50-302

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280263

Date:

Effective Date 7-24-97

INFORMATION ONLY

ANNUNCIATOR RESPONSE

AR-403

FLORIDA POWER CORPORATION

CRYSTAL RIVER UNIT 3

PSA H ANNUNCIATOR RESPONSE

APPROVED BY: Interpretation Contact

Frant Dee for CWB (SIGNATURE ON FILE)

DATE: _______

INTERPRETATION CONTACT: Manager Nuclear Plant Operations Support

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ENCLOSURE

1	Annunciator	Response	 . 3



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1.0 PURPOSE

- 1.1 Establish a reference document for each Annunciator Window on the PSA-Z Lamp box.
- 1.2 Establish operator actions for valid Annunciator alarms on the PSA-Z Lamp box.
- 1.3 Establish a reference to other procedures which address operator actions for valid Annunciator alarms on the PSA-Z Lamp box.

2.0 REFERENCES

2.1 IMPLEMENTING REFERENCES

- 2.1.1 EOP, Emergency Operating Procedure
- 2.1.2 AP-250, Radiation Monitor Actuation
- 2.1.3 AP-1050, Flooding
- 2.1.4 CP-138, Secondary Water Chemistry Guidelines
- 2.1.5 OP-103B, Heat-Up Cooldown Curves
- 2.1.6 SP-146, EFIC Monthly Functional Test
- 2.1.7 OP-302, RC Pump Operation
- 2.1.8 OP-301, Operation Of The Reactor Coolant System
- 2.1.9 AP-470, Loss of Instrument Air
- 2.1.10 OP-408, Nuclear Services Cooling System
- 2.1.11 OP-505, Radiation Monitoring System
- 2.1.12 CP-152, Primary to Secondary Leakage Operating Guideline

2.2 DEVELOPMENTAL REFERENCES

- 2.2.1 INPO 90-021, Good Practice OP-217, Alarm Response Procedures
- 2.2.2 Annunciator Window Engraving Drawing E-224-048

3.0 PERSONNEL INDOCTRINATION

3.1 The Annunciator System is powered from VBDP-5 Breaker 28.

4.0 INSTRUCTIONS

- 4.1 Respond to alarms on the PSA-Z Lamp box as indicated on Enclosure 1, Annunciator Response.
- 5.0 FOLLOW-UP ACTIONS

None



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PS	A-Z AN	NUNCIATOR	RESPONSE	PSA-Z-01-01	H-01-01
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-	and the second	 	 1	

GAMMA RADIATION HIGH

EVENT POINT 1748

INDICATED CONDITION:

o RM-G1 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G1 INDICATION AT RADIATION MONITORING PANEL.

- RM-G1 INDICATION AT DETECTOR.
- o RM-G1 RED ALARM LIGHT.
- o RM-G1 HORN.
- O SPDS ALPHA PAGE.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION.

O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).

O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.

O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G1 MONITORS THE CONTROL ROOM. THE DETECTOR IS ON THE BACK WALL NEXT TO THE ES RELAY ACTUATION CABINETS. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-22

ENCLOSURE 1 (Page 2 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-01-01	H-01-01
	GAMN	

HIGH

EVENT POINT 1750

INDICATED CONDITION:

O RM-G2 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G2 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION.

- O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G2 MONITORS THE CHEMICAL LABORATORY. THE DETECTOR IS LOCATED ON THE EAST WALL INSIDE THE CHEMICAL LABORATORY. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-23

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-01-01	H-01-01
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			CA TOAL CORPORATION

GAMMA RADIATION HIGH

EVENT POINT 1752

INDICATED CONDITION:

O RM-G3 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G3 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION.

- NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G3 MONITORS THE PRIMARY SAMPLE ROOM. THE DETECTOR IS LOCATED ON THE SOUTH WALL INSIDE THE PRIMARY SAMPLE ROOM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-23

ENCLOSURE 1 (Page 4 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-01-01	H-01-0
	GAMM RADIAT HIGH	ION

EVENT POINT 1754

INDICATED CONDITION:

RM-G4 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G4 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

INVESTIGATE CAUSE OF HIGH RADIATION.

• NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).

O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.

O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G4 MONITORS THE AUXILIARY BUILDING ENTRANCE HALLWAY. THE DETECTOR IS LOCATED ON THE WALL OPPOSITE THE PAX PHONE NEAR THE ENTRANCE TO THE INTERMEDIATE BUILDING. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-24

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		GAMMA
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GAMMA RADIATION HIGH

EVENT POINT 1756

INDICATED CONDITION:

O RM-GS RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

o RM-G5 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION.

- NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G5 MONITORS THE WASTE GAS TANK VALVE ALLEY. THE DETECTOR IS LOCATED ON THE 95' AB, ON THE WALL IN THE WASTE GAS VALVE ALLEY, ADJACENT TO THE DETECTOR. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-24

ENCLOSURE 1 (Page 6 of 187)

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1	2-01-01 H-01-

GAMMA RADIATION HIGH

EVENT POINT 1758

INDICATED CONDITION:

O RM-G6 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

RM-G6 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION.

- O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G6 MONITORS THE MAKEUP TANK VALVE ALLEY. THE DETECTOR IS LOCATED ON THE WALL NEAR THE ENTRANCE LOCKED GATE. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-25

ENCLOSURE 1 (Page 7 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-01-01	H-01-01

GAMMA RADIATION HIGH

EVENT POINT 1760

INDICATED CONDITION:

o RM-G7 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G7 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION.

- NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G7 MONITORS THE RC BLEED TANK AREA. THE DETECTOR IS LOCATED ON THE WALL NEAR THE ENTRANCE INSIDE THE LOCKED GATE ON THE 95' ELEVATION. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-25

ENCLOSURE 1 (Page 8 of 187)

 PSA-Z ANNUNCIATOR RESPONSE			PSA-Z-01-01	H-01-01	
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T					

GAMMA RADIATION HIGH

EVENT POINT 1762

INDICATED CONDITION:

O RM-G8 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G8 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION.

- O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G8 MONITORS THE RC BLEED TANK AREA. THE DETECTOR IS LOCATED ON THE WALL NEAR THE ENTRANCE INSIDE THE LOCKED GATE ON THE 119' ELEVATION. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-26

ENCLOSURE 1 (Page 9 of 187)

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EVENT POINT 1764

INDICATED CONDITION:

O RM-G9 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-GY INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION.

O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).

O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.

O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G9 MONITORS THE AREA OUTSIDE THE PERSONNEL HATCH. THE DETECTOR IS LOCATED ON THE WALL NEAR THE ENTRANCE INSIDE THE LOCKED GATE ON THE 119' ELEVATION. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-26

ENCLOSURE 1 (Page 10 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-01-01	H-01-01

GAMMA RADIATION HIGH

EVENT POINT 1766

INDICATED CONDITION:

O RM-G10 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

o RM-G10 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION.

NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).

O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.

O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G10 MONITORS THE MAKE-UP PUMP AREA. THE DETECTOR IS LOCATED ON THE WALL NEAR THE ENTRANCE TO THE 'C' MAKE-UP PUMP (SOUTH ENTRANCE). THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-27

ENCLOSURE 1 (Page 11 of 187)

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PSA-Z ANNUNCIATOR RESPON	E PSA-Z-01-01	H-01-01

GAMMA RADIATION HIGH

EVENT POINT 1768

INDICATED CONDITION:

o RM-G11 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

o RM-G11 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION.

- O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G11 MONITORS THE DEBORATING DEMIN ROOM. THE DETECTOR IS LOCATED ON THE WALL INSIDE THE DEMIN ROOM ON THE 119 ELEVATION. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-27

ENCLOSURE 1 (Page 12 of 187)

		GAMM	۵
		RADIATION	
	 	HIGH	

INDICATED CONDITION:

O RM-G12 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G12 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION.

- O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G12 MONITORS THE SPENT RESIN STORAGE TANK ROOM. THE DETECTOR IS LOCATED IN THE DECANT AND SLURRY PUMP ROOM JUST INSIDE THE LOCKED GATE ON THE WALL. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-28

ENCLOSURE 1 (Page 13 of 187)

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PSA-Z ANNUNCIATOR RES	PONSE	PSA-Z-01-01	
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		GAMN	
		RADIAT	
	L		

EVENT POINT 1772

INDICATED CONDITION:

O RM-G13 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G13 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION.

- NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G13 MONITORS THE DECONTAMINATION PIT AREA. THE DETECTOR IS LOCATED ON THE 143' ELEVATION, CLOSE TO THE STAIRWELL BY THE ECSTs. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-28

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-01-01	H-01-0
	GAMM RADIATI HIGH	ION

EVENT POINT 1774

INDICATED CONDITION:

O RM-G14 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G14 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION.

• NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).

O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.

O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G14 MONITORS THE SPENT FUEL STORAGE AREA. THE DETECTOR IS LOCATED ON THE 143' AB, ON THE WALL OF THE REACTOR BUILDING IN THE PASSAGEWAY TO THE SPENT FUEL SYSTEM FILTERS. THIS DETECTOR IS THE ONLY S.T.S. AREA MONITOR AND IS COMMONLY REFERRED TO AS THE "SPENT FUEL CRITICALITY MONITOR". THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-29

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PSA-Z ANNUNCIAT	PSA-Z-01-01	H-01-01	
		GAMN RADIAT HIGH	ION
	liyoo aa aa aa aa ahaa ahaa ahaa ahaa ahaa	EVENT POIN	T 1776
NDICATED CONDITION:	EXCEEDS HIGH SETPOI	INT.	
REDUNDANT INDICATION WHICH	WILL VERIFY ALARM:		

OPERATOR ACTIONS FOR A VALID ALARM:

• INVESTIGATE CAUSE OF HIGH RADIATION.

• NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).

O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.

- IF FUEL MOVEMENT IS IN PROGRESS, ENSURE FUEL IS PLACED IN A SAFE CONDITION PRIOR TO PERSONNEL EXIT.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G15 MONITORS THE SPENT FUEL AREA. THE DETECTOR IS LOCATED ON THE SPENT FUEL BRIDGE AND MOVES WITH THE BRIDGE. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-29

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-01-01	H-01-0
	GAMN RADIAT HIGH	ION
	EVENT POIN	IT 1778
<pre>o RM-G16 RADIATION LEVEL EXCEEDS HIGH SETPO</pre>	INT.	
REDUNDANT INDICATION WHICH WITH VEDTER AND		
REDUNDANT INDICATION WHICH WILL VERIFY ALARM: • RM-G16 INDICATION AT RADIATION MONITORING		
	PANEL. AREA(S). INFORMATION. JEL IS PLACED IN A SAM	FE

RM-G16 MONITORS THE FUEL TRANSFER AREA. THE DETECTOR IS LOCATED ON THE MAIN FUEL BRIDGE AND MOVES WITH THE BRIDGE. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-30

ENCLOSURE 1 (Page 17 of 187)

	PSA-Z ANNUNCIATOR RESPONSE				PSA-Z ANNUNCIATOR RESPONSE PSA-Z-01-01						
					GAMN RADIAT HIGH	ION					

INDICATED CONDITION:

O RM-G17 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G17 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION.

- NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G17 MONITORS THE 119' ELEVATION OF THE REACTOR BUILDING. THE DETECTOR IS LOCATED ON THE STANCHION NEAR THE PERSONNEL HATCH. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-30

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			-	L

GAMMA RADIATION HIGH

01

EVENT POINT 1782

INDICATED CONDITION:

O RM-G18 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G18 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

INVESTIGATE CAUSE OF HIGH RADIATION.

- NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- VERIFY TRANSFER CANAL LEVEL AT DESIRED HEIGHT.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G18 MONITORS THE INCORE PIT AREA. THE DETECTOR IS LOCATED IN THE PIT ON THE 164' ELEVATION NEAR THE TRANSFER CANAL. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-31

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-01-01	H-01-01
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Reconstruction					

GAMMA RADIATION HIGH

EVENT POINT 1784

INDICATED CONDITION	:		
o RM-G29/30 RADIA	TION LEVEL	EXCEEDS HI	CH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

RM-G29/30 INDICATION ON HVAC SECTION OF MAIN CONTROL BOARD.

O SPDS ALPHA PAGE.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION.

- NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G29/30 ARE THE REACTOR BUILDING HIGH RANGE POST ACCIDENT MONITORS. THE DETECTORS ARE LOCATED ON THE TOP OF EACH 'D' RING AT THE 180' ELEVATION. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-32

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H-01-02

 PSA-Z ANNUNCIATOR RESPONSE			PSA-Z-01-(
			G/ MC WA
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AMMA DNITOR ARNING

EVENT POINT 1749

INDICATED CONDITION:

- O RM-G1 RADIATION LEVEL EXCEEDS WARNING SETPOINT OR
- O RM-G1 RADIATION MONITOR FAILED LOW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G1 INDICATION AT RADIATION MONITORING PANEL.

- O RM-G1 INDICATION AT DETECTOR.
- O SPDS ALPHA PAGE.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION OR, MONITOR LOW READING.

- O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G1 MONITORS THE CONTROL ROOM. THE DETECTOR IS ON THE BACK WALL NEXT TO THE ES RELAY ACTUATION CABINETS. EITHER WARNING SETPOINT EXCEEDED OR A DETECTOR FAILED LOW WILL GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-22

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-01-02	H-01-02
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	L	
	EVENT POIN	IT 1751
INDICATED CONDITION:		IT 1751
INDICATED CONDITION: • RM-G2 RADIATION LEVEL EXCEEDS WARNING SI RM-G2 RADIATION MONITOR FAILED LOW.		IT 1751
o RM-G2 RADIATION LEVEL EXCEEDS WARNING S	TPOINT OR,	IT 1751

OPERATOR ACTIONS FOR A VALID ALARM:

 INVESTIGATE CAUSE OF HIGH RADIATION OR, MONITOR LOW READING.

- NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G2 MONITORS THE CHEMICAL LABORATORY. THE DETECTOR IS LOCATED ON THE EAST WALL INSIDE THE CHEMICAL LABORATORY. EITHER WARNING SETPOINT EXCEEDED OR A DETECTOR FAILED LOW WILL GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-23

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PSA-Z ANNUNCIATOR RESPONSE				PSA-Z-01-02	H-01-0
				GAM	OR
				WARN	ING

EVENT POINT 1753

INDICATED CONDITION:

- O RM-G3 RADIATION LEVEL EXCEEDS WARNING SETPOINT OR,
- o RM-G3 RADIATION MONITOR FAILED LOW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G3 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- O INVESTIGATE CAUSE OF HIGH RADIATION OR, MONITOR LOW READING.
- O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G3 MONITORS THE PRIMARY SAMPLE ROOM. THE DETECTOR IS LOCATED ON THE WALL INSIDE THE PRIMARY SAMPLE ROOM. EITHER WARNING SETPOINT EXCEEDED OR A DETECTOR FAILED LOW WILL GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-23

ENCLOSURE 1 (Page 23 of 187)

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				GAMM MONIT WARN	OR

EVENT POINT 1755

INDICATED CONDITION:

O RM-G4 RADIATION LEVEL EXCEEDS WARNING SETPOINT OR.

RM-G4 RADIATION MONITOR FAILED LOW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

RM-G4 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF HIGH RADIATION OR, MONITOR LOW READING.
- O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G4 MONITORS THE AUXILIARY BUILDING ENTRANCE HALLWAY. THE DETECTOR IS LOCATED ON THE WALL OPPOSITE THE PAX PHONE NEAR THE ENTRANCE TO THE INTERMEDIATE BUILDING. EITHER WARNING SETPOINT EXCEEDED OR A DETECTOR FAILED LOW WILL GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-24

ENCLOSURE 1 (Page 24 of 187)

	GAMMA MONITOR WARNING

O RM-G5 RADIATION LEVEL EXCEEDS WARNING SETPOINT OR, O RM-G5 RADIATION MONITOR FAILED LOW. REDUNDANT INDICATION WHICH WILL VERIFY ALARM: O RM-G5 INDICATION AT RADIATION MONITORING PANEL. OPERATOR ACTIONS FOR A VALID ALAPM: O INVESTIGATE CAUSE OF HIGH RADIATION OR, MONITOR LOW READING. O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S). O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION. O REFER TO OP-505, RADIATION MONITORING SYSTEM. DISCUSSION: RM-G5 MONITORS THE WASTE GAS TANK VALVE ALLEY. THE DETECTOR IS LOCATED ON THE WALL OPPOSITE THE WASTE GAS COMPRESSOR ROOM. EITHER WARNING SETPOINT EXCEEDED OR A DETECTOR FAILED LOW WILL GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION. REFERENCES: DRAWING 208-049-RM-24 SENSING ELEMENT: RADIATION MONITORING PANEL

INDICATED CONDITION:

ENCLOSURE 1 (Page 25 of 187)

PSA-Z	ANNUNCIATOR	RESPONSE	PSA-Z-01-02	H-01-02
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GAMMA MONITOR WARNING

EVENT POINT 1759

INDICATED CONDITION:

- o RM-G6 RADIATION LEVEL EXCEEDS WARNING SETPOINT OR
- O RM-G6 RADIATION MONITOR FAILED LOW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

o RM-G6 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

 INVESTIGATE CAUSE OF HIGH RADIATION OR, MONITOR LOW READING.

- O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G6 MONITORS THE MAKEUP TANK VALVE ALLEY. THE DETECTOR IS LOCATED ON THE WALL NEAR THE ENTRANCE LOCKED GATE. EITHER WARNING SETPOINT EXCEEDED OR A DETECTOR FAILED LOW WILL GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-25

ENCLOSURE 1 (Page 26 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-01-02	H-01-02
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GAMMA MONITOR WARNING

EVENT POINT 1761

INDICATED CONDITION:

- O RM-G7 RADIATION LEVEL EXCEEDS WARNING SETPOINT OR
- RM-G7 RADIATION MONITOR FAILED LOW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G7 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF HIGH RADIATION OR, MONITOR LOW READING.
- NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G7 MONITORS THE RC BLEED TANK AREA. THE DETECTOR IS LOCATED ON THE WALL NEAR THE ENTRANCE INSIDE THE LOCKED GATE ON THE 95' ELEVATION. EITHER WARNING SETPOINT EXCEEDED OR A DETECTOR FAILED LOW WILL GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: AWING 208-049-RM-25

ENCLOSURE 1 (Page 27 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-01-02	H-01-02
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GAMMA MONITOR WARNING

EVENT POINT 1763

INDICATED CONDITION:

- O RM-G8 RADIATION LEVEL EXCEEDS WARNING SETPOINT OR
- O RM-G8 RADIATION MONITOR FAILED LOW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G8 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF HIGH RADIATION OR, MONITOR LOW READING.
- O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G8 MONITORS THE RC BLEED TANK AREA. THE DETECTOR IS LOCATED ON THE WALL NEAR THE ENTRANCE INSIDE THE LOCKED GATE ON THE 119' ELEVATION. EITHER WARNING SETPOINT EXCEEDED OR A DETECTOR FAILED LOW WILL GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-26



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GAMMA MONITOR WARNING

EVENT POINT 1765

INDICATED CONDITION:

- o RM-G9 RADIATION LEVEL EXCEEDS WARNING SETPOINT OR
- RM-G9 RADIATION MONITOR FAILED LOW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G9 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTTONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF HIGH RADIATION OR, MONITOR LOW READING.
- O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G9 MONITORS THE PERSONNEL HATCH. THE DETECTOR IS LOCATED ON THE WALL NEAR THE ENTRANCE INSIDE THE LOCKED GATE ON THE 119' ELEVATION. EITHER WARNING SETPOINT EXCEEDED OR A DETECTOR FAILED LOW WILL GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-26

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	PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-01-02	H-01-02	
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GAMMA MONITOR WARNING

EVENT POINT 1767

INDICATED CONDITION:

- O RM-G10 RADIATION LEVEL EXCEEDS WARNING SETPOINT OR
- O RM-G10 RADIATION MONITOR FAILED LOW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G10 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF HIGH RADIATION OR, MONITOR LOW READING.
- O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G10 MONITORS THE MAKE-UP PUMP AREA. THE DETECTOR IS LOCATED ON THE WALL NEAR THE ENTRANCE TO THE 'C' MAKE-UP PUMP (SOUTH ENTRANCE). EITHER WARNING SETPOINT EXCEEDED OR A DETECTOR FAILED LOW WILL GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-27

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-01-02	H-01-02

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GAMMA MONITOR WARNING

EVENT POINT 1769

INDICATED CONDITION:

O RM-G11 RADIATION LEVEL EXCEEDS WARNING SETPOINT OR

RM-G11 RADIATION MONITOR FAILED LOW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G11 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

 INVESTIGATE CAUSE OF HIGH RADIATION OR, MONITOR LOW READING.

O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).

O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.

O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G11 MONITORS THE DEBORATING DEMIN ROOM. THE DETECTOR IS LOCATED ON THE WALL INSIDE THE DEMIN ROOM ON THE 119' ELEVATION. EITHER WARNING SETPOINT EXCEEDED OR A DETECTOR FAILED LOW WILL GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-27

ENCLOSURE 1 (Page 31 of 187)

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GAMMA MONITOR WARNING

EVENT POINT 1771

INDICATED CONDITION:

O RM-G12 RADIATION LEVEL EXCEEDS WARNING SETPOINT OR

o RM-G12 RADIATION MONITOR FAILED LOW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G12 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

 INVESTIGATE CAUSE OF HIGH RADIATION OR, MONITOR LOW READING.

• NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).

O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.

O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G12 MONITORS THE SPENT RESIN STORAGE TANK ROOM. THE DETECTOR IS LOCATED IN THE DECANT AND SLURRY PUMP ROOM JUST INSIDE THE LOCKED GATE. EITHER WARNING SETPOINT EXCEEDED OR A DETECTOR FAILED LOW WILL GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-28

ENCLOSURE 1 (Page 32 of 187)

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EVENT POINT 1773

INDICATED CONDITION:

- O RM-G13 RADIATION LEVEL EXCEEDS WARNING SETPOINT OR
- O RM-G13 RADIATION MONITOR FAILED LOW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G13 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- O INVESTIGATE CAUSE OF HIGH RADIATION OR, MONITOR LOW READING.
- O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G13 MONITORS THE DECONTAMINATION PIT AREA. THE DETECTOR IS LOCATED ON THE 143' ELEVATION, CLOSE TO THE STAIRWELL BY THE ECSTS. EITHER WARNING SETPOINT EXCEEDED OR A DETECTOR FAILED LOW WILL GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-28

ENCLOSURE 1 (Page 33 of 187)

PSA-Z	ANNUNCIATOR	RESPONSE	PSA-Z-01-02	H-01-0
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GAMMA MONITOR WARNING

EVENT POINT 1775

INDICATED CONDITION:

- O RM-G14 RADIATION LEVEL EXCEEDS WARNING SETPOINT OR
- O RM-G14 RADIATION MONITOR FAILED LOW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

o RM-G14 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF HIGH RADIATION OR, MONITOR LOW READING.
- O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G14 MONITORS THE SPENT FUEL STORAGE AREA. THE DETECTOR IS LOCATED ON THE 143' AB, ON THE WALL OF THE REACTOR BUILDING IN THE PASSAGEWAY TO THE SPENT FUEL SYSTEM FILTERS. THIS DETECTOR IS COMMONLY REFERRED TO AS THE "SPENT FUEL CRITICALITY MONITOR". THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-29

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-01-02	H-01-02
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GAMMA MONITOR WARNING

EVENT POINT 1777

INDICATED CONDITION:

- O RM-G15 RADIATION LEVEL EXCEEDS WARNING SETPOINT OR
- O RM-G15 RADIATION MONITOR FAILED LOW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G15 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALAPM:

- INVESTIGATE CAUSE OF HIGH RADIATION OR, MONITOR LOW READING.
- O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G15 MONITORS THE SPENT FUEL AREA. THE DETECTOR IS LOCATED ON THE SPENT FUEL BRIDGE AND MOVES WITH THE BRIDGE. EITHER WARNING SETPOINT EXCEEDED OR A DETECTOR FAILED LOW WILL GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-29

ENCLOSURE 1 (Page 35 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-01-02	H-01-02
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GAMMA MONITOR WARNING

EVENT POINT 1779

INDICATED CONDITION:

O RM-G16 RADIATION LEVEL EXCEEDS WARNING SETPOINT OR

O RM-G16 RADIATION MONITOR FAILED LOW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G16 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

 INVESTIGATE CAUSE OF HIGH RADIATION OR, MONITOR LOW READING.

O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).

- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G16 MONITORS THE FUEL TRANSFER AREA. THE DETECTOR IS LOCATED ON THE MAIN FUEL BRIDGE AND MOVES WITH THE BRIDGE. EITHER WARNING SETPOINT EXCEEDED OR A DETECTOR FAILED LOW WILL GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-30

ENCLOSURE 1 (Page 36 of 187)

Z-01-02	H-01-02
	Z-01-02

GAMMA MONITOR WARNING

EVENT POINT 1781

INDICATED CONDITION:

- O RM-G17 RADIATION LEVEL EXCEEDS WARNING SETPOINT OR
- O RM-G17 RADIATION MONITOR FAILED LOW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G17 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

 INVESTIGATE CAUSE OF HIGH RADIATION OF, MONITOR LOW READING.

- NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR THEND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G17 MONITORS THE 119' ELEVATION OF THE REACTOR BUILDING. THE DETECTOR IS LOCATED ON THE STANCHION NEAR THE PERSONNEL HATCH. EITHER WARNING SETPOINT EXCEEDED OR A DETECTOR FAILED LOW WILL GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-30

ENCLOSURE 1 (Page 37 of 187)

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	1-02 H-01-0

GAMMA MONITOR WARNING

EVENT POINT 1783

INDICATED CONDITION:

- O RM-G18 RADIATION LEVEL EXCEEDS WARNING SETPOINT OR
- RM-G18 RADIATION MONITOR FAILED LOW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

RM-G18 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

 INVESTIGATE CAUSE OF HIGH RADIATION OR, MONITOR LOW READING.

- NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O VERIFY TRANSFER CANAL LEVEL AT DESIRED HEIGHT.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G18 MONITORS THE INCORE PIT AREA. THE DETECTOR IS LOCATED IN THE PIT ON THE 164' ELEVATION NEAR THE TRANSFER CANAL. EITHER WARNING SETPOINT EXCEEDED OR A DETECTOR FAILED LOW WILL GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-31

ENCLOSURE 1 (Page 38 of 187)

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GAMMA MONITOR WARNING

EVENT POINT 1785

INDI	CATED CONDITION:
0	RM-G29/30 RADIATION LEVEL EXCEEDS WARNING SETPOINT(S) OR RM-G29/30 RADIATION MONITOR(S) FAILED LOW.
REDU	NDANT INDICATION WHICH WILL VERIFY ALARM:
0	RM-G29/30 INDICATION ON HVAC SECTION OF MAIN CONTROL BOARD. SPDS ALPHA PAGE.
OPER	ATOR ACTIONS FOR A VALID ALARM:
	INVESTIGATE CAUSE OF HIGH RADIATION OR MONITOR(S) LOW READING.
0 1	NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
0 (DBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION. /ERIFY TRANSFER CANAL LEVEL AT DESIRED HEIGHT.
O F	REFER TO OP-505, RADIATION MONITORING SYSTEM.
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THE ELE WIL	G29/30 ARE THE REACTOR BUILDING HIGH RANGE POST ACCIDENT MONITORS. DETECTORS ARE LOCATED ON THE TOP OF EACH 'D' RING AT THE 180' VATION. EITHER WARNING SETPOINT(S) EXCEEDED OR A DETECTOR FAILED LOW L GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND ORMATION.
REFE	RENCES: DRAWING 208-049-RM-32
SENS	ING ELEMENT: RADIATION MONITORING PANEL

ENCLOSURE 1 (Page 39 of 187)

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MN STM LINE A/B HIGH RAD MONITOR FAIL

EVENT POINT 1977

INDICATED CONDITION:

- O RM-G25/26/27/28 RADIATION LEVEL EXCEEDS ALARM SETPOINT, OR
- o RM-G25/26/27/28 RADIATION MONITOR FAILED LOW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-G25/26/27/28 INDICATION ON HVAC SECTION OF MAIN CONTROL BOARD.

- AUDIBLE INDICATION ON RADIATION MONITOR(S)
- O SPDS ALPHA PAGE.

OPERATOR ACTIONS FOR A VALID ALAPM:

 INVESTIGATE CAUSE OF HIGH RADIATION OR LOW MONITOR READING.

- O NOTIFY HEALTH PHYSICS TO MONITOR AFFECTED AREA(S).
- O REFER TO EOP-06, STEAM GENERATOR TUBE RUPTURE.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-G25/28 MONITOR THE ATMOSPHERIC DUMP LINES MSV-25/A1 AND MSV-26/B2. RM-G26/27 MONITOR THE MAIN STEAM LINES B1 AND A2 RESPECTIVELY. THE DETECTORS ARE ALL LOCATED ON THE 119' ELEVATION OF THE INTERMEDIATE BUILDING ON THEIR RESPECTIVE STEAM LINE. EITHER RADIATION SETPOINT EXCEEDED OR A DETECTOR FAILED LOW CAN GIVE THIS ALARM.

REFERENCES: DRAWING 208-049-RM-47

ENCLOSURE 1 (Page 40 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-01-07	H-01-07
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DO STOR TANK LEVEL HIGH/LOW

EVENT POINT 1512

INDICATED CONDITION:

O DO STORAGE TANK LEVEL >97" H20 AS SENSED BY DO-4-LS

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH LEVEL.
 O NOTIFY SECONDARY PLANT OPERATOR TO OBSERVE LOCAL LEVEL INDICATOR.

DISCUSSION:

THE DO STORAGE TANK HAS AN AUTO FILL FEATURE. IF THE LEVEL IS HIGH AND RISING THE FILL VALVE MAY BE STUCK OPEN.

REFERENCES: DRAWING 208-022-DO-07

SENSING ELEMENT: DO-4-LS

ENCLOSURE 1 (Page 41 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-01-07	H-01-07

DO STOR TANK LEVEL HIGH/LOW

EVENT POINT 1520

INDICATED CONDITION:

O DO STORAGE TANK LEVEL <33" H,0 AS SENSED BY DO-3-LS

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF LOW LEVEL.

O NOTIFY SECONDARY PLANT OPERATOR TO OBSERVE LOCAL LEVEL INDICATOR.

DISCUSSION:

THE DO STORAGE TANK HAS AN AUTO FILL FEATURE. IF THE LEVEL IS LOW AND NOT RISING THE FILL VALVE MAY BE STUCK CLOSED, CR DO WATER FROM UNITS 1/2 WATER TREATMENT BUILDING IS NOT AVAILABLE. CONTACT UNITS 1/2 TO INVESTIGATE.

REFERENCES: DRAWING 208-022-DO-07

SENSING ELEMENT: DO-3-LS



ENCLOSURE 1 (Page 42 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-01	H-02-01
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O RM-A1 RADIATION LEVEL EXCEEDS HIGH SETPO		
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 RM-A1 RADIATION LEVEL EXCEEDS HIGH SETPO REDUNDANT INDICATION WHICH WILL VERIFY ALARM RM-A1 INDICATION AT RADIATION MONITORING 	1:	

DISCUSSION:

RM-A1 MONITORS THE REACTOR BUILDING PURGE EXHAUST DUCT. THREE DIFFERENT DETECTORS ARE USED, PARTICULATE, IODINE AND GAS. ANY ONE OF THESE CHANNELS CAN GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-16

ENCLOSURE 1 (Page 43 of 187)

 PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-01	H-02-01
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ATMOSPHERIC RADIATION HIGH

EVENT POINT 1715

INDICATED CONDITION:

O RM-A2 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-A2 INDICATION AT RADIATION MONITORING PANEL.

O SPDS ALPHA PAGE.

OPERATOR ACTIONS FOR A VALID ALARM:

O REFER TO AP-250.

INVESTIGATE CAUSE OF HIGH RADIATION.

O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION

O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A2 MONITORS THE AUXILIARY BUILDING PURGE EXHAUST DUCT. THREE DIFFERENT DETECTORS ARE USED, PARTICULATE, IODINE AND GAS. ANY ONE OF THESE CHANNELS CAN GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-16

ENCLOSURE 1 (Page 44 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-01	H-02-01
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ATMOSPHERIC RADIATION HIGH

EVENT POINT 1718

INDICATED CONDITION:

O RM-A3 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-A3 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O REFER TO AP-250.

- INVESTIGATE CAUSE OF HIGH RADIATION.
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A3 MONITORS AUXILIARY BUILDING EXHAUST FROM SAMPLE AREA 'D', THE WASTE GAS COMPRESSOR ROOM, THE WASTE GAS VALVE ALLEY, AND ADJOINING AREAS. THIS DETECTOR ONLY HAS A GAS CHANNEL. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-17

ENCLOSURE 1 (Page 45 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-01	H-02-01
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ATMOSPHERIC RADIATION HIGH

EVENT POINT 1721

INDICATED CONDITION:

o RM-A4 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-A4 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O REFER TO AP-250.

- O INVESTIGATE CAUSE OF HIGH RADIATION.
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A4 MONITORS THE SPENT FUEL AREA EXHAUST. THIS DETECTOR ONLY HAS A GAS CHANNEL. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-17

ENCLOSURE 1 (Page 46 of 187)

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-01	H-02-01

ATMOSPHERIC RADIATION HIGH

EVENT POINT 1724

INDICATED CONDITION:

O RM-A5 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-AS INDICATION AT RADIATION MONITORING PANEL.

O SPDS ALPHA PAGE.

OPERATOR ACTIONS FOR A VALID ALARM:

O REFER TO AP-250.

O INVESTIGATE CAUSE OF HIGH RADIATION.

O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.

O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A5 MONITORS THE CONTROL COMPLEX RETURN DUCT. THREE DIFFERENT DETECTORS ARE USED, PARTICULATE, IODINE AND GAS. ANY ONE OF THESE CHANNELS CAN GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-18

ENCLOSURE 1 (Page 47 of 187)

H-02-01

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EVENT POINT 1727

INDICATED CONDITION:

O RM-A6 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-A6 INDICATION AT RADIATION MONITORING PANEL.

O SPDS ALPHA PAGE.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION.

O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.

O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A6 MONITORS THE REACTOR BUILDING ATMOSPHERE. SAMPLE POINTS ARE EITHER AHF-3B DUCT, OR THE RB ATMOSPHERE DIRECTLY. IT IS NORMALLY LINED UP TO THE DUCT OF AHF-3B. IT CAN ALTERNATELY BE LINED UP TO SAMPLE THE RB ATMOSPHERE DIRECTLY PER OP-417. TWO DIFFERENT DETECTORS ARE USED, PARTICULATE/IODINE AND GAS. ANY ONE OF THESE CHANNELS CAN GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-18

ENCLOSURE 1 (Page 48 of 187)

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	ATMOSPH RADIAT HIGH	ION

EVENT POINT 1730

INDICATED CONDITION:

O RM-A7 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-A7 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION.

O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.

O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A7 MONITORS THE AHF-44A/B DISCHARGE AIR, THEREFORE THE ATMOSPHERES OF THE PRIMARY SAMPLE ROOM, PRIMARY SAMPLE ROOM SAMPLE HOOD, RADIO CHEMISTRY LAB SAMPLE HOODS, AND/OR PASS SYSTEM VALVE ALLEY MAY HAVE HIGH GASEOUS ACTIVITY. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-19

ENCLOSURE 1 (Page 49 of 187)

H-02-01

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		ATMOSPH RADIAT	ION
		HIGH	

EVENT POINT 1733

INDICATED CONDITION:

O RM-A8 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

o RM-A8 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION.

O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.

O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A8 MONITORS THE AUXILIARY BUILDING EXHAUST UPSTREAM OF THE PENETRATION FOR THE FUEL HANDLING FLOOR EXHAUST. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-19



ENCLOSURE 1 (Page 50 of 187)

PSA-Z	ANNUNCIATOR	RESPONSE	5	PSA-Z-02-01	H-02-01
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ATMOSPHERIC RADIATION HIGH

EVENT POINT 1736

INDICATED CONDITION:

O RM-A11 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-A11 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION.

• IF WASTE GAS RELEASE IN PROGRESS, NOTIFY PRIMARY PLANT OPERATOR TO ENSURE WGDT RECYCLE VALVES AND RELEASE VALVE ARE CLOSED.

- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-SOS, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A11 MONITORS THE AUXILIARY BUILDING EXHAUST PENETRATION FOR THE WASTE GAS RELEASE PATH. THE WGDT RECYCLE VALVES ARE WDV 393/394/395 AND THE RELEASE VALVE IS WDV-439. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-20



ENCLOSURE 1 (Page 51 of 187)

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RADIATION HIGH

EVENT POINT 1738

INDICATED CONDITION:

O RM-A12 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- O RM-A12 INDICATION AT RADIATION MONITORING PANEL.
- O SPDS ALPHA PAGE.
- MAIN STEAM LINE RAD MONITORS RMG-25, RMG-26, RMG-27, AND /OR RMG-28 READ HIGHER THAN NORMAL.

OPERATOR ACTIONS FOR A VALID ALARM:

- O REFER TO EOP-06, STEAM GENERATOR TUBE RUPTURE.
- O INVESTIGATE CAUSE OF HIGH RADIATION.
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A12 MONITORS THE AUXILIARY BUILDING EXHAUST PENETRATION FOR SECONDARY PLANT CONDENSER OFF GAS. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-20

ENCLOSURE 1 (Page 52 of 187)

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EVENT POINT 1742

INDICATED CONDITION:

O RM-A14 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-A14 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

INVESTIGATE CAUSE OF HIGH RADIATION.

O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.

O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A14 IS A PORTABLE MONITOR, NORMALLY LOCATED NEAR THE PRIMARY SAMPLE LABORATORY. THIS MONITOR IS NOT NORMALLY ENERGIZED. THE REDAS SYSTEM MAY ALSO BE USED TO UBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-21

ENCLOSURE 1 (Page 53 of 187)

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EVENT POINT 1745

INDICATED CONDITION:

O RM-A15 RADIATION LEVEL EXCEEDS HIGH SETPOINT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-A15 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF HIGH RADIATION.

O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.

O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A15 IS A PORTABLE MONITOR, NORMALLY LOCATED NEAR THE DECONTAMINATION PIT ON THE SPENT FUEL FLOOR. THIS MONITOR IS NOT NORMALLY ENERGIZED. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-22

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H-02-02

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 		WAR

ATMOSPHERIC MONITOR WARNING

EVENT POINT 1713

INDICATED CONDITION:

- O RM-A1 RADIATION LEVEL EXCEEDS WARNING SETPOINT, OR
- O RM-A1 RADIATION MONITOR FAILED LOW

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- O RM-A1 INDICATION AT RADIATION MONITORING FANEL.
- O SPDS ALPHA PAGE.

OPERATOR ACTIONS FOR A VALID ALARM.

- INVESTIGATE CAUSE OF HIGH RADIATION, OR LOW MONITOR READING.
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A1 MONITORS THE REACTOR BUILDING PURGE EXHAUST DUCT. THREE DIFFERENT DETECTORS ARE USED, PARTICULATE, IODINE AND GAS. ANY ONE OF THESE CHANNELS CAN GIVE THIS ALARM, EITHER WARNING SETPOINT EXCEEDED, OR DETECTOR FAILED LOW. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-16

ENCLOSURE 1 (Page 55 of 187)

H-02-02

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EVENT POINT 1714

INDICATED CONDITION:

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O RM-A1 RADIATION MONITOR PUMP FLOW ABOVE NORMAL OR LESS THAN 5 SCFM.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-A1 FLOW INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF RADIATION PUMP FLOW PROBLEM. O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A1 MONITORS THE REACTOR BUILDING PURGE EXHAUST DUCT. THREE DIFFERENT DETECTORS ARE USED, PARTICULATE, IODINE AND GAS. EITHER A HIGH OR LOW FLOW CAN GIVE THIS ALARM.

REFERENCES: DRAWING 208-049-RM-01

ENCLOSURE 1 (Page 56 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-02	H-02-02

ATMOSPHERIC MONITOR WARNING

EVENT POINT 1716

INDICATED CONDITION:

- O RM-A2 RADIATION LEVEL EXCEEDS WARNING SETPOINT, UK
- O RM-A2 RADIATION MONITOR FAILED LOW

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

o RM-A2 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF HIGH RADIATION, OR LOW MONITOR READING.
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A2 MONITORS THE AUXILIARY BUILDING PURGE EXHAUST DUCT. THREE DIFFERENT DETECTORS ARE USED, PARTICULATE, IODINE AND GAS. ANY ONE OF THESE CHANNELS CAN GIVE THIS ALARM, EITHER WARNING SETPOINT EXCEEDED, OR DETECTOR FAILED LOW. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-16

ENCLOSURE 1 (Page 57 of 187)

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ATMOSPHERIC MONITOR WARNING

EVENT POINT 1717

INDICATED CONDITION:

O RM-A2 RADIATION MONITOR PUMP FLOW ABOVE NORMAL OR LESS THAN 5 SCFM.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-A2 FLOW INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF RADIATION PUMP FLOW PROBLEM. O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A2 MONITORS THE AUXILIARY BUILDING PURGE EXHAUST DUCT. THREE DIFFERENT DETECTORS ARE USED, PARTICULATE, IODINE AND GAS. EITHER A HIGH OR LOW FLOW CAN GIVE THIS ALARM.

REFERENCES: DRAWING 208-049-RM-02

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EVENT POINT 1719

INDICATED CONDITION:

- O RM-A3 RADIATION LEVEL EXCEEDS WARNING SETPOINT, OR
- O RM-A3 RADIATION MONITOR FAILED LOW

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

• RM-A3 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF HIGH RADIATION, OR LOW MONITOR READING.
- OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A3 MONITORS AUXILIARY BUILDING EXHAUST FROM SAMPLE AREA 'D', THE WASTE GAS COMPRESSOR ROOM, THE WASTE GAS VALVE ALLEY, AND ADJOINING AREAS. THIS DETECTOR ONLY HAS A GAS CHANNEL AND EITHER WARNING SETPOINT EXCEEDED OR A DETECTOR FAILED LOW WILL GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-16



ENCLOSURE 1 (Page 59 of 187)

	PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-02	H-02-02
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ATMOSPHERIC MONITOR WARNING

EVENT POINT 1720

INDICATED CONDITION:

O RM-A3 RADIATION MONITOR PUMP FLOW ABOVE NORMAL OR LESS THAN 5 SCFM.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-A3 FLOW INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

INVESTIGATE CAUSE OF RADIATION PUMP FLOW PROBLEM.
 REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A3 MONITORS AUXILIARY BUILDING EXHAUST FROM SAMPLE AREA 'D', THE WASTE GAS COMPRESSOR ROOM, THE WASTE GAS VALVE ALLEY, AND ADJOINING AREAS. THIS DETECTOR ONLY HAS A GAS CHANNEL AND EITHER A HIGH OR LOW FLOW CAN GIVE THIS ALARM.

REFERENCES: DRAWING 208-049-RM-03

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-02	H-02-02

ATMOSPHERIC MONITOR WARNING

EVENT POINT 1722

INDICATED CONDITION:

- O RM-A4 RADIATION LEVEL EXCEEDS WARNING SETPOINT, OR
- RM-A4 RADIATION MONITOR FAILED LOW

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-A4 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF HIGH RADIATION, OR LOW MONITOR READING.
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A4 MONITORS THE SPENT FUEL AREA EXHAUST. THIS DETECTOR ONLY HAS A GAS CHANNEL AND EITHER WARNING SETPOINT EXCEEDED OR A DETECTOR FAILED LOW WILL GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-17

ENCLOSURE 1 (Page 61 of 187)

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PSA-Z ANNUNCI	ATOR RESPONSE	PSA-Z-02-02	H-02-02

ATMOSPHERIC MONITOR WARNING

EVENT POINT 1723

INDICATED CONDITION:

O RM-A4 RADIATION MONITOR PUMP FLOW ABOVE NORMAL OR LESS THAN 5 SCFM.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-A4 FLOW INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

INVESTIGATE CAUSE OF RADIATION PUMP FLOW PROBLEM.
 REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A4 MONITORS THE SPENT FUEL AREA EXHAUST. THIS DETECTOR ONLY HAS A GAS CHANNEL AND EITHER A HIGH OR LOW FLOW CAN GIVE THIS ALARM.

REFERENCES: DRAWING 208-049-RM-04

ENCLOSURE 1 (Page 62 of 187)

PSA-	Z ANNUNCIATOR RESPONSE	PSA-Z-02-02	H-02-02
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ATMOSPHERIC MONITOR WARNING

EVENT POINT 1725

INDICATED CONDITION:

- O RM-A5 RADIATION LEVEL EXCEEDS WARNING SETPOINT, OR
- O RM-A5 RADIATION MONITOR FAILED LOW

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- O RM-A5 INDICATION AT RADIATION MONITORING PANEL.
- O SPDS ALPHA PAGE.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF HIGH RADIATION, OR LOW MONITOR READING.
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-AS MONITORS THE CONTROL COMPLEX RETURN DUCT. THREE DIFFERENT DETECTORS ARE USED, PARTICULATE, IODINE AND GAS. ANY ONE OF THESE CHANNELS CAN GIVE THIS ALARM, EITHER WARNING SETPOINT EXCEEDED, OR DETECTOR FAILED LOW. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-18

ENCLOSURE 1 (Page 63 of 187)

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-02	H-02-02

ATMOSPHERIC MONITOR WARNING

EVENT POINT 1726

INDICATED CONDITION:

O RM-AS RADIATION MONITOR PUMP FLOW ABOVE NORMAL OR LESS THAN 5 SCFM.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-AS FLOW INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

INVESTIGATE CAUSE OF RADIATION PUMP FLOW PROBLEM.
 REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A5 MONITORS THE CONTROL COMPLEX RETURN DUCT. THREE DIFFERENT DETECTORS ARE USED, PARTICULATE, IODINE AND GAS. EITHER A HIGH OR LOW FLOW CAN GIVE THIS ALARM.

REFERENCES: DRAWING 208-049-RM-05

ENCLOSURE 1 (Page 64 of 187)

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ATMOSPHERIC MONITOR WARNING

EVENT POINT 1728

INDICATED CONDITION:

- O RM-A6 RADIATION LEVEL EXCEEDS WARNING SETPOINT, OR
- O RM-A6 RADIATION MONITOR FAILED LOW

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- O RM-A6 INDICATION AT RADIATION MONITORING PANEL.
- O SPDS ALPHA PAGE.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF HIGH RADIATION, OR LOW MONITOR READING.
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A6 MONITORS THE REACTOR BUILDING ATMOSPHERE. SAMPLE POINTS ARE EITHER AHF-3B DUCT, OR THE RB ATMOSPHERE DIRECTLY. IT IS NORMALLY LINED UP TO THE DUCT OF AHF-3B. IT CAN ALTERNATELY BE LINED UP TO SAMPLE THE RB ATMOSPHERE DIRECTLY PER OP-417.

TWO DIFFERENT DETECTORS ARE USED, PARTICULATE/IODINE AND GAS. ANY ONE OF THESE CHANNELS CAN GIVE THIS ALARM.

THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-18

ENCLOSURE 1 (Page 65 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-02	H-02-02
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ATMOSPHERIC MONITOR WARNING

EVENT POINT 1729

INDICATED CONDITION:

 RM-A6 RADIATION MONITOR PUMP FLOW ABOVE NORMAL, LESS THAN 5 SCFM, OR RMA-6 BACKUP SAMPLE PUMP IS RUNNING.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-A6 FLOW INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

INVESTIGATE CAUSE OF RADIATION PUMP FLOW PROBLEM.
 REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

EITHER A HIGH OR LOW FLOW CAN GIVE THIS ALARM. RM-A6 MONITORS THE REACTOR BUILDING ATMOSPHERE. SAMPLE POINTS ARE EITHER AHF-3B DUCT, OR THE RB ATMOSPHERE DIRECTLY. IT IS NORMALLY LINED UP TO THE DUCT OF AHF-3B. IT CAN ALTERNATELY BE LINED UP TO SAMPLE THE RB ATMOSPHERE DIRECTLY PER OP-417. TWO DIFFERENT DETECTORS ARE USED, PARTICULATE/IODINE AND GAS. ANY ONE OF

THESE CHANNELS CAN GIVE THIS ALARM.

THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-06

ENCLOSURE 1 (Page 66 of 187)

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ATMOSPHERIC MONITOR WARNING

EVENT POINT 1731

INDICATED CONDITION:

- O RM-A7 RADIATION LEVEL EXCEEDS WARNING SETPOINT, OR
- O RM-A7 RADIATION MONITOR FAILED LOW

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-A7 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF HIGH RADIATION, OR LOW MONITOR READING.
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A7 MONITORS THE AHF-44A/B DISCHARGE AIR, THEREFORE THE ATMOSPHERES OF THE PRIMARY SAMPLE ROOM, PRIMARY SAMPLE ROOM SAMPLE HOOD, RADIO CHEMISTRY LAB SAMPLE HOODS, AND/OR PASS SYSTEM VALVE ALLEY MAY HAVE HIGH GASEOU!. ACTIVITY. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-19

ENCLOSURE 1 (Page 67 of 187)

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-02	H-02-02	

ATMOSPHERIC MONITOR WARNING

EVENT POINT 1732

INDICATED CONDITION:

O RM-A7 RADIATION MONITOR PUMP FLOW ABOVE NORMAL OR LESS THAN 5 SCFM.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-A7 FLOW INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

INVESTIGATE CAUSE OF RADIATION PUMP FLOW PROBLEM.
 REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

EITHER A HIGH OR LOW FLOW CAN GIVE THIS ALARM. RM-A7 MONITORS THE AHF-44A/B DISCHARGE AIR, THEREFORE THE ATMOSPHERES OF THE PRIMARY SAMPLE ROOM, PRIMARY SAMPLE ROOM SAMPLE HOOD, RADIO CHEMISTRY LAB SAMPLE HOODS, AND/OR PASS SYSTEM VALVE ALLEY MAY HAVE HIGH GASEOUS ACTIVITY. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-07



ENCLOSURE 1 (Page 68 of 187)

PSA-Z ANNUNCIATOR RESPONSE PS	A-Z-02-02	H-02-02

ATMOSPHERIC MONITOR WARNING

EVENT POINT 1734

INDICATED CONDITION:

- O RM-A8 RADIATION LEVEL EXCEEDS WARNING SETPOINT, OR
- O RM-A8 RADIATION MONITOR FAILED LOW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

o RM-A8 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF HIGH RADIATION, OR LOW MONITOR READING.
- O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.
- O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A8 MONITORS THE AUXILIARY BUILDING EXHAUST UPSTREAM OF THE PENETRATION FOR THE FUEL HANDLING FLOOR EXHAUST. THIS DETECTOR ONLY HAS A GAS CHANNEL AND, EITHER WARNING SETPOINT EXCEEDED, OR DETECTOR FAILED LOW WILL GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-16



ENCLOSURE 1 (Page 69 of 187)

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-02	H-02-02

ATMOSPHERIC MONITOR WARNING

EVENT POINT 1735

INDICATED CONDITION:

O RM-AS RADIATION MONITOR PUMP FLOW ABOVE NORMAL OR LESS THAN 5 SCFM.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-A8 FLOW INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

INVESTIGATE CAUSE OF RADIATION PUMP FLOW PROBLEM.
 REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A8 MONITORS THE AUXILIARY BUILDING EXHAUST UPSTREAM OF THE PENETRATION FOR THE FUEL HANDLING FLOOR EXHAUST. THIS DETECTORS ONLY HAS A GAS CHANNEL AND, EITHER A HIGH OR LOW FLOW CAN GIVE THIS ALARM.

REFERENCES: DRAWING 208-049-RM-08

ENCLOSURE 1 (Page 70 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-02	H-02-02

ATMOSPHERIC MONITOR WARNING

EVENT POINT 1737

INDICATED CONDITION:

O RM-A11 RADIATION LEVEL EXCEEDS WARNING SETPOINT, OR

o RM-A11 RADIATION MONITOR FAILED LOW

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-A11 INDICATION AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

 INVESTIGATE CAUSE OF HIGH RADIATION, OR LOW MONITOR READING.

O OBSERVE AREA MONITORS/RECORDERS FOR TREND INFORMATION.

O REFER TO OP-505, RADIATION MONITORING SYSTEM.

DISCUSSION:

RM-A11 MONITORS THE AUXILIARY BUILDING EXHAUST PENETRATION FOR THE WASTE GAS RELEASE PATH. THIS DETECTOR ONLY HAS A GAS CHANNEL AND, EITHER WARNING SETPOINT EXCEEDED, OR DETECTOR FAILED LOW CAN GIVE THIS ALARM. THE REDAS SYSTEM MAY ALSO BE USED TO OBSERVE TREND INFORMATION.

REFERENCES: DRAWING 208-049-RM-20

ENCLOSURE 1 (Page 71 of 187)

H-02-02

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-0
	ATMO MO WA

MOSPHERIC MONITOR WARNING

EVENT POINT 1739

INDICATED CONDITION:

- O RM-A12 RADIATION LEVEL EXCEEDS WARNING SETPOINT, OR
- O RM-A12 RADIATION MONITOR FAILED LOW

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-A12 INDICATION AT RADIATION MONITORING PANEL.

O MAIN STEAM LINE RAD MONITORS RMG-25, RMG-26, RMG-27, AND/OR RMG-28 READ HIGHER THAN NORMAL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF RADIATION MONITCE CROBLEM.

O REFER TO OP-505, RADIATION MONITORING SYSTEM.

O CHECK ARV-26/27 FOR PROPER POSITION (ARP-1A/1B 3-W, Y VALVE!)

O REFER TO CP-152, PRIMARY TO SECONDARY LEAKAGE OPERA TNG GUIDELINE

DISCUSSION:

RM-A12 MONITORS THE AUXILIARY BUILDING EXHAUST PENETRATION FOR SECONDARY PLANT CONDENSER OFF GAS. THIS DETECTOR ONLY HAS A GAS CHANNEL AND, EITHER WARNING SETPOINT EXCEEDED OR DETECTOR FAILED LOW CAN GIVE THIS ALARM. CHECK FOR SUPPORTING INDICATIONS OF OTSG TUBE LEAKAGE.

REFERENCES: DRAWING 208-049-RM-20

ENCLOSURE 1 (Page 72 of 187)

H-02-04

 PSA-Z ANNUN	CIATOR RE	SPONSE	PSA-Z-02
			S
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DAS STEM OUBLE

EVENT POINT 2045

INDICATED CONDITION:

- O LOSS OF MULTIPLEXER POWER.
- O PRIMARY METEOROLOGICAL TOWER ON BACKUP POWER.
- O PRIMARY METEOROLOGICAL TOWER BACKUP POWER OUT OF SYNCHRONIZATION.
- O PRIMARY METEOROLOGICAL TOWER SIGNAL FAILURE.
- O PRIMARY METEOROLOGICAL TOWER BUILDING TEMPERATURE HIGH/LOW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O PRIMARY METEOROLOGICAL ALARM PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF ALARM CONDITION.

DISCUSSION:

REFERENCES: DRAWING 208-070-MM-01

SENSING ELEMENT: MMP-3 METEOROLOGICAL ALARM PANEL

ENCLOSURE 1 (Page 73 of 187)

H-02-05

L	PSA-Z ANNUN	CIATOR RE	SPONSE	PSA-Z-02-05
				COND PL
				SUMP

OND PUMP PIT SUMP LEVEL HIGH

EVENT POINT 1329

INDICATED CONDITION:

○ CONDENSATE PUMP PIT SUMP A LEVEL >88.6' ELEVATION AS SENSED BY SD-31-LS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

O REFER TO AP-1050.

· NOTIFY SECONDARY PLANT OPERATOR TO INVESTIGATE CAUSE OF ALARM CONDITION.

DISCUSSION:

REFERENCES: DRAWING 208-072-SD-07

SENSING ELEMENT: SD-31-LS

ENCLOSURE 1 (Page 74 of 187)

PSA-Z ANNUNCIATOR	RESPONSE	PSA-Z-02-05	H-02-05
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COND PUMP PIT SUMP LEVEL HIGH

EVENT POINT 1317

INDICATED CONDITION:

○ CONDENSATE PUMP PIT SUMP B LEVEL >88.6' ELEVATION AS SENSED BY SD-32-LS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

REFER TO AP-1050.
 NOTIFY SECONDARY PLANT OPERATOR TO INVESTIGATE CAUSE OF ALARM CONDITION.

DISCUSSION:

REFERENCES: DRAWING 208-072-SD-08

SENSING ELEMENT: SD-32-LS

ENCLOSURE 1 (Page 75 of 187)

H-02-06

	PSA-Z	ANNUNCI	ATOR R	ESPONSE		PSA-Z-02-06	ł
[T			1]		
					7		
					7	AUX BL SUMP LE	
						HIGH	1
		++			-		

EVENT POINT 1292

INDICATED CONDITION:

O DECAY HEAT PIT SUMP A LEVEL >74' ELEVATION AS SENSED BY WD-133-LS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

O NOTIFY PRIMARY PLANT OPERATOR TO INVESTIGATE CAUSE OF ALARM CONDITION.

DISCUSSION:

REFERENCES: DRAWING 208-060-WD-09

SENSING ELEMENT: WD-133-LS

ENCLOSURE 1 (Page 76 of 187)

H-02-06

PSA-Z-02-06
AUX BL
SUMP LE HIGH

EVENT POINT 1305

INDICATED CONDITION:

O DECAY HEAT PIT SUMP B LEVEL >74' ELEVATION AS SENSED BY WD-134-LS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

O NOTIFY PRIMARY PLANT OPERATOR TO INVESTIGATE CAUSE OF ALARM CONDITION.

DISCUSSION:

REFERENCES: DRAWING 208-060-WD-10

SENSING ELEMENT: WD-134-LS

ENCLOSURE 1 (Page 77 of 187)

	PSA-Z	ANNUNCIATOR RESPONSE	PSA-Z-02-06	H-02-06
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 MANUAL COLUMN	 		 	
 NUMBER	 		 	

AUX BLDG SUMP LEVEL HIGH

EVENT POINT 1300

INDICATED CONDITION:

o AUXILIARY BUILDING SUMP LEVEL >92.5' ELEVATION AS SENSED BY WD-132-LS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

O NOTIFY PRIMARY PLANT OPERATOR TO INVESTIGATE CAUSE OF ALARM CONDITION.

DISCUSSION:

REFERENCES: DRAWING 208-060-WD-12

SENSING ELEMENT: WD-132-LS

ENCLOSURE 1 (Page 78 of 187)

H-02-06

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X BLDG AP LEVEL HIGH

EVENT POINT 1809

INDICATED CONDITION:

○ NUCLEAR SERVICE COOLER AREA SUMP >93'1" ELEVATION AS SENSED BY SD-5-LS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

O NOTIFY PRIMARY PLANT OPERATOR TO INVESTIGATE CAUSE OF ALARM CONDITION.

DISCUSSION:

O THIS LEVEL SWITCH IS A MECHANICAL ALTERNATOR WHICH OPERATES BOTH SDP-2A AND 2B. SWITCH #1 STARTS THE LEAD PUMP AT 93'0" AND SWITCH #2 STARTS THE LAG PUMP AT 93'1" AND INITIATES THE HIGH LEVEL ALARM.

REFERENCES: DRAWING 208-072-SD-03

SENSING ELEMENT: SD-5-LS

ENCLOSURE 1 (Page 79 of 187)

H-02-06

PSA-Z ANNUNCIATOR RESPONSE		PSA-Z-02-0	
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X BLDG IP LEVEL HIGH

EVENT POINT 1810

INDICATED CONDITION:

o TENDON ACCESS GALLERY SUMP >71'1" ELEVATION AS SENSED BY SD-6-LS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

O NOTIFY PRIMARY PLANT OPERATOR TO INVESTIGATE CAUSE OF ALARM CONDITION.

DISCUSSION:

O THIS LEVEL SWITCH IS A MECHANICAL ALTERNATOR WHICH OPERATES BOTH SDP-3A AND 3B. SWITCH #1 STARTS THE LEAD PUMP AT 71'0" AND SWITCH #2 STARTS THE LAG PUMP AT 71'1" AND INITIATES THE HIGH LEVEL ALARM.

REFERENCES: DRAWING 208-072-SD-05

SENSING ELEMENT: SD-6-LS



ENCLOSURE 1 (Page 80 of 187)

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-07	H-02-07
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BLDG SUMPS SUMP PUMP TROUBLE

EVENT POINT 1198

INDICATED CONDITION:

O DIESEL GENERATOR SUMP A/B LEVEL HIGH AS SENSED BY EG-027-LS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

O NOTIFY PRIMARY PLANT OPERATOR TO INVESTIGATE CAUSE OF ALARM CONDITION.

DISCUSSION:

REFERENCES: DRAWING 208-027-EG-17

SENSING ELEMENT: EG-027-LS.

ENCLOSURE 1 (Page 81 of 187)

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-07	H-02-07

BLDG SUMPS SUMP PUMP TROUBLE

EVENT POINT 1586

INDICATED CONDITION:

- O DECAY HEAT PIT SUMP PUMP AUTO START.
- O DECAY HEAT PIT SUMP PUMP TRIP.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

O NOTIFY PRIMARY PLANT OPERATOR TO INVESTIGATE CAUSE OF ALARM CONDITION.

DISCUSSION:

THIS ALARM MAY INDICATE AN AUTO SHUT DOWN IF THE PRIMARY PLANT OPERATOR MANUALLY STARTED THE DECAY HEAT PIT SUMP PUMP. THE ALARM IS BASED ON THE PUMP CONTROL SWITCH CONTACTS (NORMAL AFTER START OR NORMAL AFTER STOP) IN SERIES WITH THE SUMP LEVEL SWITCH.

REFERENCES: DRAWING 208-060-WD-09, WD-10, WD-134

SENSING ELEMENT: WD-133-LS, WD-134-LS, WDP-3A/3B CONTROL SWITCH CONTACTS.

ENCLOSURE 1 (Page 82 of 187)

H-02-07

	PSA-Z ANNUNCI	ATOR RESPONSE	PSA-Z-02
<u> </u>			
			BLC
			т

DG SUMPS UMP PUMP TROUBLE

EVENT POINT 1587

INDICATED CONDITION:

- O AUXILIARY BUILDING SUMP PUMP AUTO START.
- O AUXILIARY BUILDING SUMP PUMP TRIP.
- O WASTE GAS COMPRESSOR SEAL LEAKAGE DRAIN TANK LOW LEVEL.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- O DURING NORMAL OPERATING CONDITIONS, THIS IS AN EXPECTED ALARM WHENEVER THE AUX. BLDG. SUMP PUMP AUTO STARTS; IF ALARM DOES NOT CLEAR WITHIN 3-5 MINUTES, THEN NOTIFY PRIMARY PLANT OPERATOR TO INVESTIGATE CAUSE OF ALARM CONDITION.
- O ENSURE WDV-1030-SV HAS CLOSED (SEAL TANK DRAIN POT DRAIN VALVE).

DISCUSSION:

THIS ALARM MAY INDICATE AN AUTO SHUT DOWN IF THE PRIMARY PLANT OPERATOR MANUALLY STARTED THE AUXILIARY BUILDING SUMP PUMP(S). THE ALARM IS BASED ON THE PUMP CONTROL SWITCH CONTACTS (NORMAL AFTER START/STOP) IN SERIES WITH THE SUMP LEVEL SWITCH. THE WASTE GAS COMPRESSOR SEAL LEAKAGE DRAIN TANK CAN GIVE THIS ALARM BY OPERATING WDV-1030-SV TO LOWER THE DRAIN TANK LEVEL UNTIL THE LOW LEVEL SWITCH CONTACT OPENS. (SEE DRAWING WD-175)

REFERENCES: DRAWING 208-060-WD-11, WD-12, WD-135, WD-175 SENSING ELEMENT: WD-132-LS, WD-357-LS2, WDP-4A/4B CONTROL SWITCH CONTACTS.

ENCLOSURE 1 (Page 83 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-07	H-02-07
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BLDG SUMPS SUMP PUMP TROUBLE

EVENT POINT 1589

INDICATED CONDITION:

- LAUNDRY AND SHOWER SUMP PUMP AUTO START.
- O LAUNDRY AND SHOWER SUMP PUMP TRIP.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

DISCUSSION:

REFERENCES:

SENSING ELEMENT:

ENCLOSURE 1 (Page 84 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-07	H-02-07
	BLDG SU	

SUMP PUMP TROUBLE

EVENT POINT 1806

INDICATED CONDITION:

O DIESEL GENERATOR ROOM 'A' SUMP LEVEL HIGH AS SENSED BY SD-19-LS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

O NOTIFY PRIMARY PLANT OPERATOR TO INVESTIGATE CAUSE OF HIGH LEVEL.

DISCUSSION:

REFERENCES: DRAWING 208-072-SD-15.

SENSING ELEMENT: SD-19-LS

ENCLOSURE 1 (Page 85 of 187)

PSA-Z	ANNUNCIATOR	RESPONSE	PSA-Z-02-07	H-02-07
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BLDG SUMPS SUMP PUMP TROUBLE

EVENT POINT 1807

INDICATED CONDITION:

O DIESEL GENERATOR ROOM 'B' SUMP LEVEL HIGH AS SENSED BY SD-20-LS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

O NOTIFY PRIMARY PLANT OPERATOR TO INVESTIGATE CAUSE OF HIGH LEVEL.

DISCUSSION:

REFERENCES: DRAWING 208-072-SD-16.

SENSING ELEMENT: SD-20-LS

ENCLOSURE 1 (Page 86 of 187)

 PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-07	H-02-07
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BLDG SUMPS SUMP PUMP TROUBLE

EVENT POINT 1811

INDICATED CONDITION:

O INTAKE ELECTRIC VAULT SUMP LEVEL HIGH AS SENSED BY SD-14-LS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

· NOTIFY SECONDARY PLANT OPERATOR TO INVESTIGATE CAUSE OF HIGH LEVEL.

DISCUSSION:

REFERENCES: DRAWING 208-072-SD-09.

SENSING ELEMENT: SD-14-LS

ENCLOSURE 1 (Page 87 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-07	H-02-07
	BLDG SU	

BLDG SUMPS SUMP PUMP TROUBLE

EVENT POINT 1880

INDICATED CONDITION:

14

- O TURBINE ROOM SUMP LEVEL HIGH AS SENSED BY SD-24-LS
- O OILY WATER SEPARATOR TROUBLE

OR

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

 NOTIFY SECONDARY PLANT OPERATOR TO INVESTIGATE CAUSE OF HIGH LEVEL AND/OR OILY WATER SEPARATOR PROBLEM

DISCUSSION:

SENSING ELEMENT: SD-24-LS, SD-24-DPIS, SD-26-PIS

ENCLOSURE 1 (Page 88 of 187)

	PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-07	H-02-07
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	+		

BLDG SUMPS SUMP PUMP TROUBLE

EVENT POINT 1913

INDICATED CONDITION:

O SEWAGE PUMP SUMP LEVEL HIGH AS SENSED BY LOCAL CIRCUIT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

o SEP-1A AND/OR SEP-1B RUNNING.

OPERATOR ACTIONS FOR A VALID ALARM:

 NOTIFY TURBINE BUILDING OPERATOR TO ENSURE LEVEL DOES NOT OVERFLOW ONTO TURBINE BUILDING FLOOR AND THAT SEP-1A AND OR SEP-1B ARE RUNNING TO LOWER LEVEL.

DISCUSSION:

REFERENCES: DRAWING 208-064 ME-10

SENSING ELEMENT: R1.

ENCLOSURE 1 (Page 89 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-02-08 H-02		
	SEC SAN SYSTE ALARI	M	
	EVENT POIN	т 0798	
INDICATED CONDITION:			
• HOTWELL/CONDENSATE CONDUCTIVITY HIGH.			

SS-141-CIR, CONDUCTIVITY RECORDER ON HVAC SECTION OF MCB.
 COMPUTER POINTS A-100 TO A-104.

OPERATOR ACTIONS FOR A VALID ALARM:

NOTIFY SECONDARY CHEMISTRY TO INVESTIGATE CAUSE OF HIGH CONDUCTIVITY.
 REFER TO CP-138

DISCUSSION:

REFERENCES: DRAWING 208-054-55-10

SENSING ELEMENT: SS-141-CIR

ENCLOSURE 1 (Page 90 of 187)

PSA-Z	ANNUNCIATOR	RESPONSE	PSA-Z-02-08	H-02-08
 	Constructing to a feat of second data and a second s		1.5.1 2.02.00	11-02-00

SEC SAMPLE SYSTEM ALARM

EVENT POINT 0887

INDICATED CONDITION:

O SECONDARY CYCLE SAMPLE ANALYSIS ALARM.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

O NOTIFY SECONDARY CHEMISTRY TO INVESTIGATE CAUSE OF SAMPLE ALARM.

DISCUSSION:

THIS ALARM INDICATES AN ALARM HAS NOT BEEN ACKNOWLEDGED IN THE SECONDARY CHEMISTRY LABORATORY WITHIN AN ADJUSTABLE TIMER SETTING.

REFERENCES: DRAWING 208-054-55-11

SENSING ELEMENT: SSCP-1 (SECONDARY CYCLE SAMPLE ANALYZER PANEL)

ENCLOSURE 1 (Page 91 of 187)

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-03-01	H-03-01

LIQUID RADIATION HIGH

INDICATED CONDITION:	
• RM-L1 RADIATION LEVEL EXCEEDS HIGH SETPOINT.	
REDUNDANT INDICATION WHICH WILL VERIFY ALARM:	
<pre>o RM-L1 INDICATION AT RADIATION MONITORING PANEL. o SPDS ALPHA PAGE</pre>	
OPERATOR ACTIONS FOR A VALID ALARM:	
 INVESTIGATE CAUSE OF HIGH RADIATION. REFER TO OP-301, OPERATION OF THE REACTOR COOLANT SYSTEM. REFER TO OP-505, RADIATION MONITORING SYSTEM. 	
DISCUSSION:	
REFERENCES: DRAWING 208-049-RM-32	
SENSING ELEMENT: RADIATION MONITORING PANEL	

ENCLOSURE 1 (Page 92 of 187)

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-03-01	H-03-01
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LIQUID RADIATION HIGH

IND	CATED CONDITION:
0	RM-L2 RADIATION LEVEL EXCEEDS HIGH SETPOINT.
REDI	INDANT INDICATION WHICH WILL VERIFY ALARM:
0	RM-L2 INDICATION AT RADIATION MOVITORING PANEL. SPDS ALPHA PAGE
OPER	ATOR ACTIONS FOR A VALID ALARM:
0	INVESTIGATE CAUSE OF HIGH RADIATION. NOTIFY PRIMARY PLANT OPERATOR TO ENSURE WDV-891 AND WDV-892 CLOSED. REFER TO OP-505, RADIATION MONITORING SYSTEM. CONTACT CHEMISTRY FOR EVALUATION OF MONITOR PRIOR TO MONITOR FLUSH.
	USSION: -891 AND WDV-892 ARE PRIMARY LIQUID RELEASE VALVES.
REFE	RENCES: DRAWING 208-049-RM-31
SENS	ING ELEMENT: RADIATION MONITORING PANEL

ENCLOSURE 1 (Page 93 of 187)

H-03-01

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-03-01
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	HIG

LIQUID RADIATION HIGH

INDICA	TED CONDITION:
o RM	-L3 RADIATION LEVEL EXCEEDS HIGH SETPOINT.
REDUND	ANT INDICATION WHICH WILL VERIFY ALARM:
S KIT	L3 INDICATION AT RADIATION MONITORING PANEL.
OPERAT	OR ACTIONS FOR A VALID ALARM:
O IN	ESTIGATE CAUSE OF HIGH RADIATION.
O REF	ER TO OP-301, OPERATION OF THE REACTOR COOLANT SYSTEM. ER TO OP-408, NUCLEAR SERVICES COOLING SYSTEM TO CONNECT SW SURGE
IAN	ER TO OP-505, RADIATION MONITORING SYSTEM.
DISCUS	SION:
REFERE	NCES: DRAWING 208-049-RM-32
CENICTAN	ELEMENT: RADIATION MONITORING PANEL

ENCLOSURE 1 (Page 94 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-03-01	H-03-01
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LIQUID RADIATION HIGH

INDICATED CONDITION:	
o RM-L5 RADIATION LEVEL EXCEEDS HIGH SETPOINT.	
REDUNDANT INDICATION WHICH WILL VERIFY ALARM:	
0 RM-15 INDICATION AT RADIATION MONITORING PANEL.	
OPERATOR ACTIONS FOR A VALID ALARM:	
 INVESTIGATE CAUSE OF HIGH RADIATION. REFER TO OP-301, OPERATION OF THE REACTOR COOLANT SYSTEM REFER TO OP-505, RADIATION MONITORING SYSTEM. 	۹.
DISCUSSION:	
REFERENCES: DRAWING 208-049-RM-32	
SENSING ELEMENT: RADIATION MONITORING PANEL	

ENCLOSURE 1 (Page 95 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-03-01	K-03-01

		1915	

LIQUID RADIATION HIGH

INDICATED	CONDITION:
o RM-L6	RADIATION LEVEL EXCEEDS HIGH SETPOINT.
	INDICATION WHICH WILL VERIFY ALARM:
	NDICATION AT RADIATION MONITORING PANEL.
o INVESTI o REFER 1	CTIONS FOR A VALID ALARM: GATE CAUSE OF HIGH RADIATION. O OP-301, OPERATION OF THE REACTOR COOLANT SYSTEM. O OP-505, RADIATION MONITORING SYSTEM.
DISCUSSION	
REFERENCES	DRAWING 208-049-RM-32
SENSING EL	MENT: RADIATION MONITORING PANEL

ENCLOSURE 1 (Page 96 of 187)

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-03-01	H-03-01

LIQUID RADIATION HIGH

IND	ICATED CONDITION:
0	RM-L7 RADIATION LEVEL EXCEEDS HIGH SETPOINT.
0	UNDANT INDICATION WHICH WILL VERIFY ALARM: RM-L7 INDICATION AT RADIATION MONITORING PANEL. SPDS ALPHA PAGE.
OPE	RATOR ACTIONS FOR A VALID ALARM:
0	INVESTIGATE CAUSE OF HIGH RADIATION. NOTIFY PRIMARY PLANT OPERATOR TO ENSURE SDV-90 CLOSED. CONTACT CHEMISTRY FOR EVALUATION OF MONITOR PRIOR TO MONITOR FLUSH. REFER TO OP-505, RADIATION MONITORING SYSTEM.
DIS	CUSSION:
SD	V-90 IS THE SECONDARY LIQUID RELEASE VALVE.
REFE	RENCES: DRAWING 208-049-RM-31
SENS	SING E'EMENT: RADIATION MONITORING PANEL

ENCLOSURE 1 (Page 97 of 187)

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-03-02	H-03-02
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LIQUID MONITOR WARNING

INDICA	ATED CONDITION:
o RM	-L1 RADIATION LEVEL EXCEEDS WARNING SETPOINT.
REDUND	DANT INDICATION WHICH WILL VERIFY ALARM:
o RM o SP	-LI INDICATION AT RADIATION MONITORING PANEL. DS ALPHA PAGE
OPERAT	OR ACTIONS FOR A VALID ALARM:
O REI	VESTIGATE CAUSE OF HIGH RADIATION. FER TO OP-301, OPERATION OF THE REACTOR COOLANT SYSTEM. FER TO OP-505, RADIATION MONITORING SYSTEM.
DISCUS	SION:
REFERE	NCES: DRAWING 208-049-RM-32
	G ELEMENT: RADIATION MONITORING PANEL

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PSA-Z ANNUMCIATOR RESPONSE	PSA-Z-03-02	H-03-02

LIQUID MONITOR WARNING

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LIQUID	
WARNING	

o RM-L3	RADIATION LEVEL EXCEEDS WARNING SETPOINT.
REDUNDANT	INDICATION WHICH WILL VERIFY ALARM:
o RM-L3	INDICATION AT RADIATION MONITORING PANEL.
OPERATOR)	CTIONS FOR A VALID ALARM:
O REFER	IGATE CAUSE OF HIGH RADIATION. TO OP-301, OPERATION OF THE REACTOR COOLANT SYSTEM. TO OP-505, RADIATION MONITORING SYSTEM.
DISCUSSION	:
REFERENCES	: DRAWING 208-049-RM-32
SENSING EL	EMENT: RADIATION MONITORING PANEL

INDICATED CONDITION:

ENCLOSURE 1 (Page 100 of 187)

A REAL PROPERTY AND A REAL	PSA-Z-03-02	H-03-02
	LIQUI	
	WARNI	
	EVENT POIN	IT 1795
INDICATED CONDITION:		
O RM-LS RADIATION LEVEL EXCEEDS WARNING SET	POINT.	
REDUNDANT INDICATION WHICH WILL VERIFY ALARM:		
REDUNDANT INDICATION WHICH WILL VERIFY ALARM: • RM-L5 INDICATION AT RADIATION MONITORING F		
o RM-L5 INDICATION AT RADIATION MONITORING F		
O RM-L5 INDICATION AT RADIATION MONITORING F		
 RM-L5 INDICATION AT RADIATION MONITORING F OPERATOR ACTIONS FOR A VALID ALARM: INVESTIGATE CAUSE OF HIGH RADIATION. 	PANEL.	
 RM-L5 INDICATION AT RADIATION MONITORING F OPERATOR ACTIONS FOR A VALID ALARM: INVESTIGATE CAUSE OF HIGH RADIATION. REFER TO OP-301, OPERATION OF THE REACTOR 	COOLANT SYSTEM.	
 RM-L5 INDICATION AT RADIATION MONITORING F OPERATOR ACTIONS FOR A VALID ALARM: INVESTIGATE CAUSE OF HIGH RADIATION. 	COOLANT SYSTEM.	
OPERATOR ACTIONS FOR A VALID ALARM: • INVESTIGATE CAUSE OF HIGH RADIATION. • REFER TO OP-301, OPERATION OF THE REACTOR	COOLANT SYSTEM.	
 RM-L5 INDICATION AT RADIATION MONITORING FOR A VALID ALARM: OPERATOR ACTIONS FOR A VALID ALARM: INVESTIGATE CAUSE OF HIGH RADIATION. REFER TO OP-301, OPERATION OF THE REACTOR REFER TO OP-505, RADIATION MONITORING SYST 	COOLANT SYSTEM.	
 RM-L5 INDICATION AT RADIATION MONITORING FOR A VALID ALARM: OPERATOR ACTIONS FOR A VALID ALARM: INVESTIGATE CAUSE OF HIGH RADIATION. REFER TO OP-301, OPERATION OF THE REACTOR REFER TO OP-505, RADIATION MONITORING SYST 	COOLANT SYSTEM.	
 RM-L5 INDICATION AT RADIATION MONITORING FOR A VALID ALARM: OPERATOR ACTIONS FOR A VALID ALARM: INVESTIGATE CAUSE OF HIGH RADIATION. REFER TO OP-301, OPERATION OF THE REACTOR REFER TO OP-505, RADIATION MONITORING SYST 	COOLANT SYSTEM.	

ENCLOSURE 1 (Page 101 of 187)

PSA-Z A	NNUNCIATOR	RESPONSE	PSA-Z-03-02	H-03-0
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LIQUID MONITOR WARNING

INDICATED CONDITION:	
o RM-L6 RADIATION L	EVEL EXCEEDS WARNING SETPOINT.
REDUNDANT INDICATION	WHICH WILL VERIFY ALARM:
o RM-L6 INDICATION	AT RADIATION MONITORING PANEL.
OPERATOR ACTIONS FOR • INVESTIGATE CAUSE • REFER TO OP-301, • REFER TO OP-505,	
DISCUSSION:	
REFERENCES: DRAWING	208-049-RM-32
SENSING ELEMENT: RAD	IATION MONITORING PANEL

ENCLOSURE 1 (Page 102 of 187)

H-03-02

PSA-Z-03-02

	LIQUID MONITOR WARNING
	EVENT POINT 1799
INDICATED CONDITION:	
REDUNDANT INDICATION WHICH WILL VERIFY ALA • RM-L7 INDICATION AT RADIATION MONITORIN • SPDS ALPHA PAGE.	
	NG PANEL.
 RM-L7 INDICATION AT RADIATION MONITORIN SPDS ALPHA PAGE. OPERATOR ACTIONS FOR A VALID ALARM: INVESTIGATE CAUSE OF HIGH RADIATION. 	NG PANEL.
 RM-L7 INDICATION AT RADIATION MONITORIN SPDS ALPHA PAGE. OPERATOR ACTIONS FOR A VALID ALARM: INVESTIGATE CAUSE OF HIGH RADIATION. REFER TO OP-SOS, RADIATION MONITORING S 	NG PANEL.

PSA-Z ANNUNCIATOR RESPONSE

ENCLOSURE 1 (Page 103 of 187)

	PSA-Z	ANNUNCIATOR	RESPONSE	PSA-Z-03-03	H-03-03
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RM-L2/7 INTERLOCK BYPASSED

EVENT POINT 2044

INDICATED CONDITION:

- O INTERLOCK BETWEEN SDV-90 AND RWP-3A/3B DEFEATED.
- O INTERLOCK BETWEEN WDV-892 AND RWP-1, RWP-2A/2B DEFEATED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RM-L2/7 BYPASS KEY INSTALLED AT RADIATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

DISCUSSION:

BYPASSING THE RM-L2/7 INTERLOCK ALLOWS OPENING OF SDV-90 WITH EITHER RWP-1, RWP-2A OR RWP-2B RUNNING INSTEAD OF RWP-3A OR RWP-3B. ALSO WDV-892 MAY BE OPENED WITH RWP-3A OR RWP-3B RUNNING INSTEAD OF RWP-1, RWP-2A OR RWP-2B.

REFERENCES: DRAWING 208-060-WD-60

SENSING ELEMENT: RADIATION MONITORING PANEL BYPASS INTERLOCK KEY SWITCH

ENCLOSURE 1 (Page 104 of 187)

PSA	Z ANNUNCIATOR	RESPONSE	PSA-Z-04-	01	H-04-01
				-	

MAKEUP TANK LEVEL LOW LOW

INDI	CATED CONDITION:
0	MAKEUP TANK LEVEL <18" AS SENSED BY MU14-LYI-4, MU14-LY2-4.
	NDANT INDICATION WHICH WILL VERIFY ALARM:
0	MU-14-LI1, MUT LEVEL INDICATION (REDUNDANT INSTRUMENT PANEL). MU-14-LI2, MUT LEVEL INDICATION (REDUNDANT INSTRUMENT PANEL).
OPER	ATOR ACTIONS FOR A VALID ALARM:
0 0	ENSURE MUV-58, AND MUV-73 OPEN. RESTORE MAKEUP TANK LEVEL TO NORMAL BAND.
DISC	USSION:
REFE	RENCES: DRAWING 208-041-MU-17.MU-18
	ING ELEMENT: MU14-LY1-4.MU14-LY2-4.

ENCLOSURE 1 (Page 105 of 187)

 PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-	-04-02 H-04-02
 	Λ	AKEUP TANK
 		LEVEL HIGH/LOW
		HIGH/LOW

IND	ICATED CONDITION:
0	MAKEUP TANK LEVEL >100" AS SENSED BY MU-14-LY3.
RED	UNDANT INDICATION WHICH WILL VERIFY ALARM:
0	MU-014-LIR1, MUT LEVEL/PRESSURE RECORDER. MU-14-LI1, MUT LEVEL INDICATION (REDUNDANT INSTRUMENT PANEL). MU-14-LI2, MUT LEVEL INDICATION (REDUNDANT INSTRUMENT PANEL). COMPUTER POINT X359
	RATOR ACTIONS FOR A VALID ALARM: RESTORE MAKEUP TANK LEVEL TO NORMAL BAND.
IF	SCUSSION: MUP(S) ARE ALIGNED TO BWST & RECIRC FLOW TO MUT IS CAUSING HIGH LEVEL MUT, THEN CONSIDER ALIGNING MUP SUCTION FROM MUT ONLY.
REFE	RENCES: DRAWING 208-041-MU-47.
SENS	ING ELEMENT: MU-14-LY3.

ENCLOSURE 1 (Page 106 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-04-02	H-04-02

MAKEUP TANK LEVEL HIGH/LOW

INDIC	CATED CONDITION:
o M	AKEUP TANK LEVEL <55" AS SENSED BY MU-14-LY3.
	TARE LEVEL (33 AS SENSED BT H0-14-LTS.
REDUN	DANT INDICATION WHICH WILL VERIFY ALARM:
OM	U-014-LIR1, MUT LEVEL/PRESSURE RECORDER. U-14-LI1, MUT LEVEL INDICATION (REDUNDANT INSTRUMENT PANEL).
O M	U-14-LI2, MUT LEVEL INDICATION (REDUNDANT INSTRUMENT PANEL).
0 C	OMPUTER POINT X359.
OPERA	TOR ACTIONS FOR A VALID ALARM:
o RI	ESTORE MAKEUP TANK LEVEL TO NORMAL BAND.
DISCU	SSION:
REFER	ENCES: DRAWING 208-041-MU-47.
SENSI	NG ELEMENT: MU-14-LY3.

ENCLOSURE 1 (Page 107 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-04-03	H-04-03
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MAKEUP FLOW HIGH

EVENT POINT 1066

INDICATED CONDITION:

O MAKEUP FLOW >160 GPM THROUGH MUV-31 AS SENSED BY MU-24-FS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

o MU-24-FI

OPERATOR ACTIONS FOR A VALID ALARM:

O DETERMINE CAUSE OF HIGH FLOW ALARM.

- O OBSERVE LTOP CONCERNS
- o REFER TO OP-301

DISCUSSION:

THE HIGH FLOW ALARM WAS ESTABLISHED FOR LTOP CONDITIONS TO PROVIDE INDICATION SHOULD MUV-31 FAIL WIDE OPEN. THE INTENT WAS TO PROVIDE AT LEAST 10 MINUTES FOR OPERATOR CORRECTIVE ACTION FOR THIS TRANSIENT.

REFERENCES: DRAWING 208-041-MU-47.

SENSING ELEMENT: MU-24-FS.

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ENCLOSURE 1 (Page 108 of 187)

H-04-04

	PSA-Z ANNUNCIATOR RESPONSE			PSA-Z-04-		
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DOWN EMP IGH

EVENT POINT 1027

INDICATED CONDITION:

○ LETDOWN TEMPERATURE TO PRE-FILTERS >130°F AS SENSED BY MU-5-TS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

o MU-5-TI

OPERATOR ACTIONS FOR A VALID ALARM:

- O REDUCE LETDOWN FLOW WITH MUV-51 FLOW CONTROL VALVE.
- O NOTIFY PRIMARY PLANT OPERATOR TO VERIFY SW THROTTLE VALVES TO LETDOWN COOLERS 'SEALED'.

DISCUSSION:

IF LETDOWN HAS ISOLATED VIA MUV-49 REFER TO OP-402 FOR LETDOWN RECOVERY. IF HIGH LETDOWN FLOW IS DESIRED THEN CONSIDER STARTING SWP-1A OR SWP-1B TO PROVIDE ADDITIONAL COOLING WATER TO THE LETDOWN COOLERS.

REFERENCES: DRAWING 208-041-MU-33.

SENSING ELEMENT: MU-5-TS.



ENCLOSURE 1 (Page 109 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-04-05	H-04-05
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RC PUMP SEAL BLEED OFF HIGH

EVENT POINT 1075

INDICATED CONDITION:

• RC PUMP 1A CONTROL BLEEDOFF >1.75 GPM AS CALCULATED BY PLANT COMPUTER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O COMPUTER POINT X-922.

OPERATOR ACTIONS FOR A VALID ALARM:

o REFER TO OP-302 'RC PUMP OPERATION'.

DISCUSSION:

REFER TO TS FOR ADMINISTRATIVE REQUIREMENTS.

COMPUTER GROUP 78 CONTAINS ADDITIONAL DATA FOR RCP-1A.

REFERENCES: DRAWING 208-047 RC-05.

SENSING ELEMENT: RX00/RC-19A-PT1

ENCLOSURE 1 (Page 110 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-04-05	H-04-05

RC PUMP SEAL BLEED OFF HIGH

EVENT POINT 1076

INDICATED CONDITION:

• RC PUMP 18 CONTROL BLEEDOFF >1.75 GPM AS CALCULATED BY PLANT COMPUTER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O COMPUTER POINT X-923.

OPERATOR ACTIONS FOR A VALID ALARM:

o REFER TO OP-302 'RC PUMP OPERATION'.

DISCUSSION:

REFER TO TS FOR ADMINISTRATIVE REQUIREMENTS.

COMPUTER GROUP 79 CONTAINS ADDITIONAL DATA FOR RCP-18.

REFERENCES: DRAWING 208-047 RC 06.

SENSING ELEMENT: RX01/RC-19A-PT2

ENCLOSURE 1 (Page 111 of 187)

PSA-Z	ANNUNCIATOR	RESPONSE	PSA-Z-04-05	H-04-05
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RC PUMP SEAL BLEED OFF HIGH

EVENT POINT 1077

INDICATED CONDITION:

• RC PUMP 1C CONTROL BLEEDOFF >1.75 GPM AS CALCULATED BY PLANT COMPUTER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O COMPUTER POINT X-924.

OPERATOR ACTIONS FOR A VALID ALARM:

O REFER TO OP-302 'RC PUMP OPERATION'.

DISCUSSION:

REFER TO TS FOR ADMINISTRATIVE REQUIREMENTS.

COMPUTER GROUP 80 CONTAINS ADDITIONAL DATA FOR RCP-1C.

REFERENCES: DRAWING 208-047 RC-07.

SENSING ELEMENT: RX02/RC-19B-PT1.

ENCLOSURE 1 (Page 112 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-04-05	H-04-05
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RC PUMP SEAL BLEED OFF HIGH

EVENT POINT 1078

INDICATED CONDITION:

• RC PUMP 1D CONTROL BLEEDOFF >1.75 GPM AS CALCULATED BY PLANT COMPUTER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O COMPUTER POINT X-925.

OPERATOR ACTIONS FOR A VALID ALARM:

o REFER TO OP-302 'RC PUMP OPERATION'.

DISCUSSION:

REFER TO TS FOR ADMINISTRATIVE REQUIREMENTS.

COMPUTER GROUP 81 CONTAINS ADDITIONAL DATA FOR RCP-1D.

REFERENCES: DRAWING 208-047 RC-08.

SENSING ELEMENT: RX-08/RC-19B-PT1.

ENCLOSURE 1 (Page 113 of 187)

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-04-06	H-04-J6

MAKEUP TANK PRESS HIGH/LOW

EVENT POINT 1062

INDICATED CONDITION:

 \circ MAKEUP TANK PRESSURE \geq THE OVERPRESSURE VALUE CALCULATED BY THE PLANT COMPUTER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

MU-014-LIR1, MUT LEVEL/PRESSURE RECORDER.
 COMPUTER POINTS X359 AND X401.

OPERATOR ACTIONS FOR A VALTD ALARM:

o ENSURE MUV-141, MUV-143 CLOSED

• IMMEDIATELY REDUCE PRESSURE WITHIN THE LIMITS OF MAKEUP TANK PRESSURE/LEVEL OF CURVE 8 OF OP-103B.

DISCUSSION:

THE VALUES OF THE COMPUTER POINTS ARE INPUT TO A CALCULATION WHICH ACTUATES THIS EVENT POINT WHEN MUT LEVEL/PRESSURE COMBINATION ARE BEING OPERATED IN THE RESTRICTED REGION OF CURVE 8 OP-103B.

REFERENCES: DRAWING 208-041-MU-47.



ENCLOSURE 1 (Page 114 of 187)

H-04-06

	PSA-Z ANNU	NCIATOR RES	PONSE	PSA-Z-04-06	H-
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				MAKEUP 1	ΓΔΝ
				PRESS	
				HIGH/LC	W

EVENT POINT 1063

IND	CATED CONDITION:
0	MAKEUP TANK PRESSURE <3 PSIG AS SENSED BY MU-17-PS.
REDL	NDANT INDICATION WHICH WILL VERIFY ALARM:
0	U-014-LIR1, MUT LEVEL/PRESSURE RECORDER.
OPER	ATOR ACTIONS FOR A VALID ALARM:
0	NSURE MUV-134 CLOSED NCREASE PRESSURE WITHIN LIMITS OF MAKEUP TANK PRESSURE/LEVEL CURVE F OP-103B.
DISC	JSSION:
MUT	PRESSURE MAY BE TEMPORARILY REDUCED BELOW 3 PSIG DURING VENTING LUTIONS, BUT SHOULD BE MAINTAINED ABOVE 0 PSIG.
REFE	ENCES: DRAWING 208-041-MU-47

SENSING ELEMENT: MU-17-PS.

ENCLOSURE 1 (Page 115 of 187)

PSA-Z ANNUNCIATOR RESPONSE		PSA-Z-04-07	H-04-0		
		 -			
		 ++			
		 +		RC PUMP	SEAL
				RTN (MUV	

AL RTN (MUV-253) NOT FULL OPEN

EVENT POINT 1036

INDICATED CONDITION:

O MUV-253 NOT FULL OPEN.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O MUV-253 VALVE INDICATION ON PSA SECTION AND E.S. LIGHT MATRIX. O COMPUTER POINT PO64.

OPERATOR ACTIONS FOR A VALID ALARM:

o REOPEN MUV-253.

o MONITOR RCP SEALS TEMPERATURE/PRESSURE

DISCUSSION:

IF MUV-253 CANNOT BE REOPENED THEN REFER TO OP-302.

RCP DATA CAN BE OBSERVED ON COMPUTER GROUPS 78,79,80 AND 81.

REFERENCES: DRAWING 208-041-MU-44.

SENSING ELEMENT: RELAY 3MUV-2530.

ENCLOSURE 1 (Page 116 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-04-08	H-04-08

MAKEUP VALVES AIR FAILURE

EVENT POINT 1094

INDICATED CONDITION:

LETDOWN FLOW CONTROL VALVE MUV-51 LOCKED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

○ #MUV-51 AIR FAILURE PUSH-BUTTON ILLUMINATED.

OPERATOR ACTIONS FOR A VALID ALARM:

REFER TO AP-470
 INVESTIGATE LOSS OF INSTRUMENT AIR PRESSURE TO MUV-51.

DISCUSSION:

TWO PRESSURE SWITCHES SUPPLY PRESSURE INFORMATION TO THE CONFROL CIRCUITS FOR MUV-51. MU-3-PS1 SET FOR 32 PSIG AND MU-3-PS2 SET FOR 28 PSIG. IF EITHER MU-3-PS1 OR MU-3-PS2 IS ACTUATED, THE VALVE POSITION WILL BE LOCKED "AS IS" BY THE ISOLATION OF THE AIR LINE FROM THE POSITIONER TO THE VALVE DIAPHRAGM. OPERATION OF THE VALVE BY DEPRESSING THE AIR FAILURE RESET PUSH-BUTTON IS NOT CERTAIN AT THIS LOW AIR PRESSURE.

REFERENCES: DRAWING 208-041-MU-54.

SENSING ELEMENT: MU-3-PS1, MU-3-PS2.

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ENCLOSURE 1 (Page 117 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-04-08	H-04-08
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MAKEUP VALVES AIR FAILURE

EVENT POINT 1095

INDICATED CONDITION:

O MAKEUP CONTROL VALVE MUV-31 LOCKED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

MUV-31 AIR FAILURE PUSH-BUTTON ILLUMINATED.
 MUV-31 CONTROL STATION IN 'HAND'.

OPERATOR ACTIONS FOR A VALID ALARM:

REFER TO AP-470
 INVESTIGATE LOSS OF INSTRUMENT AIR PRESSURE TO MUV-31.

DISCUSSION:

TWO PRESSURE SWITCHES SUPPLY PRESSURE INFORMATION TO THE CONTROL CIRCUITS FOR MUV-31. MU-25-PS1 SET FOR 32 PSIG AND MU-25-PS2 SET FOR 28 PSIG. IF EITHER MU-25-PS1 OR MU-25-PS2 IS ACTUATED. THE VALVE POSITION WILL BE LOCKED "AS IS" BY THE ISOLATION OF THE AIR LINE FROM THE POSITIONER TO THE VALVE DIAPHRAGM. OPERATION OF THE VALVE BY DEPRESSING THE AIR FAILURE RESET PUSH-BUTTON IS NOT CERTAIN AT THIS LOW AIR PRESSURE.

REFERENCES: DRAWING 208-041-MU-54.

SENSING ELEMENT: MU-25-PS1, MU-25-PS2.



ENCLOSURE 1 (Page 118 of 187)

PSA-Z ANNUNCIATOR	RESPONSE	PSA-Z-04-08	H-04-08

MAKEUP VALVES AIR FAILURE

EVENT POINT 1096

INDICATED CONDITION:

O MAKEUP CONTROL VALVE MUV-16 LOCKED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

MUV-16 AIR FAILURE PUSH-BUTTON ILLUMINATED.
 MUV-16 CONTROL STATION IN 'HAND'.

OPERATOR ACTIONS FOR A VALID ALARM:

REFER TO AP-470
 INVESTIGATE LOSS OF INSTRUMENT AIR PRESSURE TO MUV-16.

DISCUSSION:

TWO PRESSURE SWITCHES SUPPLY PRESSURE INFORMATION TO THE CONTROL CIRCUITS FOR MUV-16. MU-15-PS1 SET FOR 32 PSIG AND MU-15-PS2 SET FOR 28 PSIG. IF EITHER MU-15-PS1 OR MU-15-PS2 IS ACTUATED, THE VALVE POSITION WILL BE LOCKED "AS IS" BY THE ISOLATION OF THE AIR LINE FROM THE POSITIONER TO THE VALVE DIAPHRAGM. OPERATION OF THE VALVE BY DEPRESSING THE AIR FAILURE RESET PUSH-BUTTON IS NOT CERTAIN AT THIS LOW AIR PRESSURE.

REFERENCES: DRAWING 208-041-MU-54.

SENSING ELEMENT: MU-15-PS1, MU-15-PS2.

ENCLOSURE 1 (Page 119 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-04-08	H-04-08
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MAKEUP VALVES AIR FAILURE

EVENT POINT 1102

INDICATED CONDITION:

 RC PUMP SEAL BLEEDOFF VALVE MUV-253 AIR SUPPLY PRESSURE <80 PSIG AS SENSED BY MU-253-PS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

O REFER TO AP-470

INVESTIGATE LOSS OF INSTRUMENT AIR PRESSURE TO MUV-253.

DISCUSSION:

OPERATION OF THE VALVE IS NOT CERTAIN AT THIS LOW AIR PRESSURE. MUV-253 FAILS CLOSED IF THE AIR PRESSURE IS INSUFFICIENT AGAINST THE CLOSURE SPRING OF THE VALVE OPERATOR.

REFERENCES: DRAWING 208-041-MU-54.

SENSING ELEMENT: MU-15-PS1, MU-15-PS2.

ENCLOSURE 1 (Page 120 of 187)

PSA-Z-05-01	H-05-01
	PSA-Z-05-01

STM GEN A MAIN STEAM ISO ACTUATED

EVENT POINT 2007

INDICATED CONDITION:

O EFIC CHANNEL "A", STEAM GENERATOR "A" MAIN STEAM LINE ISOLATION BUS 1 OR BUS 2 TRIPPED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O HALF OR FULL TRIP ON EFIC CHANNEL "A" MAIN STEAM LINE ISOLATION.

- MS-106-PI, CHANNEL "A", OTSG A PRESSURE INDICATION.
 MS-106-PIR, CHANNEL "A", OTSG A/B PRESSURE RECORDER.

OPERATOR ACTIONS FOR A VALID ALARM:

O REFER TO EOP-05, EXCESSIVE HEAT TRANSFER. O INVESTIGATE CAUSE OF TRIP CONDITION.

DISCUSSION:

MSLI ACTUATION SETPOINT IS OTSG PRESSURE <600 PSIG. WITH THIS EVENT POINT IN ALARM, A HALF TRIP OR FULL TRIP CONDITION EXISTS. THE OPERATOR MUST OBSERVE THE EFIC PUSH-BUTTONS TO DETERMINE EFIC ACTUATION STATUS.

NO ADDITIONAL ALARMS DIFFERENTIATE BETWEEN FULL AND HALF TRIPS.

REFERENCES: VITRO DRAWING 3801-3005 SHEET 1

ENCLOSURE 1 (Page 121 of 187)

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-05-01	H-05-01
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STM GEN A MAIN STEAM ISO ACTUATED

EVENT POINT 2015

INDICATED CONDITION:

 EFIC CHANNEL "B", STEAM GENERATOR "A" MAIN STEAM LINE ISOLATION BUS 1 OR BUS 2 TRIPPED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O HALF OR FULL TRIP ON EFIC CHANNEL "B" MAIN STEAM LINE ISOLATION.

- MS-107-PI, CHANNEL "B", OTSG A PRESSURE INDICATION.
- O MS-107-PIR, CHANNEL "B", OTSG A/B PRESSURE RECORDER.

OPERATOR ACTIONS FOR A VALID ALARM:

O REFER TO EOP-03, EXCESSIVE HEAT TRANSFER.

INVESTIGATE CAUSE OF TRIP CONDITION.

DISCUSSION:

MSLI ACTUATION SETPOINT IS OTSG PRESSURE <600 PSIG. WITH THIS EVENT POINT IN ALARM, A HALF TRIP OR FULL TRIP CONDITION EXISTS. THE OPERATOR MUST OBSERVE THE EFIC PUSH-BUTTONS TO DETERMINE EFIC ACTUATION STATUS. NO ADDITIONAL ALARMS DIFFERENTIATE BETWEEN FULL AND HALF TRIPS.

REFERENCES: VITRO DRAWING 3801-3005 SHEET 2

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PSA-Z ANNUNCIATOR	RESPONSE	PSA-Z-05-02	H-05-02
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STM GEN A FEEDWATER ISO ACTUATED

EVENT POINT 2009

INDICATED CONDITION:

 EFIC CHANNEL "A", STEAM GENERATOR "A" MAIN FEEDWATER ISOLATION BUS 1 OR BUS 2 TRIPPED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

· HALF OR FULL TRIP ON EFIC CHANNEL "A" MAIN FEEDWATER ISOLATION.

- MS-106-PI, CHANNEL "A", OTSG A PRESSURE INDICATION.
- O MS-106-PIR, CHANNEL "A", OTSG A/B PRESSURE RECORDER.

OPERATOR ACTIONS FOR A VALID ALARM:

• REFER TO EOP-05, EXCESSIVE HEAT TRANSFER.

INVESTIGATE CAUSE OF TRIP CONDITION.

DISCUSSION:

MFWI ACTUATION SETPOINT IS OTSG PRESSURE <600 PSIG. WITH THIS EVENT POINT IN ALARM, A HALF TRIP OR FULL TRIP CONDITION EXISTS. THE OPERATOR MUST OBSERVE THE EFIC PUSH-BUTTONS TO DETERMINE EFIC ACTUATION STATUS. NO ADDITIONAL ALARMS DIFFERENTIATE BETWEEN FULL AND HALF TRIPS.

REFERENCES: VITRO DRAWING 3801-3005 SHEET 1

ENCLOSURE 1 (Page 123 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-05-02	H-05-02
	energy and a second	

STM GEN A FEEDWATER ISO ACTUATED

EVENT POINT 2017

INDICATED CONDITION:

 EFIC CHANNEL "B", STEAM GENERATOR 'A' MAIN FEEDWATER ISOLATION BUS 1 OR BUS 2 TRIPPED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

HALF OR FULL TRIP ON EFIC CHANNEL "B" MAIN FEEDWATER ISOLATION.
 MS-107-PI, CHANNEL "B", OTSG A PRESSURE INDICATION.

MS-107-PIR, CHANNEL "B", OTSG A/B PRESSURE RECORDER.

OPERATOR ACTIONS FOR A VALID ALARM:

• REFER TO EOP-OS, EXCESSIVE HEAT TRANSFER.

O INVESTIGATE CAUSE OF TRIP CONDITION.

DISCUSSION:

MFWI ACTUATION SETPOINT IS OTSG PRESSURE <600 PSIG. WITH THIS EVENT POINT IN ALARM, A HALF TRIP OR FULL TRIP CONDITION EXISTS. THE OPERATOR MUST OBSERVE THE EFIC PUSH-BUTTONS TO DETERMINE EFIC ACTUATION STATUS. NO ADDITIONAL ALARMS DIFFERENTIATE BETWEEN FULL AND HALF TRIPS.

REFERENCES: VITRO DRAWING 3801-3005 SHEET 2

ENCLOSURE 1 (Page 124 of 187)

PSA-Z ANNUNCIATOR RESPONSE	SA-Z-05-03	H-05-03
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MAIN STEAM ISO VALVE AIR FAILURE

EVENT POINT 0956

INDICATED CONDITION:

O MSV-413 AND MSV-414 AIR SUPPLY PRESSURE <80 PSIG AS SENSED BY MS-99-PS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

REFER TO AP-470
 INVESTIGATE LOSS OF INSTRUMENT AIR PRESSURE TO MSIVS.

DISCUSSION:

ON A LOSS OF INSTRUMENT AIR, THE ACCUMULATORS SHOULD MAINTAIN THE MSIVS OPEN FOR AT LEAST 1 HOUR DEPENDENT ON ACTUATOR LEAKAGE. DEGRADATION OF THE ACCUMULATOR PRESSURE WILL BE INDICATED BY THE ILLUMINATION OF THE SV-1/SV-2 WHITE TEST LIGHT ON THE PSA PANEL.

REFERENCES: DRAWING 208-039 MS-14

SENSING ELEMENT: MS-99-PS

ENCLOSURE 1 (Page 125 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-05-03	H-05-03
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MAIN STEAM ISO VALVE AIR FAILURE

EVENT POINT 0959

INDICATED CONDITION:

• MSV-411 AND MSV-412 AIR SUPPLY PRESSURE <80 PSIG AS SENSED BY MS-98-PS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

REFER TO AP-470
 INVESTIGATE LOSS OF INSTRUMENT AIR PRESSURE TO MSIVS.

DISCUSSION:

ON A LOSS OF INSTRUMENT AIR, THE ACCUMULATORS SHOULD MAINTAIN THE MSIVS OPEN FOR AT LEAST 1 HOUR DEPENDENT ON ACTUATOR LEAKAGE. DEGRADATION OF THE ACCUMULATOR PRESSURE WILL BE INDICATED BY THE ILLUMINATION OF THE SV-1/SV-2 WHITE TEST LIGHT ON THE PSA PANEL.

REFERENCES: DRAWING 208-039 MS-14

SENSING ELEMENT: MS-98-PS

ENCLOSURE 1 (Page 126 of 187)

PSA-Z	ANNUNCIATOR RESPONSE	PSA-Z-05-04	H-05-04
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			and a second second second second	
		Sec. M		
	-			
STRUCTURE IN INCOME	1			

LETDOWN PRESSURE HIGH

EVENT POINT 1060

INDICATED CONDITION:

o LETDOWN PRESSURE AFTER BLOCK ORIFICE >145 PSIG AS SENSED BY MU-6-PS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O COMPUTER POINT X002.

OPERATOR ACTIONS FOR A VALID ALARM:

INVESTIGATE CAUSE OF HIGH PRESSURE CONDITION.
 REDUCE LETDOWN FLOW.

DISCUSSION:

A POSSIBLE CAUSE OF HIGH PRESSURE AT THIS POINT IN THE SYSTEM IS ISOLATION OF DOWNSTREAM COMPONENTS OR ANY FLOW RESTRICTIONS IN THE PRE-FILTERS, POST-FILTERS OR MAKEUP DEMINS. IF THE HIGH PRESSURE CONDITION EXISTS AND ITS CAUSE CANNOT BE DETERMINED THEN CLOSURE OF MUV-49 MAY BE REQUIRED TO PREVENT POSSIBLE RELIEF VALVE OPERATION TO THE A.B. SUMP.

REFERENCES: DRAWING 208-041 MS-47

SENSING ELEMENT: MS-6-PS



ENCLOSURE 1 (Page 127 of 187)

FSA-Z	ANNUNCIATOR	RESPONSE	PSA-Z-05-05	H-05-05
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		A Anti-		
The second second second	1			

THETCHIC	D CONDITION:
o MAKEU	P POSTFILTER DIFFERENTIAL PRESSURE >25 PSIG AS SENSED BY MU-18-DPS
REDUNDAN	F INDICATION WHICH WILL VERIFY ALARM:
o MAKEU	P POSTFILTER DIFFERENTIAL PRESSURE MU-18-DPI.
OPERATOR	ACTIONS FOR A VALID ALARM:
o PLACE o REDUC	"A" AND "B" POST-FILTERS IN SERVICE. E LETDOWN FLOW.
DISCUSSIC	IN :
	NN: S: DRAWING 208-041 MU-47

ENCLOSURE 1 (Page 128 of 187)

PSA-Z	ANNUNCIATOR	RESPONSE	PSA-Z-05-05	H-05-05
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TUDICALLD	CONDITION:
o MAKEUF	PRE-FILTER DIFFERENTIAL PRESSURE >12 PSIG AS SENSED BY MU-81-DPS
REDUNDANT	INDICATION WHICH WILL VERIFY ALARM:
O MAKEUP	PRE-FILTER DIFFERENTIAL PRESSURE INDICATION MU-81-DPI.
OPERATOR A	ACTIONS FOR A VALID ALARM:
o PLACE o REDUCE	"A" AND "B" PRE-FTLTERS IN SERVICE. LETDOWN FLOW.
DISCUSSION	4:
DISCUSSION	4:
	: DRAWING 208-041 MU-47

ENCLOSURE 1 (Page 129 of 187)

H-05-06

 PSA-Z ANN	NUNCIATOR	RESPONSE	PSA-Z-05-06	H-
		An Andrew Colorest Party		
			MAKEUP D	EMI
			Δ PRES	
			HIGH	
			 Contraction of the second s	

1110	ICATED CONDITION:
0	MAKEUP DEMIN DIFFERENTIAL PRESSURE >14 PSIG AS SENSED BY MU-75-DPS.
RED	UNDANT INDICATION WHICH WILL VERIFY ALARM:
0	MAKEUP DEMIN DIFFERENTIAL PRESSURE INDICATION MU-75-DPI.
OPE	RATOR ACTIONS FOR A VALID ALARM:
	REFER TO OP-402 BYPASS DEMINERALIZERS OR PLACE ALTERNATE DEMIN IN SERVICE
0	REDUCE LETDOWN FLOW
0	REDUCE LETDOWN FLOW
DIS CO AL TH BE	REDUCE LETDOWN FLOW CUSSION: NSIDERATION SHOULD BE GIVEN TO THE AFFECT ON THE RCS OF PLACING THE TERNATE DEMIN IN SERVICE. IF IT IS NOT SATURATED AT THE SAME LEVEL AS
DIS CO AL TH BE OP	REDUCE LETDOWN FLOW CUSSION: NSIDERATION SHOULD BE GIVEN TO THE AFFECT ON THE RCS OF PLACING THE TERNATE DEMIN IN SERVICE. IF IT IS NOT SATURATED AT THE SAME LEVEL AS E RCS IS AT THE TIME THE ALTERNATE DEMIN IS PLACED IN SERVICE THERE WI A SIGNIFICANT CHANGE IN CORE REACTIVITY THAT MAY CAUSE A SIGNIFICANT

ENCLOSURE 1 (Page 130 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-05-07	H-05-0
	RC PUI SEAL FLC HIGH/LC	ows
	EVENT POIN	T 1079
O REACTOR COOLANT PUMP TOTAL SEAL FLOW >42	GPM AS SENSED BY MU-2	7-FS.
REDUNDANT INDICATION WHICH WILL VERIFY ALARM		/-+5.

• REACTOR COOLANT PUMP TOTAL SEAL FLOW INDICATION MU-27-FI.

OPERATOR ACTIONS FOR A VALID ALARM:

REFER TO OP-302.REESTABLISH NORMAL SEAL FLOW.

DISCUSSION:

REFERENCES: DRAWING 208-041 MU-47

SENSING ELEMENT: MU-27-FS

ENCLOSURE 1 (Page 131 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-05-07	H-05-07
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RC PUMP SEAL FLOWS HIGH/LOW

IND.	ICATED CONDITION:
0	REACTOR COOLANT PUMP TOTAL SEAL FLOW <22 GPM AS SENSED BY MU-27-FS.
REDI	UNDANT INDICATION WHICH WILL VERIFY ALARM:
0	REACTOR COOLANT PUMP TOTAL SEAL FLOW INDICATION MU-27-FI.
OPER	RATOR ACTIONS FOR A VALID ALARM:
	REFER TO OP-302.
0	REESTABLISH NORMAL SEAL FLOW.
DISC	USSION:
REFE	RENCES: DRAWING 208-041 MU-47
SENS	ING ELEMENT: MU-27-FS

ENCLOSURE 1 (Page 132 of 187)

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-05-07	H-05-07
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RC PUMP SEAL FLOWS HIGH/LOW

INDICATED	CONDITION:
o REACTO	R COOLANT PUMP 1A SEAL FLOW <3 GPM AS SENSED BY MU-7-FS1.
REDUNDANT	INDICATION WHICH WILL VERIFY ALARM:
o REACTO	R COOLANT PUMP 1A SEAL FLOW INDICATION MU-7-FI1.
OPERATOR A	CTIONS FOR A VALID ALARM:
	TO OP-302. BLISH NORMAL SEAL FLOW.
DISCUSSION	:
REFERENCES	: DRAWING 208-041 MU-47
	EMENT: MU-7-FS1

ENCLOSURE 1 (Page 133 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-05-07	H-05-0
	RC PU SEAL FL HIGH/L	ows
	EVENT POIN	NT 1085
INDICATED CONDITION:		
• REACTOR COOLANT PUMP 18 SEAL FLOW <3 GPM	AS SENSED BY MIL-7-ES	,
	NS SERVED B1 M0-7-F32	••
REDUNDANT INDICATION WHICH WILL VERIFY ALARM	:	
REDUNDANT INDICATION WHICH WILL VERIFY ALARM O REACTOR COOLANT PUMP 1B SEAL FLOW INDICA		
 REACTOR COOLANT PUMP 1B SEAL FLOW INDICATION OPERATOR ACTIONS FOR A VALID ALARM: REFER TO OP-302. 		
O REACTOR COOLANT PUMP 18 SEAL FLOW INDICA OPERATOR ACTIONS FOR A VALID ALARM:		
 REACTOR COOLANT PUMP 1B SEAL FLOW INDICATION OPERATOR ACTIONS FOR A VALID ALARM: REFER TO OP-302. 		
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 REACTOR COOLANT PUMP 1B SEAL FLOW INDICATION OPERATOR ACTIONS FOR A VALID ALARM: REFER TO OP-302. REESTABLISH NORMAL SEAL FLOW. 		
 REACTOR COOLANT PUMP 1B SEAL FLOW INDICATION OPERATOR ACTIONS FOR A VALID ALARM: REFER TO OP-302. REESTABLISH NORMAL SEAL FLOW. 		
 REACTOR COOLANT PUMP 1B SEAL FLOW INDICATION OPERATOR ACTIONS FOR A VALID ALARM: REFER TO OP-302. REESTABLISH NORMAL SEAL FLOW. 		
 REACTOR COOLANT PUMP 1B SEAL FLOW INDICATION OPERATOR ACTIONS FOR A VALID ALARM: REFER TO OP-302. REESTABLISH NORMAL SEAL FLOW. 		

PSA-Z ANNUNCIATOR RESPONSE

ENCLOSURE 1 (Page 134 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-05-07	H-05-01
	RC PUI SEAL FLC HIGH/LC	ows
	EVENT POIN	IT 1086
INDICATED CONDITION:		
o REACTOR COOLANT PUMP 1C SEAL FLOW <3 GPM	AS SENSED BY MU-7-FS3	
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REDUNDANT INDICATION WHICH WILL VERIFY ALARM		
REDUNDANT INDICATION WHICH WILL VERIFY ALARM		
REDUNDANT INDICATION WHICH WILL VERIFY ALARM • REACTOR COOLANT PUMP 1C SEAL FLOW INDICAT		
REDUNDANT INDICATION WHICH WILL VERIFY ALARM • REACTOR COOLANT PUMP 1C SEAL FLOW INDICAT OPERATOR ACTIONS FOR A VALID ALARM:		
REDUNDANT INDICATION WHICH WILL VERIFY ALARM • REACTOR COOLANT PUMP 1C SEAL FLOW INDICAT OPERATOR ACTIONS FOR A VALID ALARM: • REFER TO OP-302.		
REDUNDANT INDICATION WHICH WILL VERIFY ALARM • REACTOR COOLANT PUMP 1C SEAL FLOW INDICAT OPERATOR ACTIONS FOR A VALID ALARM:		
REDUNDANT INDICATION WHICH WILL VERIFY ALARM • REACTOR COOLANT PUMP 1C SEAL FLOW INDICAT OPERATOR ACTIONS FOR A VALID ALARM: • REFER TO OP-302.		
REDUNDANT INDICATION WHICH WILL VERIFY ALARM • REACTOR COOLANT PUMP 1C SEAL FLOW INDICAT OPERATOR ACTIONS FOR A VALID ALARM: • REFER TO OP-302.		
REDUNDANT INDICATION WHICH WILL VERIFY ALARM • REACTOR COOLANT PUMP 1C SEAL FLOW INDICAT OPERATOR ACTIONS FOR A VALID ALARM: • REFER TO OP-302.		
REDUNDANT INDICATION WHICH WILL VERIFY ALARM • REACTOR COOLANT PUMP 1C SEAL FLOW INDICAT OPERATOR ACTIONS FOR A VALID ALARM: • REFER TO OP-302. • REESTABLISH NORMAL SEAL FLOW.		
REDUNDANT INDICATION WHICH WILL VERIFY ALARM • REACTOR COOLANT PUMP 1C SEAL FLOW INDICAT OPERATOR ACTIONS FOR A VALID ALARM: • REFER TO OP-302. • REESTABLISH NORMAL SEAL FLOW.		
REDUNDANT INDICATION WHICH WILL VERIFY ALARM • REACTOR COOLANT PUMP 1C SEAL FLOW INDICAT OPERATOR ACTIONS FOR A VALID ALARM: • REFER TO OP-302. • REESTABLISH NORMAL SEAL FLOW.		
REDUNDANT INDICATION WHICH WILL VERIFY ALARM • REACTOR COOLANT PUMP 1C SEAL FLOW INDICAT OPERATOR ACTIONS FOR A VALID ALARM: • REFER TO OP-302. • REESTABLISH NORMAL SEAL FLOW.		
REDUNDANT INDICATION WHICH WILL VERIFY ALARM • REACTOR COOLANT PUMP 1C SEAL FLOW INDICAT OPERATOR ACTIONS FOR A VALID ALARM: • REFER TO OP-302. • REESTABLISH NORMAL SEAL FLOW.		
REDUNDANT INDICATION WHICH WILL VERIFY ALARM • REACTOR COOLANT PUMP 1C SEAL FLOW INDICAT OPERATOR ACTIONS FOR A VALID ALARM: • REFER TO OP-302. • REESTABLISH NORMAL SEAL FLOW.		
REDUNDANT INDICATION WHICH WILL VERIFY ALARM • REACTOR COOLANT PUMP 1C SEAL FLOW INDICAT OPERATOR ACTIONS FOR A VALID ALARM: • REFER TO OP-302.		

ENCLOSURE 1 (Page 135 of 187)

RC PUMP SEAL FLOWS HIGH/LOW

EVENT POINT 1087

INDICATED CONDITION:

O REACTOR COOLANT PUMP 1D SEAL FLOW <3 GPM AS SENSED BY MU-7-FS4.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O REACTOR COOLANT PUMP 1D SEAL FLOW INDICATION MU-7-FI4.

OPERATOR ACTIONS FOR A VALID ALARM:

REFER TO OP-302.REESTABLISH NORMAL SEAL FLOW.

DISCUSSION:

REFERENCES: DRAWING 208-041 MU-47

SENSING ELEMENT: MU-7-FS4

ENCLOSURE 1 (Page 136 of 187)

 PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-05-08	H-05-08
	BWST N INTERLO BYPASS	оск

EVENT POINT 2048

INDICATED CONDITION:

O MAKEUP TANK LOW-LOW LEVEL INTERLOCK DEFEATED FOR MUV-58 AND/OR MUV-73

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

SWITCH POSITIONS IN "A" AND "B" REMOTE SHUTDOWN AUXILIARY CABINETS.

OPERATOR ACTIONS FOR A VALID ALARM:

DISCUSSION:

THE SWITCH FOR MUV-73 INTERLOCK IS LOCATED IN THE "A" REMOTE SHUTDOWN AUXILIARY CABINET IN THE "A" ES 4160V SWITCHGEAR ROOM. THE SWITCH FOR MUV-58 INTERLOCK IS LOCATED IN THE "B" REMOTE SHUTDOWN AUXILIARY CABINET IN THE "B" ES 4160V SWITCHGEAR ROOM. USE SSOD KEY 47 TO ACCESS THE AUXILIARY CABINETS.

REFERENCES: DRAWING 205-041 MU-07

SENSING ELEMENT: ZZ SS/BYP, RS-AUX A/B

ENCLOSURE 1 (Page 137 of 187)

PSA-2	ANNUNCIATOR RESPONSE	PSA-Z-06-01	H-06-0
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STM GEN B MAIN STEAM ISO ACTUATED

EVENT POINT 2008

INDICATED CONDITION:

 EFIC CHANNEL "A", STEAM GENERATOR "B" MAIN STEAM LINE ISOLATION BUS 1 OR BUS 2 TRIPPED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O HALF OR FULL TRIP ON EFIC CHANNEL "A" MAIN STEAM LINE ISOLATION.

- MS-110-PI, CHANNEL "A", OTSG B PRESSURE INDICATION.
- O MS-106-PIR, CHANNEL "A", OTSG A/B PRESSURE RECORDER.

OPERATOR ACTIONS FOR A VALID ALARM:

O REFER TO EOP-05, EXCESSIVE HEAT TRANSFER.

INVESTIGATE CAUSE OF TRIP CONDITION.

DISCUSSION:

MSLI ACTUATION SETPOINT IS OTSG PRESSURE <600 PSIG. WITH THIS EVENT POINT IN ALARM, A HALF TRIP OR FULL TRIP CONDITION EXISTS. THE OPERATOR MUST OBSERVE THE EFIC PUSH-BUTTONS TO DETERMINE EFIC ACTUATION STATUS. NO ADDITIONAL ALARMS DIFFERENTIATE BETWEEN FULL AND HALF TRIPS.

REFERENCES: VITRO DRAWING 3801-3005 SHEET 1

ENCLOSURE 1 (Page 138 of 187)

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-06-01	H-06-01
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STM GEN B MAIN STEAM ISO ACTUATED

EVENT POINT 2016

INDICATED CONDITION:

O EFIC CHANNEL "B", STEAM GENERATOR "B" MAIN STEAM LINE ISOLATION BUS 1 OR BUS 2 TRIPPED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O HALF OR FULL TRIP ON EFIC CHANNEL "B" MAIN STEAM LINE ISOLATION.

- o MS-111-PI, CHANNEL "B", OTSG A PRESSURE INDICATION.
- O MS-107-PIR, CHANNEL "B", OTSG A/B PRESSURE RECORDER.

OPERATOR ACTIONS FOR A VALID ALARM:

○ REFER TO EOP-05, EXCESSIVE HEAT TRANSFER. O INVESTIGATE CAUSE OF TRIP CONDITION.

DISCUSSION:

MSLI ACTUATION SETPOINT IS OTSG PRESSURE <600 PSIG. WITH THIS EVENT POINT IN ALARM, A HALF TRIP OR FULL TRIP CONDITION EXISTS. THE OPERATOR MUST OBSERVE THE EFIC PUSH-BUTTONS TO DETERMINE EFIC ACTUATION STATUS. NO ADDITIONAL ALARMS DIFFERENTIATE BETWEEN FULL AND HALF TRIPS.

REFERENCES: VITRO DRAWING 3801-3005 SHEET 2

ENCLOSURE 1 (Page 139 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-06-02	H-06-02
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STM GEN B FEEDWATER ISO ACTUATED

EVENT POINT 2010

INDICATED CONDITION:

 EFIC CHANNEL "A", STEAM GENERATOR "B" MAIN FEEDWATER ISOLATION BUS 1 OR BUS 2 TRIPPED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O HALF OR FULL TRIP ON EFIC CHANNEL "A" MAIN FEEDWATER ISOLATION.

- O MS-110-PI, CHANNEL "A", OTSG B PRESSURE INDICATION.
- O MS-106-PIR, CHANNEL "A", OTSG A/B PRESSURE RECORDER.

OPERATOR ACTIONS FOR A VALID ALARM:

REFER TO EOP-05, EXCESSIVE HEAT TRANSFER.
 INVESTIGATE CAUSE OF TRIP CONDITION.

O INVESTIGATE CAUSE OF THE CONDITION.

DISCUSSION:

MFWI ACTUATION SETPOINT IS OTSG PRESSURE <600 PSIG. WITH THIS EVENT POINT IN ALARM, A HALF TRIP OR FULL TRIP CONDITION EXISTS. THE OPERATOR MUST OBSERVE THE EFIC PUSH-BUTTONS TO DETERMINE EFIC ACTUATION STATUS. NO ADDITIONAL ALARMS DIFFERENTIATE BETWEEN FULL AND HALF TRIPS.

REFERENCES: VITRO DRAWING 3801-3005 SHEET 1

ENCLOSURE 1 (Page 140 of 187)

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-06-02	H-06-02
	and the second	

STM GEN B FEEDWATER ISO ACTUATED

EVENT POINT 2018

INDICATED CONDITION:

 EFIC CHANNEL "B", STEAM GENERATOR "B" MAIN FEEDWATER ISOLATION BUS 1 OR BUS 2 TRIPPED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O HALF OR FULL TRIP ON EFIC CHANNEL "B" MAIN FEEDWATER ISOLATION.

- MS-111-PI, CHANNEL "B", OTSG B PRESSURE INDICATION.
- MS-107-PIR, CHANNEL "B", OTSG A/B PRESSURE RECORDER.

OPERATOR ACTIONS FOR A VALID ALARM:

REFER TO EOP-05, EXCESSIVE HEAT TRANSFER.
 INVESTIGATE CAUSE OF TRIP CONDITION.

DISCUSSION:

MFWI ACTUATION SETPOINT IS OTSG PRESSURE <600 PSIG. WITH THIS EVENT POINT IN ALARM, A HALF TRIP OR FULL TRIP CONDITION EXISTS. THE OPERATOR MUST OBSERVE THE EFIC PUSH-BUTTON'S TO DETERMINE EFIC ACTUATION STATUS. NO ADDITIONAL ALARMS DIFFERENTIATE BETWEEN FULL AND HALF TRIPS.

REFERENCES: VITRO DRAWING 3801-3005 SHEET 2

ENCLOSURE 1 (Page 141 of 187)

 PSA-2	Z ANNUNC	IATOR A	RESPO	NSE		PSA-Z-06-03	H-06-0
					t i		
 						EMERG	
					311		

EVENT POINT 2006

INDICATED CONDITION:

O EFIC CHANNEL "A", EMERGENCY FEEDWATER BUS 1 OR BUS 2 TRIPPED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O HALF OR FULL TRIP ON EFIC CHANNEL "A" EMERGENCY FEEDWATER ACTUATION.

OPERATOR ACTIONS FOR A VALID ALARM:

REFER TO EOP.INVESTIGATE CAUSE OF TRIP CONDITION.

DISCUSSION:

WITH THIS EVENT POINT IN ALARM, A HALF TRIP OR FULL TRIP CONDITION EXISTS. THE OPERATOR MUST OBSERVE THE EFIC PUSH-BUTTONS TO DETERMINE EFIC ACTUATION STATUS. EFIC ACTUATES BY ANY OF THE FOLLOWING CONDITIONS:

EITHER OTSG <600 PSIG EITHER OTSG APPROACHING O" MANUAL ACTUATION LOSS OF ALL RCPs NI POWER >45% W/FW <17% HPI A AND B ACTUATION LOSS OF BOTH MFPs W/RPS NOT IN S/D BYPASS

REFERENCES: VITRO DRAWING 3801-3005 SHEET 1

ENCLOSURE 1 (Page 142 of 187)

	PSA-Z-06-03	H-06-03
	EMERG	
	EVENT POIN	IT 2014
INDICATED CONDITION: • EFIC CHANNEL "B", EMERGENCY FEEDWATER BU	5 1 OR BUS 2 TRIPPED.	
DEDUNDANT TNOTCATTON LUITCH LITE ANTERT	٨.	the little date in the second s
REDUNDANT INDICATION WHICH WILL VERIFY ALARM • HALF OR FULL TRIP ON EFIC CHANNEL "B" EM		ATION.
		ATION.

REFERENCES: VITRO DRAWING 3801-3005 SHEET 1

ENCLOSURE 1 (Page 143 of 187)

H-06-06

2012

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-06-06
	EFIC BYPASS
	EVENT POINT

O EFIC CHANNEL A IN MAINTENANCE BYPASS.

· ANY EFIC CHANNEL A TEST SWITCH NOT IN NORMAL.

• ANY EFIC CHANNEL A CIRCUIT BREAKER OPEN.

• ANY EFIC CHANNEL A MODULE WITHDRAWN.

• EFIC CHANNEL A CABINET POWER SUPPLY FAILURE.

• EFIC CHANNEL A MAINTENANCE BYPASS ISOLATOR FAILURE.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF ALARM CONDITION.

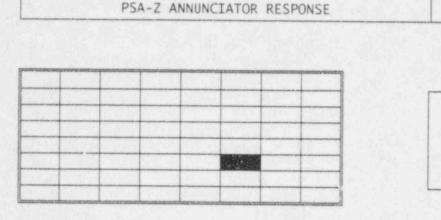
DISCUSSION:

• MAINTENANCE BYPASS DIGITAL ISOLATOR FAILURE IS INDICATED BY MAINTENANCE BYPASS ALARM WITHOUT THE LOCAL CHANNEL MAINTENANCE BYPASS LED FLASHING.

REFERENCES: VITRO DRAWING 3801-3005 SHEET 1

ENCLOSURE 1 (Page 144 of 187)

H-06-06



EFIC BYPASS

PSA-Z-06-06

EVENT POINT 2020

INDICATED CONDITION:

O EFIC CHANNEL B IN MAINTENANCE BYPASS.

O ANY EFIC CHANNEL B TEST SWITCH NOT IN NORMAL.

• ANY EFIC CHANNEL B CIRCUIT BREAKER OPEN.

• ANY EFIC CHANNEL B MODULE WITHDRAWN.

• EFIC CHANNEL B CABINET POWER SUPPLY FAILURE.

O EFIC CHANNEL B MAINTENANCE BYPASS ISOLATOR FAILURE.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

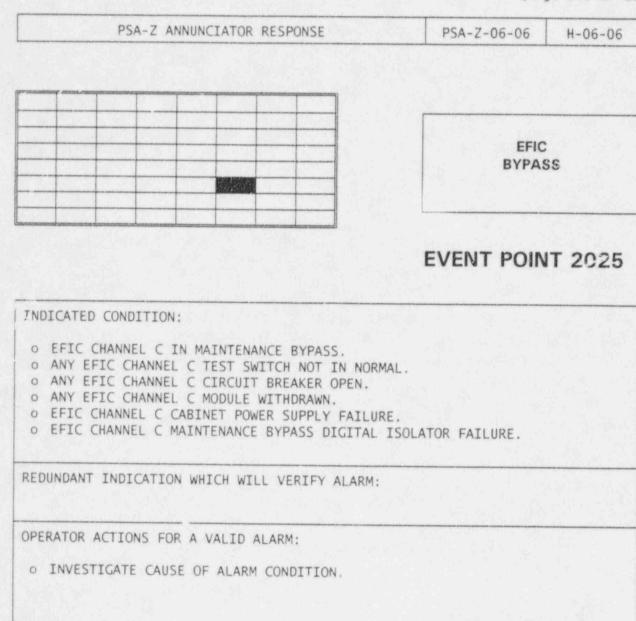
INVESTIGATE CAUSE OF ALARM CONDITION.

DISCUSSION:

• MAINTENANCE BYPASS DIGITAL ISOLATOR FAILURE IS INDICATED BY MAINTENANCE BYPASS ALARM WITHOUT THE LOCAL CHANNEL MAINTENANCE BYPASS LED FLASHING.

REFERENCES: VITRO DRAWING 3801-3005 SHEET 2

ENCLOSURE 1 (Page 145 of 187)



DISCUSSION:

O MAINTENANCE BYPASS DIGITAL ISOLATOR FAILURE IS INDICATED BY MAINTENANCE BYPASS ALARM WITHOUT THE LOCAL CHANNEL MAINTENANCE BYPASS LED FLASHING.

REFERENCES: VITRO DRAWING 3801-3005 SHEET 3

ENCLOSURE 1 (Page 146 of 187)

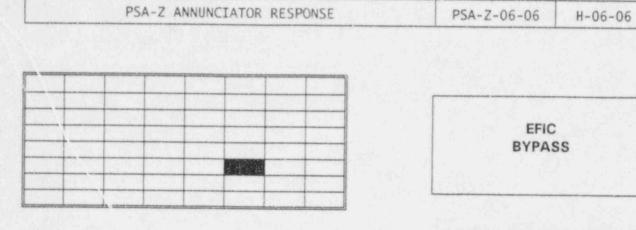
	H-06-06
EFIC	
EVENT POIN	IT 2029
	ВУРАЗ

DISCUSSION:

• MAINTENANCE BYPASS DIGITAL ISOLATOR FAILURE IS INDICATED BY MAINTENANCE BYPASS ALARM WITHOUT THE LOCAL CHANNEL MAINTENANCE BYPASS LED FLASHING.

REFERENCES: VITRO DRAWING 3801-3005 SHEET 4

ENCLOSURE 1 (Page 147 of 187)



EVENT POINT 2030

 O EFIC CHANNEL A EFW TEST SWITCH IN "TEST" POSITION. "M.S. ISOLATION VALVES AIR SUPPLY TEST A" SWITCH SELECTED TO NUMBER 2 "MSI SV-2 EFIC HALF/TRIP" OR NUMBER 1, "MS & FW ISOLATION".
REDUNDANT INDICATION WHICH WILL VERIFY ALARM:
• KEY OPERATED TEST SWITCH IN RELAY RACK RR3A IS SELECTED TO THE "TEST" POSITION. (CRD ROOM)
OPERATOR ACTIONS FOR A VALID ALARM:
 INVESTIGATE CAUSE OF ALARM CONDITION. NOTIFY SSOD OF KEY SWITCH POSITION.
DISCUSSION:
SELECTING THE "TEST" POSITION BLOCKS THE OUTPUT OF "A" EFW BUS 1 AND BUS 2.
REFERENCES: DRAWING 208-032-FW-47, 208-026-EF-15
ENSING ELEMENT:

INDICATED CONDITION:

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	PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-06-06	H-06-06
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			8-1 - H - H	

EFIC BYPASS

EVENT POINT 2031

INDICATED CONDITION:

- O EFIC CHANNEL B EFW TEST SWITCH IN TEST POSITION.
- "M.S. ISOLATION VALVES AIR SUPPLY TEST B" SWITCH SELECTED TO NUMBER 2, "MSI SV-1 EFIC HALF TRIP" OR NUMBER 1, "MS & FW ISOLATION".

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

 KEY OPERATED TEST SWITCH IN RELAY RACK RRSB1 IS SELECTED TO THE "TEST" POSITION. (EFIC ROOM B)

OPERATOR ACTIONS FOR A VALID ALARM:

INVESTIGATE CAUSE OF ALARM CONDITION.
 NOTIFY SSOD OF KEY SWITCH POSITION.

DISCUSSION:

SELECTING THE "TEST" POSITION BLOCKS THE OUTPUT OF "B" EFW BUS 1 AND BUS 2.

REFERENCES: DRAWING 208-032-FW-48, 208-026-EF-16

ENCLOSURE 1 (Page 149 of 187)

H-06-06

PSA-Z-06-06

	EFIC BYPASS
	EVENT POINT 2032
INDICATED CONDITION:	
• EFIC AUXILIARY RELAY BOX 1C TEST SWITCH	IN TEST.
REDUNDANT INDICATION WHICH WILL VERIFY ALAR	RM:
	RM :
OPERATOR ACTIONS FOR A VALID ALARM:	RM :
	RM :
OPERATOR ACTIONS FOR A VALID ALARM:	RM :
OPERATOR ACTIONS FOR A VALID ALARM:	RM :
OPERATOR ACTIONS FOR A VALID ALARM: • INVESTIGATE CAUSE OF ALARM CONDITION.	RM:
OPERATOR ACTIONS FOR A VALID ALARM: • INVESTIGATE CAUSE OF ALARM CONDITION. DISCUSSION:	
OPERATOR ACTIONS FOR A VALID ALARM: • INVESTIGATE CAUSE OF ALARM CONDITION.	
OPERATOR ACTIONS FOR A VALID ALARM: • INVESTIGATE CAUSE OF ALARM CONDITION. DISCUSSION: • AUTOMATIC REPOSITIONING OF EFV-11 AND EF	
OPERATOR ACTIONS FOR A VALID ALARM: • INVESTIGATE CAUSE OF ALARM CONDITION. DISCUSSION: • AUTOMATIC REPOSITIONING OF EFV-11 AND EF	

PSA-Z ANNUNCIATOR RESPONSE

ENCLOSURE 1 (Page 150 of 187)

H-06-06

PSA-2-06-06

	EFIC BYPASS
	EVENT POINT 2033
INDICATED CONDITION:• EFIC AUXILIARY RELAY BOX 1D TEST SW	ITCH IN TEST.
REDUNDANT INDICATION WHICH WILL VERIFY	ALARM:
REDUNDANT INDICATION WHICH WILL VERIFY OPERATOR ACTIONS FOR A VALID ALARM: • INVESTIGATE CAUSE OF ALARM CONDITIO	
OPERATOR ACTIONS FOR A VALID ALARM:	Ν.

PSA-Z ANNUNCIATOR RESPONSE

ENCLOSURE 1 (Page 151 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-06-06	H-06-06
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	EFIC	
	EFIL	

EVENT POINT 2034

INDICATED CONDITION:

O EFIC ES-A BYPASS/TESTING.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF ALARM CONDITION.

DISCUSSION:

THIS EVENT POINT IS RECEIVED DURING EFIC TESTING BY PLACING THE SPRING RETURN TO NORMAL SWITCH TO EITHER TEST 1 OR TEST 2 POSITION IN THE ES-A MANUAL ACTUATION CABINET 4D. THESE TEST POSITIONS SIMULATE AN ES "A" SIGNAL TO EFIC CHANNELS "A" OR "B". THIS SWITCH DOES NOT BYPASS ANY ACTUATION SIGNAL FROM ENGINEERED SAFEGUARDS.

REFERENCES: DRAWING 208-028-ES-A65

ENCLOSURE 1 (Page 152 of 187)

	EFIC
	BYPASS

INDICATED CONDITION:

• EFIC ES-B BYPASS/TESTING.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

○ INVESTIGATE CAUSE OF ALARM CONDITION.

DISCUSSION:

THIS EVENT POINT IS RECEIVED DURING EFIC TESTING BY PLACING THE SPRING RETURN TO NORMAL SWITCH TO EITHER TEST 1 OR TEST 2 POSITION IN THE ES-B MANUAL ACTUATION CABINET 5D. THESE TEST POSITIONS SIMULATE AN ES "B" SIGNAL TO EFIC CHANNELS "A" OR "B". THIS SWITCH DOES NOT BYPASS ANY ACTUATION SIGNAL FROM ENGINEERED SAFEGUARDS.

REFERENCES: DRAWING 208-028-ES-B65

ENCLOSURE 1 (Page 153 of 187)

H-06-07

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SHUTDOV		 		
EVENT POINT	Conservation of Conservation o	Ataga, da, tantar ja		

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

 CHANNEL "A" <725 PSI STM GEN PRESS EFIC ACT BYPASS' PUSH-BUTTON ILLUMINATED.

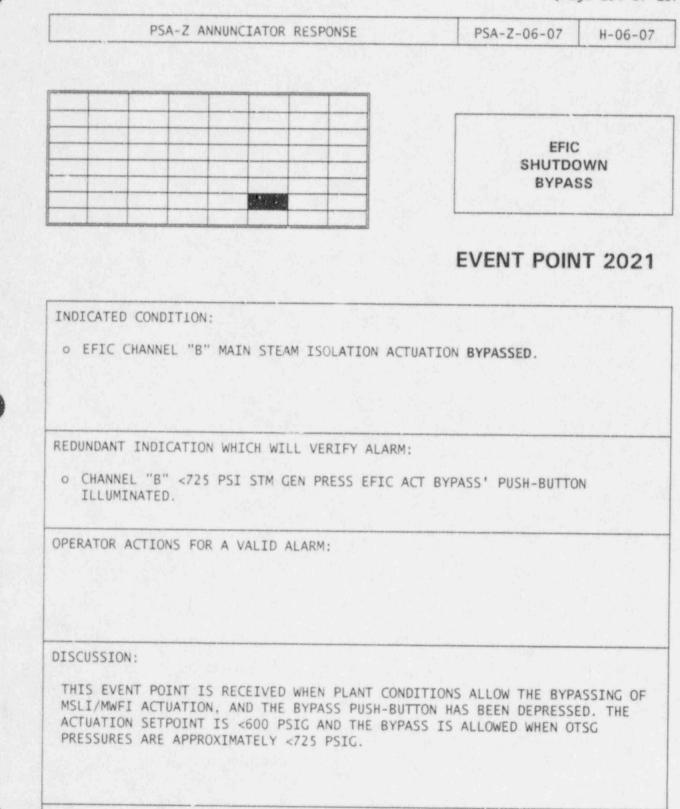
OPERATOR ACTIONS FOR A VALID ALARM:

DISCUSSION:

THIS EVENT POINT IS RECEIVED WHEN PLANT CONDITIONS ALLOW THE BYPASSING OF MSLI/MWFI ACTUATION, AND THE BYPASS PUSH-BUTTON HAS BEEN DEPRESSED. THE ACTUATION SETPOINT IS <600 PSIG AND THE BYPASS IS ALLOWED WHEN OTSG PRESSURES ARE APPROXIMATELY <725 PSIG.

REFERENCES: VITRO DRAWING 3801-3005 SHEET 1

ENCLOSURE 1 (Page 154 of 187)



REFERENCES: VITRO DRAWING 3801-3005 SHEET 2

ENCLOSURE 1 (Page 155 of 187)

PSA-Z ANNUNCIATOR R	PSA-Z-06-07	H-06-0
	EFIC	
	SHUTDO	

EVENT POINT 2024

INDICATED CONDITION:

• EFIC CHANNEL "C" MAIN STEAM ISOLATION ACTUATION BYPASSED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

 CHANNEL "C" <725 PSI STM GEN PRESS EFIC ACT BYPASS' PUSH-BUTTON ILLUMINATED.

OPERATOR ACTIONS FOR A VALID ALARM:

DISCUSSION:

THIS EVENT POINT IS RECEIVED WHEN PLANT CONDITIONS ALLOW THE BYPASSING OF MSLI/MWFI ACTUATION, AND THE BYPASS PUSH-BUTTON HAS BEEN DEPRESSED. THE ACTUATION SETPOINT IS <600 PSIG AND THE BYPASS IS ALLOWED WHEN OTSG PRESSURES ARE APPROXIMATELY <725 PSIG.

REFERENCES: VITRO DRAWING 3801-3005 SHEET 3

ENCLOSURE 1 (Page 156 of 187)

PSA-Z ANNUNCIATOR RESPONSE			PSA-Z-06-07	H-06-0	
un an	TT				
			 	EFIC)

SHUTDOWN BYPASS

EVENT POINT 2028

INDICATED CONDITION:

• EFIC CHANNEL "D" MAIN STEAM ISOLATION ACTUATION BYPASSED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

 CHANNEL "D" <725 PSI STM GEN PRESS EFIC ACT BYPASS' PUSH-BUTTON ILLUMINATED.

OPERATOR ACTIONS FOR A VALID ALARM:

DISCUSSION:

THIS EVENT POINT IS RECEIVED WHEN PLANT CONDITIONS ALLOW THE BYPASSING OF MSLY/MWFI ACTUATION, AND THE BYPASS PUSH-BUTTON HAS BEEN DEPRESSED. THE ACTUATION SETPOINT IS <600 PSIG AND THE BYPASS IS ALLOWED WHEN OTSG PRESSURES ARE APPROXIMATELY <725 PSIG.

REFERENCES: VITRO DRAWING 3801-3005 SHEET 4

ENCLOSURE 1 (Page 157 of 187)

INDICATED CONDITION:	EF?C A SYSTE TROUE	M
ENDICATED CONDITION:		
INDICATED CONDITION:	PRIT DOIN	
	VENT POIN	T 0767
 AHF-54A/AHF-54B DUCT, SMUKE DETECTED, OR TROUBLE SMOKE DETECTION MODULES AH-934-CE1 OR AH-934-CE2. 	AS SENSED BY	PYROTRONI
and derection hobbles An out cer on An-534-CE2.		
REDUNDANT INDICATION WHICH WILL VERIFY ALARM:		

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE CAUSE OF SMOKE DETECTED OR TROUBLE ALARM.

DISCUSSION:

REFERENCES: DRAWING 208-005-AH-185

SENSING ELEMENT: AH-934-CE1, AH-934-CE2

ENCLOSURE 1 (Page 158 of 187)

H-06-08

PSA-Z-06-08

	EFIC AH S\'STEM TROUBLE
	EVENT POINT 0768
INDICATED CONDITION: • AHF-54A/AHF-54B DUCT, TEMPE	RATURE >85° AS SENSED BY AH-932-TS1/TS2.
REDUNDANT INDICATION WHICH WIL	L VERIFY ALARM:
OPERATOR ACTIONS FOR A VALID AN O INVESTIGATE CAUSE OF DUCT H	
O INVESTIGATE CAUSE OF DUCT H	IGH TEMPERATURE ALARM.

PSA-Z ANNUNCIATOR RESPONSE

ENCLOSURE 1 (Page 159 of 187)

H-06-08

PSA-Z-06-08

	EFIC AH SYSTEM TROUBLE
	EVENT POINT 0774
INDICATED CONDITION: • AHF-54A/AHF-54B DUCT, FLOW LOW AS S	ENSED BY AH-933-FS1/FS2.
APAULANT THAT A THAT A	
	ALARM:
REDUNDANT INDICATION WHICH WILL VERIFY OPERATOR ACTIONS FOR A VALID ALARM: • INVESTIGATE CAUSE OF LOW AIRFLOW ALA	
OPERATOR ACTIONS FOR A VALID ALARM:	ARM.
OPERATOR ACTIONS FOR A VALID ALARM: • INVESTIGATE CAUSE OF LOW AIRFLOW ALA DISCUSSION: THIS ALARM POINT IS ACTUATED WHEN EFIC	ARM.

PSA-Z ANNUNCIATOR RESPONSE

ENCLOSURE 1 (Page 160 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-06-08	H-06-08
	EFIC A SYSTE TROUB	M
	EVENT POIN	T 0775
<pre>INDICATED CONDITION:</pre>	ED BY AH-944-TS1/TS2/	
NDICATED CONDITION: • EFIC ROOM(S) TEMPERATURE HIGH/LOW AS SENS	ED BY AH-944-TS1/TS2/	TS3/TS4.
	ED BY AH-944-TS1/TS2/	TS3/TS4.
		TS3/TS4.
<pre>o EFIC ROOM(S) TEMPERATURE HIGH/LOW AS SENS</pre>		TS3/TS4.
<pre>o EFIC ROOM(S) TEMPERATURE HIGH/LOW AS SENS</pre>		TS3/TS4.

• INVESTIGATE CAUSE OF EFIC ROOM TEMPERATURE ALARM.

DISCUSSION:

THIS ALARM POINT IS ACTUATED WHEN ANY EFIC ROOM TEMPERATURE IS LESS THAN 60°F OR GREATER THAN 85°F. ONE DETECTOR IS LOCATED TN EACH EFIC ROOM MOUNTED ON THE WALL APPROXIMATELY 4' FROM THE FLOOR. IF ALARM IS IN FOR NO APPARENT REASON ENGINEERING CAN ADJUST DAMPER AND/OR DUCT REGISTER POSITIONS TO BETTER DISTRIBUTE AIR FLOW THROUGHOUT THE ROOMS.

REFERENCES: DRAWING 208-005-AH-185

SENSING ELEMENT: AH-944-TS1, AH-944-TS2, AH-944-TS3, AH-944-TS4

ENCLOSURE 1 (Page 161 of 187)

	1	
PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-07-01	H-07-01

EF TANK I EVEL LOW-LOW

EVENT POINT 0815

INDICATED CONDITION:

○ EFT-2 LEVEL <8'0" AS SENSED BY EF-98-LT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

EF-98-LI1, EMERGENCY FEED TANK LEVEL INDICATION.
 EF-99-LI1, EMERGENCY FEED TANK LEVEL INDICATION.

OPERATOR ACTIONS FOR A VALID ALARM:

O REFER TO EOP.

DISCUSSION:

THE LOW-LOW LEVEL ALARM SETPOINT IS EQUIVALENT TO 30,600 GALLONS.

REFER TO TS FOR ADMINISTRATIVE REQUIREMENTS.

REFERENCES: DRAWING 205-026-EF-05

SENSING ELEMENT: EF-98-LT

ENCLOSURE 1 (Page 162 of 187)

EF PUMP 1 AUTO START
EVENT POINT 1681

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O RED LIGHT ON WITH A GREEN FLAG ON EFP-1 CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

O REFER TO EOP.

DISCUSSION:

REFERENCES: DRAWING 208-026-EF-01B

SENSING ELEMENT: EFP-1 CONTROL SWITCH CONTACTS CS/ST, CS/O

ENCLOSURE 1 (Page 163 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-07-03	H-07-03

EF PUMP 1 START FAILURE

EVENT POINT 1680

INDICATED CONDITION:

• EFP-1 MOTOR NOT ENERGIZED WITH CONTROL SWITCH IN NORMAL AFTER STOP POSITION, AND 50 SECONDS HAVE ELAPSED WITH AN ACTUATION SIGNAL PRESENT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

O REFER TO EOP.

O MANUALLY START EFP-1

DISCUSSION:

IF EFP-1 FAILED TO START FROM A VALID ACTUATION SIGNAL, BUT WAS MANUALLY STARTED THEN THIS ALARM WILL NOT ACTUATE DUE TO THE 50 SECOND TIME DELAY RELAY CIRCUIT. THE CONTROL SWITCH MUST BE IN THE NORMAL AFTER STOP POSITION TO ACTUATE THIS ALARM.

REFERENCES: DRAWING 208-026-EF-01B

SENSING ELEMENT: EFP-1 CONTROL SWITCH CONTACTS CS/ST. CS/O

ENCLOSURE 1 (Page 164 of 187)

PSA-Z ANNUNCIATOR	RESPONSE	PSA-Z-07-03	H-07-03
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EF PUMP 1 START FAILURE

EVENT POINT 1682

INDICATED CONDITION:

• EFP-1 DISCHARGE PRESSURE <1100 PSIG AS SENSED BY EF-17-PS WITH CONTROL SWITCH IN NORMAL AFTER START POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

REFER TO EOP.
 INVESTIGATE CAUSE OF LOW DISCHARGE PRESSURE.

DISCUSSION:

THE CONTROL SWITCH MUST BE IN THE NORMAL AFTER START POSITION TO ACTUATE THIS EVENT POINT.

REFERENCES: DRAWING 208-026-EF-016

SENSING ELEMENT: EFP-1 CONTROL SWITCH CONTACTS CS/SC, CS/O, EF-17-PS

ENCLOSURE 1 (Page 165 of 187)

PSA-Z	ANNUNCIATOR	RESPONSE	PSA-Z-07-04	H-07-04

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EF PUMP 1 TRIP

EVENT POINT 1261

INDICATED CONDITION:

• EFP-1 MOTOR NOT ENERGIZED WITH CONTROL SWITCH IN NORMAL AFTER START POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O GREEN LIGHT ON WITH A RED FLAG ON EFP-1 CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

REFER TO EOP.INVESTIGATE CAUSE OF BREAKER TRIP.

DISCUSSION:

THE CONTROL SWITCH MUST BE IN THE NORMAL AFTER START POSITION TO ACTUATE THIS EVENT POINT.

REFERENCES: DRAWING 208-026-EF-01

SENSING ELEMENT: EFP-1 CONTROL SWITCH CONTACTS CS/SC, CS/O

ENCLOSURE 1 (Page 166 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-07-05	H-07-05
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				18 4 S	

EF PUMP 1 OUT OF SERVICE

EVENT POINT 1191

TUNT	CAI	ED	COND.	ION:

O EFP-1 CONTROL SWITCH IN PULL TO LOCK POSITION

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

O GREEN AND RED LIGHTS EXTINGUISHED ON CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

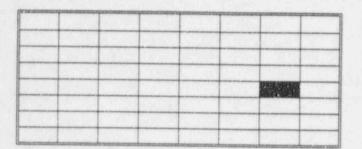
DISCUSSION:

REFERENCES: DRAWING 208-026-EF-01

SENSING ELEMENT: EFP-1 CONTROL SWITCH CONTACTS CS/PTL

ENCLOSURE 1 (Page 167 of 187)

PSA-Z ANNUNCIATOR RESPONSE PSA-Z-	07-05	H-07-05
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EF PUMP 1 OUT OF SERVICE

EVENT POINT 1257

INDICATED CONDITION:	
0 EFP-1 CIRCUIT BREAKER NOT RACKED IN.	
REDUNDANT INDICATION WHICH WILL VERIFY ALARM:	
• GREEN AND RED LIGHTS EXTINGUISHED ON CONTROL STATION.	
OPERATOR ACTIONS FOR A VALID ALARM:	
DISCUSSION:	
REFERENCES: DRAWING 208-026-EF-01	
SENSING ELEMENT: EFP-1 BREAKER 52H/B CONTACTS	

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-07-05	H-07-05
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EF PUMP 1 OUT OF SERVICE

EVENT POINT 1259

INDICATED CONDITION:

O EFP-1 CIRCUIT BREAKER LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

• GREEN AND RED LIGHTS EXTINGUISHED ON CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

DISCUSSION:

REFERENCES: DRAWING 208-026-EF-01

SENSING ELEMENT: EFP-1 BREAKER CONTROL CIRCUIT 27 RELAY

ENCLOSURE 1 (Page 169 of 187)

PSA-Z ANNUNCIATOR RESPONSE PSA-Z-07-06 H-07-06

EF PUMP 1 MOTOR OVERLOAD

EVENT POINT 1260

INDICA	ATED CONDITION:
o EF	P-1 MOTOR AMPS >115% RATED LOAD.
	MANT INDICATION WHICH WILL VERIFY ALARM:
	GH MOTOR AMPS. P-1 BREAKER TRIP.
o REI o STA	OR ACTIONS FOR A VALID ALARM: FER TO EOP. ART EFP-2. DUCE EMERGENCY FEEDWATER FLOW FROM EFP-1 IF STILL RUNNING.
PROTE	ALARM INDICATES THAT EITHER THE TIMED OVERCURRENT OR INSTANTANEOUS URRENT PROTECTIVE DEVICES HAVE ACTUATED. INSTANTANEOUS OVERCURRENT CTIVE RELAY ACTUATION WILL TRIP THE BREAKER.
	POSSIBLE TO HAVE THIS ALARM PRIOR TO THE BREAKER TRIP.
	G ELEMENT: EFP-1 BREAKER 51 RELAY (INSIDE 4160 BREAKER CUBICLE)

ENCLOSURE 1 (Page 170 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-07-07	H-07-
	FWP-7 TRIP	
	EVENT POINT	08
INDICATED CONDITION:	CTATION IN NORMAL ACTOR	
 FWP-7 MOTOR NOT ENERGIZED WITH CONTROL POSITION. 		TART
 FWP-7 MOTOR NOT ENERGIZED WITH CONTROL POSITION. 	RM :	FART
 FWP-7 MOTOR NOT ENERGIZED WITH CONTROL POSITION. REDUNDANT INDICATION WHICH WILL VERIFY ALAF 	RM :	TART
 FWP-7 MOTOR NOT ENERGIZED WITH CONTROL POSITION. REDUNDANT INDICATION WHICH WILL VERIFY ALAF GREEN LIGHT ON WITH A RED FLAG ON FWP-7 	RM :	TART
 FWP-7 MOTOR NOT ENERGIZED WITH CONTROL POSITION. REDUNDANT INDICATION WHICH WILL VERIFY ALAF GREEN LIGHT ON WITH A RED FLAG ON FWP-7 OPERATOR ACTIONS FOR A VALID ALARM: 	RM :	TART

REFERENCES: DRAWING 208-032 FW-55

SENSING ELEMENT: CS/SC, CS/O

ENCLOSURE 1 (Page 171 of 187)

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PSA-Z ANNUNCIATOR	RESPONSE	PSA-Z-07-08	H-07-08	P

FWP-7 OVERCURRENT

EVENT POINT 0780

INDICATED CONDITION:

o FWP-7 MOTOR AMPS >115% RATED LOAD

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- · HIGH MOTOR AMPS
- O FWP-7 BREAKER TRIP

OPERATOR ACTIONS FOR A VALID ALARM:

O REDUCE FEEDWATER FLOW FROM FWP-7 IF STILL RUNNING

DISCUSSION:

THIS ALARM INDICATES THAT EITHER THE TIMED OVERCURRENT OR INSTANTANEOUS OVERCURRENT PROTECTIVE DEVICES HAVE ACTUATED. INSTANTANEOUS OVERCURRENT PROTECTIVE RELAY ACTUATION WILL TRIP THE BREAKER.

IT IS POSSIBLE TO HAVE THIS ALARM PRIOR TO THE BREAKER TRIP.

REFERENCES: DRAWING 208-032 FW-55

SENSING ELEMENT: FWP-7 BREAKER 51 RELAY (INSIDE 4160 BREAKER CUBICLE)

ENCLOSURE 1 (Page 172 of 187)

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-08-01	H-08-01
	and a second data second and the second s	

EF TANK LEVEL HIGH/LOW

EVENT POINT 0816

INDICATED CONDITION:

• EFT-2 LEVEL >37'O" AS SENSED BY EF-98-LT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

EF-98-LI1 EMERGENCY FEED TANK LEVEL INDICATION.
 EF-99-LI1 EMERGENCY FEED TANK LEVEL INDICATION.

OPERATOR ACTIONS FOR A VALID ALARM:

O RESTORE TANK LEVEL TO NORMAL OPERATING BAND.

DISCUSSION:

THE HIGH LEVEL ALARM SETPOINT IS EQUIVALENT TO 163,900 GALLONS.

REFERENCES: DRAWING 205-026 EF-05

SENSING ELEMENT: EF-98-LT

ENCLOSURE 1 (Page 173 of 187)

P	SA-Z	ANNUNCIATOR	RESPONSE	PSA-Z-08-01	H-08-01

EF TANK LEVEL HIGH/LOW

EVENT POINT 0817

INDICATED CONDI	TION:
O EFT-2 LEVEL	<34'6" AS SENSED BY EF-99-LT.
REDUNDANT INDIC	ATION WHICH WILL VERIFY ALARM:
o EF-98-LI1 EM o EF-99-LI1 EM	MERGENCY FEED TANK LEVEL INDICATION. MERGENCY FEED TANK LEVEL INDICATION.
OPERATOR ACTION	S FOR A VALID ALARM:
O RESTORE TANK	LEVEL TO NORMAL OPERATING BAND.
DISCUSSION:	
THE LOW LEVEL	ALARM SETPOINT IS EQUIVALENT TO 152,500 GALLONS.
REFER TO TS FO	R ADMINISTRATIVE REQUIREMENTS.
REFERENCES	AWING 205-026 EF-05
SENSING ELEMENT	

ENCLOSURE 1 (Page 174 of 187)

PSA-Z	ANNUNCIATOR	RESPONSE	PSA-Z-08-02	H-08-02

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EF PUMP 2 AUTO START

EVENT POINT 1707

INDICATED CONDITION:

• EFP-2 DISCHARGE PRESSURE >1100 PSIG AS SENSED BY EF-18-PS, AND 50 SECONDS HAVE ELAPSED WITH AN ACTUATION SIGNAL PRESENT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

O REFER TO EOP.

DISCUSSION:

REFERENCES: DRAWING 208-008 AS-01

SENSING ELEMENT: EF-18-PS

ENCLOSURE 1 (Page 175 of 187)

H-08-03

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PSA-Z ANNUNCIATOR RESPONSE

EF PUMP 2 START FAILURE

PSA-Z-08-03

EVENT POINT 1706

INDICATED CONDITION:

• EFP-2 DISCHARGE PRESSURE <1100 PSIG AS SENSED BY EF-18-PS, AND 50 SECONDS HAVE ELAPSED WITH AN ACTUATION SIGNAL PRESENT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

O REFER TO EOP.

DISCUSSION:

REFERENCES: DRAWING 208-008 AS-01

SENSING ELEMENT: EF-18-PS

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PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-08-04	H-08-04
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EF PUMP 2 TRIP

EVENT POINT 0326

INDICATED CONDITION:

• TURBINE DRIVEN EMERGENCY FEEDWATER PUMP STEAM SUPPLY VALVE ASV-50 NOT OPEN.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

O NOTIFY PRIMARY PLANT OPERATOR TO RESET ASV-50

DISCUSSION:

REFERENCES: DRAWING 208-008 AS-01

SENSING ELEMENT: 33C/ASV-50

ENCLOSURE 1 (Page 177 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-08-05	H-08-05

EF PUMP 2 OUT OF SERVICE

EVENT POINT 0100

INDICATED CONDITION:

- o ASV-5 CLOSED, WITH DC CONTROL POWER NOT AVAILABLE FOR >5 SECONDS.
- o MSV-55 CLOSED.
- o MSV-56 CLOSED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

ASV-5 POSITION INDICATION.

- MSV-55 POSITION INDICATION.
- MSV-56 POSITION INDICATION.

OPERATOR ACTIONS FOR A VALID ALARM:

INVESTIGATE LOSS OF CONTROL POWER TO ASV-5.
 INVESTIGATE CLOSURE OF MSV-55 OR MSV-56.

DISCUSSION:

IF THIS ALARM IS DUE TO THE ASV-5 CIRCUITRY THEN IT MEANS ASV-5 IS CLOSED WITH NO CONTROL POWER AVAILABLE TO ALLOW AN AUTO OPEN DURING AN EFW ACTUATION. THE MSV-55 AND MSV-56 ALARMS ARE DUE TO FULLY CLOSED LIMIT SWITCHES. CONTROL POWER FOR ASV-5 IS SUPPLIED FROM DPDP-88 FUSE #6.

REFERENCES: DRAWING 208-008 AS-01

SENSING ELEMENT: ASV-5 LS(13), 2ASV-5 RELAY, MSV-55 LS(5), MSV-56 LS(14)

ENCLOSURE 1 (Page 178 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-08-05	H-08-05
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EF PUMP 2 OUT OF SERVICE

EVENT POINT 1521

INDICATED CONDITION:

O ASV-204 CLOSED, WITH DC CONTROL POWER NOT AVAILABLE.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

ASV-204 POSITION INDICATION.

OPERATOR ACTIONS FOR A VALID ALARM:

O INVESTIGATE LOSS OF CONTRUL POWER TO ASV-204.

DISCUSSION:

THIS ALARM MEANS ASV-204 IS CLOSED WITH NO CONTROL POWER AVAILABLE TO ALLOW AN AUTO OPEN DURING AN ACTUATION. CONTROL POWER FOR ASV-204 IS SUPPLIED FROM DPDP-8A FUSE #15.

REFERENCES: DRAWING 208-008 AS-07

SENSING ELEMENT: ASV-204 LS(13), 27ASV-204 RELAY

ENCLOSURE 1 (Page 179 of 187)

 T 1	 		
		EMERG VALV NOT FULL	E
	 -	EVENT POIN	T 1192

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

• EFV-32 POSITION INDICATION.

OPERATOR ACTIONS FOR A VALID ALARM:

o INVESTIGATE CLOSURE OF EFV-32.

DISCUSSION:

REFERENCES: DRAWING 208-026 EF-10

SENSING ELEMENT: EFV-32 FULL OPEN LIMIT SWITCH

ENCLOSURE 1 (Page 180 of 187)

	EMERG VALV NOT FULL	Έ
	EVENT POINT 11	
O EFV-11 NOT FULL OPEN.		

OPERATOR ACTIONS FOR A VALID ALARM:

• INVESTIGATE CLOSURE OF EFV-11.

DISCUSSION:

REFERENCES: DRAWING 208-026 EF-08

SENSING ELEMENT: EFV-11 FULL OPEN LIMIT SWITCH

ENCLOSURE 1 (Page 181 of 187)

PSA-Z ANNUNCIATOR RESPONSE PS	A-Z-08-06 H-08-06

EMERG FW VALVE NOT FULL OPEN

INDICATED	CONDITION:
o EFV-14	NOT FULL OPEN.
REDUNDANT	INDICATION WHICH WILL VERIFY ALARM:
o EFV-14	POSITION INDICATION.
OPERATOR /	ACTIONS FOR A VALID ALARM:
O INVEST	IGATE CLOSURE OF EFV-14.
DISCUSSION	N:
REFERENCES	5: DRAWING 208-026 EF-9
SENSING EL	EMENT: EFV-14 FULL OPEN LIMIT SWITCH

ENCLOSURE 1 (Page 182 of 187)

PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-08-06	H-08-06

EMERG FW VALVE NOT FULL OPEN

INDI	CATED CONDITION:
0	EFV-33 NOT FULL OPEN.
REDU	NDANT INDICATION WHICH WILL VERIFY ALARM:
0	EFV-33 POSITION INDICATION.
OPER	ATOR ACTIONS FOR A VALID ALARM:
0 1	INVESTIGATE CLOSURE OF EFV-33.
DISC	USSION:
REFE	RENCES: DRAWING 208-026 EF-11
SENS	ING ELEMENT: EFV-33 FULL OPEN LIMIT SWITCH

ENCLOSURE 1 (Page 183 of 187)

	 T	1		
				EMERG FW VALVE NOT FULL OPEN
and the second		town and the	(EVENT POINT 1255

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

• EFV-3 POSITION INDICATION.

OPERATOR ACTIONS FOR A VALID ALARM:

INVESTIGATE CLOSURE OF EFV-3.

DISCUSSION:

REFERENCES: DRAWING 208-026 EF-02

SENSING ELEMENT: EFV-3 FULL OPEN LIMIT SWITCH

ENCLOSURE 1 (Page 184 of 187)

	PSA-Z ANNUNCIATOR RESPONSE	PSA-Z-08-06	H-08-06
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		 TRANSPORT	the statement of the second	TICK SURGER MAN	COLUMN TWO IS NOT
					1.4.4.4
	1				

EMERG FW VALVE NOT FULL OPEN

INDICATED	ONDITION:
o EFV-4	OT FULL OPEN.
REDUNDANT	NDICATION WHICH WILL VERIFY ALARM:
O EFV-4	OSITION INDICATION.
12.355	
OPERATOR A	TIONS FOR A VALID ALARM:
O INVEST	GATE CLOSURE OF EFV-4.
REFERENCES	DRAWING 208-026 EF-03
where the set of the state of the set of the	MENT: EFV-4 FULL OPEN LIMIT SWITCH

ENCLOSURE 1 (Page 185 of 187)

Р	SA-Z	ANNUNCIATOR RESPONSE	PSA-Z-08-06	H-08-06
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EMERG FW VALVE NOT FULL OPEN

INDICATED CONDITION:	
O EFV-7 NOT FULL OPEN.	
REDUNDANT INDICATION WHICH WILL VERIFY ALARM:	
0 EFV-7 POSITION INDICATION.	
OPERATOR ACTIONS FOR A VALID ALARM:	
• INVESTIGATE CLOSURE OF EFV-7.	
DISCUSSION:	
REFERENCES: DRAWING 208-026 EF-04	

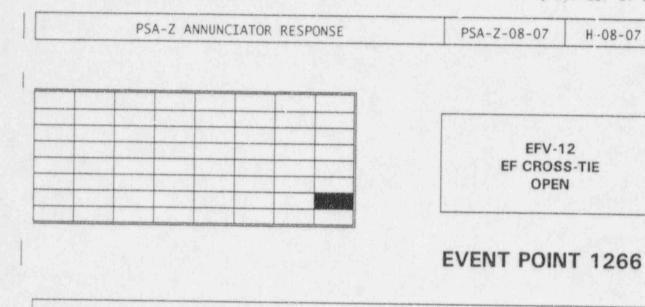
ENCLOSURE 1 (Page 186 of 187)

PSA-	Z ANNUNCIATOR RESPONSE	PSA-Z-08-06	H-08-06

EMERG FW VALVE NOT FULL OPEN

INDICATED CONDITION:	
0 EFV-8 NOT FULL OPEN.	
REDUNDANT INDICATION WHICH WILL VERIFY ALARM:	
o EFV-8 POSITION INDICATION.	
OPERATOR ACTIONS FOR A VALID ALARM:	
• INVESTIGATE CLOSURE OF EFV-8.	
DISCUSSION:	
REFERENCES: DRAWING 208-026 EF-05	
SENSING ELEMENT: EFV-8 FULL OPEN LIMIT SWITCH	

ENCLOSURE 1 (Page 187 of 187)



	2011년 2012년 1월 18일 - 18일 - 18일 - 18일 - 18 - 18일 - 18g - 18g - 18g - 18g - 1 - 18g - 1 - 18g - 1
 RED LIGH SWITCHGE 	NDICATION WHICH WILL VERIFY ALARM: IT LIT ON EFV-12 CONTROL STATION, EFV-12-MST IN "A" ES 480v AR ROOM, 124" ELEV CC.
O FLOW IND	DICATED ON EF-62-FI, LOCATED ON PSA SECTION OF MCB (TO BE D BY MAR 97-01-04-01
PERATOR AC	TIONS FOR A VALID ALARM:
O VEKTFY (ROSS-FLOW VIA "A" SIDE EFIC FLOW INDICATORS.
o VERTFY (ROSS-FLOW VIA "A" SIDE EFIC FLOW INDICATORS.
	ROSS-FLOW VIA "A" SIDE EFIC FLOW INDICATORS. EFV-12 POWERED FROM DPDP-8C, BKRS 5 (POWER) & 6 (CONTROL)