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Rev. 20

Effective Date 12/8/97

INFORMATION ONLY

ANNUNCIATOR RESPONSE

AR-501

FLORIDA POWER CORPORATION

CRYSTAL RIVER UNIT 3

ICS I ANNUNCIATOR RESPONSE

APPROVED BY: Interpretation Contact

Frank Dola for MAR
SIGNATURE ON FILE

DATE: 12/5/97

Interpretation Contact: Manager, Nuclear Plant
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ENCLOSURE

1	Annunciator Response	2
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1.0 PURPOSE

- 1.1 Establish a reference document for each Annunciator Window on the ICS-CY1 Lampbox.
- 1.2 Establish operator actions for valid Annunciator alarms on the ICS-CY1 Lampbox.
- 1.3 Establish a reference to other procedures which address operator actions for valid Annunciator alarms on the ICS-CY1 Lampbox.

2.0 REFERENCES

2.1 IMPLEMENTING REFERENCES

- 2.1.1 AP-545, Plant Runback
- 2.1.2 OP-302, RC Pump Operation
- 2.1.3 OP-506, LPMS Data Handling Recording and Analysis Equipment
- 2.1.4 EOP, Emergency Operating Procedure

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 ICS-CY1 Lampbox as indicated on Enclosure 1, Annunciator Response.

5.0 FOLLOW-UP ACTIONS

None

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-01-01	I-01-01
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RC PUMP A
TRIP

EVENT POINT 1377

INDICATED CONDITION:

- o RCP-1A BREAKER OPEN WITH CONTROL HANDLE IN THE NORMAL AFTER START POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o GREEN LIGHT ON WITH A RED FLAG ON RCP-1A CONTROL STATION.
- o RCS FLOW IS DECREASING.

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO AP-545.

DISCUSSION:

A RCP TRIP SHOULD CAUSE A PLANT RUNBACK AND CAUSE FEEDWATER TO RE-RATIO.
ADDRESS TS REQUIREMENTS CONCERNING THIS CONDITION.

REFERENCES: DRAWING 208-047 SHEET RC-01

SENSING ELEMENT: CONTROL SWITCH AND BREAKER CONTACTS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-01-02	I-01-02
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RC PUMP A
MTR VIBRATION
HIGH

EVENT POINT 1299

INDICATED CONDITION:

- o RCP-1A MOTOR VIBRATION >2 MILS AS SENSED BY RC-42-MS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o REDUNDANT RCP VIBRATION INDICATIONS AS SEEN ON RCP VIBRATION MONITORING PANEL, LPP-1A.

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO OP-302 FOR ACTIONS ON HIGH RCP VIBRATION.
- o CONSIDERATION SHOULD BE GIVEN TO SHUTTING DOWN A RCP WITH HIGH VIBRATIONS.

DISCUSSION:

THE VIBRATION SWITCH RESET PUSH-BUTTON ON THE MAIN CONTROL BOARD MUST BE DEPRESSED TO RESET THIS ALARM.

REFERENCES: DRAWING 208-047 SHEET RC-05

SENSING ELEMENT: RC-42-MS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-01-03	I-01-03
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[illegible]

RC PUMP A
CLG WTR FLOW
LOW

EVENT POINT 1419

INDICATED CONDITION:

- o SW FLOW TO RCP-1A IS <260 GPM AS SENSED BY SW-108-FS2.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o WHITE RCP-1A SW FLOW INTERLOCK LIGHT NOT ON.

OPERATOR ACTIONS FOR A VALID ALARM:

- o VERIFY NORMAL SW SYSTEM OPERATION.
- o REFER TO OP-302 FOR SW REQUIREMENTS FOR RUNNING REACTOR COOLANT PUMPS.

DISCUSSION:

THIS ALARM MAY BE CAUSED BY LARGE SW SYSTEM LOADS. IN THESE INSTANCES CONSIDERATION SHOULD BE GIVEN TO RUNNING SWP-1A OR SWP-1B INSTEAD OF USING THE NORMAL DUTY SW PUMP, SWP-1C.

REFERENCES: DRAWING 208-047 SHEET RC-05

SENSING ELEMENT: SW-108-F52

ICS-J. ANNUNCIATOR RESPONSE	ICS-CY1-01-04	I-01-04
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[illegible]RC PUMP
OVERCURRENT

EVENT POINT 1378

INDICATED CONDITION:

- o RCP-1A MOTOR AMPS >110% RATED LOAD.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o HIGH MOTOR AMPS INDICATED ON RCP-1A CONTROL STATION.
- o RCP-1A TRIPS.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF HIGH CURRENT.
- o INSPECT BREAKER FOR DROPPED TARGETS.

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 208-047 SHEET RC-01

SENSING ELEMENT: 74-RCP-1A

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-01-04	I-01-04
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RC PUMP
OVERCURRENT

EVENT POINT 1380

INDICATED CONDITION:

- o RCP-1B MOTOR AMPS >110% RATED LOAD.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o HIGH MOTOR AMPS INDICATED ON RCP-1B CONTROL STATION.
- o RCP-1B TRIPS.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF HIGH CURRENT.
- o INSPECT BREAKER FOR DROPPED TARGETS.

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 208-047 SHEET RC-02

SENSING ELEMENT: 74-RCP-1B

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-01-04	I-01-04
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RC PUMP
OVERCURRENT

EVENT POINT 1382

INDICATED CONDITION:

- o RCP-1C MOTOR AMPS >110% RATED LOAD.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o HIGH MOTOR AMPS INDICATED ON RCP-1C CONTROL STATION.
- o RCP-1C TRIPS.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF HIGH CURRENT.
- o INSPECT BREAKER FOR DROPPED TARGETS.

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 208-047 SHEET RC-03

SENSING ELEMENT: 74-RCP-1C

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-01-04	I-01-04
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RC PUMP
OVERCURRENT

EVENT POINT 1384

INDICATED CONDITION:

- o RCP-1D MOTOR AMPS >110% RATED LOAD.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o HIGH MOTOR AMPS INDICATED ON RCP-1D CONTROL STATION.
- o RCP-1D TRIPS.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF HIGH CURRENT.
- o INSPECT BREAKER FOR DROPPED TARGETS.

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 208-047 SHEET RC-04

SENSING ELEMENT: 74-RCP-1D

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-01-06	I-01-06
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[illegible]

RC PUMP
LIFT OIL PUMP
TRIP

EVENT POINT 1269

INDICATED CONDITION:

- o RCP-2B BREAKER OPEN WITH CONTROL HANDLE IN THE NORMAL AFTER START POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o GREEN LIGHT ON WITH A RED FLAG ON RCP-2B CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- o ENSURE DC LIFT OIL PUMP IS OPERATING.
- o INVESTIGATE CAUSE OF PUMP TRIP.

DISCUSSION:

REFERENCES: DRAWING 208-047 SHEET RC-10

SENSING ELEMENT: CONTROL SWITCH AND BREAKER CONTACTS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-01-06	I-01-06
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RC PUMP
LIFT OIL PUMP
TRIP

EVENT POINT 1272

INDICATED CONDITION:

- o RCP-2C BREAKER OPEN WITH CONTROL HANDLE IN THE NORMAL AFTER START POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o GREEN LIGHT ON WITH A RED FLAG ON RCP-2C CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- o ENSURE DC LIFT OIL PUMP IS OPERATING.
- o INVESTIGATE CAUSE OF PUMP TRIP.

DISCUSSION:

REFERENCES: DRAWING 208-047 SHEET RC-11

SENSING ELEMENT: CONTROL SWITCH AND BREAKER CONTACTS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-01-06	I-01-06
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[illegible]

RC PUMP
LIFT OIL PUMP
TRIP

EVENT POINT 1275

INDICATED CONDITION:

- o RCP-2D BREAKER OPEN WITH CONTROL HANDLE IN THE NORMAL AFTER START POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o GREEN LIGHT ON WITH A RED FLAG ON RCP-2D CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- o ENSURE DC LIFT OIL PUMP IS OPERATING.
- o INVESTIGATE CAUSE OF PUMP TRIP.

DISCUSSION:

REFERENCES: DRAWING 208-047 SHEET RC-12

SENSING ELEMENT: CONTROL SWITCH AND BREAKER CONTACTS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-01-06	I-01-06
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[illegible]

RC PUMP
LIFT OIL PUMP
TRIP

EVENT POINT 1277

INDICATED CONDITION:

- o RCP-3A BREAKER OPEN WITH CONTROL HANDLE IN THE NORMAL AFTER START POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o GREEN LIGHT ON WITH A RED FLAG ON RCP-3A CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF PUMP TRIP.

DISCUSSION:

REFERENCES: DRAWING 208-047 SHEET RC-21

SENSING ELEMENT: CONTROL SWITCH AND BREAKER CONTACTS

ICS-7 ANNUNCIATOR RESPONSE	ICS-CY1-01-06	I-01-06
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[illegible]

RC PUMP
LIFT OIL PUMP
TRIP

EVENT POINT 1281

INDICATED CONDITION:

- RCP-3B BREAKER OPEN WITH CONTROL HANDLE IN THE NORMAL AFTER START POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o GREEN LIGHT ON WITH A RED FLAG ON RCP-3B CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- o START AC LIFT OIL PUMP.
- o INVESTIGATE CAUSE OF PUMP TRIP.

DISCUSSION:

THE AC LIFT OIL PUMP WILL NOT AUTO START ON A LOW OIL PRESSURE SIGNAL.
SO THE AC LIFT OIL PUMP MUST BE MANUALLY STARTED.

REFERENCES: DRAWING 208-047 SHEET RC-22

SENSING ELEMENT: CONTROL SWITCH AND BREAKER CONTACTS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-01-06	I-01-06
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[illegible]

RC PUMP
LIFT OIL PUMP
TRIP

EVENT POINT 1285

INDICATED CONDITION:

- RCP-3C BREAKER OPEN WITH CONTROL HANDLE IN THE NORMAL AFTER START POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o GREEN LIGHT ON WITH A RED FLAG ON RCP-3C CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- o START AC LIFT OIL PUMP.
- o INVESTIGATE CAUSE OF PUMP TRIP.

DISCUSSION:

THE AC LIFT OIL PUMP WILL NOT AUTO START ON A LOW OIL PRESSURE SIGNAL.
SO THE AC LIFT OIL PUMP MUST BE MANUALLY STARTED.

REFERENCES: DRAWING 208-047 SHEET RC-23

SENSING ELEMENT: CONTROL SWITCH AND BREAKER CONTACTS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-01-06	I-01-06
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[illegible]

RC PUMP
LIFT OIL PUMP
TRIP

EVENT POINT 1289

INDICATED CONDITION:

- o RCP-3D BREAKER OPEN WITH CONTROL HANDLE IN THE NORMAL AFTER START POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o GREEN LIGHT ON WITH A RED FLAG ON RCP-3D CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- o START AC LIFT OIL PUMP.
- o INVESTIGATE CAUSE OF PUMP TRIP.

DISCUSSION:

THE AC LIFT OIL PUMP WILL NOT AUTO START ON A LOW OIL PRESSURE SIGNAL.
SO THE AC LIFT OIL PUMP MUST BE MANUALLY STARTED.

REFERENCES: DRAWING 208-047 SHEET RC-24

SENSING ELEMENT: CONTROL SWITCH AND BREAKER CONTACTS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-02-01	I-02-01
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[illegible]

RC PUMP B
TRIP

EVENT POINT 1379

INDICATED CONDITION:

- o RCP-1B BREAKER IS OPEN WITH CONTROL HANDLE IN THE NORMAL AFTER START POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o GREEN LIGHT ON WITH A RED FLAG ON RCP-1B CONTROL STATION.
- o RCS FLOW IS DECREASING.

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO AP-545.

DISCUSSION:

A RCP TRIP SHOULD CAUSE A PLANT RUNBACK AND CAUSE FEEDWATER TO RE-RATIO.
ADDRESS TS REQUIREMENTS CONCERNING THIS CONDITION.

REFERENCES: DRAWING 208-047 SHEET RC-02

SENSING ELEMENT: CONTROL SWITCH AND BREAKER CONTACTS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-02-02	I-02-02
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RC PUMP B
MTR VIBRATION
HIGH

EVENT POINT 1312

INDICATED CONDITION:

- o RCP-1B MOTOR VIBRATION >2 MILS AS SENSED BY RC-65-MS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o REDUNDANT RCP VIBRATION INDICATION AS SEEN ON RCP VIBRATION MONITORING PANEL, LPP-1A.

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO OP-302 FOR ACTIONS ON HIGH RCP VIBRATION.
- o CONSIDERATION SHOULD BE GIVEN TO SHUTTING DOWN A RCP WITH HIGH VIBRATION.

DISCUSSION:

THE VIBRATION SWITCH RESET PUSH-BUTTON ON THE MAIN CONTROL BOARD MUST BE DEPRESSED TO RESET THIS ALARM.

REFERENCES: DRAWING 208-047 SHEET RC-06

SENSING ELEMENT: RC-65-MS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-02-03	I-02-03
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RC PUMP B
CLG WTR FLOW
LOW

EVENT POINT 1420

INDICATED CONDITION:

- o RCP-1B SW COOLING FLOW <260 GPM AS SENSED BY SW-114-FS2.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o WHITE RCP-1A SW FLOW INTERLOCK LIGHT NOT ON.

OPERATOR ACTIONS FOR A VALID ALARM:

- o VERIFY NORMAL SW SYSTEM OPERATION.
- o REFER TO OP-302 FOR SW REQUIREMENTS FOR RUNNING REACTOR COOLANT PUMPS.

DISCUSSION:

THIS ALARM MAY BE CAUSED BY LARGE SW SYSTEM LOADS. IN THESE INSTANCES CONSIDERATION SHOULD BE GIVEN TO RUNNING SWP-1A OR SWP-1B INSTEAD OF USING THE NORMAL DUTY SW PUMP, SWP-1C.

REFERENCES: DRAWING 208-047 SHEET RC-02

SENSING ELEMENT: RC-114-FS2

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-02-04	I-02-04
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RC PUMP MTR
THRUST BRG
TEMP HIGH

EVENT POINT 1304

INDICATED CONDITION:

- o RCP UPPER OR LOWER THRUST BEARING TEMPERATURE $>185^{\circ}$ F AS SEEN ON RCP THRUST BEARING TEMPERATURE MONITOR PANEL, RC-133-TI.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCP THRUST BEARING TEMPERATURES ON RC-133-TI.
- o ABNORMAL RCP VIBRATIONS.
- o OBSERVE RCP SEAL PARAMETERS.

OPERATOR ACTIONS FOR A VALID ALARM:

- o START BOTH LIFT OIL PUMPS AND CONTACT SITE NUCLEAR ENGINEERING FOR EVALUATION.
- o IF THE ACTIVE THRUST BEARING TEMPERATURE EXCEEDS 250° F AND THE TEMPERATURE IS INCREASING, THEN TRIP THE AFFECTED RCP.
- o MONITOR RCP COMPUTER GROUPS FOR ABNORMAL TRENDS:
RCP-1A - GROUP 78, RCP-1B - GROUP 79, RCP-1C - GROUP 80, RCP-1D - GROUP 81.

DISCUSSION:

THIS ALARM INDICATES A LOSS OF LUBRICATION MAY BE OCCURRING TO THE RCP THRUST BEARINGS. IF TEMPERATURES CONTINUE TO INCREASE CONSIDERATION SHOULD BE GIVEN TO SHUTTING DOWN THE RCP. THRUST BEARING FAILURE WILL CAUSE SIGNIFICANT AND RAPID SEAL FAILURE.

REFERENCES: DRAWING 208-047 SHEET RC-027

SENSING ELEMENT: RC-133-TI

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-02-05	I-02-05
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[illegible]

RC PUMP
LIFT OIL PUMP
AUTO START

EVENT POINT 1268

INDICATED CONDITION:

- o RCP-2B CONTROL POWER BREAKER CLOSED WITH THE CONTROL HANDLE IN THE NORMAL AFTER STOP POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED LIGHT ON WITH A GREEN FLAG ON RCP-2B CONTROL STATION.
- o RCP-1B TRIP.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF AUTO START.
- o VERIFY PROPER LIFT OIL PRESSURE BY OBSERVING WHITE LIFT OIL PERMISSIVE LIGHT ON.

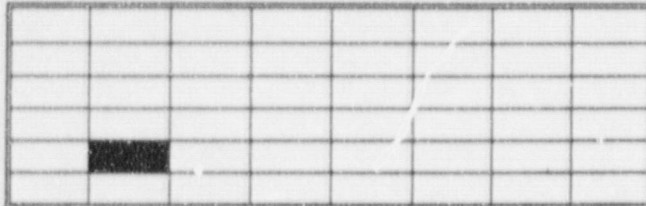
DISCUSSION:

THE AC LIFT OIL PUMP WILL AUTO START IF THE REACTOR COOLANT PUMP TRIPS OR IS TURNED OFF.

REFERENCES: DRAWING 208-047 SHEET RC-10

SENSING ELEMENT: CONTROL SWITCH AND BREAKER CONTACTS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-02-05	I-02-05
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RC PUMP
LIFT OIL PUMP
AUTO START

EVENT POINT 1271

INDICATED CONDITION:

- o RCP-2C CONTROL BREAKER POWER CLOSED WITH THE CONTROL HANDLE IN THE NORMAL AFTER STOP POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED LIGHT ON WITH A GREEN FLAG ON RCP-2C CONTROL STATION.
- o RCP-1C TRIP.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF AUTO START.
- o VERIFY PROPER LIFT OIL PRESSURE BY OBSERVING WHITE LIFT OIL PERMISSIVE LIGHT ON.

DISCUSSION:

THE AC LIFT OIL PUMP WILL AUTO START IF THE REACTOR COOLANT PUMP TRIPS OR IS TURNED OFF.

REFERENCES: DRAWING 208-047 SHEET RC-11

SENSING ELEMENT: CONTROL SWITCH AND BREAKER CONTACTS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-02-05	I-02-05
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[illegible]

RC PUMP
LIFT OIL PUMP
AUTO START

EVENT POINT 1274

INDICATED CONDITION:

- o RCP-2D CONTROL POWER BREAKER CLOSED WITH THE CONTROL HANDLE IN THE NORMAL AFTER STOP POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED LIGHT ON WITH A GREEN FLAG ON RCP-2D CONTROL STATION.
- o RCP-1D TRIP.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF AUTO START.
- o VERIFY PROPER LIFT OIL PRESSURE BY OBSERVING WHITE LIFT OIL PERMISSIVE LIGHT ON.

DISCUSSION:

THE AC LIFT OIL PUMP WILL AUTO START IF THE REACTOR COOLANT PUMP TRIPS OR IS TURNED OFF.

REFERENCES: DRAWING 208-047 SHEET RC-12

SENSING ELEMENT: CONTROL SWITCH AND BREAKER CONTACTS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-02-05	I-02-05
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RC PUMP
LIFT OIL PUMP
AUTO START

EVENT POINT 1278

INDICATED CONDITION:

- o RCP-3A CONTROL POWER BREAKER CLOSED WITH THE CONTROL HANDLE IN THE NORMAL AFTER STOP POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED LIGHT ON WITH A GREEN FLAG ON RCP-3A CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF AUTO START.
- o VERIFY PROPER LIFT OIL PRESSURE BY OBSERVING WHITE LIFT OIL PERMISSIVE LIGHT ON.

DISCUSSION:

THE DC LIFT OIL PUMP WILL AUTO START IF THE REACTOR COOLANT PUMP TRIPS OR IS TURNED OFF.

REFERENCES: DRAWING 208-047 SHEET RC-21

SENSING ELEMENT: CONTROL SWITCH AND BREAKER CONTACTS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-02-05	I-02-05
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[illegible]

RC PUMP
LIFT OIL PUMP
AUTO START

EVENT POINT 1282

INDICATED CONDITION:

- o RCP-3B CONTROL POWER BREAKER CLOSED WITH THE CONTROL HANDLE IN THE NORMAL AFTER STOP POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED LIGHT ON WITH A GREEN FLAG ON RCP-3B CONTROL STATION.
- o RCP-2B TRIP.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF AUTO START.
- o VERIFY PROPER LIFT OIL PRESSURE BY OBSERVING WHITE LIFT OIL PERMISSIVE LIGHT ON.

DISCUSSION:

THE DC LIFT OIL PUMP WILL AUTO START IF THE REACTOR COOLANT PUMP TRIPS OR IS TURNED OFF AND LIFT OIL PRESSURE IS <110 PSIG AS SENSED BY RC-66-R55.

REFERENCES: DRAWING 208-047 SHEET RC-22

SENSING ELEMENT: CONTROL SWITCH AND BREAKER CONTACTS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-02-05	I-02-05
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[illegible]

RC PUMP
LIFT OIL PUMP
AUTO START

EVENT POINT 1286

INDICATED CONDITION:

- o RCP-3C CONTROL POWER BREAKER CLOSED WITH THE CONTROL HANDLE IN THE NORMAL AFTER STOP POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- 0 RED LIGHT ON WITH A GREEN FLAG ON RCP-3C CONTROL STATION
0 CP-2C TRIP.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF AUTO START.
- o VERIFY PROPER LIFT OIL PRESSURE BY OBSERVING WHITE LIFT OIL PERMISSIVE LIGHT ON.

DISCUSSION:

THE DC LIFT OIL PUMP WILL AUTO START IF THE REACTOR COOLANT PUMP TRIPS OR IS TURNED OFF AND LIFT OIL PRESSURE IS <110 PSIG AS SENSED BY RC-89-R55.

REFERENCES: DRAWING 208-047 SHEET RC-23

SENSING ELEMENT: CONTROL SWITCH AND BREAKER CONTACTS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-02-05	I-02-05
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[illegible]

RC PUMP
LIFT OIL PUMP
AUTO START

EVENT POINT 1290

INDICATED CONDITION:

- o RCP-3D CONTROL POWER BREAKER CLOSED WITH THE CONTROL HANDLE IN THE NORMAL AFTER STOP POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED LIGHT ON WITH A GREEN FLAG ON RCP-3D CONTROL STATION.
- o RCP-2D TRIP.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF AUTO START.
- o VERIFY PROPER LIFT OIL PRESSURE BY OBSERVING WHITE LIFT OIL PERMISSIVE LIGHT ON.

DISCUSSION:

THE DC LIFT OIL PUMP WILL AUTO START IF THE REACTOR COOLANT PUMP TRIPS OR IS TURNED OFF AND LIFT OIL PRESSURE IS <110 PSIG AS SENSED BY RC-112-R55.

REFERENCES: DRAWING 208-047 SHEET RC-24

SENSING ELEMENT: CONTROL SWITCH AND BREAKER CONTACTS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-02-06	I-02-06
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RC PUMP
OIL LIFT PUMP
OVERLOAD

EVENT POINT 1729

INDICATED CONDITION:

- o RCP-3A MOTOR AMPS >115% RATED LOAD.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o HIGH BATTERY AMPS.
- o LOW LIFT OIL PRESSURE (WHITE LIFT OIL PERMISSIVE LIGHT IS OFF).

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF OVERLOAD CONDITION.

DISCUSSION:

IF PROPER LIFT OIL PRESSURE CANNOT BE MAINTAINED THEN CONSIDERATION SHOULD BE GIVEN TO SHUTTING DOWN RCP-3A AND INVESTIGATING THE LIFT OIL SYSTEM.

REFERENCES: DRAWING 208-047 SHEET RC-21

SENSING ELEMENT: 49, BREAKER OVERLOAD RELAY

ICS-I ANNIUNCIATOR RESPONSE	ICS-CY1-02-06	I-02-06
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[illegible]

RC PUMP
OIL LIFT PUMP
OVERLOAD

EVENT POINT 1283

INDICATED CONDITION:

- o RCF 3B MOTOR AMPS >115% RATED LOAD.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o HIGH BATTERY AMPS.
- o LOW LIFT OIL PRESSURE (WHITE LIFT OIL PERMISSIVE LIGHT IS OFF).

OPERATOR ACTIONS FOR A VALID ALARM:

- o START RCP-2B, SHUT DOWN RCP-3B.
- o INVESTIGATE CAUSE OF OVERLOAD CONDITION.

DISCUSSION:

IF PROPER LIFT OIL PRESSURE CANNOT BE MAINTAINED WITH THE AC PUMP RUNNING THEN CONSIDERATION SHOULD BE GIVEN TO SHUTTING DOWN THE AC LIFT OIL PUMP AND INVESTIGATING THE LIFT OIL SYSTEM.

REFERENCES: DRAWING 208-047 SHEET RC-22

SENSING ELEMENT: 49, BREAKER OVERLOAD RELAY

ICS-1 ANNUNCIATOR RESPONSE	ICS-CY1-02-06	I-02-06
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[illegible]

RC PUMP
OIL LIFT PUMP
OVERLOAD

EVENT POINT 1287

INDICATED CONDITION:

- o RCP-3C MOTOR AMPS >115% RATED LOAD.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o HIGH BATTERY AMPS.
- o LOW LIFT OIL PRESSURE (WHITE LIFT CTL PERMISSIVE LIGHT IS OFF).

OPERATOR ACTIONS FOR A VALID ALARM:

- o START RCP-2C, SHUT DOWN RCP-3C.
- o INVESTIGATE CAUSE OF OVERLOAD CONDITION.

DISCUSSION:

IF PROPER LIFT OIL PRESSURE CANNOT BE MAINTAINED WITH THE AC PUMP RUNNING THEN CONSIDERATION SHOULD BE GIVEN TO SHUTTING DOWN THE AC LIFT OIL PUMP AND INVESTIGATING THE LIFT OIL SYSTEM.

REFERENCES: DRAWING 208-047 SHEET RC-23

SENSING ELEMENT: 49, BREAKER OVERLOAD RELAY

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-02-06	I-02-06
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[illegible]

RC PUMP
OIL LIFT PUMP
OVERLOAD

EVENT POINT 1291

INDICATED CONDITION:

- o RCP-3D MOTOR AMPS >115% RATED LOAD.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o HIGH BATTERY AMPS.
- o LOW LIFT OIL PRESSURE (WHITE LIFT OIL PERMISSIVE LIGHT IS OFF).

OPERATOR ACTIONS FOR A VALID ALARM:

- o START RCP-2D, SHUT DOWN RCP-3D.
- o INVESTIGATE CAUSE OF OVERLOAD CONDITION.

DISCUSSION:

IF PROPER LIFT OIL PRESSURE CANNOT BE MAINTAINED WITH THE AC PUMP RUNNING THEN CONSIDERATION SHOULD BE GIVEN TO SHUTTING DOWN THE AC LIFT OIL PUMP AND INVESTIGATING THE LIFT OIL SYSTEM.

REFERENCES: DRAWING 208-047 SHEET RC-24

SENSING ELEMENT: 49, BREAKER OVERLOAD RELAY

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-01	I-03-01
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[illegible]

RC PUMP C
TRIP

EVENT POINT 1381

INDICATED CONDITION:

- o RCP-1C BREAKER OPEN WITH CONTROL HANDLE IN THE NORMAL AFTER START POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- GREEN LIGHT ON WITH A RED FLAG ON RCP-1C CONTROL STATION.
- RCS FLOW IS DECREASING.

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO AP-545.

DISCUSSION:

A RCP TRIP SHOULD CAUSE A PLANT RUNBACK AND CAUSE FEEDWATER TO RE-RATIO.
ADDRESS TS REQUIREMENTS CONCERNING THIS CONDITION.

REFERENCES: DRAWING 208-047 SHEET RC-03

SENSING ELEMENT: CONTROL SWITCH AND BREAKER CONTACTS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-02	I-03-02
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RC PUMP C
MTR VIBRATION
HIGH

EVENT POINT 1324

INDICATED CONDITION:

- o RCP-1C MOTOR VIBRATION >2 MILS AS SENSED BY RC-88-MS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o REDUNDANT RCP VIBRATION INDICATION AS SEEN ON RCP VIBRATION MONITORING PANEL, LPP-1A.

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO OP-302 FOR ACTIONS ON HIGH RCP VIBRATION.
- o CONSIDERATION SHOULD BE GIVEN TO SHUTTING DOWN A RCP WITH HIGH VIBRATIONS.

DISCUSSION:

THE VIBRATION SWITCH RESET PUSH-BUTTON ON THE MAIN CONTROL BOARD MUST BE DEPRESSED TO RESET THIS ALARM.

REFERENCES: DRAWING 208-047 SHEET RC-07

SENSING ELEMENT: RC-88-MS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-03	I-03-03
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RC PUMP C
CLG WTR FLOW
LOW

EVENT POINT 1421

INDICATED CONDITION:

- o RCP-1C SW COOLING FLOW <260 GPM AS SENSED BY SW-96-FS2.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o WHITE RCP-1C SW FLOW INTERLOCK LIGHT NOT ON.

OPERATOR ACTIONS FOR A VALID ALARM:

- o VERIFY NORMAL SW SYSTEM OPERATION.
- o REFER TO OP-302 FOR SW REQUIREMENTS FOR RUNNING REACTOR COOLANT PUMPS.

DISCUSSION:

THIS ALARM MAY BE CAUSED BY LARGE SW SYSTEM LOADS. IN THESE INSTANCES CONSIDERATION SHOULD BE GIVEN TO RUNNING SWP-1A OR SWP-1B INSTEAD OF USING THE NORMAL DUTY SW PUMP, SWP-1C.

REFERENCES: DRAWING 208-047 SHEET RC-03

SENSING ELEMENT: SW-96-FS2

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-04	I-03-04
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RC PUMP VIBRATION ALERT

EVENT POINT 0811

INDICATED CONDITION:

- 0 RCP-1A VIBRATION GREATER THAN SETPOINT ON BENTLY NEVADA VIBRATION MONITORING PANEL.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o FLASHING ALERT LIGHT ON BENTLY NEVADA RCP VIBRATION MONITORING PANEL.
- o REDUNDANT READINGS ON THE BENTLY NEVADA VIBRATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO OP-302 FOR VIBRATION GUIDELINES.

DISCUSSION:

REFERENCES: BENTLY NEVADA DRAWINGS

SENSING ELEMENT: VARIOUS RCP VIBRATION PICKUPS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-04	I-03-04
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[illegible]

RC PUMP VIBRATION ALERT

EVENT POINT 0812

INDICATED CONDITION:

- 0 RCP-1B VIBRATION GREATER THAN SETPOINT ON BENTLY NEVADA VIBRATION MONITORING PANEL.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o FLASHING ALERT LIGHT ON BENTLY NEVADA RCP VIBRATION MONITORING PANEL.
- o REDUNDANT READINGS ON THE BENTLY NEVADA VIBRATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO OP-302 FOR VIBRATION GUIDELINES.

DISCUSSION:

REFERENCES: BENTLY NEVADA DRAWINGS

SENSING ELEMENT: VARIOUS RCP VIBRATION PICKUPS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-04	I-03-04
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[illegible]

RC PUMP VIBRATION ALERT

EVENT POINT 0813

INDICATED CONDITION:

- 0 RCP-1C VIBRATION GREATER THAN SETPOINT ON BENTLY NEVADA VIBRATION MONITORING PANEL.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o FLASHING ALERT LIGHT ON BENTLY NEVADA RCP VIBRATION MONITORING PANEL.
- o REDUNDANT READINGS ON THE BENTLY NEVADA VIBRATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO OP-302 FOR VIBRATION GUIDELINES.

DISCUSSION:

REFERENCES: BENTLY NEVADA DRAWINGS

SENSING ELEMENT: VARIOUS RCP VIBRATION PICKUPS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-04	I-03-04
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RC PUMP
VIBRATION
ALERT

EVENT POINT 0821

INDICATED CONDITION:
o RCP-1D VIBRATION GREATER THAN SETPOINT ON BENTLY NEVADA VIBRATION MONITORING PANEL.
REDUNDANT INDICATION WHICH WILL VERIFY ALARM:
o FLASHING ALERT LIGHT ON BENTLY NEVADA RCP VIBRATION MONITORING PANEL. o REDUNDANT READINGS ON THE BENTLY NEVADA VIBRATION MONITORING PANEL.
OPERATOR ACTIONS FOR A VALID ALARM:
o REFER TO OP-302 FOR VIBRATION GUIDELINES.
DISCUSSION:
REFERENCES: BENTLY NEVADA DRAWINGS
SENSING ELEMENT: VARIOUS RCP VIBRATION PICKUPS

- INDICATED CONDITION:
- o RCP-1D VIBRATION GREATER THAN SETPOINT ON BEITLY NEVADA VIBRATION MONITORING PANEL.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o FLASHING ALERT LIGHT ON BENTLY NEVADA RCP VIBRATION MONITORING PANEL.
- o REDUNDANT READINGS ON THE BENTLY NEVADA VIBRATION MONITORING PANEL.

- REDUNDANT INDICATION WHICH WILL VERIFY ALARM:
- o FLASHING ALERT LIGHT ON BENTLY NEVADA RCP VIBRATION MONITORING PANEL.
 - o REDUNDANT READINGS ON THE BENTLY NEVADA VIBRATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO OP-302 FOR VIBRATION GUIDELINES.

- OPERATOR ACTIONS FOR A VALID ALARM:
- o REFER TO OP-302 FOR VIBRATION GUIDELINES.

REFERENCES: BENTLY NEVADA DRAWINGS

SENSING ELEMENT: VARIOUS RCP VIBRATION PICKUPS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-04	I-03-04
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RC PUMP
VIBRATION
ALERT

EVENT POINT 1937

INDICATED CONDITION:

- o RCP BENTLY NEVADA VIBRATION MONITORING PANEL VIBRATION DETECTOR NOT OK.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o FLASHING BYPASSED INDICATION ON THE BENTLY NEVADA VIBRATION MONITORING PANEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o CONTACT SITE NUCLEAR ENGINEERING.

DISCUSSION:

THIS ALARM INDICATES THAT ONE OF THE VIBRATION PICKUPS IS MALFUNCTIONING. ENGINEERING SHOULD BE NOTIFIED.

REFERENCES: BENTLY NEVADA DRAWINGS

SENSING ELEMENT: VARIOUS RCP VIBRATION PICKUPS

I-03-05

RC PUMP
MTR OIL LEVEL
HIGH/LOW

EVENT POINT 1294

INDICATED CONDITION:

- o RCP-1A MOTOR UPPER OIL LEVEL >1.25" ABOVE NORMAL AS SENSED BY RC-39-LSH.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCP MOTOR OIL LEVEL INDICATION, RC-190-LI, INDICATES HIGH LEVEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o TREND RCP-1A MOTOR UPPER OTL LEVEL WITH RC-190-LI.
- o MONITOR RCP-1A USING COMPUTER GROUP 78.
- o NOTIFY SITE NUCLEAR ENGINEERING.

DISCUSSION:

RC PUMP MOTOR UPPER OIL RESERVOIR HOLDS APPROXIMATELY 175 GALLONS.
NORMAL LEVEL IS 23 3/16".

REFERENCES: DRAWING 208-047 SHEET RC-05

SENSING ELEMENT: RC-39-LSH

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-05	I-03-05
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RC PUMP
MTR OIL LEVEL
HIGH/LOW

EVENT POINT 1295

INDICATED CONDITION:

- o RCP-1A MOTOR UPPER OIL LEVEL $>.75"$ BELOW NORMAL AS SENSED BY RC-39-LSL.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCP MOTOR OIL LEVEL INDICATION, RC-190-LI, INDICATES LOW LEVEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o TREND RCP-1A UPPER MOTOR OIL LEVEL WITH RC-190-LI.
- o MONITOR RCP-1A USING COMPUTER GROUP 78.
- o NOTIFY SITE NUCLEAR ENGINEERING.
- o NOTIFY ELECTRIC SHOP TO PREPARE TO ADD OIL TO MOTOR.

DISCUSSION:

RC PUMP MOTOR UPPER OIL RESERVOIR HOLDS APPROXIMATELY 175 GALLONS.
NORMAL LEVEL IS $23 \frac{3}{16}"$.

REFERENCES: DRAWING 208-047 SHEET RC-05

SENSING ELEMENT: RC-39-LSL

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-05	I-03-05
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[illegible]

RC PUMP
MTR OIL LEVEL
HIGH/LOW

EVENT POINT 1296

INDICATED CONDITION:

- o RCP-1A MOTOR LOWER OIL LEVEL >1" ABOVE NORMAL AS SENSED BY RC-40-LSH.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCP MOTOR OIL LEVEL INDICATION, RC-190-LI, INDICATES LOW LEVEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o TREND RCP-1A LOWER MOTOR OIL LEVEL WITH RC-190-LI.
- o MONITOR RCP-1A USING COMPUTER GROUP 78.
- o NOTIFY SITE NUCLEAR ENGINEERING.

DISCUSSION:

RC PUMP MOTOR LOWER OIL RESERVOIR HOLDS APPROXIMATELY 15 GALLONS.
NORMAL LEVEL IS 14 9/16".

REFERENCES: DRAWING 208-047 SHEET RC-05

SENSING ELEMENT: RC-40-LSH

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-05	I-03-05
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[illegible]

RC PUMP
MTR OIL LEVEL
HIGH/LOW

EVENT POINT 1297

INDICATED CONDITION:

- o RCP-1A MOTOR LOWER OIL LEVEL >1" BELOW NORMAL AS SENSED BY RC-40-LSL.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCP MOTOR OIL LEVEL INDICATION, RC-190-LI, INDICATES LOW LEVEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o TREND RCP-1A LOWER MOTOR OIL LEVEL WITH RC-190-LI.
- o MONITOR RCP-1A USING COMPUTER GROUP 78.
- o NOTIFY SITE NUCLEAR ENGINEERING.
- o NOTIFY ELECTRIC SHOP TO PREPARE TO ADD OIL TO MOTOR.

DISCUSSION:

RC PUMP MOTOR LOWER OIL RESERVOIR HOLDS APPROXIMATELY 15 GALLONS.
NORMAL LEVEL IS 14 9/16".

REFERENCES: DRAWING 208-047 SHEET RC-05

SENSING ELEMENT: RC-40-LSL

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-05	I-03-05
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RC PUMP
MTR OIL LEVEL
HIGH/LOW

EVENT POINT 1307

INDICATED CONDITION:

- o RCP-1B MOTOR UPPER OIL LEVEL $>1.25''$ ABOVE NORMAL AS SENSED BY RC-62-LSH.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCP MOTOR OIL LEVEL INDICATION, RC-190-LI, INDICATES HIGH LEVEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o TREND RCP-1B MOTOR UPPER OIL LEVEL WITH RC-190-LI.
- o MONITOR RCP-1B USING COMPUTER GROUP 79.
- o NOTIFY SITE NUCLEAR ENGINEERING.

DISCUSSION:

RC PUMP MOTOR UPPER OIL RESERVOIR HOLDS APPROXIMATELY 175 GALLONS.
NORMAL LEVEL IS $23 \frac{3}{16}''$.

REFERENCES: DRAWING 208-047 SHEET RC-06

SENSING ELEMENT: RC-62-LSH

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-05	I-03-05
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RC PUMP
MTR OIL LEVEL
HIGH/LOW

EVENT POINT 1308

INDICATED CONDITION:

- o RCP-1B MOTOR UPPER OIL LEVEL $>.75''$ BELOW NORMAL AS SENSED BY RC-62-LSL.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCP MOTOR OIL LEVEL INDICATION, RC-190-LI, INDICATES LOW LEVEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o TREND RCP-1B UPPER MOTOR OIL LEVEL WITH RC-190-LI.
- o MONITOR RCP-1B USING COMPUTER GROUP 79.
- o NOTIFY SITE NUCLEAR ENGINEERING.
- o NOTIFY ELECTRIC SHOP TO PREPARE TO ADD OIL TO MOTOR.

DISCUSSION:

RC PUMP MOTOR UPPER OIL RESERVOIR HOLDS APPROXIMATELY 175 GALLONS.
NORMAL LEVEL IS $23 \frac{3}{16}''$.

REFERENCES: DRAWING 208-047 SHEET RC-06

SENSING ELEMENT: RC-62-LSL

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-05	I-03-05
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[illegible]

RC PUMP
MTR OIL LEVEL
HIGH/LOW

EVENT POINT 1309

INDICATED CONDITION:

- o RCP-1B MOTOR LOWER OIL LEVEL >1" ABOVE NORMAL AS SENSED BY RC-63-LSH.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCP MOTOR OIL LEVEL INDICATION, RC-190-LI, INDICATES HIGH LEVEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o TREND RCP-1B LOWER MOTOR OIL LEVEL WITH RC-190-LI.
- o MONITOR RCP-1B USING COMPUTER GROUP 79.
- o NOTIFY SITE NUCLEAR ENGINEERING.

DISCUSSION:

RC PUMP MOTOR LOWER OIL RESERVOIR HOLDS APPROXIMATELY 15 GALLONS.
NORMAL LEVEL IS 14 9/16".

REFERENCES: DRAWING 208-047 SHEET RC-06

SENSING ELEMENT: RC-63-LSH

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-05	I-03-05
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[illegible]

RC PUMP
MTR OIL LEVEL
HIGH/LOW

EVENT POINT 1310

INDICATED CONDITION:

- o RCP-1B MOTOR LOWER OIL LEVEL >1" BELOW NORMAL AS SENSED BY RC-63-LSL.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCP MOTOR OIL LEVEL INDICATION, RC-190-LI, INDICATES LOW LEVEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o TREND RCP-1B LOWER MOTOR OIL LEVEL WITH RC-190-LI.
- o MONITOR RCP-1B USING COMPUTER GROUP 79.
- o NOTIFY SITE NUCLEAR ENGINEERING.
- o NOTIFY ELECTRIC SHOP TO PREPARE TO ADD OIL TO MOTOR.

DISCUSSION:

RC PUMP MOTOR LOWER OIL RESERVOIR HOLDS APPROXIMATELY 15 GALLONS.
NORMAL LEVEL IS 14 9/16".

REFERENCES: DRAWING 208-047 SHEET RC-06

SENSING ELEMENT: RC-63-LSL

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-05	I-03-05
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[illegible]

RC PUMP
MTR OIL LEVEL
HIGH/LOW

EVENT POINT 1319

INDICATED CONDITION:

- o RCP-1C MOTOR UPPER OIL LEVEL >1.25" ABOVE NORMAL AS SENSED BY RC-85-LSH.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCP MOTOR OIL LEVEL INDICATION, RC-190-LI, INDICATES HIGH LEVEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o TREND RCP-1C MOTOR UPPER OIL LEVEL WITH RC-190-LI.
- o MONITOR RCP-1C USING COMPUTER GROUP 80.
- o NOTIFY SITE NUCLEAR ENGINEERING.

DISCUSSION:

RC PUMP MOTOR UPPER OIL RESERVOIR HOLDS APPROXIMATELY 175 GALLONS.
NORMAL LEVEL IS 23 3/16".

REFERENCES: DRAWING 208-047 SHEET RC-0.

SENSING ELEMENT: RC-85-LSH

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-05	I-03-05
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[illegible]

RC PUMP
MTR OIL LEVEL
HIGH/LOW

EVENT POINT 1320

INDICATED CONDITION:

- o RCP-1C MOTOR UPPER OIL LEVEL >.75" BELOW NORMAL AS SENSED BY RC-85-LSL.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCP MOTOR OIL LEVEL INDICATION, RC-190-LI, INDICATES LOW LEVEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o TREND RCP-1C UPPER MOTOR OIL LEVEL WITH RC-190-LI.
- o MONITOR RCP-1C USING COMPUTER GROUP 80.
- o NOTIFY SITE NUCLEAR ENGINEERING.
- o NOTIFY ELECTRIC SHOP TO PREPARE TO ADD OIL TO MOTOR.

DISCUSSION:

RC PUMP MOTOR UPPER OIL RESERVOIR HOLDS APPROXIMATELY 175 GALLONS.
NORMAL LEVEL IS 23 3/16".

REFERENCES: DRAWING 208-047 SHEET RC-07

SENSING ELEMENT: RC-85-LSL

ICS-1 ANNEX IATOR RESPONSE	ICS-CY1-03-05	I-03-05
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RC PUMP
MTR OIL LEVEL
HIGH/LOW

EVENT POINT 1321

INDICATED CONDITION:
o RCP-1C MOTOR LOWER OIL LEVEL >1" ABOVE NORMAL AS SENSED BY RC-86-LSH.
REDUNDANT INDICATION WHICH WILL VERIFY ALARM:
o RCP MOTOR OIL LEVEL INDICATION, RC-190-LI, INDICATES HIGH LEVEL.
OPERATOR ACTIONS FOR A VALID ALARM:
o TREND RCP-1C LOWER MOTOR OIL LEVEL WITH RC-190-LI.
o MONITOR RCP-1C USING COMPUTER GROUP 80.
o NOTIFY SITE NUCLEAR ENGINEERING.
DISCUSSION:
RC PUMP MOTOR LOWER OIL RESERVOIR HOLDS APPROXIMATELY 15 GALLONS. NORMAL LEVEL IS 14 9/16".
REFERENCES: DRAWING 208-047 SHEET RC-07
SENSING ELEMENT: RC-86-LSH

- INDICATED CONDITION:
- o RCP-1C MOTOR LOWER OIL LEVEL >1" ABOVE NORMAL AS SENSED BY RC-86 LSH.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCP MOTOR OIL LEVEL INDICATION, RC-190-LI, INDICATES HIGH LEVEL.

- REDUNDANT INDICATION WHICH WILL VERIFY ALARM:
- o RCP MOTOR OIL LEVEL INDICATION, RC-190-LI, INDICATES HIGH LEVEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o TREND RCP-1C LOWER MOTOR OIL LEVEL WITH RC-190-LI.
- o MONITOR RCP-1C USING COMPUTER GROUP 80.
- o NOTIFY SITE NUCLEAR ENGINEERING.

- OPERATOR ACTIONS FOR A VALID ALARM:
- o TREND RCP-1C LOWER MOTOR OIL LEVEL WITH RC-190-LI.
 - o MONITOR RCP-1C USING COMPUTER GROUP 80.
 - o NOTIFY SITE NUCLEAR ENGINEERING.

DISCUSSION:

RC PUMP MOTOR LOWER OIL RESERVOIR HOLDS APPROXIMATELY 15 GALLONS.
NORMAL LEVEL IS 14 9/16".

DISCUSSION:

RC PUMP MOTOR LOWER OIL RESERVOIR HOLDS APPROXIMATELY 15 GALLONS.
NORMAL LEVEL IS 14 9/16".

REFERENCES: DRAWING 208-047 SHEET RC-07

SENSING ELEMENT: RC-86-LSH

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-05	I-03-05
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[illegible]

RC PUMP
MTR OIL LEVEL
HIGH/LOW

EVENT POINT 1322

INDICATED CONDITION:

- o RCP-1C MOTOR LOWER OIL LEVEL >1" BELOW NORMAL AS SENSED BY RC-86-LSL.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCP MOTOR OIL LEVEL INDICATION, RC-190-LI, INDICATES LOW LEVEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o TREND RCP-1C LOWER MOTOR OIL LEVEL WITH RC-190-LI.
- o MONITOR RCP-1C USING COMPUTER GROUP 80.
- o NOTIFY SITE NUCLEAR ENGINEERING.
- o NOTIFY ELECTRIC SHOP TO PREPARE TO ADD OIL TO MOTOR.

DISCUSSION:

RC PUMP MOTOR LOWER OIL RESERVOIR HOLDS APPROXIMATELY 15 GALLONS.
NORMAL LEVEL IS 14 9/16".

REFERENCES: DRAWING 208-047 SHEET RC-07

SENSING ELEMENT: RC-86-LSL

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-05	I-03-05
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[illegible]

RC PUMP
MTR OIL LEVEL
HIGH/LOW

EVENT POINT 1331

INDICATED CONDITION:

- o RCP-1D MOTOR UPPER OIL LEVEL >1.25" ABOVE NORMAL AS SENSED BY RC-108-LSH.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCP MOTOR OIL LEVEL INDICATION, RC-190-LI, INDICATES HIGH LEVEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o TREND RCP-1D MOTOR UPPER OIL LEVEL WITH RC-190-LI.
- o MONITOR RCP-1D USING COMPUTER GROUP 81.
- o NOTIFY SITE NUCLEAR ENGINEERING.

DISCUSSION:

RC PUMP MOTOR UPPER OIL RESERVOIR HOLDS APPROXIMATELY 175 GALLONS.
NORMAL LEVEL IS 23 3/16".

REFERENCES: DRAWING 208-047 SHEET RC-08

SENSING ELEMENT: RC-108-LSH

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-05	I-03-05
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[illegible]

RC PUMP
MTR OIL LEVEL
HIGH/LOW

EVENT POINT 1332

INDICATED CONDITION:

- o RCP-1D MOTOR UPPER OIL LEVEL > .75" BELOW NORMAL AS SENSED BY RC-108-LSL.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCP MOTOR OIL LEVEL INDICATION, RC-190-LI, INDICATES LOW LEVEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- 5 TREND RCP-1D UPPER MOTOR OIL LEVEL WITH RC-190-LI.
- o MONITOR RCP-1D USING COMPUTER GROUP 81.
- o NOTIFY SITE NUCLEAR ENGINEERING.
- o NOTIFY ELECTRIC SHOP TO PREPARE TO ADD OIL TO MOTOR.

DISCUSSION:

RC PUMP MOTOR UPPER OIL RESERVOIR HOLDS APPROXIMATELY 175 GALLONS.
NORMAL LEVEL IS 23 3/16".

REFERENCES: DRAWING 208-047 SHEET RC-08

SENSING ELEMENT: RC-108-LSL

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-05	I-03-05
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[illegible]

RC PUMP
MTR OIL LEVEL
HIGH/LOW

EVENT POINT 1333

INDICATED CONDITION:

- o RCP-1D MOTOR LOWER OIL LEVEL >1" ABOVE NORMAL AS SENSED BY RC-108-LSH.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCP MOTOR OIL LEVEL INDICATION, RC-190-LI, INDICATES HIGH LEVEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o TREND RCP-1D LOWER MOTOR OIL LEVEL WITH RC-190-LI.
- o MONITOR RCP-1D USING COMPUTER GROUP 1.
- o NOTIFY SITE NUCLEAR ENGINEERING.

DISCUSSION:

RC PUMP MOTOR LOWER OIL RESERVOIR HOLDS APPROXTMATELY 15 GALLONS.
NORMAL LEVEL IS 14 9/16".

REFERENCES: DRAWING 208-047 SHEET RC-08

SENSING ELEMENT: RC-108-LSH

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-05	I-03-05
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[illegible]

RC PUMP
MTR OIL LEVEL
HIGH/LOW

EVENT POINT 1334

INDICATED CONDITION:

- o RCP-1D MOTOR LOWER OIL LEVEL >1" BELOW NORMAL AS SENSED BY RC-109-LSL.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCP MOTOR OIL LEVEL INDICATION, RC-190-LI, INDICATES LOW LEVEL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o TREND RCP-1D LOWER MOTOR OIL LEVEL WITH RC-1#0-LI.
- o MONITOR RCP-1D USING COMPUTER GROUP 81.
- o NOTIFY SITE NUCLEAR ENGINEERING.
- o NOTIFY ELECTRIC SHOP TO PREPARE TO ADD OIL TO MOTOR.

DISCUSSION:

R. PUMP MOTOR LOWER OIL RESERVOIR HOLDS APPROXIMATELY 15 GALLONS.
NORMAL LEVEL IS 14 9/16".

REFERENCES: DRAWING 208-047 SHEET RC-08

SENSING ELEMENT: RC-109-LSL

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-06	I-03-06
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[illegible]

RC PUMP
AIR COOLER
LEAK

EVENT POINT 1298

INDICATED CONDITION:

- o RCP-1A MOTOR COOLER SW LEAK AS SENSED BY RC-41-LS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- 6 SW COOLING WATER SUPPLY TO COOLER DIFFERENTIAL FLOW ALARM.

OPERATOR ACTIONS FOR A VALID ALARM:

- o MONITOR RCP-1A PARAMETERS USING COMPUTER GROUP 78.
- o NOTIFY SITE NUCLEAR ENGINEERING.

DISCUSSION:

CONSIDERATION SHOULD BE GIVEN TO SHUTTING DOWN RCP-1A IF THERE IS A SUBSTANTIAL AIR COOLER LEAK.

REFERENCES: DRAWING 208-047 SHEET RC-05

SENSING ELEMENT: RC-41-LS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-06	I-03-06
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[illegible]

RC PUMP
AIR COOLER
LEAK

EVENT POINT 1311

INDICATED CONDITION:

- o RCP-1B MOTOR COOLER SW LEAK AS SENSED BY RC-J4-LS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o SW COOLING WATER SUPPLY TO COOLER DIFFERENTIAL FLOW ALARM.

OPERATOR ACTIONS FOR A VALID ALARM:

- o MONITOR RCP-18 PARAMETERS USING COMPUTER GROUP 79.
- o NOTIFY SITE NUCLEAR ENGINEERING.

DISCUSSION:

CONSIDERATION SHOULD BE GIVEN TO SHUTTING DOWN RCP-1B IF THERE IS A SUBSTANTIAL AIR COOLER LEAK.

REFERENCES: DRAWING 208-047 SHEET RC-06

SENSING ELEMENT: RC-64-LS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-06	I-03-06
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[illegible]

RC PUMP
AIR COOLER
LEAK

EVENT POINT 1323

INDICATED CONDITION:

- o RCP-1C MOTOR COOLER SW LEAK AS SENSED BY RC-87-LS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- 6 SW COOLING WATER SUPPLY TO COOLER DIFFERENTIAL FLOW ALARM.

OPERATOR ACTIONS FOR A VALID ALARM:

- o MONITOR RCP-1C PARAMETERS USING COMPUTER GROUP 80.
- o NOTIFY SITE NUCLEAR ENGINEERING.

DISCUSSION:

CONSIDERATION SHOULD BE GIVEN TO SHUTTING DOWN A RCP-1C IF THERE IS A SUBSTANTIAL AIR COOLER LEAK.

REFERENCES: DRAWING 208-047 SHEET RC-07

SENSING ELEMENT: RC-87-LS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-03-06	I-03-06
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[illegible]

RC PUMP
AIR COOLER
LEAK

EVENT POINT 1335

INDICATED CONDITION:

- o RCP-1D MOTOR COOLER SW LEAK AS SENSED BY RC-110-LS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o SW COOLING WATER SUPPLY TO COOLER DIFFERENTIAL FLOW ALARM.

OPERATOR ACTIONS FOR A VALID ALARM:

- o MONITOR RCP-1D PARAMETERS USING COMPUTER GROUP 81.
- o NOTIFY SITE NUCLEAR ENGINEERING.

DISCUSSION:

CONSIDERATION SHOULD BE GIVEN TO SHUTTING DOWN A RCP-1D IF THERE IS A SUBSTANTIAL AIR COOLER LEAK.

REFERENCES: DRAWING 208-047 SHEET RC-08

SENSING ELEMENT: RC-110-LS

[illegible]

INDICATED CONDITION:
o RCP-1D BREAKER OPEN WITH CONTROL HANDLE IN THE NORMAL AFTER START POSITION.
REDUNDANT INDICATION WHICH WILL VERIFY ALARM:
o GREEN LIGHT ON WITH A RED FLAG ON RCP-1D CONTROL STATION. o RCS FLOW IS DECREASING.
OPERATOR ACTIONS FOR A VALID ALARM:
o REFER TO AP-545.
DISCUSSION:
A RCP TRIP SHOULD CAUSE A PLANT RINBACK AND CAUSE FEEDWATER TO RE-RATIO. ADDRESS TS REQUIREMENTS CONCERNING THIS CONDITION.
REFERENCES: DRAWING 208-047 SHEET RC-04
SENSING ELEMENT: CONTROL SWITCH AND BREAKER CONTACTS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-04-02	I-04-02
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RC PUMP D
MTR VIBRATION
HIGH

EVENT POINT 1336

INDICATED CONDITION:

- o RCP-1D MOTOR VIBRATION >2 MILS AS SENSED BY RC-111-MS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o REDUNDANT RCP VIBRATION INDICATIONS AS SEEN ON RCP VIBRATION MONITORING PANEL, LPP-1A.

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO OP-302 FOR ACTIONS ON HIGH RCP VIBRATION.
- o CONSIDERATION SHOULD BE GIVEN SHUTTING DOWN A RCP WITH HIGH VIBRATIONS.

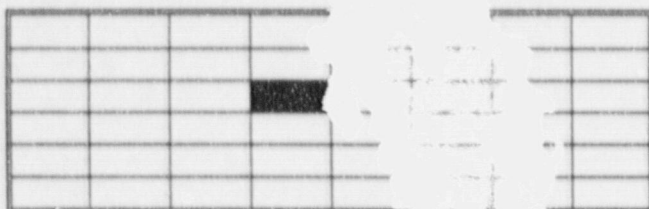
DISCUSSION:

THE VIBRATION SWITCH RESET PUSH-BUTTON ON THE MAIN CONTROL BOARD MUST BE DEPRESSED TO RESET THIS ALARM.

REFERENCES: DRAWING 208-047 SHEET RC-08

SENSING ELEMENT: RC-111-MS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-04-03	I-04-03
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RC PUMP D
CLG WTR FLOW
LOW

EVENT POINT 1422

<p>INDICATED CONDITION:</p> <ul style="list-style-type: none"> o RCP-1D SW COOLING FLOW IS <260 GPM AS SENSED BY SW-102-FS2.
<p>REDUNDANT INDICATION WHICH WILL VERIFY ALARM:</p> <ul style="list-style-type: none"> o WHITE RCP-1D SW FLOW INTERLOCK LIGHT NOT ON.
<p>OPERATOR ACTIONS FOR A VALID ALARM:</p> <ul style="list-style-type: none"> o VERIFY NORMAL SW SYSTEM OPERATION. o REFER TO OP-302 FOR SW REQUIREMENTS FOR RUNNING REACTOR COOLANT PUMPS.
<p>DISCUSSION:</p> <p>THIS ALARM MAY BE CAUSED BY LARGE SW SYSTEM LOADS. IN THESE INSTANCES CONSIDERATION SHOULD BE GIVEN TO RUNNING SWP-1A OR SWP-1B INSTEAD OF USING THE NORMAL DUTY SW PUMP, SWP-1C.</p>
<p>REFERENCES: DRAWING 208-047 SHEET RC-04</p>
<p>SENSING ELEMENT: SW-102-FS2</p>

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-04-04	I-04-04
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RC PUMP SEAL
UPPER STAGE
TEMP HIGH

EVENT POINT 0787

INDICATED CONDITION:

- o RCP UPPER STAGE TEMPERATURE $>150^{\circ}$ F AS SENSED BY RC-206-TS, RC-209-TS, RC-212-TS, RC-215-TS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCP SEAL DATA RECORDERS, RC-19A-PR1, RC-19A-PR2, RC-19B-PR1, RC-19B-PR2.
- o COMPUTER POINTS:
RCP-1A, X-383 RCP-1B, X-386 RCP-1C, X-389 RCP-1D, X-392.

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO OP-302 FOR ABNORMAL RCP SEAL TEMPERATURES.
- o CONTACT SITE NUCLEAR ENGINEERING.
- o MONITOR RCP COMPUTER GROUP FOR INCREASING TRENDS:
RCP-1A GRP. 78 RCP-1B GRP. 79 RCP-1C GRP. 80 RCP-1D GRP.81

DISCUSSION:

THIS ALARM COMES IN WHEN ANY RCP UPPER STAGE TEMPERATURE IS HIGH. THE OPERATOR MUST DETERMINE WHICH IS THE EFFECTED RCP BY OBSERVING THE UPPER STAGE COMPUTER POINTS LISTED OR THE RCP SEAL CHART RECORDERS BEHIND THE CONTROL BOARD.

REFERENCES: DRAWING 208-047 SHEET RC-028

SENSING ELEMENT: RC-206,209,212,215-TS

[illegible]

RC PUMP
OIL FILTER Δ P
HIGH

INDICATED CONDITION:
o RCP-3A SUCTION OIL FILTER DIFFERENTIAL PRESSURE >2 PSID AS SENSED BY RC-44-PS2.
REDUNDANT INDICATION WHICH WILL VERIFY ALARM:
o RCP-1A WHITE LIFT OIL PERMISSIVE LIGHT IS OUT.
OPERATOR ACTIONS FOR A VALID ALARM:
o IF THIS ALARM COMES IN WHILE SHUTTING DOWN RCP-1A, RCP-3A SHOULD REMAIN RUNNING UNTIL RCP-1A COAST DOWN IS COMPLETE, OTHERWISE SHUTDOWN RCP-3A.
DISCUSSION:
MAINTENANCE SHOULD BE NOTIFIED TO CHANGE FILTER.
REFERENCES: DRAWING 208-047 SHEET RC-05
SENSING ELEMENT: RC-44-PS2

EVENT POINT 1314

o RCP-2B SUCTION OIL FILTER DIFFERENTIAL PRESSURE >2 PSID AS SENSED BY RC-67-PS1.

- o RCP-1B WHITE LIFT OIL PERMISSIVE LIGHT IS OUT.
- o RCP-1B DC LIFT OIL PUMP, RCP-3B AUTO STARTS.

- o START RCP-3B.
- o SHUT DOWN RCP-2B.

MAINTENANCE SHOULD BE NOTIFIED TO CHANGE FILTER.

SENSING ELEMENT: RC-67-PS1

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[illegible]

EVENT POINT 1326

o RCP-1C AC LIFT OIL PUMP, RCP-2C SUCTION OIL FILTER DIFFERENTIAL PRESSURE
 >2 PSID AS SENSED BY RC-90-PS1.

- o RCP-1C WHITE LIFT OIL PERMISSIVE LIGHT IS OUT.
- o RCP-1C DC LIFT OIL PUMP, RCP-3C AUTO STARTS.

- o START RCP-3C.
- o SHUT DOWN RCP-2C.

MAINTENANCE SHOULD BE NOTIFIED TO CHANGE FILTER.

SENSING ELEMENT: RC-90-PS1

[illegible]

EVENT POINT 1327

○ RCP-1C DC LIFT OIL PUMP, RCP-3C SUCTION OIL FILTER DIFFERENTIAL PRESSURE
 >2 PSID AS SENSED BY RC-90-PS2.

o RCP-1C WHITE LIFT OIL PERMISSIVE LIGHT IS OUT.

- o START RCP-2C.
- o SHUT DOWN RCP-3C.

MAINTENANCE SHOULD BE NOTIFIED TO CHANGE FILTER.

SENSING ELEMENT: RC-90-PS2

4[illegible]

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EVENT POINT 1338

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[illegible]

EVENT POINT 1339

o RCP-3D SUCTION OIL FILTER DIFFERENTIAL PRESSURE >2 PSID AS SENSED BY RC-113-PS2.

○ RCP-1D WHITE LIFT OIL PERMISSIVE LIGHT IS OUT.

- o START RCP-2D.
- o SHUT DOWN RCP-3D.

MAINTENANCE SHOULD BE NOTIFIED TO CHANGE FILTER.

SENSING ELEMENT: RC-113-PS2

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-05-01	I-05-01
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PORV
SAFETY VALVE
OPEN

EVENT POINT 1957

INDICATED CONDITION:

- O PRESSURIZER CODE SAFETY VALVE, RCV-8, ULTRASONIC INDICATION IS IN THE "VALVE OPEN" REGION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCS PRESSURE >2500 PSIG.
- o RCS PRESSURE DECREASING.
- o RC DRAIN TANK PRESSURE AND TEMPERATURE INCREASING.

OPERATOR ACTIONS FOR A VALID ALARM:

- o LOWER RCS PRESSURE USING PORV OR SPRAY VALVE.

DISCUSSION:

THIS ALARM MUST BE RESET LOCALLY IN THE PORV POSITION INDICATION AND TSAT CABINET IN THE "B" ES 4160V. SWITCHGEAR ROOM.

REFERENCES: DRAWING 208-047 SHEET RC-027

SENSING ELEMENT: ALARM SWITCH 1

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-05-01	I-05-01
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PORV
SAFETY VALVE
OPEN

EVENT POINT 1958

INDICATED CONDITION:

- o PRESSURIZER CODE SAFETY VALVE, RCV-9, ULTRASONIC INDICATION IS IN THE "VALVE OPEN" REGION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCS PRESSURE >2500 PSIG.
- o RCS PRESSURE DECREASING.
- o RC DRAIN TANK PRESSURE AND TEMPERATURE INCREASING.

OPERATOR ACTIONS FOR A VALID ALARM:

- o LOWER RCS PRESSURE USING PORV OR SPRAY VALVE.

DISCUSSION:

THIS ALARM MUST BE RESET LOCALLY IN THE POR ' POSITION INDICATION AND TSAT CABINET IN THE "B" ES 4160V. SWITCHGEAR ROOM.

REFERENCES: DRAWING 208-047 SHEET RC-027

SENSING ELEMENT: ALARM SWITCH 2

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-05-01	I-05-01
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PORV
SAFETY VALVE
OPEN

EVENT POINT 1959

INDICATED CONDITION:

- O PRESSURIZER PILOT OPERATED RELIEF VALVE, RCV-10, ULTRASONIC INDICATION IS IN THE "VALVE OPEN" REGION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCS PRESSURE >2450 PSIG.
- o RCS PRESSURE DECREASING.
- o RC DRAIN TANK PRESSURE AND TEMPERATURE INCREASING.

OPERATOR ACTIONS FOR A VALID ALARM:

- o LOWER RCS PRESSURE USING SPRAY VALVE.

DISCUSSION:

THIS ALARM MUST BE RESET LOCALLY IN THE PORV POSITION INDICATION AND TSAT CABINET IN THE "B" ES 4160V. SWITCHGEAR ROOM.

REFERENCES: DRAWING 208-047 SHEET RC-027

SENSING ELEMENT: ALARM SWITCH 3

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-05-02	I-05-02
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PORV
SELECTED
CLOSED

EVENT POINT 1445

INDICATED CONDITION:

- o PILOT OPERATED RELIEF VALVE, RCV-10 CONTROL SWITCH SELECTED TO "CLOSED."

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o POSITION OF PORV SELECTOR SWITCH.

OPERATOR ACTIONS FOR A VALID ALARM:

- o EVALUATE THE NECESSITY FOR PORV TO BE SELECTED CLOSED.

DISCUSSION:

THIS CONDITION RENDERS THE PORV INOPERABLE.
ADDRESS TS AND LTOPS REQUIREMENTS CONCERNING THIS CONDITION.

REFERENCES: DRAWING 208-047 SHEET RC-025

SENSING ELEMENT: CONTROL SWITCH CONTACTS

[illegible]

EVENT POINT 1936

o ANY ONE OF THE LOOSE PARTS MONITORING CHANNELS EXCEEDING ALARM SETPOINT.

○ RED ALARM INDICATION ON LOOSE PARTS MONITORING CHANNELS.

o REFER TO OP-506 FOR LPMS ALARM RESPONSE AND ANALYSIS GUIDELINES.

DISCUSSION:

REFERENCES:

SENSING ELEMENT: VARIOUS LPMS SENSORS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-06-01	I-05-01
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PORV
SOLENOID
ENERGIZED

EVENT POINT 1442

INDICATED CONDITION:

- o PILOT OPERATED RELIEF VALVE, RCV-10, SOLENOID IS ENERGIZED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RCS PRESSURE >2450 PSIG.
- o PORV SWITCH RED INDICATING LIGHT IS ON.
- o ULTRASONIC FLOW INDICATION FOR PORV IN THE "VALVE OPEN REGION."

OPERATOR ACTIONS FOR A VALID ALARM:

- o IF PORV IS NOT REQUIRED TO BE OPEN THEN SELECT PORV TO "CLOSED"
 - IF RC PRESSURE IS FAST DECREASING INDICATING THE PORV IS LEAKING BY OR NOT FULL CLOSED, THEN CLOSE PORV BLOCK VALVE RCV-11.

DISCUSSION:

THIS ALARM INDICATES ONLY THAT THE PORV OPEN SOLENOID IS ENERGIZED. THIS IS NOT ACTUAL PORV POSITION INDICATION. ULTRASONIC FLOW INDICATION SHOULD BE USED TO VERIFY THE PORV OPEN.

PORV WILL OPEN AT >2450 PSIG AND CLOSE AT <2380 PSIG WHEN SELECTED TO HIGH
PORV WILL OPEN AT >442.6 AND CLOSE AT <392.6 WHEN SELECTED TO LOW.

REFERENCES: DRAWING 208-047 SHEET RC-025

SENSING ELEMENT: 20X-RCV-10

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-06-02	I-06-02
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PORV
BLOCK VALVE
CLOSED

EVENT POINT 1360

INDICATED CONDITION:

- o PILOT OPERATED RELIEF, RCV-10, BLOCK VALVE, RCV-11 FULL CLOSED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o GREEN INDICATING LIGHT IS ON FOR RCV-11.

OPERATOR ACTIONS FOR A VALID ALARM:

- o ASSESS REQUIREMENTS FOR PORV BLOCK VALVE, RCV-11 BEING CLOSED.

DISCUSSION:

ADDRESS TS AND LTOP REQUIREMENTS CONCERNING THIS CONDITION.

REFERENCES: DRAWING 208-047 SHEET RC-013

SENSING ELEMENT: 33C VALVE CLOSED CONTACT

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-07-01	I-07-01
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PRESSURIZER
LEVEL
HIGH

EVENT POINT 1371

INDICATED CONDITION:

- o PRESSURIZER LEVEL >275" AS SENSED BY RC-1-LS1.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o PRESSURIZER LEVEL RECORDERS.
- o COMPUTER POINT R-201.

OPERATOR ACTIONS FOR A VALID ALARM:

- o MANUALLY CONTROL RCS MAKEUP AND LETDOWN TO REGAIN PRESSURIZER LEVEL.
- o REFER TO ITS 3.4.8
- o CONTACT SYSTEM ENGINEER TO DETERMINE IF DESIGN BASIS HAS BEEN EXCEEDED.

DISCUSSION:

HIGH PRESSURIZER LEVELS INDICATE EITHER PROBLEMS WITH MAKEUP/LETDOWN OR A RCS HEATUP HAS OCCURRED.
REFER TO OP-402 CONCERNING LIMITS ON LETDOWN FLOW.
DUE TO INSTRUMENT INACCURACIES, ENGINEERING MUST DETERMINE IF DESIGN BASIS HAS BEEN EXCEEDED.

REFERENCES: DRAWING 208-047 SHEET RC-027

SENSING ELEMENT: RC-1-LS1

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-07-01	I-07-01
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PRESSURIZER
LEVEL
HIGH

EVENT POINT 1372

INDICATED CONDITION:

- o PRESSURIZER LEVEL >240" AS SENSED BY RC-1-LS2.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o PRESSURIZER LEVEL RECORDERS.
- o COMPUTER POINT R-201.

OPERATOR ACTIONS FOR A VALID ALARM:

- o MANUALLY CONTROL RCS MAKEUP AND LETDOWN TO REGAIN PRESSURIZER LEVEL.
- o IF PRESSURIZER LEVEL REACHES 256", REFER TO ITS 3.4.8.

DISCUSSION:

HIGH PRESSURIZER LEVELS INDICATE EITHER PROBLEMS WITH MAKEUP/LETDOWN OR A RCS HEATUP HAS OCCURRED.
REFER TO OP-402 CONCERNING LIMITS ON LETDOWN FLOW.

REFERENCES: DRAWING 208-047 SHEET RC-027

SENSING ELEMENT: RC-1-LS2

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-07-02	I-07-02
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PRESSURIZER
HEATER SCR
FAILURE

EVENT POINT 1303

INDICATED CONDITION:

- o RC PRESSURIZER HEATER SCR FAILURE.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED INDICATING LIGHT ON PRESSURIZER HEATER CONTROL CABINET.
- o RCS PRESSURE ABNORMAL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o ATTEMPT TO RESET SCR FAILURE BY OPENING THEN RECLOSING FEEDER BREAKER TO HEATER GROUP WITH THE SCR FAILURE.
- o MANUALLY CONTROL RCS PRESSURE AS REQUIRED.
- o NOTIFY ELECTRIC SHOP.

DISCUSSION:

THIS ALARM INDICATES A DIFFERENTIAL VOLTAGE EXISTS OR HAS EXISTED BETWEEN TWO LEGS OF THE SCR CONTROL CIRCUIT FOR THE PRESSURIZER HEATERS. THIS DOES NOT NECESSARILY MEAN THAT CONTROL HAS BEEN LOST TO THOSE HEATERS.

THIS ALARM SEALS IN AND CANNOT BE CLEARED UNTIL THE CONTROL CIRCUIT IS DE-ENERGIZED.

REFERENCES: DRAWING 208-047 SHEET RC-019

SENSING ELEMENT: SCR DIFFERENTIAL VOLTAGE RELAYS

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-07-05	I-07-05
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RCS PRESS HIGH TEMP LOW

EVENT POINT 1935

INDICATED CONDITION:

- o REACTOR COOLANT PRESSURE IS >392.6 PSIG AS SENSED BY RC-3A-PS4 AND THE PORV, RCV-10, IS SELECTED TO LOW RANGE.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o PORV, RCV-10, IS OPEN.
- o WIDE RANGE RCS PRESSURE INDICATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- o REDUCE RCS PRESSURE BY INCREASING LETDOWN OR USE OF PRESSURIZER SPRAY VALVE.

DISCUSSION:

THIS ALARM INDICATES THAT RCS LOW TEMP AND PRESS RECORDER, RC-154-PR/TR HAS SHIFTED TO FAST SPEED.

REFERENCES: DRAWING 208-047 SHEET RC-027

SENSING ELEMENT: 86/RC3A-PS4

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-08-01	I-08-01
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PRESSURIZER
LEVEL
LOW

EVENT POINT 1373

<p>INDICATED CONDITION:</p> <ul style="list-style-type: none"> o PRESSURIZER LEVEL IS <200" AS SENSED BY RC-1-LY4.
<p>REDUNDANT INDICATION WHICH WILL VERIFY ALARM:</p> <ul style="list-style-type: none"> o PRESSURIZER LEVEL INDICATION.
<p>OPERATOR ACTIONS FOR A VALID ALARM:</p> <ul style="list-style-type: none"> o VERIFY PROPER OPERATION OF PRESSURIZER LEVEL CONTROL VALVE, MUV-31. o INCREASE PRESSURIZER LEVEL BY MANUALLY CONTROLLING MAKEUP/LETDOWN. o TERMINATE PLANT COOLDOWN AS REQUIRED.
<p>DISCUSSION:</p>
<p>REFERENCES: DRAWING 208-047 SHEET RC-027</p>
<p>SENSING ELEMENT: RC-1-LY4</p>

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-08-01	I-08-01
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PRESSURIZER
LEVEL
LOW

EVENT POINT 1374

INDICATED CONDITION:

- o PRESSURIZER LEVEL IS <40" AS SENSED BY RC-1-LS1/RC-1-LS3.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o PRESSURIZER LEVEL INDICATION.
- o WHITE INDICATOR LIGHTS FOR PRESSURIZER HEATERS ARE OFF.
- o PRESSURIZER HEATER BAILEY CONTROL STATION SHIFTS TO MANUAL.

OPERATOR ACTIONS FOR A VALID ALARM:

- o VERIFY PROPER OPERATION OF PRESSURIZER LEVEL CONTROL VALVE, MUV-31.
- o INCREASE PRESSURIZER LEVEL TO >57" BY MANUALLY CONTROLLING MAKEUP/LETDOWN.
- o TERMINATE PLANT COOLDOWN AS REQUIRED.

DISCUSSION:

A LOW-LOW LEVEL IN THE PRESSURIZER WILL DE-ENERGIZE PRESSURIZER HEATERS. HEATER GROUPS 7 THRU 13 ARE AFFECTED, REFER TO THE 208-47 DRAWINGS FOR SPECIFIC GROUPS ASSOCIATED WITH EACH SWITCH RELAY.

REFERENCES: DRAWING 208-047 SHEET RC-027

SENSING ELEMENT: RC-1-LS1, RC-1-LS3

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-08-02	I-08-02
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PRESSURIZER
HEATER GROUP
TROUBLE

EVENT POINT 1344

<p>INDICATED CONDITION:</p> <ul style="list-style-type: none"> o PRESSURIZER HEATER GROUP 1 BREAKER OPEN.
<p>REDUNDANT INDICATION WHICH WILL VERIFY ALARM:</p> <ul style="list-style-type: none"> o FEEDER BREAKER FOR THE HEATER GROUP TRIPS OR IS OPENED.
<p>OPERATOR ACTIONS FOR A VALID ALARM:</p> <ul style="list-style-type: none"> o STABILIZE RCS PRESSURE. o MONITOR PRESSURIZER OPERATION. o NOTIFY ELECTRIC SHOP.
<p>DISCUSSION:</p> <p>THIS ALARM INDICATES THE PRESSURIZER HEATER GROUP BREAKER IS OPEN. THIS CONDITION COULD BE CAUSED BY MANUAL OPENING OF THE BREAKER OR A FAULT CONDITION (OVERCURRENT OR CURRENT IMBALANCE).</p>
<p>REFERENCES: DRAWING 208-047 SHEET RC-018</p>
<p>SENSING ELEMENT: BKR. 4A ALARM SWITCH</p>

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-08-02	I-08-02
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PRESSURIZER
HEATER GROUP
TROUBLE

EVENT POINT 1348

INDICATED CONDITION:

- o PRESSURIZER HEATER GROUP 2 BREAKER OPEN.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o FEEDER BREAKER FOR THE HEATER GROUP TRIPS OR IS OPENED.

OPERATOR ACTIONS FOR A VALID ALARM:

- o STABILIZE RCS PRESSURE.
- o MONITOR PRESSURIZER OPERATION.
- o NOTIFY ELECTRIC SHOP.

DISCUSSION:

THIS ALARM INDICATES THE PRESSURIZER HEATER GROUP BREAKER IS OPEN. THIS CONDITION COULD BE CAUSED BY MANUAL OPENING OF THE BREAKER OR A FAULT CONDITION (OVERCURRENT OR CURRENT IMBALANCE).

REFERENCES: DRAWING 208-047 SHEET RC-018

SENSING ELEMENT: BKR.2A ALARM SWITCH

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-08-02	I-08-02
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PRESSURIZER
HEATER GROUP
TROUBLE

EVENT POINT 1352

<p>INDICATED CONDITION:</p> <ul style="list-style-type: none"> o PRESSURIZER HEATER GROUP 3 BREAKER OPEN.
<p>REDUNDANT INDICATION WHICH WILL VERIFY ALARM:</p> <ul style="list-style-type: none"> o FEEDER BREAKER FOR THE HEATER GROUP TRIPS OR IS OPENED.
<p>OPERATOR ACTIONS FOR A VALID ALARM:</p> <ul style="list-style-type: none"> o STABILIZE RC PRESSURE. o MONITOR PRESSURIZER OPERATION. o NOTIFY ELECTRIC SHOP.
<p>DISCUSSION:</p> <p>THIS ALARM INDICATES THE PRESSURIZER HEATER GROUP BREAKER IS OPEN. THIS CONDITION COULD BE CAUSED BY MANUAL OPENING OF THE BREAKER OR A FAULT CONDITION (OVERCURRENT OR CURRENT IMBALANCE).</p>
<p>REFERENCES: DRAWING 208-047 SHEET RC-018</p>
<p>SENSING ELEMENT: BKR.4B ALARM SWITCH</p>

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-08-02	I-08-02
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PRESSURIZER
HEATER GROUP
TROUBLE

EVENT POINT 1356

INDICATED CONDITION:

- o PRESSURIZER HEATER GROUP 4 BREAKER OPEN.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o FEEDER BREAKER FOR THE HEATER GROUP TRIPS OR IS OPENED.

OPERATOR ACTIONS FOR A VALID ALARM:

- o STABILIZE RCS PRESSURE.
- o MONITOR PRESSURIZER OPERATION.
- o NOTIFY ELECTRIC SHOP.

DISCUSSION:

THIS ALARM INDICATES THE PRESSURIZER HEATER GROUP BREAKER IS OPEN. THIS CONDITION COULD BE CAUSED BY MANUAL OPENING OF THE BREAKER OR A FAULT CONDITION (OVERCURRENT OR CURRENT IMBALANCE).

REFERENCES: DRAWING 208-047 SHEET RC-018

SENSING ELEMENT: BKR.4C ALARM SWITCH

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-08-02	I-08-02
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[illegible]

PRESSURIZER HEATER GROUP TROUBLE

EVENT POINT 1359

INDICATED CONDITION:

- o PRESSURIZER HEATER GROUP 5 BREAKER OPEN.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o FEEDER BREAKER FOR THE HEATER GROUP TRIPS OR IS OPENED.

OPERATOR ACTIONS FOR A VALID ALARM:

- Q STABILIZE RCS PRESSURE.
- Q MONITOR PRESSURIZER OPERATION.
- Q NOTIFY ELECTRIC SHOP.

DISCUSSION:

THIS ALARM INDICATES THE PRESSURIZER HEATER GROUP BREAKER IS OPEN. THIS CONDITION COULD BE CAUSED BY MANUAL OPENING OF THE BREAKER OR A FAULT CONDITION (OVERCURRENT OR CURRENT IMBALANCE).

REFERENCES: DRAWING 208-047 SHEET RC-018

SENSING ELEMENT: BKR. 3A ALARM SWITCH

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-08-02	I-08-02
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PRESSURIZER
HEATER GROUP
TROUBLE

EVENT POINT 1387

INDICATED CONDITION:

- o PRESSURIZER HEATER GROUP 6 BREAKER OPEN.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o FEEDER BREAKER FOR THE HEATER GROUP TRIPS OR IS OPENED.

OPERATOR ACTIONS FOR A VALID ALARM:

- o STABILIZE RCS PRESSURE.
- o MONITOR PRESSURIZER OPERATION.
- o NOTIFY ELECTRIC SHOP.

DISCUSSION:

THIS ALARM INDICATES THE PRESSURIZER HEATER GROUP BREAKER IS OPEN. THIS CONDITION COULD BE CAUSED BY MANUAL OPENING OF THE BREAKER OR A FAULT CONDITION (OVERCURRENT OR CURRENT IMBALANCE).

REFERENCES: DRAWING 208-047 SHEET RC-018

SENSING ELEMENT: BKR. 4A ALARM SWITCH

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-08-02	I-08-02
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[illegible]

PRESSURIZER HEATER GROUP TROUBLE

EVENT POINT 1388

INDICATED CONDITION:

- PRESSURIZER HEATER GROUP 7 BREAKER OPEN.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o FEEDER BREAKER FOR THE HEATER GROUP TRIPS OR IS OPENED.

OPERATOR ACTIONS FOR A VALID ALARM:

- o STABILIZE RCS PRESSURE.
- o MONITOR PRESSURIZER OPERATION.
- o NOTIFY ELECTRIC SHOP.

DISCUSSION:

THIS ALARM INDICATES THE PRESSURIZER HEATER GROUP BREAKER IS OPEN. THIS CONDITION COULD BE CAUSED BY MANUAL OPENING OF THE BREAKER OR A FAULT CONDITION (OVERCURRENT OR CURRENT IMBALANCE).

REFERENCES: DRAWING 208-047 SHEET RC-020

SENSING ELEMENT: BKR. 1C ALARM SWITCH

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-08-02	I-08-02
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PRESSURIZER
HEATER GROUP
TROUBLE

EVENT POINT 1389

INDICATED CONDITION:

- o PRESSURIZER HEATER GROUP 8 BREAKER OPEN.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o FEEDER BREAKER FOR THE HEATER GROUP TRIPS OR IS OPENED.

OPERATOR ACTIONS FOR A VALID ALARM:

- o STABILIZE RCS PRESSURE.
- o MONITOR PRESSURIZER OPERATION.
- o NOTIFY ELECTRIC SHOP.

DISCUSSION:

THIS ALARM INDICATES THE PRESSURIZER HEATER GROUP BREAKER IS OPEN. THIS CONDITION COULD BE CAUSED BY MANUAL OPENING OF THE BREAKER OR A FAULT CONDITION (OVERCURRENT OR CURRENT IMBALANCE).

REFERENCES: DRAWING 208-047 SHEET RC-020

SENSING ELEMENT: BKR.2C ALARM SWITCH

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-08-02	I-08-02
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PRESSURIZER
HEATER GROUP
TROUBLE

EVENT POINT 1390

<p>INDICATED CONDITION:</p> <ul style="list-style-type: none"> o PRESSURIZER HEATER GROUP 9 BREAKER OPEN.
<p>REDUNDANT INDICATION WHICH WILL VERIFY ALARM:</p> <ul style="list-style-type: none"> o FEEDER BREAKER FOR THE HEATER GROUP TRIPS OR IS OPENED.
<p>OPERATOR ACTIONS FOR A VALID ALARM:</p> <ul style="list-style-type: none"> o STABILIZE RCS PRESSURE. o MONITOR PRESSURIZER OPERATION. o NOTIFY ELECTRIC SHOP.
<p>DISCUSSION:</p> <p>THIS ALARM INDICATES THE PRESSURIZER HEATER GROUP BREAKER IS OPEN. THIS CONDITION COULD BE CAUSED BY MANUAL OPENING OF THE BREAKER OR A FAULT CONDITION (OVERCURRENT OR CURRENT IMBALANCE).</p>
<p>REFERENCES: DRAWING 208-047 SHEET RC-020</p>
<p>SENSING ELEMENT: BKR.3C ALARM SWITCH</p>

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-08-02	I-08-02
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PRESSURIZER
HEATER GROUP
TROUBLE

EVENT POINT 1391

INDICATED CONDITION:

- o PRESSURIZER HEATER GROUP 10 BREAKER OPEN.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o FEEDER BREAKER FOR THE HEATER GROUP TRIPS OR IS OPENED.

OPERATOR ACTIONS FOR A VALID ALARM:

- o STABILIZE RCS PRESSURE.
- o MONITOR PRESSURIZER OPERATION.
- o NOTIFY ELECTRIC SHOP.

DISCUSSION:

THIS ALARM INDICATES THE PRESSURIZER HEATER GROUP BREAKER IS OPEN. THIS CONDITION COULD BE CAUSED BY MANUAL OPENING OF THE BREAKER OR A FAULT CONDITION (OVERCURRENT OR CURRENT IMBALANCE).

REFERENCES: DRAWING 208-047 SHEET RC-020

SENSING ELEMENT: BKR. 1D ALARM SWITCH

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-08-02	I-08-02
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PRESSURIZER
HEATER GROUP
TROUBLE

EVENT POINT 1392

<p>INDICATED CONDITION:</p> <ul style="list-style-type: none"> o PRESSURIZER HEATER GROUP 11 BREAKER OPEN.
<p>REDUNDANT INDICATION WHICH WILL VERIFY ALARM:</p> <ul style="list-style-type: none"> o FEEDER BREAKER FOR THE HEATER GROUP TRIPS OR IS OPENED.
<p>OPERATOR ACTIONS FOR A VALID ALARM:</p> <ul style="list-style-type: none"> o STABILIZE RCS PRESSURE. o MONITOR PRESSURIZER OPERATION. o NOTIFY ELECTRIC SHOP.
<p>DISCUSSION:</p> <p>THIS ALARM INDICATES THE PRESSURIZER HEATER GROUP BREAKER IS OPEN. THIS CONDITION COULD BE CAUSED BY MANUAL OPENING OF THE BREAKER OR A FAULT CONDITION (OVERCURRENT OR CURRENT IMBALANCE).</p>
<p>REFERENCES: DRAWING 208-047 SHEET RC-020</p>
<p>SENSING ELEMENT: BKR. 2C ALARM SWITCH</p>

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-08-02	I-08-02
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PRESSURIZER
HEATER GROUP
TROUBLE

EVENT POINT 1393

INDICATED CONDITION:

- o PRESSURIZER HEATER GROUP 12 BREAKER OPEN.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o FEEDER BREAKER FOR THE HEATER GROUP TRIPS OR IS OPENED.

OPERATOR ACTIONS FOR A VALID ALARM:

- o STABILIZE RCS PRESSURE.
- o MONITOR PRESSURIZER OPERATION.
- o NOTIFY ELECTRIC SHOP.

DISCUSSION:

THIS ALARM INDICATES THE PRESSURIZER HEATER GROUP BREAKER IS OPEN. THIS CONDITION COULD BE CAUSED BY MANUAL OPENING OF THE BREAKER OR A FAULT CONDITION (OVERCURRENT OR CURRENT IMBALANCE).

REFERENCES: DRAWING 208-047 SHEET RC-020

SENSING ELEMENT: BKR.3C ALARM SWITCH

ICS-I ANNUNCIATOR RESPONSE	ICS-CY1-08-02	I-08-02
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PRESSURIZER
HEATER GROUP
TROUBLE

EVENT POINT 1394

INDICATED CONDITION:

- o PRESSURIZER HEATER GROUP 13 BREAKER OPEN.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o FEEDER BREAKER FOR THE HEATER GROUP TRIPS OR IS OPENED.

OPERATOR ACTIONS FOR A VALID ALARM:

- o STABILIZE RCS PRESSURE.
- o MONITOR PRESSURIZER OPERATION.
- o NOTIFY ELECTRIC SHOP.

DISCUSSION:

THIS ALARM INDICATES THE PRESSURIZER HEATER GROUP BREAKER IS OPEN.
THIS CONDITION COULD BE CAUSED BY MANUAL OPENING OF THE BREAKER OR
A FAULT CONDITION (OVERCURRENT OR CURRENT IMBALANCE).

REFERENCES: DRAWING 208-047 SHEET RC-020

SENSING ELEMENT: BKR. 4C ALARM SWITCH