOL LEVEL HI/LO alarm.
4. **REFER TO** HC.OP-AB.COOL-0004(Q) Fuel Pool Cooling.
5. **ACKNOWLEDGE** the low level alarm at Local Panel 10C214 (Rx. Bldg. El. 201').

NOTE

Annunciator on local Panel 10C214 is always valid for low Spent Fuel Pool level, however it is only enabled for the low Reactor cavity water level during refueling operations. The annunciator on local Panel 10C214 alarms on low Spent Fuel Pool level and/or low Reactor cavity water level when the annunciator is enabled.

CAUSE CORRE	CTIVE ACTION
1. Leakage past the Fuel Storage Pool Inner Gate(s) with drain valve(s) 1EC-V034, 1EC-V097, and/or 1EC-V182 open.	1A. **ENSURE** HV-4660 SKIMMER SURGE TANK MAKEUP VALVE is open. 1B. **MONITOR** Fuel Storage Pool gate(s) leakage rate AND IF high, **ENSURE** drain valves 1EC-V097, 1EC-V034 and 1EC-V182 are closed.

Associated annunciator D1 A5

REFERENCES M-10-0, Sht. 2
DCP 4-HM-0660
J-53-0, Sht. 10
M-51-1, Sht. 1; 2
M-53-0, Sht. 1

DIGITAL ALARM POINT D3834

CAUSE CORRE	CTIVE ACTION
1. (Continued)	1C. **MONITOR** Reactor Building Sump leakage rates AND IF high, **NOTIFY** the SM/CRS to initiate corrective action. 1D. IF water level is dropping AND time permits **LINE UP** makeup to the Fuel Storage Pool from the Condensate Storage Tank via the Fuel Pool Cooling Pump(s). 1E. IF water level continues to drop **MAINTAIN** Fuel Storage Pool level using makeup from the RHR System. 1F. IF Fuel Storage Pool level cannot be maintained **ALIGN** makeup from the Station Service Water System. 1G. IF the appropriate entry criteria is satisfied **IMPLEMENT** the HCGS Emergency Plan.
2. Evaporation of coolant from the Fuel Storage Pool. 3. 3A Leakage from RHR IF in Shutdown Cooling to support Refueling operations.	2A. **ENSURE** HV-4660 SKIMMER SURGE TANK MAKEUP VALVE is open. **DETERMINE** if leakage is from the RHR System. 3B. IF leakage is from RHR, **DETERMINE** if RHR Pump trip AND isolation is necessary. (1BC-HV-F008, 1BC-HV-F009, 1BC-HV-F015A, 1BC-HV-F015B, require manual isolation IF HC.OP-GP.SM-0001(Q) has been implemented).

DIGITAL ALARM POINT D3835

NOMENCLATURE Fuel/Cask Pool Gates Leakage **SETPOINT** 1' 3/4"

DESCRIPTION ORIGIN Leakage past the Fuel Storage Pool and/or the Fuel Cask Storage Pit gates LSH-4668*

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **MAINTAIN** the Fuel Storage Pool and/or the Fuel Cask Storage Pit water level(s).
2. **ENSURE** compliance with the WATER LEVEL - SPENT FUEL STORAGE POOL requirements of Technical Specifications 3.9.9.
3. **VERIFY** proper valve alignment.
   IF the gate area between the Fuel Pool and either the Reactor Well or Fuel Cask Pit is intentionally flooded, the affected leak detection drain (1-EC-V053 Fuel Storage Pool GT Seal Drn and/or 1-EC-V052 Fuel Cask Stor Pit GT Seal Drn must be isolated or D3835 will alarm.
4. Visually **IDENTIFY** the source of leakage at the refuel floor, if possible.
   NOTE - This condition may be due to long term gate seal leakage.

   To Clear The Alarm

   OPEN 1-EC-V097 and 1-EC-V034 to drain LSH-4668
   THEN, **RE-CLOSE** 1-EC-V097 and 1-EC-V034.

   IF the alarm is received again in a short period of time
   THEN **IDENTIFY** the Leakage Source and/or Qualitatively Estimate the Leak Rate as follows:

   a. **CLOSE** 1-EC-V052 and 1-EC-V053

   b. **DRAIN** LSH-4668 by opening 1-EC-V097 Fuel Pool/Fuel Cks GT Seal Drn Vlv
   UNTIL the alarm clears
   THEN, **RE-CLOSE** 1-EC-V097.

   c. **RE-OPEN** 1-EC-V052 and 1-EC-V053 alternately
   UNTIL the alarm re-occurs.

5. **VERIFY** proper gate seal valve alignment and seal pressure.
6. IF the leak can be contained between the gates (visually verify),
   ISOLATE the affected drain path (1-EC-V052 and/or 1-EC-V053) to minimize leakage through the switch to CRW. LSH-4668 may then be drained by opening 1-EC-V097 and reset to monitor the remaining drain path.
   IF leakoff is desired, **OPEN** either 1-EC-V034 FP FC Gate Seal Hdr Drn to CRW
   OR 1-EC-V033 FP F/C GT Seal Drn TO FPC to FPCC Pump suction.

* LSH-4668 is a float switch and flow will occur through the switch to CRW WHEN in alarm unless the switch is isolated.

DIGITAL ALARM POINT D3835

CAUSE CORRE	CTIVE ACTION
1. Leakage past the Fuel Storage Pool inner gate(s) (i.e. from the Fuel Pool toward the Reactor Well or Fuel Cask Storage Pit).	1A. **OPEN** HV-4660 SKIMMER SURGE TANK MAKEUP VALVE to maintain Fuel Storage Pool water level as needed. 1B. IF ACTION 1A is insufficient to maintain Fuel Storage Pool water level, **ALIGN** the RHR System to inject into the Fuel Storage Pool by opening valve 1EC-V060 and/or 1EC-V061. 1C. **MONITOR** the Fuel Storage water level. 1D. **REQUEST** the SM/CRS to initiate corrective action.
2. Leakage past the Fuel Cask Storage Pit removable blocks and outer gates.	2A. **MAINTAIN** the Fuel Cask Storage Pit water level within prescribed limits by opening valve(s) 1EC-V047, 1EC-V051 and/or 1EC-V032. 2B. **ALIGN** makeup to the Fuel Cask Storage Pit via the Condensate Transfer System to maintain the water level within limits using valve 1EC-V049. 2C. **REQUEST** the SM/CRS to initiate corrective action.

Associated annunciator D1 B5

REFERENCES M-53-1, Sht. 1 JL-5000(A)-34
J-53-0, Sht. 10, 11

DIGITAL ALARM POINT **D3837**

NOMENCLATURE Drywell/React Well Seal Lkg Leakage **SETPOINT** 0' 7 1/2"

DESCRIPTION Leakage past the Drywell to Reactor Well Seal **ORIGIN** LSH-4665*

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **CONFIRM** that the DRYWELL/REACT WELL LKG alarm setpoint has been reached.
2. **MAINTAIN** the Reactor Well water level.
3. **ENSURE** compliance with the WATER LEVEL - REACTOR VESSEL requirements of Technical Specifications 3.9.8.
4. To prevent overflowing the Drywell to Reactor Well Seal Area, 1-EC-V095 and/or 1-EC-V085 should be opened to increase flow to CRW as necessary.
5. **DISPATCH** an operator to the Torus Room (RB 4102, 54 ft elev) to check the drywell shell, drywell pedestal and drains at the bottom of the drywell air gap for leakage.

CAUSE CORRE	CTIVE ACTION
1. Defective Drywell to Reactor Well Seal.	1A. **DETERMINE** Seal leakage by monitoring Reactor Well leakage rates and level. 1B. IF needed, **ALIGN** make up to the Reactor Well via the Fuel Pool Cooling Pump(s) by opening valves 1EC-V047, 1EC-V027 and/or 1EC-V024 to maintain the Reactor Well level within prescribed limits.

Associated annunciator D1 B5

REFERENCES M-53-1, Sht. 1 JL-5000(A)-34
J-53-0, Sht. 10, 11

* LSH-4665 is a float switch and flow will pass through the switch to CRW when in alarm.

DIGITAL ALARM POINT D3837

CAUSE CORRE	CTIVE ACTION
1. Defective Drywell to Reactor Well Seal. (Continued)	1C. **ALIGN** makeup to the Reactor Well via the Condensate Transfer System to maintain Reactor Well water level, IF needed, by using valve 1EC-V049. 1D. **REQUEST** the SM/CRS to initiate corrective action.

DIGITAL ALARM POINT D3838

NOMENCLATURE Vessel/Drywell Seal Leakage **SETPOINT** 2' 6 3/8"

DESCRIPTION Leakage past the Vessel to Drywell Seal **ORIGIN** LSH-4666*

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **CONFIRM** that the VESSEL/DRYWELL SEAL LEAKAGE alarm setpoint has been reached.
2. **MAINTAIN** the Reactor Well water level within the prescribed limits.
3. **ENSURE** compliance with the WATER LEVEL - REACTOR LEVEL requirements of Technical Specifications 3.9.8.
4. **NOTIFY** HP Shift Tech of contaminated water leak into drywell from Reactor Well.
5. To prevent overflowing into the Drywell 1-EC-V028 and/or 1-EC-V094 should be opened to increase flow to CRW as necessary if drywell entry is possible.

CAUSE CORRE	CTIVE ACTION
1. Defective Vessel to Drywell Seal.	1A. **DETERMINE** Seal leakage by monitoring Reactor Well leakage rate and level. 1B. **ALIGN** make up to the Reactor Well via the Fuel Pool Cooling Pump(s) by opening valves 1EC-V047, 1EC-V027 and/or 1EC-V024 to maintain the Reactor Well level within prescribed limits, IF needed.

Associated annunciator D1 B5

REFERENCES M-53-1, Sht. 1 JL-5000(A)-34
J-53-0, Sht. 10, 11

* LSH-4666 is afloat switch and flow will pass through the switch to CRW when in alarm. LSH-4666 is located in the drywell.

DIGITAL ALARM POINT D3838

CAUSE CORRE	CTIVE ACTION
1. Defective Vessel to Drywell Seal. (Continued)	1C. **ALIGN** makeup to the Reactor Well via the Condensate Transfer System to maintain Reactor Well water level, IF needed, by using valve 1EC-V047. 1D. **REQUEST** the SM/CRS to initiate corrective action.

DIGITAL ALARM POINT **D3840**

NOMENCLATURE TORUS WTR CLNUP PMP OP229 FLOW **SETPOINT** 300 gpm

DESCRIPTION Torus water cleanup system low flow **ORIGIN** FSL-4684

AUTOMATIC ACTION:

Torus Water Cleanup Pump OP229 trips after 15 second time delay.

OPERATOR ACTION:

1. **CONFIRM** AUTOMATIC ACTION.
2. **DISPATCH** an operator to Remote Panel 10C305 to investigate the cause of alarm.

CAUSE CORRE	CTIVE ACTION
1. Torus Water Cleanup Pump breaker 52-253014 OR thermal overloads have tripped, faulty control power fuse, OR faulty control power transformer.	1A. **DISPATCH** an operator to breaker to determine fault. IF the breaker OR thermal overloads have tripped OR the control power fuse has blown, **INSPECT** Pump/Motor OP229 for mechanical interference, low lube oil level, high motor temperature. 1B. **NOTIFY** the SM/CRS prior to resetting OR attempting to correct any breaker fault OR IF any pump/motor problems are detected.

Associated annunciator D1 C5

REFERENCES M-53-1, Sht. 2 E-0031-1, Sht. 1
J-53-0, Sht. 3, 10; 11 J-102-0, Sht. 2, 3, 6, 8

DIGITAL ALARM POINT D3840

CAUSE CORRE	CTIVE ACTION
2. Improper valve lineup.	2A. **ENSURE** the proper Torus Water Cleanup System valve lineup.
3. Torus Water Cleanup Isolation Valves HV-4652, HV-4679, AND HV-4680, AND HV-4681 closed due to a containment isolation signal being present.	3A. **CONFIRM** that the containment isolation signal is valid.
4. Torus Water Cleanup System suction strainer plugged.	4A. **BACK FLUSH** the strainer.
5. Fuel Pool Filter Demin Hi D/P.	5A. **PLACE** another Filter Demin in service AND **REMOVE** the affected Filter Demin from service.

DIGITAL ALARM POINT **D3847**

NOMENCLATURE TORUS WTR CLNUP V HV-4652 **SETPOINT** N/A

DESCRIPTION Motor operated valve HV-4652 inoperative **ORIGIN** MCC 10B212

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with the CONTAINMENT ISOLATION VALVES requirements of Technical Specifications 3.6.3.

CAUSE CORRE	CTIVE ACTION
1. HV-4652 TWC Inboard Return Containment Isolation Valve inoperative due to: a. breaker 52-212233 tripped b. thermal overloads tripped c. control power fuse faulty d. control power transformer faulty	1A. **DISPATCH** an operator to breaker 52-212233. 1B. IF breaker or thermal overloads are tripped, **NOTIFY** SM/CRS PRIOR to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated annunciator D1 D5

REFERENCES E-0021-1, Shts. 1, 2 & 3

DIGITAL ALARM POINT **D3848**

NOMENCLATURE TORUS WTR CLNUP V HV-4680 **SETPOINT** N/A

DESCRIPTION Motor operated valve HV-4680 inoperative **ORIGIN** MCC 10B212

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with the CONTAINMENT ISOLATION VALVES requirements of Technical Specifications 3.6.3.

CAUSE CORRE	CTIVE ACTION
1. HV-4680 Torus Water Cleanup Inboard Supply Containment Isolation Valve inoperative due to: a. breaker 52-212241 tripped b. thermal overloads tripped c. control power fuse faulty d. control power transformer faulty	1A. **DISPATCH** an operator to breaker 52-212241. 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS PRIOR to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated annunciator D1 D5

REFERENCES E-0021-1, Sht. 1, 2 & 3

DIGITAL ALARM POINT **D3849**

NOMENCLATURE FUEL POOL F/D BYP HV-4689A OPF **SETPOINT** N/A

DESCRIPTION Motor operated valve HV-4689A inoperative **ORIGIN** MCC 10B212

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

None

CAUSE CORRE	CTIVE ACTION
1. HV-4689A Fuel Pool F/D Bypass Valve inoperative due to: a. breaker 52-212244 tripped b. thermal overloads tripped c. control power fuse faulty d. control power transformer faulty	1A. **DISPATCH** an operator to breaker 52-212244 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS PRIOR to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated annunciator D1 D5

REFERENCES E-0021-1, Sht. 1, 2 & 3

DIGITAL ALARM POINT D3850

NOMENCLATURE EMERG MKUP TO FUEL POOL LP A V **SETPOINT** N/A

DESCRIPTION Motor operated valve HV-4647 inoperative **ORIGIN** MCC 10B212

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

None

CAUSE CORRE	CTIVE ACTION
1. HV-4647 Spent Fuel Storage Pool Emergency Fill Valve inoperative due to: a. breaker 52-212254 tripped b. thermal overloads tripped c. control power fuse faulty d. control power transformer faulty	1A. **DISPATCH** an operator to breaker 52-212254 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS PRIOR to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated annunciator D1 D5

REFERENCES E-0021-1, Sht. 1, 2 & 3

DIGITAL ALARM POINT **D3851**

NOMENCLATURE TORUS WTR CLNUP V HV-4679 **SETPOINT** N/A

DESCRIPTION Motor operated valve HV-4679 inoperative **ORIGIN** MCC 10B222

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with the CONTAINMENT ISOLATION VALVES requirements of Technical Specifications 3.6.3.

CAUSE CORRE	CTIVE ACTION
1. HV-4679 TWC Outboard Return Containment Isolation Valve inoperative due to: a. breaker 52-222212 tripped b. thermal overloads tripped c. control power fuse faulty d. control power transformer faulty	1A. **DISPATCH** an operator to breaker 52-222212 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS PRIOR to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated annunciator D1 D5

REFERENCES E-0021-1, Sht. 1, 2 & 3

DIGITAL ALARM POINT **D3852**

NOMENCLATURE TORUS WTR CLNUP V HV-4681 **SETPOINT** N/A

DESCRIPTION Motor operated valve HV-4681 inoperative **ORIGIN** MCC 10B222

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with the CONTAINMENT ISOLATION VALVES requirements of Technical Specifications 3.6.3.

CAUSE CORRE	CTIVE ACTION
1. HV-4681 TWC Outboard Supply Containment Isolation Valve inoperative due to: a. breaker 52-222221 tripped b. thermal overloads tripped c. control power fuse faulty d. control power transformer faulty	1A. **DISPATCH** an operator to breaker 52-222221 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS PRIOR to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated annunciator D1 D5

REFERENCES E-0021-1, Sht. 1, 2 & 3

DIGITAL ALARM POINT D3853

NOMENCLATURE EMERG MKUP TO FUEL POOL LP B V **SETPOINT** N/A

DESCRIPTION Motor operated valve HV-4648 inoperative **ORIGIN** MCC 10B222

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

None

CAUSE CORRE	CTIVE ACTION
1. HV-4648 Spent Fuel Storage Pool Emergency Fill Valve inoperative due to: a. breaker 52-222154 tripped b. thermal overloads tripped c. control power fuse faulty d. control power transformer faulty	1A. **DISPATCH** an operator to breaker 52-222154 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS PRIOR to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated annunciator D1 D5

REFERENCES E-0021-1, Sht. 1, 2 & 3

DIGITAL ALARM POINT **D3854**

NOMENCLATURE FUEL POOL F/D BYP HV-4689B OPF **SETPOINT** N/A

DESCRIPTION Motor operated valve HV-4689B inoperative **ORIGIN** MCC 10B222

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

None

CAUSE CORRE	CTIVE ACTION
1. HV-4689B Fuel Pool Filter Demin Bypass Valve inoperative due to: a. breaker 52-222244 tripped b. thermal overloads tripped c. control power fuse faulty d. control power transformer faulty	1A. **DISPATCH** an operator to breaker 52-222244 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS PRIOR to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated annunciator D1 D5

REFERENCES E-0021-1, Sht. 1, 2 & 3

DIGITAL ALARM POINT **D3855**

NOMENCLATURE SSWS STRAINER B DIFF PRESSURE **SETPOINT** 138.55 inwc (5 psid)

DESCRIPTION Hi Hi differential pressure **ORIGIN** PDSHH-2196B

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **MAINTAIN** required Service Water flow to RACS AND SACS Heat Exchangers (**MONITOR** SACS & RACS temperatures).
2. **ENSURE** EA-HV-2197B SSW STRNR BKWSH VLV is open.
3. **DISPATCH** operator to Service Water Intake Structure to investigate problem .
4. **ENSURE** compliance with the Service Water operability requirement of Technical Specification 3/4.7.1.2.
5. **REFER** to HC.OP-AB.COOL-0001(Q); Station Service Water.

CAUSE	CORRECTIVE ACTION
1. Clogged filter	1A. **CHECK** operation of strainer backwash system and strainer motor. 1B. **CHECK** strainer drive unit sheer pin. 1C. **CHECK** condition/operation of traveling screen.
2. Hi system flow/Header break	2A. **INVESTIGATE** cause of excessive flow 2B. WHEN possible. **RESTORE** flow to normal.

Associated Annunciator A1 B3

REFERENCES: E-6754-0, Sht. A J-10-0, Sht. 19, Sht. 23

DIGITAL ALARM POINT **D3857**

NOMENCLATURE SSWS STRAINER A DIFF PRESSURE **SETPOINT** 138.55 in wc (5 psid)

DESCRIPTION Hi Hi differential pressure **ORIGIN** PDSHH-2196A

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **MAINTAIN** required Service Water flow to RACS AND SACS Heat Exchangers (**MONITOR** SACS & RACS temperatures).
2. **ENSURE** EA-HV-2197A SSW STRNR BKWSH VLV is open.
3. **DISPATCH** operator to Service Water Intake Structure to investigate problem.
4. **ENSURE** compliance with the Service Water operability requirement of Technical Specification 3/4.7.1.2.
5. **REFER** to HC.OP-AB.COOL-0001(Q); Station Service Water.

CAUSE	CORRECTIVE ACTION
1. Clogged filter	1A. **CHECK** operation of Strainer backwash system AND Strainer motor. 1B. **CHECK** Strainer drive unit sheer pin. 1C. **CHECK** condition/operation of traveling screen.
2. Hi system flow/Header break	2A. **INVESTIGATE** cause of excessive flow 2B. WHEN possible, **RESTORE** flow to normal.

Associated Annunciator A1 B1

REFERENCES: E-6754-0, Sht. A
J-10-0, Sht. 18, Sht. 23

DIGITAL ALARM POINT **D3859**

NOMENCLATURE SSWS STRAINER C DIFF PRESSURE **SETPOINT** 138.55 inwc (5 psid)

DESCRIPTION Hi Hi differential pressure **ORIGIN** PDSHH-2196C

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **MAINTAIN** required Service Water flow to RACS AND SACS Heat Exchangers (**MONITOR** SACS & RACS temperatures).
2. **ENSURE** EA-HV-2197A SSW STRNR BKWSH VLV is open.
3. **DISPATCH** operator to Service Water Intake Structure to investigate problem .
4. **ENSURE** compliance with the Service Water operability requirement of Technical Specification 3/4.7.1.2.
5. **REFER** to HC.OP-AB.COOL-0001(Q); Station Service Water.

CAUSE	CORRECTIVE ACTION
1. Clogged filter	1A. **CHECK** operation of Strainer backwash system and strainer motor. 1B. **CHECK** Strainer drive unit sheer pin. 1C. **CHECK** condition/operation of traveling screen.
2. Hi system flow/header break	2A. **INVESTIGATE** cause of excessive flow. 2B. WHEN possible, **RESTORE** flow to normal.

Associated Annunciator A1 C1

REFERENCES: E-6754-0, Sht. A
J-10-0, Sht. 19, Sht. 23

DIGITAL ALARM POINT D3861

NOMENCLATURE SSW LOOP A DUMP VLV LOCKED CLS **SETPOINT** N/A

DESCRIPTION HV-2356A Locked Closed **ORIGIN** HS-2356A

AUTOMATIC ACTION:

HV-2356A STATION SERVICE WATER LOOP A YARD DUMP VALVE closes.

OPERATOR ACTION:

None

CAUSE	CORRECTIVE ACTION
1. HS-2356A STATION SERVICE WATER LOOP A YARD DUMP VALVE Switch in LOCKOUT.	1A. WHEN proper Service Water flow is established, **PRESS** HS-2356A STATION SERVICE WATER LOOP A YARD DUMP VALVE AUTO PB.

Associated Annunciator A1 D1

REFERENCES: J-10-0, Sht. 11, Sht. 23

DIGITAL ALARM POINT **D3943**

NOMENCLATURE SSW LOOP B DUMP VLV LOCKED CLS **SETPOINT** N/A

DESCRIPTION HV-2356B Locked Closed **ORIGIN** HS-2356B

AUTOMATIC ACTION:

HV-2356B STATION SERVICE WATER LOOP B YARD DUMP VALVE closes.

OPERATOR ACTION:

None

CAUSE	CORRECTIVE ACTION
1. HS-2356B STATION SERVICE WATER LOOP B YARD DUMP VALVE switch in LOCKOUT.	1A. WHEN conditions permit, **PRESS** HS-2356B STATION SERVICE WATER LOOP B YARD DUMP VALVE AUTO PB.

Associated Annunciator A1 D3

REFERENCES: J-10-0, Sht. 11, Sht. 23

DIGITAL ALARM POINT D3945 – D3946

NOMENCLATURE SACS HX B1(B2) FLOW **SETPOINT** 8.0 psig

DESCRIPTION SACS Hx B1 Low Flow **ORIGIN** PDSL-2354B
SACS Hx B2 Low Flow PDSL-2373B

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **ENSURE** proper cooling flow to SACS
   AND RACS Heat Exchangers.
2. **OBSERVE** the Service Water System operability requirements of T/S 3.7.1.2.
3. **REFER** to HC.OP-AB.COOL-0001(Q); Station Service Water.

CAUSE	CORRECTIVE ACTION
1. SACS Hx Inlet Hdr Leak/Break	1A. **REQUEST** SM/CRS to initiate investigative action. IF room is flooding **HAVE** operator isolate SACS loop.
2. Loss of Running Service Water Pump	2A. **RESTORE** service water flow IAW HC.OP-SO.EA-0001(Q).
3. Improper valve lineup	3A. **RESTORE** proper valve lineup IAW HC.OP-SO.EA-0001(Q).

Associated Annunciator A1 D3

REFERENCES: J-10-0, Sht. 7, Sht. 23
CD-273Y NRC Q410.66

DIGITAL ALARM POINT D3947 – D3948

NOMENCLATURE SACS HX A1(A2 FLOW **SETPOINT** 8.0 psid

DESCRIPTION SACS Hx A1 Low Flow and HV-2371A full open **ORIGIN** PDSL-2354A
SACS Hx A2 Low Flow and HV-2355A full open PDSL-2373A

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **ENSURE** proper cooling flow to SACS
   AND RACS Heat Exchangers.
2. IF low flow cannot be corrected,
   TRANSFER to standby Service Water loop.
3. **REFER** to HC.OP-AB.COOL-0001(Q); Station Service Water.

CAUSE	CORRECTIVE ACTION
1. SACS Hx OR RACS Hx Inlet Hdr Leak/Break	1A. **REQUEST** SM/CRS to initiate investigative action. IF room is flooding **HAVE** operator isolate SACS loop.
2. Loss of Running Service Water Pump	2A. **RESTORE** service water flow IAW HC.OP-SO.EA-0001(Q).
3. Improper valve lineup	3A. **RESTORE** proper valve lineup IAW HC.OP-SO.EA-0001(Q).

Associated Annunciator A1 D1

REFERENCES: J-10-0, Sht. 6, Sht. 23
CD-273Y Q410.66 TASK NO.: 0001

DIGITAL ALARM POINT **D3949**

NOMENCLATURE	SSWS PUMP B LUBE WATER FLOW SSWS PUMP B GLAND TEMPERATURE	**SETPOINT**	5 psig 100 °F
DESCRIPTION	Low SSWS Pump B Lube Water Pressure High SSWS Pump B Gland Temperature	**ORIGIN**	PSL-2224B TSH-2251B

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **MAINTAIN** required Service Water flow to RACS AND SACS Heat Exchangers (**MONITOR** SACS & RACS temperatures).
2. **DISPATCH** an operator to the Service Water Intake Structure to investigate the problem.
3. **ENSURE** compliance with the Service Water operability requirements of T/S 3/4.7.1.2.

CAUSE	CORRECTIVE ACTION
1. Low lube water pressure (5 psig with BP502 running) High Gland Temperature (100 °F)	1A. **ENSURE** proper valve alignment, and system integrity. 1B. **DETERMINE** whether alarm is either Low lube Water Pressure AND/OR a High Gland Temperature (and take action) as follows: • **VERIFY** whether lubrication water supply pressure is adequate using 1EAPI-2224B (local). (This pressure should be > 5 psig based on existing low lubrication supply pressure alarm set point.) IF pressure is 5 psig or less, THEN, **SECURE** SSW Pump after ensuring required service water flow to SACS and RACS Heat Exchangers • Visually **VERIFY** adequate packing gland leak-off flow is present from packing gland follower leak off line. (**REMOVE** tygon tubing from gland follower leak off line and visually witness steady stream of water) IF there is NOT a steady stream of packing leak off water and steam is being emitted from this leak off line, THEN **SECURE** SSW Pump after ensuring required service water flow to SACS and RACS Heat Exchangers. • **MEASURE** gland temperature sensor mounting plate temperature using calibrated pyrometer and validate metal temperatures in the vicinity of temperature probe at or above 100 °F. IF metal temperatures are NOT above alarm temperature set point of 100 °F, THEN **INITIATE** notification for maintenance to troubleshoot temperature switch (1EATSH-2251B) • **MEASURE** gland follower temperature just below upper adjustment flange. (This temperature should not exceed 120 °F (based on internal OE, reference notification 20189430) in an attempt to maintain SSW Pump lubrication/cooling water flow below 100 °F) IF gland follower temperature just below upper adjustment flange exceeds 120 °F THEN **SECURE** SSW Pump after ensuring required service water flow to SACS and RACS Heat Exchangers. 1C. IF alarm condition persists periodically **RE-VALIDATE** whether alarm is due to Low lube Water Pressure AND/OR a High Gland Temperature (Temporary Log) IAW above criteria.

Associated Annunciator A1 B3

REFERENCES: E-6754-0, Sht. A; J-10-0, Shts. 5, 23

DIGITAL ALARM POINT **D3951**

NOMENCLATURE	SSWS PUMP A LUBE WATER FLOW SSWS PUMP A GLAND TEMPERATURE	**SETPOINT**	5 psig 100 °F
DESCRIPTION	Low SSWS Pump A Lube Water Pressure High SSWS Pump A Gland Temperature	**ORIGIN**	PSL-2224A TSH-2251A

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **MAINTAIN** required Service Water flow to RACS AND SACS Heat Exchangers, (**MONITOR** SACS & RACS temperatures).
2. **DISPATCH** an operator to the Service Water Intake Structure to investigate the problem.
3. **ENSURE** compliance with the Service Water operability requirements of T/S 3/4.7.1.2.

CAUSE	CORRECTIVE ACTION
1. Low lube water pressure (5 psig with AP502 running) High Gland Temperature (100 °F)	1A. **ENSURE** proper valve alignment, and system integrity. 1B. **DETERMINE** whether alarm is either Low lube Water Pressure AND/OR a High Gland Temperature (and take action) as follows: • **VERIFY** whether lubrication water supply pressure is adequate using 1EAPI-2224A (local). (This pressure should be > 5 psig based on existing low lubrication supply pressure alarm set point.) IF pressure is 5 psig or less, THEN, **SECURE** SSW Pump after ensuring required service water flow to SACS and RACS Heat Exchangers • Visually **VERIFY** adequate packing gland leak-off flow is present from packing gland follower leak off line. (**REMOVE** tygon tubing from gland follower leak off line and visually witness steady stream of water) IF there is NOT a steady stream of packing leak off water and steam is being emitted from this leak off line, THEN **SECURE** SSW Pump after ensuring required service water flow to SACS and RACS Heat Exchangers. • **MEASURE** gland temperature sensor mounting plate temperature using calibrated pyrometer and validate metal temperatures in the vicinity of temperature probe at or above 100 °F. IF metal temperatures are NOT above alarm temperature set point of 100 °F, THEN **INITIATE** notification for maintenance to troubleshoot temperature switch (1EATSH-2251A) • **MEASURE** gland follower temperature just below upper adjustment flange. (This temperature should not exceed 120 °F (based on internal OE, reference notification 20189430) in an attempt to maintain SSW Pump lubrication/cooling water flow below 100 °F) IF gland follower temperature just below upper adjustment flange exceeds 120 °F THEN **SECURE** SSW Pump after ensuring required service water flow to SACS and RACS Heat Exchangers. 1C. IF alarm condition persists periodically **RE-VALIDATE** whether alarm is due to Low lube Water Pressure AND/OR a High Gland Temperature (Temporary Log) IAW above criteria.

Associated Annunciator A1 B1

REFERENCES: E-6754-0, Sht. A; J-10-0, Shts. 3, 23

	DIGITAL ALARM POINT		**D3953**
NOMENCLATURE	SSWS PUMP D LUBE WATER FLOW SSWS PUMP D GLAND TEMPERATURE	**SETPOINT**	5 psig 100 °F
DESCRIPTION	Low SSWS Pump D Lube Water Pressure High SSWS Pump D Gland Temperature	**ORIGIN**	PSL-2224D TSH-2251D

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **MAINTAIN** required Service Water flow to RACS AND SACS Heat Exchangers (**MONITOR** SACS & RACS temperatures).
2. **DISPATCH** an operator to the Service Water Intake Structure to investigate the problem.
3. **ENSURE** compliance with the Service Water operability requirements of T/S 3/4.7.1.2.

CAUSE	CORRECTIVE ACTION
1. Low lube water pressure (5 psig with DP502 running) High Gland Temperature (100 °F)	1A. **ENSURE** proper valve alignment, and system integrity. 1B. **DETERMINE** whether alarm is either Low lube Water Pressure AND/OR a High Gland Temperature (and take action) as follows: • **VERIFY** whether lubrication water supply pressure is adequate using 1EAPI-2224D (local). (This pressure should be > 5 psig based on existing low lubrication supply pressure alarm set point.) IF pressure is 5 psig or less, THEN, **SECURE** SSW Pump after ensuring required service water flow to SACS and RACS Heat Exchangers • Visually **VERIFY** adequate packing gland leak-off flow is present from packing gland follower leak off line. (**REMOVE** tygon tubing from gland follower leak off line and visually witness steady stream of water) IF there is NOT a steady stream of packing leak off water and steam is being emitted from this leak off line, THEN **SECURE** SSW Pump after ensuring required service water flow to SACS and RACS Heat Exchangers. • **MEASURE** gland temperature sensor mounting plate temperature using calibrated pyrometer and validate metal temperatures in the vicinity of temperature probe at or above 100 °F. IF metal temperatures are NOT above alarm temperature set point of 100 °F, THEN **INITIATE** notification for maintenance to troubleshoot temperature switch (1EATSH-2251D) • **MEASURE** gland follower temperature just below upper adjustment flange. (This temperature should not exceed 120 °F (based on internal OE, reference notification 20189430) in an attempt to maintain SSW Pump lubrication/cooling water flow below 100 °F) IF gland follower temperature just below upper adjustment flange exceeds 120 °F THEN **SECURE** SSW Pump after ensuring required service water flow to SACS and RACS Heat Exchangers. 1C. IF alarm condition persists periodically **RE-VALIDATE** whether alarm is due to Low lube Water Pressure AND/OR a High Gland Temperature (Temporary Log) IAW above criteria.

Associated Annunciator A1 C3

REFERENCES: E-6754-0, Sht. A; J-10-0, Shts. 5, 23

DIGITAL ALARM POINT D3960

NOMENCLATURE RBVS EXH RTM PNL C382 SETPOINT Various

DESCRIPTION Reactor Building HVAC Exhaust System trouble ORIGIN Multiple

AUTOMATIC ACTION:

Low flow condition on operating fan results in fan trip
AND auto start of standby fan(s).

OPERATOR ACTION:

1. **NOTIFY** SM/CRS of alarm condition.
2. **OBSERVE** Control Room indication to determine
   IF fan tripped.
3. **REFER TO** HC.OP-AB.CONT-0003(Q), Reactor Building.
4. **DISPATCH** operator to the Remote Control Panel 10C382 to determine cause of alarm.

CAUSE CORRE	CTIVE ACTION
1. Low flow (FSL-9420A, B, C)	1A. **ENSURE** standby fan(s) auto starts to maintain a negative pressure in Secondary Containment. 1B. IF insufficient exhaust fans available to maintain a negative pressure in Secondary Containment **ISOLATE** the Reactor Building AND **START** FRVS (Filtration Recirculation and Ventilation System). 1C. **DIRECT** operator to monitor damper operation to determined if a malfunction exists. This action requires a restart of the fan which may be undesirable.
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Associated Annunciator E6 C5

REFERENCES: E-6787-0 H-84-0, Sht. 1

DIGITAL ALARM POINT D3960

CAUSE CORRE	CTIVE ACTION
2. A(B,C)VH3 01 Filter high D/P (alarm setpoint 3.5 inches water gauge) PDSH-9420A, B, C	2A. **DIRECT** operator to determine filter D/P for the fan(s) in operation.
3. Exhaust air temperature high (alarm setpoint 120°F; TSH-9415 located at common inlet to Exhaust Filters)	3A. **DISPATCH** operator to check for steam leaks AND other room temperature alarms. 3B. **RESPOND** IAW HC.OP-AR.GR-0001(Q). 3C. **REQUEST** SM/CRS to initiate corrective action.

REFERENCES: E-6787-0 H-84-0, Sht. 1

DIGITAL ALARM POINT **D3961**

NOMENCLATURE RBVS SUPPLY RTM PNL C382 SETPOINT Various

DESCRIPTION Reactor Building HVAC Supply System trouble ORIGIN Multiple

AUTOMATIC ACTION:

Low flow condition on operating fan(s) results in fan trip AND auto start of standby fan(s).

OPERATOR ACTION:

1. **NOTIFY** SM/CRS of alarm condition.
2. **DISPATCH** operator to the Remote Control Panel 10C382 to determine cause of alarm.
3. **OBSERVE** Control Room indication to determine IF fan tripped.

CAUSE CORRE	CTIVE ACTION
1. Low flow (trip setpoint 30,000 cfm)	1A. **ENSURE** standby fan(s) auto start AND fan with low flow trips. 1B. **DIRECT** operator to monitor damper operation to determined IF a malfunction exists. This action requires a restart of the fan which may be undesirable. 1C. **ALIGN** ventilation to maintain a negative pressure in Secondary Containment (≤ -.50 inches water)
2. A(B,C)VH3 00 Filter high D/P (alarm setpoint 1.5 inches water gauge) PDSH-9368A, B, C	2A. **DIRECT** operator to determine filter D/P (PDI-9368)
Continued next page	

Associated Annunciator E6 C5

REFERENCES: E-6787-0
H-83-0, Sht. 1

DIGITAL ALARM POINT D3961

CAUSE CORRE	CTIVE ACTION
3. A(B,C)VH3 00 low temperature (alarm setpoint 35°F, TSL-9368A, B, C)	3A. **ENSURE** steam is available to Steam Heating Coils.
4. A(B,C)VH300 high temperature (alarm setpoint 65°F TSH-9368A,B,C)	4A. **DIRECT** operator to inspect Heating System to determine IF a malfunction exists.
5. Supply air temperature high (alarm setpoint 67°F, TSH-9369)	5A. **DIRECT** operator to inspect Heating System to determine malfunction.
6. Refueling Dampers in abnormal position	6A. Any one OR more dampers out of position for normal OR refueling operations. **DIRECT** operator to check dampers as indicated on H-83-0, Sht. 7 to determine which damper(s) have malfunctioned.
7. A(B,C)VH300 Roll Filter media runout ZAL-9368B	7A. **RESPOND** IAW HC.OP-AR.GR-0001(Q). 7B. **REQUEST** SM/CRS to initiate corrective action.

REFERENCES: E-6787-0
H-83-0, Sht. 1

DIGITAL ALARM POINT **D3974**

NOMENCLATURE SSWS STRAINER D DIFF PRESSURE **SETPOINT** 138.55 inwc (5 psid)

DESCRIPTION Hi Hi differential pressure **ORIGIN** PDSHH-2196D

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **MAINTAIN** required Service Water flow to RACS AND SACS Heat Exchangers (**MONITOR** SACS & RACS temperatures).
2. **ENSURE** EA-HV-2197D SSW STRNR BKWSH VLV is open.
3. **DISPATCH** operator to Service Water Intake Structure to investigate problem.
4. **ENSURE** compliance with the Service Water operability requirement of Technical Specification 3/4.7.1.2.
5. **REFER** to HC.OP-AB.COOL-0001(Q); Station Service Water.

CAUSE	CORRECTIVE ACTION
1. Clogged filter	1A. **CHECK** operation of strainer backwash system AND strainer motor. 1B. **CHECK** strainer drive unit sheer pin. 1C. **CHECK** condition/operation of traveling screen.
2. Hi system flow/header break	2A. **INVESTIGATE** cause of excessive flow 2B. WHEN possible, **RESTORE** flow to normal.

Associated Annunciator A1 C3

REFERENCES: E-6754-0, Sht. A
J-10-0, Sht. 19, Sht. 23

		DIGITAL ALARM POINT	**D3976**
NOMENCLATURE	SSWS PUMP C LUBE WATER FLOW SSWS PUMP C GLAND TEMPERATURE	**SETPOINT**	5 psig 100 °F
DESCRIPTION	Low SSWS Pump C Lube Water Pressure High SSWS Pump C Gland Temperature	**ORIGIN**	PSL-2224C TSH-2251C

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **MAINTAIN** required Service Water flow to RACS AND SACS Heat Exchangers (**MONITOR** SACS & RACS temperatures).
2. **DISPATCH** an operator to the Service Water Intake Structure to investigate the problem.
3. **ENSURE** compliance with the Service Water operability requirements of T/S 3/4.7.1.2.

CAUSE	CORRECTIVE ACTION
1. Low lube water pressure (5 psig with AP502 running) High Gland Temperature (100 °F)	1A. **ENSURE** proper valve alignment, and system integrity. 1B. **DETERMINE** whether alarm is either Low lube Water Pressure AND/OR a High Gland Temperature (and take action) as follows: • **VERIFY** whether lubrication water supply pressure is adequate using 1EAPI-2224C (local). (This pressure should be > 5 psig based on existing low lubrication supply pressure alarm set point.) IF pressure is 5 psig or less, THEN, **SECURE** SSW Pump after ensuring required service water flow to SACS and RACS Heat Exchangers • Visually **VERIFY** adequate packing gland leak-off flow is present from packing gland follower leak off line. (**REMOVE** tygon tubing from gland follower leak off line and visually witness steady stream of water) IF there is NOT a steady stream of packing leak off water and steam is being emitted from this leak off line, THEN **SECURE** SSW Pump after ensuring required service water flow to SACS and RACS Heat Exchangers. • **MEASURE** gland temperature sensor mounting plate temperature using calibrated pyrometer and validate metal temperatures in the vicinity of temperature probe at or above 100 °F. IF metal temperatures are NOT above alarm temperature set point of 100 °F, THEN **INITIATE** notification for maintenance to troubleshoot temperature switch (1EATSH-2251C) • **MEASURE** gland follower temperature just below upper adjustment flange. (This temperature should not exceed 120 °F (based on internal OE, reference notification 20189430) in an attempt to maintain SSW Pump lubrication/cooling water flow below 100 °F) IF gland follower temperature just below upper adjustment flange exceeds 120 °F THEN **SECURE** SSW Pump after ensuring required service water flow to SACS and RACS Heat Exchangers. 1C. IF alarm condition persists periodically **RE-VALIDATE** whether alarm is due to Low lube Water Pressure AND/OR a High Gland Temperature (Temporary Log) IAW above criteria.

Associated Annunciator A1 C1

REFERENCES: E-6754-0, Sht. A; J-10-0, Shts. 5, 23

DIGITAL ALARM POINT D3977

NOMENCLATURE SEISMIC TROUBLE ALARM **SETPOINT** Multiple

DESCRIPTION ORIGIN Seismic Occurrence at OBE alarm level Various

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **DISPATCH** an operator to Local Panel 10C673 to validate alarm AND **RESET** IAW HC.OP-SO.SG-0001(Z) Seismic Instrumental System Operation.
2. **OBSERVE** Seismic Response Spectrum Annunciator (10C650C) AND **INDICATE** on Attachment C4-1 the lamps that are illuminated.
3. **RESET** in accordance with HC.OP-SO.SG-0001(Q).
4. **REQUEST** I&C to retrieve the earthquake record IAW I&C procedure.
5. **IMPLEMENT** procedure HC.OP-AB.MISC-0001(Q) Acts of Nature.
6. **REPORT** cause AND severity of alarm to SM/CRS.

CAUSE CORRE	CTIVE ACTION
1. Seismic event	1A. **REQUEST** SM/CRS to initiate corrective action. 1B. **IMPLEMENT** procedure HC.OP-AB.MISC-0001(Q) Acts of Nature.

Associated Annunciator C6 C4

DIGITAL ALARM POINT D3996 – D3997

NOMENCLATURE SACS HX A1 OUTLET HV-2371A OPF
SACS LP A/CLG TWR HV-2357A OPF **SETPOINT** N/A

DESCRIPTION HV-2371A Overload/Power Failure
HV-2357A Overload/Power Failure **ORIGIN** AC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

None

CAUSE	CORRECTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker open	1A. **DISPATCH** an operator to MCC 10B212 HV-2371A Bkr 52-212133 SACS LP A HX A1E201 OUT. HV-2357A Bkr 52-212132 SACS LP A CLG OUT TO TWR 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator A1 D1

REFERENCES: J-10-0, Sht. 23, Sht. 28

DIGITAL ALARM POINT D3998 – D3999

NOMENCLATURE SACS HX B1 OUTLET HV-2371B OPF
SACS LP B/CLG TWR HV-2357B OPF **SETPOINT** N/A

DESCRIPTION HV-2371B Overload/Power Failure
HV-2357B Overload/Power Failure **ORIGIN** BC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

OBSERVE the Service Water System operability requirements of T/S 3.7.1.2.

CAUSE	CORRECTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker open	1A. **DISPATCH** an operator to MCC 10B222 HV-2371B Bkr 52-222133 SACS LP B HX B1E201 OUT. HV-2357B Bkr 52-222132 SACS LP B CLG OUT TO TWR. 1B. IF breaker is tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF the thermal overload relay is tripped, THEN, **DIRECT** Maintenance to inspect valve. **[PR 970811169]** 1D. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator A1 D3

REFERENCES: J-10-0, Sht. 23, Sht. 28

DIGITAL ALARM POINT **D4000**

NOMENCLATURE SACS HX A2 OUTLET HV-2355A OPF **SETPOINT** N/A

DESCRIPTION HV-2355A Overload/Power Failure **ORIGIN** CC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

None

CAUSE	CORRECTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker open	1A. **DISPATCH** an operator to MCC 10B232 Bkr 52-232032 SACS LP A HX A2E201 OUT. 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator A1 D1

REFERENCES: J-10-0, Sht. 23, Sht. 28

DIGITAL ALARM POINT **D4002**

NOMENCLATURE SACS HX B2 OUTLET HV-2355B OPF **SETPOINT** N/A

DESCRIPTION HV-2355B Overload/Power Failure **ORIGIN** DC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

OBSERVE the Service Water System operability requirements of T/S 3.7.1.2.

CAUSE	CORRECTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker open	1A. **DISPATCH** an operator to MCC 10B242 Bkr 52-242032 SACS LP B HX B2E201 OUT. 1B. IF breaker is tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF the thermal overload relay is tripped, THEN, **DIRECT** Maintenance to inspect valve. **[PR 970811169]** 1D. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator A1 D3

REFERENCES: J-10-0, Sht. 23, Sht. 28

DIGITAL ALARM POINT D4004 – D4005

NOMENCLATURE SSW LP A DUMP HV-2356A OPF
SSW LP A/RACS HX HV-2203 OPF

SETPOINT N/A

DESCRIPTION HV-2356A Overload/Power Failure
HV-2203 Overload/Power Failure

ORIGIN AC652
CC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

None

CAUSE	CORRECTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker open	1A. **DISPATCH** an operator to MCC 10B212 HV-2356A Bkr 52-212131 SERVICE WTR LOOP A DUMP HV-2203 Bkr 52-212232 RACS HX CLG LP A SPLY. 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator A1 D1

REFERENCES: J-10-0, Sht. 23, Sht. 28

DIGITAL ALARM POINT **D4006**

NOMENCLATURE SSW LP B DUMP HV-2356B OPF **SETPOINT** N/A

DESCRIPTION HV-2356B Overload/Power Failure **ORIGIN** BC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

OBSERVE the Service Water System operability requirements of T/S 3.7.1.2

CAUSE	CORRECTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker open	1A. **DISPATCH** an operator to MCC 10B222 Bkr 52-222131 SERVICE WTR LOOP B DUMP. 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator A1 D3

REFERENCES: J-10-0, Sht. 23, Sht. 28

DIGITAL ALARM POINT **D4007**

NOMENCLATURE SSW LP B/RACS HX HV-2204 OPF **SETPOINT** N/A

DESCRIPTION HV-2204 Overload/Power Failure **ORIGIN** BC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

OBSERVE the Service Water System operability requirements of T/S 3.7.1.2.

CAUSE	CORRECTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker open	1A. **DISPATCH** an operator to MCC 10B222 Bkr 52-222191 SACS HX CLG LP B SPLY. 1B. IF breaker is tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF the thermal overload relay is tripped, THEN, **DIRECT** Maintenance to inspect valve. **[PR 970811169]** 1D. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator A1 D3

REFERENCES: J-10-0, Sht. 23, Sht. 28

DIGITAL ALARM POINT D4008 – D4009

NOMENCLATURE RACS HX INLET ISLN HV-2207 OPF
RACS HX OUTLET ISLN HV-2346 OPF **SETPOINT** N/A

DESCRIPTION HV-2207 Overload/Power Failure
HV-2346 Overload/Power Failure **ORIGIN** CC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

None

CAUSE	CORRECTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker open	1A. **DISPATCH** an operator to MCC 10B232 HV-2207 Bkr 52-232081 RACS HX CLG SUPPLY. HV-2346 Bkr 52-232082 RACS HX CLG OUTLET. 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator A1 D1

REFERENCES: J-10-0, Sht. 23, Sht. 28

DIGITAL ALARM POINT **D4010**

NOMENCLATURE SSW PUMP A DISCH HV-2198A OPF **SETPOINT** N/A

DESCRIPTION Thermal overload or loss of control power **ORIGIN** 52-553041

AUTOMATIC ACTION:

Valve fails in present position.

OPERATOR ACTION:

1. **MAINTAIN** required Service Water flow to RACS
   AND SACS Heat Exchangers
   (**MONITOR** SACS & RACS temperatures).
2. **DISPATCH** operator to SWIS MCC 10B553 to determine cause of alarm.
3. **ENSURE** compliance with the Service Water operability requirement of Technical Specification 3/4.7.1.2.

CAUSE	CORRECTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker open	1A. **DISPATCH** an operator to MCC 10B553 BKR 52-553041 STN SERVICE WTR SYS DIS MOV. 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator A1 B1

REFERENCES: E-6754-0, Sht. A
J-10-0, Sht. 23, Sht. 28

DIGITAL ALARM POINT **D4011**

NOMENCLATURE SSW STR A BCKWSH HV-2197A OPF **SETPOINT** N/A

DESCRIPTION Thermal overload or loss of control power **ORIGIN** 52-553021

AUTOMATIC ACTION:

Valve fails in present position.

OPERATOR ACTION:

1. **MONITOR** Strainer differential pressure for signs of Strainer clogging.
2. **MAINTAIN** required Service Water flow to RACS
   AND SACS Heat Exchangers
   (**MONITOR** SACS & RACS temperature).
   PLACE "C" SSW Pump I/S
   IF necessary.
3. **DISPATCH** operator to SWIS MCC 10B553 to determine cause of alarm.
4. **ENSURE** compliance with the Service Water operability requirement of Technical Specification 3/4.7.1.2.
5. **REFER** to HC.OP-AB.COOL-0001(Q); Station Service Water.

CAUSE	CORRECTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker open	1A. **DISPATCH** an operator to MCC 10B553 BKR 52-553021 STN SERVICE WTR SYS BK WASH. 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator A1 B1

REFERENCES: E-6754-0, Sht. A
J-10-0, Sht. 23, Sht. 28

DIGITAL ALARM POINT **D4012**

NOMENCLATURE SSW PUMP C DISCH HV-2198C OPF **SETPOINT** N/A

DESCRIPTION Thermal overload or loss of control power **ORIGIN** 52-573041

AUTOMATIC ACTION:

Valve fails in present position.

OPERATOR ACTION:

1. **MAINTAIN** required Service Water flow to RACS
   AND SACS Heat Exchangers
   (**MONITOR** SACS & RACS temperatures).
2. **DISPATCH** operator to SWIS MCC 10B573 to determine cause of alarm.
3. **ENSURE** compliance with the Service Water operability requirement of Technical Specification 3/4.7.1.2.

CAUSE	CORRECTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker open	1A. **DISPATCH** an operator to MCC 10B573 BKR 52-573041 STN SERVICE WTR SYS DIS MOV. 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator A1 C1

REFERENCES: E-6754-0, Sht. A
J-10-0, Sht. 23, Sht. 28

DIGITAL ALARM POINT **D4013**

NOMENCLATURE SSW STR C BCKWSH HV-2197C OPF **SETPOINT** N/A

DESCRIPTION Thermal overload or loss of control power **ORIGIN** 52-573021

AUTOMATIC ACTION:

Valve fails in present position.

OPERATOR ACTION:

1. **MONITOR** Strainer differential pressure for signs of strainer clogging.
2. **MAINTAIN** required Service Water flow to RACS
   AND SACS Heat Exchangers
   (**MONITOR** SACS & RACS temperature).
   START "A" SSW Pump
   IF necessary.
3. **DISPATCH** operator to SWIS MCC 10B573 to determine cause of alarm.
4. **ENSURE** compliance with the Service Water operability requirement of Technical Specification 3/4.7.1.2.
5. **REFER** to HC.OP-AB.COOL-0001(Q); Station Service Water.

CAUSE	CORRECTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker open	1A. **DISPATCH** an operator to MCC 10B573 BKR 52-573021 STN SERVICE WTR SYS BK WASH. 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator A1 C1

REFERENCES: E-6754-0, Sht. A
J-10-0, Sht. 23, Sht. 28

DIGITAL ALARM POINT **D4034**

NOMENCLATURE SSW PMP B DISCH V HV-2198B OPF **SETPOINT** N/A

DESCRIPTION Thermal overload or loss of control power **ORIGIN** 52-563041

AUTOMATIC ACTION:

Valve fails in present position.

OPERATOR ACTION:

1. **MAINTAIN** required Service Water flow to RACS
   AND SACS Heat Exchangers
   (**MONITOR** SACS & RACS temperatures).
2. **DISPATCH** operator to SWIS MCC 10B563 to determine cause of alarm.
3. **ENSURE** compliance with the Service Water operability requirement of Technical Specification 3/4.7.1.2.

CAUSE	CORRECTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker open	1A. **DISPATCH** an operator to MCC 10B563 BKR 52-563041 STN SERVICE WTR SYS DIS MOV. 1B. IF breaker is tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF the thermal overload relay is tripped, THEN, **DIRECT** Maintenance to inspect valve. **[PR 970811169]** 1D. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator A1 B3

REFERENCES: E-6754-0, Sht. A
J-10-0, Sht. 23, Sht. 28

DIGITAL ALARM POINT **D4035**

NOMENCLATURE SSW STR B BCKWSH HV-2197B OPF **SETPOINT** N/A

DESCRIPTION Thermal overload or loss of control power **ORIGIN** 52-563021

AUTOMATIC ACTION:

Valve fails in present position.

OPERATOR ACTION:

1. **MONITOR** Strainer differential pressure for signs of strainer clogging.
2. **MAINTAIN** required Service Water flow to RACS
   AND SACS Heat Exchangers
   (**MONITOR** SACS & RACS temperatures).
   PLACE "D" SSW Pump I/S IF necessary.
3. **DISPATCH** operator to SWIS MCC 10B563 to determine cause of alarm.
4. **ENSURE** compliance with the Service Water operability requirement of Technical Specification 3/4.7.1.2.
5. **REFER** to HC.OP-AB.COOL-0001(Q); Station Service Water.

CAUSE	CORRECTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker open	1A. **DISPATCH** an operator to MCC 10B563 BKR 52-563021 STN SERVICE WTR SYS BK WASH. 1B. IF breaker is tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF the thermal overload relay is tripped, THEN, **DIRECT** Maintenance to inspect valve. **[PR 970811169]** 1D. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator A1 B3

REFERENCES: E-6754-0, Sht. A
J-10-0, Sht. 23, Sht. 28

DIGITAL ALARM POINT **D4036**

NOMENCLATURE SSW PUMP D DISCH HV-2198D OPF **SETPOINT** N/A

DESCRIPTION Thermal overload or loss of control power **ORIGIN** 52-583041

AUTOMATIC ACTION:

Valve fails in present position.

OPERATOR ACTION:

1. **MAINTAIN** required Service Water flow to RACS
   AND SACS Heat Exchangers
   (**MONITOR** SACS & RACS temperatures).
2. **DISPATCH** operator to SWIS MCC 10B583 to determine cause of alarm.
3. **ENSURE** compliance with the Service Water operability requirement of Technical Specification 3/4.7.1.2.

CAUSE	CORRECTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker open	1A. **DISPATCH** an operator to MCC 10B583 BKR 52-583041 STN SERVICE WTR SYS DIS MOV. 1B. IF breaker is tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF the thermal overload relay is tripped, THEN, **DIRECT** Maintenance to inspect valve. **[PR 970811169]** 1D. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator A1 C3

REFERENCES: E-6754-0, Sht. A
J-10-0, Sht. 23, Sht. 28

DIGITAL ALARM POINT **D4046**

NOMENCLATURE SSW STR D BCKWSH HV-2197D OPF **SETPOINT** N/A

DESCRIPTION Thermal overload or loss of control power **ORIGIN** 52-583021

AUTOMATIC ACTION:

Valve fails in present position.

OPERATOR ACTION:

1. **MONITOR** Strainer differential pressure for signs of strainer clogging.
2. **MAINTAIN** required Service Water flow to RACS
   AND SACS Heat Exchangers
   (**MONITOR** SACS & RACS temperature).
   PLACE "B" SSW Pump I/S IF necessary.
3. **DISPATCH** operator to SWIS MCC 10B583 to determine cause of alarm.
4. **ENSURE** compliance with the Service Water operability requirement of Technical Specification 3/4.7.1.2.
5. **REFER** to HC.OP-AB.COOL-0001(Q); Station Service Water.

CAUSE	CORRECTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker open	1A. **DISPATCH** an operator to MCC 10B583 BKR 52-583021 STN SERVICE WTR SYS BK WASH. 1B. IF breaker is tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF the thermal overload relay is tripped, THEN, **DIRECT** Maintenance to inspect valve. **[PR 970811169]** 1D. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator A1 C3

REFERENCES: E-6754-0, Sht. A
J-10-0, Sht. 23, Sht. 28

DIGITAL ALARM POINT D4047 – D4048

NOMENCLATURE SSW LP A/EMER MKUP HV-2234 OPF
SSW LP A/EMER MKUP HV-2236 OPF **SETPOINT** N/A

DESCRIPTION HV-2234 Overload/Power Failure
HV-2236 Overload/Power Failure **ORIGIN** AC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

None

CAUSE	CORRECTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker open	1A. **DISPATCH** an operator to MCC 10B212 HV-2234 Bkr 52-212221 FUEL POOL CLG MKUP WTR. HV-2236 Bkr 52-212222 FUEL POOL CLG MKUP WTR. 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator A1 D1

REFERENCES: J-10-0, Sht. 23, Sht. 28

DIGITAL ALARM POINT D4049 – D4050

NOMENCLATURE SSW LP B/EMER MKUP HV-2238B OPF
SSW LP B/EMER MKUP HV-F073 OPF **SETPOINT** N/A

DESCRIPTION HV-2238 Overload/Power Failure
HV-F073 Overload/Power Failure **ORIGIN** BC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

OBSERVE the Service Water System operability requirements of T/S 3.7.1.2

CAUSE	CORRECTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker open	1A. **DISPATCH** an operator to MCC 10B222 HV-2238 Bkr 52-222224 FUEL POOL CLG & M/U WATER. HV-F073 Bkr 52-222082 FUEL POOL & SACS LP B MAKEUP ISLN VLV 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator A1 D3

REFERENCES: J-10-0, Sht. 23, Sht. 28

DIGITAL ALARM POINT D4053

NOMENCLATURE	WTR CHILLER AK111 REMOTE PANEL	**SETPOINT**	Various
DESCRIPTION	AK111 Chiller Remote Control Panel Trouble Alarm	**ORIGIN**	Multiple

AUTOMATIC ACTION:

AK111 Chiller trips except on HI/LO CHILLER OUTLET TEMP.

OPERATOR ACTION:

DISPATCH EO to Chilled Water Panel 10C152 to determine cause of alarm.

CAUSE CORRE	CTIVE ACTION
1. Chiller AK111 Panel Alarm	1A. **RESPOND** IAW HC.OP-AR.GB-0005(Q).
2. Low Chiller Outlet Temp	2A. **OBSERVE** AK111 restarts WHEN Chilled Wtr Outlet Temp 50°F.
3. High Chiller Outlet Temp	3A. **CHECK** A2259 TURB BLDG COND CLR A OTLT TEMP < 100°F. 3B. **CHECK** TI-9489A CHW TEMP SPLY < 55°F on 10C651E. 3C. **CHECK** TI-9489B AK111 CHILLED WTR DISCH < 65°F.
Continued next page	

Associated Annunciator E5 E1

REFERENCES: H-87-0, Sht. 1

DIGITAL ALARM POINT D4053

CAUSE CORRE	CTIVE ACTION
3. High Chiller Outlet Temp (continued)	3D. IF differential temperature between 3B AND 3C, listed above, is > 10°F **PERFORM** the following: 1. **START** standby Chiller IAW HC.OP-SO.GB-0001(Q). 2. **STOP** effected Chiller IAW HC.OP-SO.GB-0001(Q). 3E. **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 E1

REFERENCES: H-87-0, Sht. 1

DIGITAL ALARM POINT D4054

NOMENCLATURE WTR CHILLER BK111 REMOTE PANEL

SETPOINT Various

DESCRIPTION BK111 Chiller Remote Control Panel Trouble Alarm

ORIGIN Multiple

AUTOMATIC ACTION:

BK111 Chiller trips except on HI/LO CHILLER OUTLET TEMP.

OPERATOR ACTION:

DISPATCH EO to Chilled Water Panel 10C152 to determine cause of alarm.

CAUSE CORRE	CTIVE ACTION
1. Chiller BK111 Panel Alarm	1A. **RESPOND** IAW HC.OP-AR.GB-0005(Q).
2. Low Chiller Outlet Temp	2A. **OBSERVE** BK111 restarts WHEN Chilled Wtr Outlet Temp ≥ 50°F
3. High Chiller Outlet Temp	3A. **CHECK** A2260 TURB BLDG COND CLR B OTLT TEMP < 100°F. 3B. **CHECK** TI-9489A CHW TEMP SPLY < 55°F on 10C651E. 3C. **CHECK** TI-9489B BK111 CHILLED WTR DISCH < 65°F.
Continued next page	

Associated Annunciator E5 E1

REFERENCES: H-87-0, Sht. 1

DIGITAL ALARM POINT D4054

CAUSE CORRE	CTIVE ACTION
3. High Chiller Outlet Temp (continued)	3D. IF differential temperature between 3B AND 3C, listed above, is > 10°F **PERFORM** the following: 1. **START** standby Chiller IAW HC.OP-SO.GB-0001(Q). 2. **STOP** effected Chiller IAW HC.OP-SO.GB-0001(Q). 3E. **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 E1

REFERENCES: H-87-0, Sht. 1

DIGITAL ALARM POINT D4055

NOMENCLATURE WTR CHILLER CK111 REMOTE PANEL

SETPOINT Various

DESCRIPTION CK111 Chiller Remote Control Panel Trouble Alarm

ORIGIN Multiple

AUTOMATIC ACTION:

CK111 Chiller trips except on HI/LO CHILLER OUTLET TEMP

OPERATOR ACTION:

DISPATCH EO to Chilled Water Panel 10C152 to determine cause of alarm.

CAUSE CORRE	CTIVE ACTION
1. Chiller CK111 Panel Alarm	1A. **RESPOND** IAW HC.OP-AR.GB-0005(Q).
2. Low Chiller Outlet Temp	2A. **OBSERVE** CK111 restarts WHEN Chilled Wtr Outlet Temp ≥ 50°F.
3. High Chiller Outlet Temp	3A. **CHECK** A2261 TURB BLDG COND CLR C OTLT TEMP < 100°F. 3B. **CHECK** TI-9489A CHW TEMP SPLY < 55°F on 10C651E. 3C. **CHECK** TI-9489B CK111 CHILLED WTR DISCH < 65°F.
Continued next page	

Associated Annunciator E5 E1

REFERENCES: H-87-0, Sht. 1

DIGITAL ALARM POINT D4055

CAUSE CORRE	CTIVE ACTION
3. High Chiller Outlet Temp (continued)	3D. IF differential temperature between 3B AND 3C, listed above, is > 10°F **PERFORM** the following: 1. **START** standby Chiller IAW HC.OP-SO.GB-0001(Q). 2. **STOP** effected Chiller IAW HC.OP-SO.GB-0001(Q). 3E. **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 E1

REFERENCES: H-87-0, Sht. 1

DIGITAL ALARM POINT D4072

NOMENCLATURE CTMT ISLN OUTBD HV-9531A1

SETPOINT N/A

DESCRIPTION Loop A Sup Hdr Outboard Containment Isln HV-9531A1 Overload/Power failure

ORIGIN 1DC652

AUTOMATIC ACTION:

Valve fails in present position.

OPERATOR ACTION:

ENSURE compliance with operability requirements of Technical Specifications 3.6.3 Primary Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B242 CHW SYS OUTBD ISLN 1GB-HV-9531A1 Brkr 52-242181 is on. 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 F1

REFERENCES: H-87-0, Sht. 1, Rev. 11

DIGITAL ALARM POINT D4073

NOMENCLATURE CTMT ISLN OUTBD HV-9531A2

SETPOINT N/A

DESCRIPTION Loop A Ret Hdr Outboard Containment Isln HV-9531A2 Overload/Power failure

ORIGIN 1DC652

AUTOMATIC ACTION:

Valve fails in present position.

OPERATOR ACTION:

ENSURE compliance with operability requirements of Technical Specifications 3.6.3 Primary Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B242 CHW SYS OUTBD ISLN 1GB-HV-9531A2 Brkr 52-242182 is ON 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 F1

REFERENCES: H-87-0, Sht. 1, Rev. 11

DIGITAL ALARM POINT D4074

NOMENCLATURE CTMT ISLN OUTBD HV-9531A3 **SETPOINT** N/A

DESCRIPTION Loop B Sup Hdr Outboard Containment Isln HV-9531A3 **ORIGIN** 1DC652

AUTOMATIC ACTION:

Valve fails in present position.

OPERATOR ACTION:

ENSURE compliance with operability requirements of Technical Specifications 3.6.3 Primary Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B242 CHW SYS OUTBD ISLN 1GB-HV-9531A3 Brkr 52-242183 is ON. 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 F1

REFERENCES: H-87-0, Sht. 1

DIGITAL ALARM POINT D4082

NOMENCLATURE	CTMT ISLN OUTBD HV-9531A4	**SETPOINT**	N/A
DESCRIPTION	Loop B Ret Hdr Outboard Containment Isln HV-9531A4	**ORIGIN**	1DC652

AUTOMATIC ACTION:

Valve fails in present position.

OPERATOR ACTION:

ENSURE compliance with operability requirements of Technical Specifications 3.6.3 Primary Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B242 CHW SYS OUTBD ISLN 1GB-HV-9531A4 Brkr 52-242184 is ON. 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 F1

REFERENCES: H-87-0, Sht. 1

DIGITAL ALARM POINT D4134

NOMENCLATURE ADS CH B DW PR BYP TIMER INIT **SETPOINT** Various

DESCRIPTION ADS Logic B High Drywell Pressure Bypass Timer running **ORIGIN** Multiple

AUTOMATIC ACTION:

ADS Logic B High Drywell Pressure Bypass Timer (5 minute) started.

OPERATOR ACTION:

VERIFY that the ADS High Drywell Pressure Bypass Timer initiation setpoint (RPV Level 1 (≤ -129")) has been reached.

CAUSE CORRE	CTIVE ACTION
1. The following ADS Logic B condition exist: RPV Level 1 (≤ -129")	1A. **REFER** to HC.OP-EO.ZZ-0101(Q).

Associated Annunciator C1 F3

REFERENCES: J-41-0, Sht. 13
PN1-B21-1060-0063

DIGITAL ALARM POINT D4135

NOMENCLATURE ADS CH D DW PR BYP TIMER INIT **SETPOINT** Various

DESCRIPTION ADS Logic D High Drywell Pressure Bypass Timer running **ORIGIN** Multiple

AUTOMATIC ACTION:

ADS Logic D High Drywell Pressure Bypass Timer (5 minute) started.

OPERATOR ACTION:

VERIFY that the ADS High Drywell Pressure Bypass Timer initiation setpoint (RPV Level 1 (≤ -129")) has been reached.

CAUSE CORRE	CTIVE ACTION
1. The following ADS Logic D condition exist: RPV Level 1 (≤ -129")	1A. **REFER** to HC.OP-EO.ZZ-0101(Q).

Associated Annunciator C1 F3

REFERENCES: J-41-0, Sht. 13
PN1-B21-1060-0063

DIGITAL ALARM POINT **D4140**

NOMENCLATURE SRV LO-LO SET DIV 4 ARMED **SETPOINT** 1047 psig

DESCRIPTION SRV LO LO SET Function Initiated **ORIGIN** Multiple

AUTOMATIC ACTION:

SRV PSV-F013P open

OPERATOR ACTION:

1. **VERIFY** AUTOMATIC ACTION
   AND **MONITOR** Reactor pressure.
2. **ENSURE** compliance with Technical Specification 3.6.2.1, Suppression Chamber temperature requirements.
3. IF it is necessary to prevent SRV Low-Low Set Function Initiation
   OR continued operation
   PLACE SRV PSV-F013P Control Switch to CLOSE.

CAUSE CORRE	CTIVE ACTION
1. High Reactor pressure **NOTE** PSV-F013P Open at 1047 psig, Close at 935 psig.	1A. Same as above.

Associated Annunciator C1 E5

REFERENCES: J-41-0, Sht. 13
PN1-B21-1060-0063

DIGITAL ALARM POINT D4146

NOMENCLATURE CTMT ISLN INBD HV-9531B1 **SETPOINT** N/A

DESCRIPTION Loop A Sup Hdr Inboard Containment Isln HV-9531B1 Overload/Power Failure **ORIGIN** 1CC652

AUTOMATIC ACTION:

Valve fails in present position.

OPERATOR ACTION:

ENSURE compliance with operability requirements of Technical Specifications 3.6.3 Primary Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B232 CHW SYS INBD ISLN 1GB-HV-9531B1 Brkr 52-232181 is ON. 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 F1

REFERENCES: H-87-0, Sht. 1

DIGITAL ALARM POINT D4147

NOMENCLATURE CTMT ISLN INBD HV-9531B2 **SETPOINT** N/A

DESCRIPTION Loop A Ret Hdr Inboard Containment Isln HV-9531B2 Overload/Power Failure **ORIGIN** 1CC652

AUTOMATIC ACTION:

Valve fails in present position.

OPERATOR ACTION:

ENSURE compliance with operability requirements of Technical Specifications 3.6.3 Primary Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B232 CHW SYS INBD ISLN 1GB-HV-9531B2 Brkr 52-232182 is ON. 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 F1

REFERENCES: H-87-0, Sht. 1

DIGITAL ALARM POINT **D4148**

NOMENCLATURE CTMT ISLN INBD HV-9531B3 **SETPOINT** N/A

DESCRIPTION ORIGIN Loop B Sup Hdr Inboard Containment Isln HV-9531B3 Overload/Power Failure 1CC652

AUTOMATIC ACTION:

Valve fails in present position.

OPERATOR ACTION:

ENSURE compliance with operability requirements of Technical Specifications 3.6.3 Primary Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B232 CHW SYS INBD ISLN 1GB-HV-9531B3 Brkr 52-232183 is ON. 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 F1

REFERENCES: H-87-0, Sht. 1

DIGITAL ALARM POINT **D4149**

NOMENCLATURE CTMT ISLN INBD HV-9531B4 **SETPOINT** N/A

DESCRIPTION ORIGIN Loop B Ret Hdr Inboard Containment Isln HV-9531B4 Overload/Power Failure 1CC652

AUTOMATIC ACTION:

Valve fails in present position.

OPERATOR ACTION:

ENSURE compliance with operability requirements of Technical Specifications 3.6.3 Primary Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B232 CHW SYS INBD ISLN 1GB-HV-9531B4 Brkr 52-232193 is ON. 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 F1

REFERENCES: H-87-0, Sht. 1

DIGITAL ALARM POINT D4150

NOMENCLATURE CHW RB ISLN RTN HV-9532-1 OPF

SETPOINT N/A

DESCRIPTION ORIGIN CHW Rx Bldg Isln Ret HV-9532-1 Overload/Power Failure

1CC652

AUTOMATIC ACTION:

Valve fails in present position.

OPERATOR ACTION:

ENSURE compliance with operability requirements of Technical Specifications 3.6.3 Primary Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B232 CHILLED WTR SYS INBD ISLN 1GB-HV-9532-1 Brkr 52-232161 is ON. 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 F1

REFERENCES: H-87-0, Sht. 1

DIGITAL ALARM POINT **D4151**

NOMENCLATURE SRV LO-LO SET DIV 2 ARMED **SETPOINT** 1047 psig

DESCRIPTION SRV LO LO SET Function Initiated **ORIGIN** Multiple

AUTOMATIC ACTION:

SRV PSV-F013H open

OPERATOR ACTION:

1. **VERIFY** AUTOMATIC ACTION
   AND **MONITOR** Reactor pressure.
2. **ENSURE** compliance with Technical Specification 3.6.2.1, Suppression Chamber temperature requirements.
3. IF it is necessary to prevent SRV Low-Low Set Function Initiation
   OR continued operation
   PLACE SRV PSV-F013H Control Switch to CLOSE.

CAUSE CORRE	CTIVE ACTION
1. High Reactor pressure **NOTE** PSV-F013H Open at 1047 psig, Close at 905 psig. Subsequent opening 1017 psig.	1A. Same as above.

Associated Annunciator C1 E5

REFERENCES: J-41-0, Sht. 13
PN1-B21-1060-0063

DIGITAL ALARM POINT D4152

NOMENCLATURE CHW RB ISLN RTN HV-9532-2 OPF

SETPOINT N/A

DESCRIPTION ORIGIN CHW Supply Rx Bldg Isln HV-9532-2 Overload/Power Failure

1CC652

AUTOMATIC ACTION:

Valve fails in present position.

OPERATOR ACTION:

ENSURE compliance with operability requirements of Technical Specifications 3.6.3 Primary Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B232 CHILLED WATER SYS ISLN 1GB-HV-9532-2 Brkr 52-232162 is ON. 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 F1

REFERENCES: H-87-0, Sht. 1

DIGITAL ALARM POINT D4153

NOMENCLATURE AUX BOILER RCP 00C504 **SETPOINT** N/A

DESCRIPTION Auxiliary Boiler Control Panels 0BC502, 0CC502 and/or 00C504 Alarm **ORIGIN** N/A

AUTOMATIC ACTION:

REFER to appropriate Local Alarm Response Procedure.

OPERATOR ACTION:

DISPATCH EO to Auxiliary Boiler Control Panels 0BC502, 0CC502 AND 00C504 to determine cause of alarm.

CAUSE CORRE	CTIVE ACTION
1. Alarm condition at Panel 0BC502.	1A **REFER** dispatched Operator to procedure HC.OP-AR.FA-0002(Z).
2. Alarm condition at Panel 0CC502.	2A **REFER** dispatched Operator to procedure HC.OP-AR.FA-0003(Z).
3. Alarm condition at Panel 00C504.	3A **REFER** dispatched Operator to procedure HC.OP-AR.FA-0004(Z).
4. IF in Winterization (10/1 thru 4/1).	4A. **REFER** to HC.OP-AB.MISC-0003(Q).

Associated Annunciator A2 D1

REFERENCES: J-20-0, Sht. 2

DIGITAL ALARM POINT **D4169**

NOMENCLATURE BLR SUBSTA WTR PRETREAT HVAC **SETPOINT** Multiple

DESCRIPTION Alarm on Panel 00C591 **ORIGIN** Various

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **DISPATCH** operator to Panel 00C591 to determine the system effected and the cause of alarm.
2. **NOTIFY** SM/CRS of alarm condition.

CAUSE CORRE	CTIVE ACTION
1. Multiple Alarm inputs include: a) 0A(B)VH536 low flow/high DP FSL-9792A(B) b) 0A(B)VH537 low flow/high DP FSL-9794A(B) c) 00VH538 low flow/high DP FSL-9796 d) Boiler area temperature hi/low TSHL-9792 e) Substation temperature hi/low TSHL-9794 f) Wtr treatment temperature hi/low TSHL-9796	1A. **RESPOND** IAW HC.OP-AR.GF-0003(Z). 1B. **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E6 F3

REFERENCES: H-95-0, Sht. 1
E-6792-0

DIGITAL ALARM POINT D4170

NOMENCLATURE CIRC WATER PUMP HOUSE HVAC

SETPOINT N/A

DESCRIPTION HVAC Trouble Alarm at Circ Water Pump House Local Panel 00C590

ORIGIN Various

AUTOMATIC ACTION

Alarm only

OPERATOR ACTION

DISPATCH Equipment Operator to Local Panel 00C590 to determine cause of the alarm.

CAUSE CORRE	CTIVE ACTION
1. Hi/Lo ambient temp. in Pump House (TSHL-9784 at 120°F Hi, 60°F Low) 2. Hi/Lo ambient temp. in Switchgear Room (TSHL-9785 at 104°F Hi, 60°F Low) 3. Low air flow at a Pump House Exhaust Fan (FSL-9784 at 27,000 cfm) 4. Low air flow at a Switchgear Room Supply Fan (FSL-9785 at 12,000 cfm) 5. High differential pressure across intake filter of a Switchgear Room Supply Unit (PDSH-9785 at 0.4" wg)	1A. **REFER** to HC.OP-AR.GF-0001(Z); Circulating Water Pump HVAC Trouble 00C590.

Associated Annunciator A2 C3

REFERENCES: DITS D3.57B H-95-0, Sht. 1
P-0076-0 E-0499-0, Sht. A
M-81-0, Sht. 2 M-95-0, Sht. 1

DIGITAL ALARM POINT D4203

NOMENCLATURE CONT ATM ANALYZER A H2 **SETPOINT** 2%

DESCRIPTION Containment Hydrogen/Oxygen Analyzer 'A' High H2 Concentration **ORIGIN** ASH-5037A

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **CHECK** Containment H2/O2 Analyzer 'A' HIGH H2 light is ON AND % H2 indication is > 2% on Containment Atmosphere Section of 10650E.
2. **CHECK** Containment H2/O2 Analyzer 'B' % H2 is > 2% on Containment Atmosphere Section of 10C650E.

CAUSE CORRE	CTIVE ACTION
1. Meter Calibration	1A. **CHECK** SPAN light is ON. 1B. IF no testing in progress, **PLACE** 'A' H2/O2 Analyzer in service IAW HC.OP-SO.GS-0002(Q) H2/O2 Analyzer System Operation.
2. Inoperable H2/O2 Analyzer	2A. IF Cntmt H2/O2 Analyzer 'B' % H2 indicates < 2%, **REQUEST** SM/CRS to initiate corrective action.
3. H2 generation in Drywell	3A. IF Cntmt H2/O2 Analyzers 'A' AND 'B' indicates > 0.0% H2, **PLACE** both H2 Recombiners in service AND **NOTIFY** SM/CRS.

Associated Annunciator E3 F5

REFERENCES: J-57-0; Sht. 10 **CD-195Y** SER 6.2.5/p6-26

DIGITAL ALARM POINT D4204

NOMENCLATURE CONT ATM ANALYZER A O2 **SETPOINT** 4.25%

DESCRIPTION Containment Hydrogen/Oxygen Analyzer 'A' High O2 Concentration **ORIGIN** ASH-5041A

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **CHECK** Containment H2/O2 Analyzer 'A' HIGH O2 light is ON AND % O2 indication is > 4.25% on Containment Atmosphere Section of 10C650E.
2. **ENSURE** compliance with operability requirements of T/S 3.3.7.5 Accident Monitoring Instrumentation and 3.6.6.2 Drywell and Suppression Chamber Oxygen Concentration.

CAUSE CORRE	CTIVE ACTION
1. Containment de-inerted	1A. **CHECK** Rx Operational Condition AND **ENSURE** compliance with operability requirements of T/S 3.6.6.2.
2. Air inleakage to Drywell	2A. IF Cntmt H2/O2 Analyzers 'A' AND 'B' indicates > 4.0% O2, **REDUCE** O2 conc < 4% IAW HC.OP-SO.GS-0001(Q) Containment Atmosphere Control System Operation. 2B. IF trend of Nitrogen makeup indicates excessive usage, **REFER TO** HC.OP-AB.CONT-0002(Q), Primary Containment.

Associated Annunciator E3 F5

REFERENCES: J-57-0; Sht. 10

DIGITAL ALARM POINT D4204

CAUSE CORRE	CTIVE ACTION
3. Meter Calibration	3A. **CHECK** SPAN light is ON. 3B. IF no testing in progress, **PLACE** 'A' H2/O2 Analyzer in service IAW HC.OP-SO.GS-0002(Q) H2/O2 Analyzer System Operation.
4. Inoperable H2/O2 Analyzer	4A. IF Cntmt H2/O2 Analyzer 'B' %O2 indicates < 4.25%, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E3 F5

REFERENCES: J-57-0; Sht. 10

DIGITAL ALARM POINT D4205

NOMENCLATURE	CONT ATM H2/O2 ANALYZER A UNIT	**SETPOINT**	Various
DESCRIPTION	Containment Hydrogen/Oxygen Analyzer 'A' Common Trouble Alarm	**ORIGIN**	XA-5042A

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **DISPATCH** NEO to 1A-C200 H2/O2 Analyzer A Panel to determine cause of alarm.
2. **ENSURE** compliance with operability requirements of T/S 3.3.7.5 Accident Monitoring Instrumentation.

CAUSE CORRE	CTIVE ACTION
1. Hot Box Temperature - High 2. Hot Box Temperature - Low 3. Reagent and Calibrate Gas Pressure - Low 4. Cell Failure Hi/Lo while in ANALYZE	**REFER TO HC**.OP-AR.GS-0006(Q), H2/O2 Analyzer Panel 1A(B)C200, local alarm reponse

Associated Annunciator E3 F5

REFERENCES: J-57-0; Sht. 10

DIGITAL ALARM POINT D4212

NOMENCLATURE CONT ATM ANALYZER B H2 **SETPOINT** 2%

DESCRIPTION Containment Hydrogen/Oxygen Analyzer 'B' High H2 Concentration **ORIGIN** ASH-5037B

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **CHECK** Containment H2/O2 Analyzer 'B' HIGH H2 light is ON
   AND % H2 indication is > 2% on Containment Atmosphere Section of 10650E.
2. **CHECK** Containment H2/O2 Analyzer 'A' % H2 is > 2% on Containment Atmosphere Section of 10C650E.

CAUSE CORRE	CTIVE ACTION
1. Meter Calibration	1A. **CHECK** SPAN light is ON. 1B. IF not testing in progress, **PLACE** 'A' H2/O2 Analyzer in service IAW HC.OP-SO.GS-0002(Q) H2/O2 Analyzer System Operation.
2. Inoperable H2/O2 Analyzer	2A. IF Cntmt H2/O2 Analyzer 'A' % H2 indicates < 2%, **REQUEST** SM/CRS to initiate corrective action.
3. H2 generation in Drywell	3A. IF Cntmt H2/O2 Analyzers 'B' AND 'A' indicates > 0.0% H2, **PLACE** both H2 Recombiners in service AND **NOTIFY** SM/CRS.

REFERENCES: J-57-0; Sht. 10 **CD-195Y** SER 6.2.5/p6-26

DIGITAL ALARM POINT D4213

NOMENCLATURE CONT ATM ANALYZER B O2 **SETPOINT** 4.25%

DESCRIPTION **ORIGIN** Containment Hydrogen/Oxygen Analyzer 'B' High O2 Concentration ASH-5041B

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **CHECK** Containment H2/O2 Analyzer 'B' HIGH O2 light is ON AND % O2 indication is > 4.25% on Containment Atmosphere Section of 10650E.
2. **ENSURE** compliance with operability requirements of T/S 3.3.7.5 Accident Monitoring Instrumentation and 3.6.6.2 Drywell and Suppression Chamber Oxygen Concentration.

CAUSE CORRE	CTIVE ACTION
1. Containment de-inerted	1A. **CHECK** Rx Operational Condition and **ENSURE** compliance with operability requirements of T/S 3.6.6.2.
2. Air inleakage to Drywell	2A. IF Cntmt H2/O2 Analyzers 'B' and 'A' indicates > 4.0% O2, **REDUCE** O2 conc. < 4% IAW HC.OP-SO.GS-0001(Q) Containment Atmosphere Control System Operation. 2B. IF trend of Nitrogen makeup indicates excessive usage, **REFER TO** HC.OP-AB.CONT-0002(Q),

Associated Annunciator E3 F5

REFERENCES: J-57-0; Sht. 10

DIGITAL ALARM POINT D4213

CAUSE CORRE	CTIVE ACTION
3. Meter Calibration	3A. **CHECK** SPAN light is ON. 3B. IF no testing in progress, **PLACE** 'A' H2/O2 Analyzer in service IAW HC.OP-SO.GS-0002(Q) H2/O2 Analyzer System Operation.
4. Inoperable H2/O2 Analyzer	4A. IF Cntmt H2/O2 Analyzer 'A' %O2 indicates < 4.25%, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E3 F5

REFERENCES: J-57-0; Sht. 10

DIGITAL ALARM POINT D4214

NOMENCLATURE	CONT ATM H2/O2 ANALYZER B UNIT	**SETPOINT**	Various
DESCRIPTION	Containment Hydrogen/Oxygen Analyzer 'B' Common Trouble Alarm	**ORIGIN**	XA-5042B

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **DISPATCH** NEO to 1B-C200 H2/O2 Analyzer B Panel to determine cause of alarm.
2. **ENSURE** compliance with operability requirements of T/S 3.3.7.5 Accident Monitoring Instrumentation.

CAUSE CORRE	CTIVE ACTION
1. Hot Box Temperature - High 2. Hot Box Temperature - Low 3. Reagent and Calibrate Gas Pressure - Low 4. Cell Failure Hi/Lo while in ANALYZE	**REFER TO** HC.OP-AR.GS-0006(Q), H2/O2 Analyzer Panel 1A(B)C200, local alarm response.

Associated Annunciator E3 F5

REFERENCES: J-57-0; Sht. 10

DIGITAL ALARM POINT D4234

NOMENCLATURE	H2/O2 ANALYZER A HV-4955A OPF	**SETPOINT**	N/A
DESCRIPTION	Containment Hydrogen/Oxygen Analyzer A HV-4955A Overload/Power Failure	**ORIGIN**	AC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with operability requirements of T/S 3.6.3 Primary Containment Isolation Valves AND 3.3.7.5 Accident Monitoring Instrumentation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. Breaker trip b. Thermal overload c. Control power fuse blown d. Control power transformer failure e. Breaker open	1A. **DISPATCH** an NEO to check 10B212 H2/O2 ANALY 'A' ISLN 1GS-HV-4955A Brkr 52-212152 is ON. 1B. IF breaker or thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E3 F5

REFERENCES: J-57-0; Sht. 10 J-57-0; Sht. 18

DIGITAL ALARM POINT D4235

NOMENCLATURE	H2/O2 ANALYZER A HV-5019A OPF SETPOINT	**SETPOINT**	N/A
DESCRIPTION	Containment Hydrogen/ Oxygen Analyzer A HV-5019A Overload/Power Failure	**ORIGIN**	AC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with operability requirements of T/S 3.6.3 Primary Containment Isolation Valves AND 3.3.7.5 Accident Monitoring Instrumentation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. Breaker trip b. Thermal overload c. Control power fuse blown d. Control power transformer failure e. Breaker open	1A. **DISPATCH** an NEO to check 10B212 H2/O2 ANALY 'A' ISLN 1GS-HV-5019A Brkr 52-212162 is ON. 1B. IF breaker or thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E3 F5

REFERENCES: J-57-0; Sht. 10 J-57-0; Sht. 18

DIGITAL ALARM POINT D4236

NOMENCLATURE	H2/O2 ANALYZER A HV-4959A OPF	**SETPOINT**	N/A
DESCRIPTION	Containment Hydrogen/Oxygen Analyzer A HV-4959A Overload/Power Failure	**ORIGIN**	AC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with operability requirements of T/S 3.6.3 Primary Containment Isolation Valves AND 3.3.7.5 Accident Monitoring Instrumentation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. Breaker trip b. Thermal overload c. Control power fuse blown d. Control power transformer failure e. Breaker open	1A. **DISPATCH** an NEO to CHECK 10B212 H2/O2 ANALY 'A' ISLN 1GS-HV-4959A Brkr 52-212153 is ON. 1B. IF breaker or thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E3 F5

REFERENCES: J-57-0; Sht. 10 J-57-0; Sht. 18

DIGITAL ALARM POINT D4237

NOMENCLATURE H2/O2 ANALYZER A HV-4966A OPF

SETPOINT N/A

DESCRIPTION Containment Hydrogen/Oxygen Analyzer A HV-4966A Overload/Power Failure

ORIGIN AC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with operability requirements of T/S 3.6.3 Primary Containment Isolation Valves AND 3.3.7.5 Accident Monitoring Instrumentation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. Breaker trip b. Thermal overload c. Control power fuse blown d. Control power transformer failure e. Breaker open	1A. **DISPATCH** an NEO to CHECK 10B212 H2/O2 ANALY 'A' ISLN 1GS-HV-4966A Brkr 52-212161 is ON. 1B. IF breaker or thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E3 F5

REFERENCES: J-57-0, Sht. 10 J-57-0, Sht. 18

DIGITAL ALARM POINT D4238

NOMENCLATURE H2/O2 ANALYZER A H2 SPLY OPF

SETPOINT N/A

DESCRIPTION Containment Hydrogen/Oxygen Analyzer A HV-5741A Overload/Power Failure

ORIGIN AC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with operability requirements of T/S 3.6.3 Primary Containment Isolation Valves AND 3.3.7.5 Accident Monitoring Instrumentation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. Breaker trip b. Thermal overload c. Control power fuse blown d. Control power transformer failure e. breaker open	1A. **DISPATCH** an NEO to check 10B212 H2/O2 ANALY 'A' H2 SPLY 1GS-HV-5741A Brkr 52-212151 is ON. 1B. IF breaker or thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E3 F5

REFERENCES: J-57-0, Sht. 10 J-57-0, Sht. 18

DIGITAL ALARM POINT D4239

NOMENCLATURE	PREPURGE CLNUP HV-4952 OPF	**SETPOINT**	N/A
DESCRIPTION	Drywell Purge Exhaust 1GS-SV-4952 Overload/Power Failure	**ORIGIN**	AC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with Technical Specifications 3.6.3 Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. Loss of Control Power/Overload	1A. **DISPATCH** EO to check 1AJ481 CLASS 1E, CH A, 120V Inst Dist Pnl Brkr 1AJ481-11 is on (137' Cont Bldg) 1B. **CHECK** Fuse Panel 1YF401 for blown fuse 1YF401-FU08 (102' Const Bldg) 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C4

REFERENCES: J-57-0, Sht. 11
J-57-0, Sht. 18

DIGITAL ALARM POINT D4240

NOMENCLATURE	PREPURGE CLNUP HV-4956 OPF	**SETPOINT**	N/A
DESCRIPTION	Drywell Purge Exhaust 1GS-SV-4956 Overload/Power Failure	**ORIGIN**	AC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with Technical Specifications 3.6.3 Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. Loss of Control Power/Overload	1A. **DISPATCH** EO to check 1AJ481 CLASS 1E, CH A, 120V Inst Dist Pnl Brkr 1AJ481-11 is on (137' Const Bldg) 1B. **CHECK** Fuse Panel 1YF401 for blown fuse 1YF401-FU09 (102' Cont Bldg) 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C4

REFERENCES: J-57-0, Sht. 11
J-57-0, Sht. 18

DIGITAL ALARM POINT D4241

NOMENCLATURE	PREPURGE CLNUP HV-4958 OPF	**SETPOINT**	N/A
DESCRIPTION	Drywell Purge Exhaust 1GS-SV-4958 Overload/Power Failure	**ORIGIN**	AC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with Technical Specifications 3.6.3 Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. Loss of Control Power/Overload	1A. **DISPATCH** EO to check 1AJ481 CLASS 1E, CH A, 120V Inst Dist Pnl Brkr 1AJ481-11 is ON (137' Cont Bldg) 1B. **CHECK** Fuse Panel 1YF401 for blown fuse 1YF401-FU09 (102' Cont Bldg) 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C4

REFERENCES: J-57-0, Sht. 11
J-57-0, Sht. 18

DIGITAL ALARM POINT D4242

NOMENCLATURE PREPURGE CLNUP HV-4964 OPF

SETPOINT N/A

DESCRIPTION Suppression Chamber Purge Exhaust 1GS-SV-4964 Overload/Power Failure

ORIGIN AC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with Technical Specifications 3.6.3 Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. Loss of Control Power/Overload	1A. **DISPATCH** EO to check 1AJ481 CLASS 1E, CH A, 120V Inst Dist Pnl Brkr 1AJ481-11 is ON (137' Cont Bldg) 1B. **CHECK** Fuse Panel 1YF401 for blown fuse 1YF401-FU08 (102' Cont Bldg) 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C4

REFERENCES: J-57-0, Sht. 11
J-57-0, Sht. 18

DIGITAL ALARM POINT D4243

NOMENCLATURE	H2/O2 ANALYZER B HV-4955B OPF	**SETPOINT**	N/A
DESCRIPTION	Containment Hydrogen/Oxygen Analyzer B HV-4955B Overload/ Power Failure	**ORIGIN**	BC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with operability requirements of T/S 3.6.3 Primary Containment Isolation Valves AND 3.3.7.5 Accident Monitoring Instrumentation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. Breaker trip b. Thermal overload c. Control power fuse blown d. Control power transformer failure e. Breaker open	1A. **DISPATCH** an NEO to check 10B222 H2/O2 ANALY 'B' ISLN 1GS-HV-4955B Brkr 52-222152 is ON. 1B. IF breaker or thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E3 F5

REFERENCES: J-57-0, Sht. 10 J-57-0, Sht. 18

DIGITAL ALARM POINT D4244

NOMENCLATURE H2/O2 ANALYZER B HV-5019B OPF

SETPOINT N/A

DESCRIPTION Containment Hydrogen/Oxygen Analyzer B HV-5019B Overload/Power Failure

ORIGIN BC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with operability requirements of T/S 3.6.3 Primary Containment Isolation Valves AND 3.3.7.5 Accident Monitoring Instrumentation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. Breaker trip b. Thermal overload c. Control power fuse blown d. Control power transformer failure e. Breaker open	1A. **DISPATCH** an NEO to CHECK 10B222 H2/O2 ANALY 'B' ISLN 1GS-HV-5019B Brkr 52-222162 is ON. 1B. IF breaker or thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E3 F5

REFERENCES: J-57-0, Sht. 10 J-57-0, Sht. 18

DIGITAL ALARM POINT D4245

NOMENCLATURE H2/O2 ANALYZER B HV-4959B OPF

SETPOINT N/A

DESCRIPTION Containment Hydrogen/Oxygen Analyzer B HV-4959B Overload/Power Failure

ORIGIN BC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with operability requirements of T/S 3.6.3 Primary Containment Isolation Valves AND 3.3.7.5 Accident Monitoring Instrumentation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. Breaker trip b. Thermal overload c. Control power fuse blown d. Control power transformer failure e. Breaker open	1A. **DISPATCH** an NEO to check 10B222 H2/O2 ANALY 'B' ISLN 1GS-HV-4959B Brkr 52-222153 is ON. 1B. IF breaker or thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E3 F5

REFERENCES: J-57-0, Sht. 10 J-57-0, Sht. 18

DIGITAL ALARM POINT D4246

NOMENCLATURE H2/O2 ANALYZER B HV-4966B OPF

SETPOINT N/A

DESCRIPTION Containment Hydrogen/Oxygen Analyzer B HV-4966B Overload/Power Failure

ORIGIN BC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with operability requirements of T/S 3.6.3 Primary Containment Isolation Valves AND 3.3.7.5 Accident Monitoring Instrumentation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. Breaker trip b. Thermal overload c. Control power fuse blown d. Control power transformer failure e. Breaker open	1A. **DISPATCH** an NEO to check 10B222 H2/O2 ANALY 'B' ISLN 1GS-HV-4966B Brkr 52-222161 is ON. 1B. IF breaker or thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E3 F5

REFERENCES: J-57-0, Sht. 10 J-57-0, Sht. 18

DIGITAL ALARM POINT D4247

NOMENCLATURE H2/O2 ANALYZER H2 SPLY OPF

SETPOINT N/A

DESCRIPTION Containment Hydrogen/Oxygen Analyzer B HV-5741B Overload/Power Failure

ORIGIN BC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with operability requirements of T/S 3.6.3 Primary Containment Isolation Valves AND 3.3.7.5 Accident Monitoring Instrumentation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. Breaker trip b. Thermal overload c. Control power fuse blown d. Control power transformer failure e. Breaker open	1A. **DISPATCH** an NEO to check 10B222 H2/O2 ANALY 'B' H2 SPLY 1GS-HV-5741B Brkr 52-222053 is ON. 1B. IF breaker or thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E3 F5

REFERENCES: J-57-0, Sht. 10 J-57-0, Sht. 18

DIGITAL ALARM POINT D4248

NOMENCLATURE H2/O2 ANALYZER A HV-4983A OPF

SETPOINT N/A

DESCRIPTION Containment Hydrogen/Oxygen Analyzer A HV-4983A Overload/Power Failure

ORIGIN CC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with operability requirements of T/S 3.6.3 Primary Containment Isolation Valves AND 3.3.7.5 Accident Monitoring Instrumentation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. Breaker trip b. Thermal overload c. Control power fuse blown d. Control power transformer failure e. Breaker open	1A. **DISPATCH** an NEO to check 10B232 H2/O2 ANALY 'A' ISLN 1GS-HV-4983A Brkr 52-232091 is ON. 1B. IF breaker or thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E3 F5

REFERENCES: J-57-0, Sht. 10 J-57-0, Sht. 18

DIGITAL ALARM POINT D4249

NOMENCLATURE H2/O2 ANALYZER A HV-4984A OPF

SETPOINT N/A

DESCRIPTION Containment Hydrogen/Oxygen Analyzer A HV-4984A Overload/Power Failure

ORIGIN CC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with operability requirements of T/S 3.6.3 Primary Containment Isolation Valves AND 3.3.7.5 Accident Monitoring Instrumentation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. Breaker trip b. Thermal overload c. Control power fuse blown d. Control power transformer failure e. Breaker open	1A. **DISPATCH** an NEO to check 10B232 H2/O2 ANALY 'A' ISLN 1GS-HV-4984A Brkr 52-232092 is ON. 1B. IF breaker or thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E3 F5

REFERENCES: J-57-0, Sht. 10 J-57-0, Sht. 18

DIGITAL ALARM POINT D4250

NOMENCLATURE	H2/O2 ANALYZER A HV-4965A OPF	**SETPOINT**	N/A
DESCRIPTION	Containment Hydrogen/Oxygen Analyzer A HV-4965A Overload/Power Failure	**ORIGIN**	CC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with operability requirements of T/S 3.6.3 Primary Containment Isolation Valves AND 3.3.7.5 Accident Monitoring Instrumentation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. Breaker trip b. Thermal overload c. Control power fuse blown d. Control power transformer failure e. Breaker open	1A. **DISPATCH** an NEO to check 10B232 H2/O2 ANALY 'A' ISLN 1GS-HV-4965A Brkr 52-232073 is ON. 1B. IF breaker or thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E3 F5

REFERENCES: J-57-0, Sht. 10 J-57-0, Sht. 18

DIGITAL ALARM POINT D4251

NOMENCLATURE	H2/O2 ANALYZER A HV-5022A OPF	**SETPOINT**	N/A
DESCRIPTION	Containment Hydrogen/Oxygen Analyzer A HV-5022A Overload/Power Failure	**ORIGIN**	CC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with operability requirements of T/S 3.6.3 Primary Containment Isolation Valves AND 3.3.7.5 Accident Monitoring Instrumentation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. Breaker trip b. Thermal overload c. Control power fuse blown d. Control power transformer failure e. Breaker open	1A. **DISPATCH** an NEO to check 10B232 H2/O2 ANALY 'A' ISLN 1GS-HV-5022A Brkr 52-232093 is ON. 1B. IF breaker or thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E3 F5

REFERENCES: J-57-0, Sht. 10 J-57-0, Sht. 18

DIGITAL ALARM POINT D4252

NOMENCLATURE H2/O2 ANALYZER B HV-4983B OPF

SETPOINT N/A

DESCRIPTION Containment Hydrogen/Oxygen Analyzer A HV-4983B Overload/Power Failure

ORIGIN DC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with operability requirements of T/S 3.6.3 Primary Containment Isolation Valves AND 3.3.7.5 Accident Monitoring Instrumentation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. Breaker trip b. Thermal overload c. Control power fuse blown d. Control power transformer failure e. Breaker open	1A. **DISPATCH** an NEO to check 10B242 H2/O2 ANALY 'B' ISLN 1GS-HV-4983B Brkr 52-242091 is ON. 1B. IF breaker or thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E3 F5

REFERENCES: J-57-0, Sht. 10 J-57-0, Sht. 18

DIGITAL ALARM POINT D4253

NOMENCLATURE H2/O2 ANALYZER B HV-4984B OPF

SETPOINT N/A

DESCRIPTION Containment Hydrogen/Oxygen Analyzer A HV-4984B Overload/Power Failure

ORIGIN DC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with operability requirements of T/S 3.6.3 Primary Containment Isolation Valves AND 3.3.7.5 Accident Monitoring Instrumentation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. Breaker trip b. Thermal overload c. Control power fuse blown d. Control power transformer failure e. Breaker open	1A. **DISPATCH** an NEO to check 10B242 H2/O2 ANALY 'B' ISLN 1GS-HV-4984B Brkr 52-242092 is ON. 1B. IF breaker or thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E3 F5

REFERENCES: J-57-0, Sht. 10 J-57-0, Sht. 18

DIGITAL ALARM POINT D4254

NOMENCLATURE H2/O2 ANALYZER B HV-4965B OPF

SETPOINT N/A

DESCRIPTION Containment Hydrogen/Oxygen Analyzer B HV-4965B Overload/Power Failure

ORIGIN DC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with operability requirements of T/S 3.6.3 Primary Containment Isolation Valves AND 3.3.7.5 Accident Monitoring Instrumentation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. Breaker trip b. Thermal overload c. Control power fuse blown d. Control power transformer failure e. Breaker open	1A. **DISPATCH** an NEO to check 10B242 H2/O2 ANALY 'B' ISLN 1GS-HV-4965B Brkr 52-242073 is ON. 1B. IF breaker or thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E3 F5

REFERENCES: J-57-0, Sht. 10 J-57-0, Sht. 18

DIGITAL ALARM POINT D4255

NOMENCLATURE	H2/O2 ANALYZER B HV-5022B OPF	**SETPOINT**	N/A
DESCRIPTION	Containment Hydrogen/Oxygen Analyzer B HV-5022B Overload/Power Failure	**ORIGIN**	DC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with operability requirements of T/S 3.6.3 Primary Containment Isolation Valves AND 3.3.7.5 Accident Monitoring Instrumentation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. Breaker trip b. Thermal overload c. Control power fuse blown d. Control power transformer failure e. breaker open	1A. **DISPATCH** an NEO to check 10B242 H2/O2 ANALY 'B' ISLN 1GS-HV-5022B Brkr 52-242093 is ON. 1B. IF breaker or thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL can not be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E3 F5

REFERENCES: J-57-0, Sht. 10 J-57-0, Sht. 18

DIGITAL ALARM POINT D4256

NOMENCLATURE SETPOINT DRYWELL PURGE EXH HV-4951 OPF — N/A

DESCRIPTION ORIGIN Drywell Purge Exhaust 1GS-HV-4951 Overload/Power Failure — DC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with Technical Specifications 3.6.3 Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. Loss of Control Power/Overload	1A. **DISPATCH** an EO to check 1DJ481 Class 1E Brk 1DJ481-11 is ON. 1B. **CHECK** Fuse Panel 1YF404 for blown fuse (102' Cont Bldg). 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action

Associated Annunciator E5 A4

REFERENCES: J-57-0, Sht. 11
J-57-0, Sht. 18

DIGITAL ALARM POINT D4257

NOMENCLATURE SETPOINT TORUS PURGE EXH HV-4963 OPF — N/A

DESCRIPTION ORIGIN Suppression Chamber Purge Exhaust 1GS HV-4963 Overload/Power Failure — DC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with Technical Specifications 3.6.3 Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. Loss of Control Power/Overload	1A. **DISPATCH** an EO to check 1DJ481 Class 1E Brkr 1DJ481-11 is ON. 1B. **CHECK** Fuse Panel 1YF404 for blown fuse (102' Cont Bldg) 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 A4

REFERENCES: J-57-0, Sht. 11
J-57-0, Sht. 18

DIGITAL ALARM POINT D4258

NOMENCLATURE	CONT RB N_2 MKUP HV-4974 OPF	**SETPOINT**	N/A
DESCRIPTION	Nitrogen Makeup Isolation 1GS-HV-4974 Overload/Power Failure	**ORIGIN**	DC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with Technical Specifications 3.6.3 Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power transformer failure d. breaker racked out	1A. **DISPATCH** EO to check NITROGEN MAKEUP ISOLATION 1GS-HV-4974 Brkr 52-242202 is ON. 1B. IF breaker OR thermal overloads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C4

REFERENCES: J-57-0, Sht. 11
J-57-0, Sht. 18

DIGITAL ALARM POINT D4259

NOMENCLATURE	CONT RB N_2 MKUP HV-4978 OPF	**SETPOINT**	N/A
DESCRIPTION	Nitrogen Makeup Isolation 1GS-SV-4978 Overload/Power Failure	**ORIGIN**	DC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with Technical Specifications 3.6.3 Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. Loss of Control Power/Overload	1A. **DISPATCH** EO to check 1DJ481 CLASS 1E, CH A, 120V Inst Dist Pnl Brkr 1DJ481-11 is ON (137' Cont Bldg) 1B. **CHECK** Fuse Panel 1YF404 for blown fuse 1YF404-FU07 (102' Cont Bldg) 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C4

REFERENCES: J-57-0, Sht. 11
J-57-0, Sht. 18

DIGITAL ALARM POINT D4260

NOMENCLATURE PREPURGE CLNUP HV-4950 OPF

SETPOINT N/A

DESCRIPTION Suppression Chamber Purge Exhaust 1GS-SV-4950 Overload/Power Failure

ORIGIN DC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with Technical Specifications 3.6.3 Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. Loss of Control Power/Overload	1A. **DISPATCH** EO to check 1DJ481 CLASS 1E, CH A, 120V Inst Dist Pnl Brkr 1DJ481-11 is ON (137' Cont Bldg) 1B. **CHECK** Fuse Panel 1YF404 for blown fuse 1YF404-FU05 (102' Cont Bldg) 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C4

REFERENCES: J-57-0, Sht. 11
J-57-0, Sht. 18

DIGITAL ALARM POINT D4261

NOMENCLATURE PREPURGE CLNUP HV-4962 OPF

SETPOINT N/A

DESCRIPTION Suppression Chamber Purge Exhaust 1GS-SV-4962 Overload/Power Failure

ORIGIN DC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with Technical Specifications 3.6.3 Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. Loss of Control Power/Overload	1A. **DISPATCH** EO to check 1DJ481 CLASS 1E, CH A, 120V Inst Dist Pnl Brkr 1DJ481-11 is ON (137' Cont Bldg) 1B. **CHECK** Fuse Panel 1YF404 for blown fuse 1YF404-FU05 (102' Cont Bldg) 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C4

REFERENCES: J-57-0, Sht. 11
J-57-0, Sht. 18

DIGITAL ALARM POINT D4262

NOMENCLATURE PREPURGE CLNUP HV-4979 OPF

SETPOINT N/A

DESCRIPTION Drywell Prepurge Cleanup Inlet 1GS-SV-4979 Overload/Power Failure

ORIGIN DC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with Technical Specifications 3.6.3 Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. Loss of Control Power/Overload	1A. **DISPATCH** EO to check 1DJ481 CLASS 1E, CH A, 120V Inst Dist Pnl Brkr 1DJ481-11 is ON (137' Cont Bldg) 1B. **CHECK** Fuse Panel 1YF404 for blown fuse 1YF404-FU08 (102' Cont Bldg) 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C4

REFERENCES: J-57-0, Sht. 11
J-57-0, Sht. 18

DIGITAL ALARM POINT D4263

NOMENCLATURE PREPURGE CLNUP HV-4980 OPF

SETPOINT N/A

DESCRIPTION Drywell Prepurge Cleanup Inlet 1GS-SV-4980 Overload/Power Failure

ORIGIN DC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

ENSURE compliance with Technical Specifications 3.6.3 Containment Isolation Valves.

CAUSE CORRE	CTIVE ACTION
1. Loss of Control Power/Overload	1A. **DISPATCH** EO to check 1DJ481 CLASS 1E, CH A, 120V Inst Dist Pnl Brkr 1DJ481-11 is ON (137' Cont Bldg) 1B. **CHECK** Fuse Panel 1YF404 for blown fuse 1YF404-FU08 (102' Cont Bldg) 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C4

REFERENCES: J-57-0, Sht. 11
J-57-0, Sht. 18

DIGITAL ALARM POINT D4264

NOMENCLATURE	RECOMB A GAS RTN HV-5054A OPF	**SETPOINT**	N/A
DESCRIPTION	H_2 Recombiner A Gas Return HV-5054A Overload/Power Failure	**ORIGIN**	AC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **ENSURE** compliance with operability requirements of Technical Specifications 3.6.1.1 Primary Containment Integrity.
2. IF __ necessary,
   USE alternate H_2 Recombiner IAW HC.OP-SO.GS-0003(Q); Containment Hydrogen Recombiner System Operation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B212 RECOMB 'A' GAS INBD ISLN 1GS-HV-5054A Bkr 52-212172 is on. 1B. IF breaker OR thermal over loads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C5

REFERENCES: J-58-0, Sht. 3; Sht. 4

DIGITAL ALARM POINT D4265

NOMENCLATURE	RECOMB A GAS SPLY HV-5050A OPF	**SETPOINT**	N/A
DESCRIPTION	H_2 Recombiner A Gas Supply HV-5050A Overload/Power Failure	**ORIGIN**	AC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **ENSURE** compliance with operability requirements of Technical Specifications 3.6.1.1 Primary Containment Integrity.
2. IF __ necessary,
   USE alternate H_2 Recombiner IAW HC.OP-SO.GS-0003(Q); Containment Hydrogen Recombiner System Operation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B212 RECOMB 'A' GAS INBD ISLN 1GS-HV-5050A Bkr 52-212171 is on. 1B. IF breaker OR thermal over loads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C5

REFERENCES: J-58-0, Sht. 3; Sht. 4

DIGITAL ALARM POINT D4266

NOMENCLATURE	RECOMB B GAS RTN HV-5054B OPF	**SETPOINT**	N/A
DESCRIPTION	H_2 Recombiner B Gas Return HV-5054B Overload/Power Failure	**ORIGIN**	BC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **ENSURE** compliance with operability requirements of Technical Specifications 3.6.1.1 Primary Containment Integrity.
2. IF __ necessary,
   USE alternate H_2 Recombiner IAW HC.OP-SO.GS-0003(Q); Containment Hydrogen Recombiner System Operation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B222 RECOMB 'B' GAS INBD ISLN 1GS-HV-5054B Bkr 52-222172 is on. 1B. IF breaker OR thermal over loads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C5

REFERENCES: J-58-0, Sht. 3; Sht. 4

DIGITAL ALARM POINT D4267

NOMENCLATURE	RECOMB B GAS SPLY HV-5050B OPF	**SETPOINT**	N/A
DESCRIPTION	H_2 Recombiner B Gas Supply HV-5050B Overload/Power Failure	**ORIGIN**	BC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **ENSURE** compliance with operability requirements of Technical Specifications 3.6.1.1 Primary Containment Integrity.
2. IF __ necessary,
   USE alternate H_2 Recombiner IAW HC.OP-SO.GS-0003(Q); Containment Hydrogen Recombiner System Operation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B222 RECOMB 'B' GAS INBD ISLN 1GS-HV-5050B Bkr 52-222171 is on. 1B. IF breaker OR thermal over loads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C5

REFERENCES: J-58-0, Sht. 3; Sht. 4

DIGITAL ALARM POINT D4268

NOMENCLATURE	RECOMB A GAS RTN HV-5053A OPF	**SETPOINT**	N/A
DESCRIPTION	H_2 Recombiner A Gas Return HV-5053A Overload/Power Failure	**ORIGIN**	CC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **ENSURE** compliance with operability requirements of Technical Specifications 3.6.1.1 Primary Containment Integrity.
2. IF __ necessary,
   USE alternate H_2 Recombiner IAW HC.OP-SO.GS-0003(Q); Containment Hydrogen Recombiner System Operation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B232 RECOMB 'A' OUTBD RTN ISLN 1GS-HV-5053A Bkr 52-232121 is ON. 1B. IF breaker OR thermal over loads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C5

REFERENCES: J-58-0, Sht. 3; Sht. 4

DIGITAL ALARM POINT D4269

NOMENCLATURE	RECOMB A GAS SPLY HV-5052A OPF	**SETPOINT**	N/A
DESCRIPTION	H_2 Recombiner A Gas Supply HV-5052A Overload/Power Failure	**ORIGIN**	CC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **ENSURE** compliance with operability requirements of Technical Specifications 3.6.1.1 Primary Containment Integrity.
2. IF __ necessary,
   USE alternate H_2 Recombiner IAW HC.OP-SO.GS-0003(Q); Containment Hydrogen Recombiner System Operation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B232 RECOMB 'A' OUTBD SPLY 1SLN 1GS-HV-5052A Bkr 52-232112 is ON. 1B. IF breaker OR thermal over loads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C5

REFERENCES: J-58-0, Sht. 3; Sht. 4

DIGITAL ALARM POINT D4270

NOMENCLATURE	RECOMB B GAS RTN HV-5053B OPF	**SETPOINT**	N/A
DESCRIPTION	H_2 Recombiner B Gas Return HV-5053B Overload/Power Failure	**ORIGIN**	DC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **ENSURE** compliance with operability requirements of Technical Specifications 3.6.1.1 Primary Containment Integrity.
2. IF __ necessary,
   USE alternate H_2 Recombiner IAW HC.OP-SO.GS-0003(Q); Containment Hydrogen Recombiner System Operation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B242 RECOMB 'B' OUTBD RTN ISLN 1GS-HV-5053B Bkr 52-242121 is ON. 1B. IF breaker OR thermal over loads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C5

REFERENCES: J-58-0, Sht. 3; Sht. 4

DIGITAL ALARM POINT D4271

NOMENCLATURE	RECOMB B GAS SPLY HV-5052B OPF	**SETPOINT**	N/A
DESCRIPTION	H_2 Recombiner B Gas Supply HV-5052B Overload/Power Failure	**ORIGIN**	DC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **ENSURE** compliance with operability requirements of Technical Specifications 3.6.1.1 Primary Containment Integrity.
2. IF __ necessary,
   USE alternate H_2 Recombiner IAW HC.OP-SO.GS-0003(Q); Containment Hydrogen Recombiner System Operation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B242 RECOMB 'B' OUTBD SPLY ISLN 1GS-HV-5052B Bkr 52-242112 is ON. 1B. IF breaker OR thermal over loads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C5

REFERENCES: J-58-0, Sht. 3; Sht. 4

DIGITAL ALARM POINT D4272

NOMENCLATURE	RECOMB A RHR WTR HV-5055A OPF	**SETPOINT**	N/A
DESCRIPTION	H_2 Recombiner A RHR Water Supply HV-5055A Overload/Power Failure	**ORIGIN**	AC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **ENSURE** compliance with operability requirements of Technical Specifications 3.6.1.1 Primary Containment Integrity.
2. IF __ necessary,
   USE alternate H_2 Recombiner IAW HC.OP-SO.GS-0003(Q); Containment Hydrogen Recombiner System Operation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B212 RECOMB 'A' SCBBR WTR ISLN 1GS-HV-5055A Bkr 52-212273 is ON. 1B. IF breaker OR thermal over loads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C5

REFERENCES: J-58-0, Sht. 3; Sht. 4

DIGITAL ALARM POINT D4273

NOMENCLATURE	RECOMB B RHR WTR HV-5055B OPF	**SETPOINT**	N/A
DESCRIPTION	H_2 Recombiner B RHR Water Supply HV-5055B Overload/Power Failure	**ORIGIN**	BC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **ENSURE** compliance with operability requirements of Technical Specifications 3.6.1.1 Primary Containment Integrity.
2. IF __ necessary,
   USE alternate H_2 Recombiner IAW HC.OP-SO.GS-0003(Q); Containment Hydrogen Recombiner System Operation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B222 RECOMB 'B' SCBBR WTR ISLN 1GS-HV-5055B Bkr 52-222192 is ON. 1B. IF breaker OR thermal over loads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C5

REFERENCES: J-58-0, Sht. 3; Sht. 4

DIGITAL ALARM POINT D4274

NOMENCLATURE	RECOMB A RHR WTR HV-5057A OPF	**SETPOINT**	N/A
DESCRIPTION	H_2 Recombiner A RHR Water Supply HV-5057A Overload/Power Failure	**ORIGIN**	CC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **ENSURE** compliance with operability requirements of Technical Specifications 3.6.1.1 Primary Containment Integrity.
2. IF __ necessary,
   USE alternate H_2 Recombiner IAW HC.OP-SO.GS-0003(Q); Containment Hydrogen Recombiner System Operation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B232 RECOMB 'A' SCBBR WTR ISLN 1GS-HV-5057A Bkr 52-232202 is ON. 1B. IF breaker OR thermal over loads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C5

REFERENCES: J-58-0, Sht. 3; Sht. 4

DIGITAL ALARM POINT D4275

NOMENCLATURE	RECOMB B RHR WTR HV-5057B OPF	**SETPOINT**	N/A
DESCRIPTION	H_2 Recombiner B RHR Water Supply HV-5057B Overload/Power Failure	**ORIGIN**	DC652

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

1. **ENSURE** compliance with operability requirements of Technical Specifications 3.6.1.1 Primary Containment Integrity.
2. IF __ necessary,
   USE alternate H_3 Recombiner IAW HC.OP-SO.GS-0003(Q); Containment Hydrogen Recombiner System Operation.

CAUSE CORRE	CTIVE ACTION
1. MOV inoperative a. breaker trip b. thermal overload c. control power fuse blown d. control power transformer failure e. breaker racked out	1A. **DISPATCH** an EO to check MCC 10B242 RECOMB 'B' SCBBR WTR ISLN 1GS-HV-5057B Bkr 52-242222 is ON. 1B. IF breaker OR thermal over loads are tripped, **NOTIFY** SM/CRS prior to resetting. 1C. IF OVLD/PWR FAIL cannot be cleared, **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator E5 C5

REFERENCES: J-58-0, Sht. 3; Sht. 4

DIGITAL ALARM POINT D4276

NOMENCLATURE RCIC ISOLATION POWER LOSS **SETPOINT** ---

DESCRIPTION ORIGIN Loss of Input/Output card, power to Isolator, Channel B AT4 AT4 at Pnl P621

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

OBSERVE Reactor Core Isolation Cooling System operability limits of Technical Specifications 3.7.4.

NOTE

Due to optical isolation card trouble, the following alarms will not be annunciated on the panel. It is recommended that the associated parameters of digital points be monitored.

INPUTS

Digital Point/ Indication	Nomenclature/Condition	Automatic Action
D3553	RCIC TURB OUTBD BRG OIL TEMP	Alarm only
D3554	RCIC TURB INBOARD BRG OIL TEMP	Alarm only
D3555	RCIC VACUUM TANK LEVEL	Alarm only
D3556	RCIC TURB OIL FLTR DIFF PRESS	Alarm only
D3557	RCIC VACUUM TANK LEVEL	Alarm only
D3561	RCIC CHAN B ISLN RESET REQUIRED	Alarm only
D3558	RCIC MNL INITIATION SW ARMED	Alarm only
D5339	RCIC OUT OF SERVICE	Alarm only

DIGITAL ALARM POINT D4276

CAUSE CORRE	CTIVE ACTION
1. Input/Output Isolator Card out of file	1A. **REQUEST** SM/CRS to initiate corrective action.
2. Input/Output Isolator Card failure	2A. **REQUEST** SM/CRS to initiate corrective action.
3. Input power breaker tripped	3A. **CHECK** 120 VAC Instrument Bus B 1BJ481 Brkr #18 (P618 Panel) for trip 3B. WHEN directed by SM/CRS **RESET** the breaker
4. Input power fuse blown	4A. **CHECK** AND **REPLACE** if necessary, 5 amp F48 fuse at Panel P618. 4B. **CHECK** AND **REPLACE** if necessary, 10 amp fuse F41B at Panel P618.
5. Output card power failure	5A. **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator B1 F2

REFERENCES: N1-E51-1040-59(16)-15
N1-E51-1040-59(5)-11
N1-E51-1040-59(15)-18
N1-E21-1040-383(6B) -10
N1-E21-1040-383(6A) -11
E-6769-0, Sht. 1; Sht. 2

DIGITAL ALARM POINT D4277

NOMENCLATURE	RCIC CH D ISLN RESET REQUIRED	**SETPOINT**	N/A
DESCRIPTION	RCIC Channel D Isolation Reset Switch in Reset	**ORIGIN**	S25

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

IF the logic is reset,
PLACE ISOLATION LOGIC D in NORMAL.

CAUSE CORRE	CTIVE ACTION
1. ISOLATION LOGIC D Switch placed in RESET	1A. IF logic resetting is complete, **PLACE** ISOLATION LOGIC D in NORMAL.

Associated Annunciator B1 D2

REFERENCES: J-50-0, Sht. 10
N1-E51-1040-59(17)-8
N1-E51-1040-59(8)-17

DIGITAL ALARM POINT D4278

NOMENCLATURE RCIC WARM-UP ISOLATION VLV F076

SETPOINT N/A

DESCRIPTION RCIC Warmup Isln Vlv not fully closed

ORIGIN ZS-F076

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

IF RCIC steam line is NOT being warmed-up,
CLOSE HV-F076 RCIC STM LINE WARMUP VLV.

CAUSE CORRE	CTIVE ACTION
1. HV-F076 RCIC STM LINE WARM-UP VLV is opened for warming-up	1A. **CLOSE** the valve after warming-up the RCIC System

Associated Annunciator B1 D2

REFERENCES: J-49-0, Sht. 13
N1-E51-1040-59(12)-13

DIGITAL ALARM POINT D4279

NOMENCLATURE RCIC VAC BRKR ISLN V F084 **SETPOINT** N/A

DESCRIPTION RCIC Vac Brkr Vlv HV-F084 not fully open **ORIGIN** ZS-F084

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

OBSERVE limiting conditions for operation of RCIC System in accordance with Technical Specifications 3.7.4.

CAUSE CORRE	CTIVE ACTION
1. Valve is being tested	1A. **OPEN** valve after test
2. RCIC Turbine Steam supply pressure < 64.5 psig (after a 4 second time delay) AND Drywell pressure > 1.68 psig	2A. IF RCIC is being operated for non-emergency purpose, **TRIP** the turbine. 2B. **OPEN** HV-F084 RCIC VAC BRKR VLV WHEN directed by SM/CRS
3. Improper valve lineup	3A. **ENSURE** proper valve lineup IAW HC.OP-SO.BD-0001(Q)

Associated Annunciator B1 D2

REFERENCES: N1-E51-1040-59(6)-18
N1-E51-1040-59(10)-15
N1-E51-1040-59(14)-11
J-49-0, Sht. 13

DIGITAL ALARM POINT D4280

NOMENCLATURE RCIC ISOLATION POWER LOSS **SETPOINT** ---

DESCRIPTION ORIGIN Loss of Input/Output card, power to Isolator, Channel D AT1 AT1 at Pnl P640

AUTOMATIC ACTION:

Alarm only

OPERATOR ACTION:

OBSERVE Reactor Core Isolation Cooling System operability limits of Technical Specifications 3.7.4.

NOTE

Due to optical isolation card trouble the following alarms will not be annunciated on the panel. It is recommended that the associated parameters of digital points be monitored.

INPUTS

Digital Point/ Indication	Nomenclature/Condition	Automatic Action
D4277	RCIC CH D ISLN RESET REQUIRED	Alarm only
D4279	RCIC VACUUM BRK ISLN VLV F084	Alarm only
D4286	RCIC STREAM LINE DIFF PRESS	Alarm only
D4287	RCIC TURB EXH DIAPH RUPTURED	Alarm only
D4288	RCIC STEAM SUPPLY PRESS	Alarm only
D7132	RCIC ISOLATION BYP VLV HV-F076	Alarm only
D3559	RCIC OUT OF SERVICE	Alarm only

DIGITAL ALARM POINT D4280

CAUSE CORRE	CTIVE ACTION
1. Input/Output Isolator Card out of file	1A. **REQUEST** SM/CRS to initiate corrective action.
2. Input/Output Isolator Card failure	2A. **REQUEST** SM/CRS to initiate corrective action.
3. Input power breaker tripped	3A. **CHECK** 120 VAC Instrument Bus D 1DJ481 Brkr #20 (P640 Pnl) for trip. 3B. WHEN directed by SM/CRS **RESET** the breaker.
4. Input power fuse blown	4A. **CHECK** AND **REPLACE** if necessary, 5 amp F46 fuse at Panel P640. 4B. **CHECK** AND **REPLACE** if necessary, 10 amp fuse F41D at Panel P640.
5. Output Card power failure	5A. **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator B1 F2

REFERENCES: N1-E51-1040-59(16)-15
N1-E51-1040-59(5)-11
N1-E51-1040-59(15)-18
N1-E21-1040-383(6B) -10
N1-E21-1040-383(6A) -11
E-6769-0, Sht. 1; Sht. 2

DIGITAL ALARM POINT **D4282**

NOMENCLATURE SETPOINT	RCIC TURB EXH DIAPH B/F RUPTD	> 10 psig
DESCRIPTION ORIGIN	RCIC Turbine exhaust diaphragm ruptured	PISH-N655B PISH-N655F

AUTOMATIC ACTION:

IF the signal is from BOTH the sensors, Turbine trips under Auto-Isolation, otherwise alarm only

OPERATOR ACTION:

1. **VALIDATE** alarm by checking PI-R603 TURBINE EXH PRESS (Blue)
2. **ENSURE** compliance with operability requirements of Technical Specifications 3.7.4, 3.3.2.

CAUSE CORRE	CTIVE ACTION
1. HV-F059 TURBINE EXHAUST VLV is closed.	1A. **ENSURE** HV-F059 TURBINE EXHAUST VLV is open.
2. Check Valve V003 is stuck closed.	2A. **REQUEST** SM/CRS to initiate corrective action.
3. Mechanical failure of diaphragm	3A **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator B1 B1

REFERENCES: J-50-0, Sht. 10
N1-E51-1040-59(9)-16
N1-E51-1040-59(6)-18
N1-E51-1040-59(10)-15

DIGITAL ALARM POINT D4283

NOMENCLATURE RCIC STEAM SUPPLY PRESS B/F **SETPOINT** < 64.5 psig w/4sec TD

DESCRIPTION RCIC Steam Supply Pressure low **ORIGIN** PISL-N658B or PISL-N658F

AUTOMATIC ACTION:

RCIC Div 2 isolation
AND Turbine trip

OPERATOR ACTION:

1. **RESET** System Logic B
   WHEN directed by SM/CRS in accordance with HC.OP-SO.BD-0001(Q).
2. **OBSERVE** limiting conditions for operation of RCIC System in accordance with Technical Specifications 3.7.4, 3.3.2.

CAUSE CORRE	CTIVE ACTION
1. Improper valve lineup	1A. **ENSURE** proper valve lineup IAW HC.OP-SO.BD-0001(Q).
2. Low Reactor pressure	2A. ----
3. Steam supply line break	3A. **CHECK** the following for abnormalities: 1. PI-602 TURBINE INL PRESS 2. PI-R603 TURBINE EXH PRESS 3. SI-4280-1 TURBINE SPEED

Associated Annunciator B1 C1

REFERENCES: J-49-0, Sht. 15 N1-E51-1040-59(10)-15
N1-E51-1040-59(8)-17

DIGITAL ALARM POINT **D4284**

NOMENCLATURE	RCIC STEAM LINE B DIFF PRESS	**SETPOINT**	272-300% Normal Flow (≥ 598" H_2O) OR - 50" H_2O
DESCRIPTION	RCIC Steam line flow high	**ORIGIN**	PDISH-N657B PDSH-N660B

AUTOMATIC ACTION:

1. RCIC Steam Line Outbd Isln Vlv HV-F008 closes.
2. RCIC Turbine trips.

OPERATOR ACTION:

1. **RESPOND** in accordance with HC.OP-AR.ZZ-0006(Q), Attachment A1.
2. **OBSERVE** LIMITING conditions for operation of RCIC System in accordance with Technical Specifications 3.7.4, 3.3.2.

CAUSE CORRE	CTIVE ACTION
1. Improper valve lineup	1A. **ENSURE** proper valve lineup IAW HC.OP-SO.BD-0001(Q)
2. RCIC steam supply/instrument line break	2A. **CHECK** the following for any abnormalities to validate the alarm: 1. D4286 RCIC STEAM LINE D DIFF PRESS 2. PI-R602 TURBINE INL PRESS 3. PR-4960B2 (CONTAINMENT ATMOSPHERE) DRYWELL PRESSURE (BLUE) 4. TR-4967B2 (CONTAINMENT ATMOSPHERE) DRYWELL ATMOSPHERE TEMPERATURE (BLUE) 5. D5858 RCIC STM LEAK DETECT TEMP CH D 6. D5860 RCIC/RHR STM LEAK DETECT TEMP CH B

Associated Annunciator B1 A2

REFERENCES: J-49-0, Sht. 15 E51-9-1, Sht. 7

DIGITAL ALARM POINT **D4286**

NOMENCLATURE	RCIC STEAM LINE D DIFF PRESS	**SETPOINT**	272-300% Normal Flow ($\geq$ 598" H_2O) OR - 50" H_2O
DESCRIPTION	RCIC Steam line flow high	**ORIGIN**	PDISH-N657D PDSH-N660D

AUTOMATIC ACTION:

1. RCIC STEAM LINE INBD ISLN VLV HV-F007 closes.
2. RCIC WARM-UP ISOLATION HV-F076 closes
3. RCIC Turbine trips.

OPERATOR ACTION:

1. **RESPOND** in accordance with HC.OP-AR.ZZ-0006(Q), Attachment A1.
2. **OBSERVE** limiting conditions for operation of RCIC System in accordance with Technical Specifications 3.7.4, 3.3.2.

CAUSE CORRE	CTIVE ACTION
1. Improper valve lineup	1A. **ENSURE** proper valve lineup IAW HC.OP-SO.BD-0001(Q)
2. RCIC steam supply/instrument line break	2A. **CHECK** the following for any abnormalities to validate the alarm: 1. D4284 RCIC STEAM LINE B DIFF PRESS 2. PI-R602 TURBINE INL PRESS 3. PR-4960B2 (CONTAINMENT ATMOSPHERE) DRYWELL PRESSURE (BLUE) 4. TR-4967B2 (CONTAINMENT ATMOSPHERE) DRYWELL ATMOSPHERE TEMPERATURE (BLUE) 5. D5858 RCIC STM LEAK DETECT TEMP CH D 6. D5860 RCIC/RHR STM LEAK DETECT TEMP CH B

Associated Annunciator B1 A2

REFERENCES: J-49-0, Sht. 15 E51-9-1, Sht. 7

DIGITAL ALARM POINT **D4287**

NOMENCLATURE SETPOINT	RCIC TURB EXH DIAPH D/H RUPTD	> 10 psig
DESCRIPTION ORIGIN	RCIC turbine exhaust diaphragm ruptured	PISH-N655D PISH-N655H

AUTOMATIC ACTION:

IF the signal is from BOTH the sensors, turbine trips under auto-isolation, otherwise alarm only

OPERATOR ACTION:

1. **VALIDATE** alarm by checking PI-R603 TURBINE EXH PRESS (Blue)
2. **ENSURE** compliance with operability requirements of Technical Specifications 3.7.4, 3.3.2.

CAUSE CORRE	CTIVE ACTION
1. HV-F059 TURBINE EXHAUST VLV is closed.	1A. **ENSURE** HV-F059 TURBINE EXHAUST VLV is open.
2. Check Valve V003 is stuck closed.	2A. **REQUEST** SM/CRS to initiate corrective action.
3. Mechanical failure of diaphragm	3A. **REQUEST** SM/CRS to initiate corrective action.

Associated Annunciator B1 B1

REFERENCES: J-50-0, Sht. 10
N1-E51-1040-59(9)-16
N1-E51-1040-59(6)-18
N1-E51-1040-59(10)-15

DIGITAL ALARM POINT D4288

NOMENCLATURE SETPOINT RCIC STEAM SUPPLY PRESS D/H < 64.5 psig w/4sec TD

DESCRIPTION RCIC Steam Supply Pressure low **ORIGIN** PISL-N658D or PISL-N658H

AUTOMATIC ACTION:

RCIC Div 4 isolation
AND Turbine trip

OPERATOR ACTION:

1. **RESET** System Logic D
   WHEN directed by SM/CRS in accordance with HC.OP-SO.BD-0001(Q).
2. **OBSERVE** limiting conditions for operation of RCIC System in accordance with Technical Specifications 3.7.4, 3.3.2.

CAUSE CORRE	CTIVE ACTION
1. Improper valve lineup	1A. **ENSURE** proper valve lineup IAW HC.OP-SO.BD-0001(Q).
2. Low Reactor pressure	2A. ----
3. Steam supply line break	3A. **CHECK** the following for abnormalities: 1. PI-602 TURBINE INL PRESS 2. PI-R603 TURBINE EXH PRESS 3. SI-4280-1 TURBINE SPEED

Associated Annunciator B1 C1

REFERENCES: J-49-0, Sht. 15 N1-E51-1040-59(10)-15
N1-E51-1040-59(8)-17