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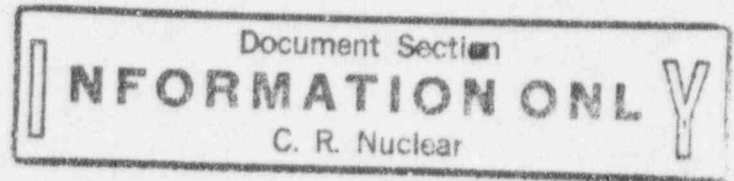
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Rev. 9

Effective Date 3-5-96



OPERATING PROCEDURE

AR-601

FLORIDA POWER CORPORATION

CRYSTAL RIVER UNIT 3

TGF M ANNUNCIATOR RESPONSE

APPROVED BY: Interpretation Contact


(SIGNATURE ON FILE)

DATE:

3/4/96

INTERPRETATION CONTACT: Manager, Nuclear Operations
Support

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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 TGF-AX1 Lampbox.
- 1.2 Establish operator actions for valid Annunciator alarms on the TGF-AX1 Lampbox.
- 1.3 Establish a reference to other procedures which address operator actions for valid Annunciator alarms on the TGF-AX1 Lampbox.

2.0 REFERENCES

2.1 IMPLEMENTING REFERENCES

- 2.1.1 OP-604, Circulating Water System
- 2.1.2 OP-416, Domestic Water Supply System
- 2.1.3 AP-1050, Flooding

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-224-049
- 2.2.3 MAR 90-08-16-01, CWEJ Encapsulation
- 2.2.4 MAR 95-11-10-01, Intake Screen Setpoint Change

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 TGF-AX1 Lampbox as indicated on Enclosure 1, Annunciator Response.

5.0 FOLLOW-UP ACTIONS

None

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-01-01	M-01-01
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CW PUMP A
TRIP

EVENT POINT 0122

INDICATED CONDITION:

- o CWP-1A BREAKER OPEN AND CONTROL HANDLE IN NORMAL AFTER START POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o GREEN LIGHT IS ON WITH A RED FLAG ON CWP-1A CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- o MONITOR CONDENSER VACUUM.
- o CLOSE ARV-47.
- o VERIFY ON LINE SC HEAT EXCHANGER IS BEING SUPPLIED BY AN ON LINE CWP.
- o REDUCE PLANT POWER AS NECESSARY TO MAINTAIN CONDENSER VACUUM.

DISCUSSION:

DO NOT CONTINUE TO OPERATE THE TURBINE WHEN BOTH CIRC WATER PUMPS ARE SHUTDOWN IN THE SAME CONDENSER.

MAXIMUM ΔT BETWEEN CONDENSERS USING LP TURBINE EXHAUST TEMPERATURE IS 50° F.

REFERENCES: DRAWING 208-018 SHEET CW-01

SENSING ELEMENT: BREAKER AND CONTROL SWITCH CONTACTS.

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-01-02	M-01-02
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CW PUMP A
MOTOR
OVERLOAD

EVENT POINT 0121

INDICATED CONDITION:

- o CWP-1A MOTOR **AMPS** >115% RATED LOAD.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o CWP-1A LOAD INDICATOR.
- o LOCAL CWP-1A AMP METER.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CWP-1A FOR SIGNS OF ABNORMAL OPERATION.
- o CHECK BREAKER CUBICLE FOR DROPPED TARGETS.

DISCUSSION:

THIS ALARM INDICATES THAT EITHER THE TIMED OVERCURRENT OR THE 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 208-018 SHEET CW-01

SENSING ELEMENT: BREAKER OVERLOAD CONTACTS

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-01-03	M-01-03
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CW PUMP
VIBRATION
HIGH

EVENT POINT 2040

INDICATED CONDITION:

- o CIRCULATING WATER PUMPS VIBRATION MONITOR IN ALARM.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED ALARM LIGHT IS ON, LOCATED ON THE LOCAL ALARM PANEL, INTAKE AREA.

OPERATOR ACTIONS FOR A VALID ALARM:

- o VERIFY PROPER OPERATION OF CW PUMPS.
- o REFER TO OP-604.

DISCUSSION:

THIS ALARM INDICATES ANY ONE OF 8 CIRC PUMP VIBRATION MONITORS IS IN ALARM. ONCE THIS ALARM IS IN, ANOTHER VIBRATION ALARM COMING IN WILL NOT REFLASH THE WINDOW.

REFERENCES: VENDOR DRAWINGS FOR CIRC PUMP VIBRATION MODULE.

SENSING ELEMENT: CW-156-ME, CW-157-ME, CW-158-ME, CW-159-ME

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-01	M-02-01
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CW PUMP B
TRIP

EVENT POINT 0126

INDICATED CONDITION:

- o CWP-1B BREAKER OPEN AND CONTROL HANDLE IN NORMAL AFTER START POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o GREEN LIGHT IS ON WITH A RED FLAG ON CWP-1B CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- o MONITOR CONDENSER VACUUM.
- o CLOSE ARV-46.
- o VERIFY ON LINE SC HEAT EXCHANGER IS BEING SUPPLIED BY AN ON LINE CWP.
- o REDUCE PLANT POWER AS NECESSARY TO MAINTAIN CONDENSER VACUUM.

DISCUSSION:

DO NOT CONTINUE TO OPERATE THE TURBINE WHEN BOTH CIRC WATER PUMPS ARE SHUTDOWN IN THE SAME CONDENSER.

MAXIMUM ΔT BETWEEN CONDENSERS USING LP TURBINE EXHAUST TEMPERATURE IS 50° F.

REFERENCES: DRAWING 208-018 SHEET CW-02

SENSING ELEMENT: BREAKER AND CONTROL SWITCH CONTACTS.

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-02	M-02-02
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CW PUMP B
MOTOR
OVERLOAD

EVENT POINT 0125

INDICATED CONDITION:

- o CIRC WATER PUMP 1B MOTOR AMPS >115% RATED LOAD.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o CWP-1B CURRENT INDICATOR.
- o LOCAL CWP-1B AMMETER.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CWP-1B FOR SIGNS OF ABNORMAL OPERATION.
- o CHECK BREAKER CUBICLE FOR DROPPED TARGETS.

DISCUSSION:

THIS ALARM INDICATES THAT EITHER THE TIMED OVERCURRENT OR THE 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 208-018 SHEET CW-02

SENSING ELEMENT: BREAKER OVERLOAD CONTACTS

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-03	M-02-03
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CW PUMP
DISCH PRESS
HIGH/LOW

EVENT POINT 0123

INDICATED CONDITION:

- o CIRC WATER PUMP 1A DISCHARGE PRESSURE <4 PSIG AS SENSED BY CW-57-PS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o HIGH LEVEL ALARM FOR CDP-1A/B PIT AND/OR TURBINE BUILDING SUMP.
- o INTAKE AREA LOCAL CWP-1A DISCHARGE PRESSURE GAUGE.
- o LOCAL WATERBOX INLET PRESSURE GAUGE.

OPERATOR ACTIONS FOR A VALID ALARM:

- o CHECK CDP-1A/B PIT AND TURBINE BUILDING SUMP LEVELS ARE NOT HIGH.
- o IF TURBINE BUILDING FLOODING IS INDICATED REFER TO AP-1050.
- o VERIFY PROPER INTAKE OPERATION.
- o WASH SCREENS AS NECESSARY.
- o CLEAN BAR RACKS.

DISCUSSION:

THIS ALARM INDICATES CWP-1A IS EITHER NOT PUMPING WATER, OR A LARGE LEAK HAS DEVELOPED WHICH COULD BE FLOODING THE TURBINE BUILDING. CONSIDERATION SHOULD BE GIVEN TO SHUTTING DOWN CWP-1A.

REFERENCES: DRAWING 208-018 SHEET CW-01

SENSING ELEMENT: CW-57-PS

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-03	M-02-03
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**CW PUMP
DISCH PRESS
HIGH/LOW**

EVENT POINT 0127

INDICATED CONDITION:

- o CIRC WATER PUMP 1B DISCHARGE PRESSURE <4 PSIG AS SENSED BY CW-58-PS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o HIGH LEVEL ALARM FOR CDP-1A/B PIT AND/OR TURBINE BUILDING SUMP.
- o INTAKE AREA LOCAL CWP-1B DISCHARGE PRESSURE GAUGE.
- o LOCAL WATERBOX INLET PRESSURE GAUGE.

OPERATOR ACTIONS FOR A VALID ALARM:

- o CHECK CDP-1A/B PIT AND TURBINE BUILDING SUMP LEVELS ARE NOT HIGH.
- o IF TURBINE BUILDING FLOODING IS INDICATED REFER TO AP-1050.
- o VERIFY PROPER INTAKE OPERATION.
- o WASH SCREENS AS NECESSARY.
- o CLEAN BAR RACKS.

DISCUSSION:

THIS ALARM INDICATES CWP-1B IS EITHER NOT PUMPING WATER, OR A LARGE LEAK HAS DEVELOPED WHICH COULD BE FLOODING THE TURBINE BUILDING. CONSIDERATION SHOULD BE GIVEN TO SHUTTING DOWN CWP-1B.

REFERENCES: DRAWING 208-018 SHEET CW-02

SENSING ELEMENT: CW-58-PS

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-03	M-02-03
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CW PUMP
DISCH PRESS
HIGH/LOW

EVENT POINT 0131

INDICATED CONDITION:

- o CIRC WATER PUMP 1C DISCHARGE PRESSURE <4 PSIG AS SENSED BY CW-59-PS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o HIGH LEVEL ALARM FOR CDP-1A/B PIT AND/OR TURBINE BUILDING SUMP.
- o INTAKE AREA LOCAL CWP-1C DISCHARGE PRESSURE GAUGE.
- o LOCAL WATERBOX INLET PRESSURE GAUGE.

OPERATOR ACTIONS FOR A VALID ALARM:

- o CHECK CDP-1A/B PIT AND TURBINE BUILDING SUMP LEVELS ARE NOT HIGH.
- o IF TURBINE BUILDING FLOODING IS INDICATED REFER TO AP-1050.
- o VERIFY PROPER INTAKE OPERATION.
- o WASH SCREENS AS NECESSARY.
- o CLEAN BAR RACKS.

DISCUSSION:

THIS ALARM INDICATES CWP-1C IS EITHER NOT PUMPING WATER, OR A LARGE LEAK HAS DEVELOPED WHICH COULD BE FLOODING THE TURBINE BUILDING. CONSIDERATION SHOULD BE GIVEN TO SHUTTING DOWN CWP-1C.

REFERENCES: DRAWING 208-018 SHEET CW-03

SENSING ELEMENT: CW-59-PS

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-03	M-02-03
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CW PUMP
DISCH PRESS
HIGH/LOW

EVENT POINT 0135

INDICATED CONDITION:

- o CIRC WATER PUMP 1D DISCHARGE PRESSURE <4 PSIG AS SENSED BY CW-60-PS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o HIGH LEVEL ALARM FOR CDP-1A/B PIT AND/OR TURBINE BUILDING SUMP.
- o INTAKE AREA LOCAL CWP-1D DISCHARGE PRESSURE GAUGE.
- o LOCAL WATERBOX INLET PRESSURE GAUGE.

OPERATOR ACTIONS FOR A VALID ALARM:

- o CHECK CDP-1A/B PIT AND TURBINE BUILDING SUMP LEVELS ARE NOT HIGH.
- o IF TURBINE BUILDING FLOODING IS INDICATED REFER TO AP-1050.
- o VERIFY PROPER INTAKE OPERATION.
- o WASH SCREENS AS NECESSARY.
- o CLEAN BAR RACKS.

DISCUSSION:

THIS ALARM INDICATES CWP-1D IS EITHER NOT PUMPING WATER, OR A LARGE LEAK HAS DEVELOPED WHICH COULD BE FLOODING THE TURBINE BUILDING. CONSIDERATION SHOULD BE GIVEN TO SHUTTING DOWN CWP-1D.

REFERENCES: DRAWING 208-018 SHEET CW-04

SENSING ELEMENT: CW-60-PS

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-03	M-02-03
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CW PUMP
DISCH PRESS
HIGH/LOW

EVENT POINT 0137

INDICATED CONDITION:

- o CIRC WATER PUMP 1A DISCHARGE PRESSURE >14 PSIG AS SENSED BY CW-57-PS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- o VERIFY PROPER INTAKE OPERATION.
- o BACKWASH DEBRIS FILTERS AS NECESSARY.
- o CHECK INTAKE AREA LOCAL CWP-1A DISCHARGE PRESSURE GAUGE AND 95' ELEVATION TB LOCAL WATERBOX INLET PRESSURE GAUGE.

DISCUSSION:

THIS ALARM INDICATES CWP-1A IS PUMPING AGAINST SOME KIND OF FLOW RESTRICTION. THIS COULD BE, CLOGGED DEBRIS FILTERS OR DIRTY WATERBOX. IF A HIGH WATERBOX INLET PRESSURE EXISTS THEN A CLOGGED WATERBOX MAY BE INDICATED. CONSIDERATION SHOULD BE GIVEN TO REMOVING THE WATERBOX FROM SERVICE AND CLEANING THE BOX.

THIS ALARM ALSO IS AN ALERT THAT A POTENTIAL CIRCULATING WATER SYSTEM EXPANSION JOINT RUPTURE COULD RESULT, WITH EXPANSION JOINT ENCAPSULATION LEAKAGE GREATER THAN THOSE CALCULATED THAT WOULD ALLOW OPERATIONS A MINIMUM OF 30 MINUTES OF RESPONSE TIME PRIOR TO JEOPARDIZING SAFETY RELATED ELECTRICAL EQUIPMENT IN THE AB.

REFERENCES: DRAWING 208-018 SHEET CW-01

SENSING ELEMENT: CW-57-PS

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-03	M-02-03
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CW PUMP
DISCH PRESS
HIGH/LOW

EVENT POINT 0138

INDICATED CONDITION:

- o CIRC WATER PUMP 1B DISCHARGE PRESSURE > 14 PSIG AS SENSED BY CW-58-PS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- o VERIFY PROPER INTAKE OPERATION.
- o BACKWASH DEBRIS FILTERS AS NECESSARY.
- o CHECK INTAKE AREA LOCAL CWP-1B DISCHARGE PRESSURE GAUGE AND 95' ELEVATION TB LOCAL WATERBOX INLET PRESSURE GAUGE.

DISCUSSION:

THIS ALARM INDICATES CWP-1B IS PUMPING AGAINST SOME KIND OF FLOW RESTRICTION. THIS COULD BE, CLOGGED DEBRIS FILTERS OR DIRTY WATERBOX. IF A HIGH WATERBOX INLET PRESSURE EXISTS THEN A CLOGGED WATERBOX MAY BE INDICATED. CONSIDERATION SHOULD BE GIVEN TO REMOVING THE WATERBOX FROM SERVICE AND CLEANING THE BOX.

THIS ALARM ALSO IS AN ALERT THAT A POTENTIAL CIRCULATING WATER SYSTEM EXPANSION JOINT RUPTURE COULD RESULT, WITH EXPANSION JOINT ENCAPSULATION LEAKAGE GREATER THAN THOSE CALCULATED THAT WOULD ALLOW OPERATIONS A MINIMUM OF 30 MINUTES OF RESPONSE TIME PRIOR TO JEOPARDIZING SAFETY RELATED ELECTRICAL EQUIPMENT IN THE AB.

REFERENCES: DRAWING 208-018 SHEET CW-02

SENSING ELEMENT: CW-58-PS

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-03	M-02-03
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CW PUMP
DISCH PRESS
HIGH/LOW

EVENT POINT 0139

INDICATED CONDITION:

- o CIRC WATER PUMP 1C DISCHARGE PRESSURE >14 PSIG AS SENSED BY CW-59-PS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- o VERIFY PROPER INTAKE OPERATION.
- o BACKWASH DEBRIS FILTERS AS NECESSARY.
- o CHECK INTAKE AREA LOCAL CWP-1C DISCHARGE PRESSURE GAUGE AND 95' ELEVATION TB LOCAL WATERBOX INLET PRESSURE GAUGE.

DISCUSSION:

THIS ALARM INDICATES CWP-1C IS PUMPING AGAINST SOME KIND OF FLOW RESTRICTION. THIS COULD BE, CLOGGED DEBRIS FILTERS OR DIRTY WATERBOX. IF A HIGH WATERBOX INLET PRESSURE EXISTS THEN A CLOGGED WATERBOX MAY BE INDICATED. CONSIDERATION SHOULD BE GIVEN TO REMOVING THE WATERBOX FROM SERVICE AND CLEANING THE BOX.

THIS ALARM ALSO IS AN ALERT THAT A POTENTIAL CIRCULATING WATER SYSTEM EXPANSION JOINT RUPTURE COULD RESULT, WITH EXPANSION JOINT ENCAPSULATION LEAKAGE GREATER THAN THOSE CALCULATED THAT WOULD ALLOW OPERATIONS A MINIMUM OF 30 MINUTES OF RESPONSE TIME PRIOR TO JEOPARDIZING SAFETY RELATED ELECTRICAL EQUIPMENT IN THE AB.

REFERENCES: DRAWING 208-018 SHEET CW-03

SENSING ELEMENT: CW-59-PS

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-03	M-02-03
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CW PUMP
DISCH PRESS
HIGH/LOW

EVENT POINT 0140

INDICATED CONDITION:

- o CIRC WATER PUMP 1D DISCHARGE PRESSURE >14 PSIG AS SENSED BY CW-60-PS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- o VERIFY PROPER INTAKE OPERATION.
- o BACKWASH DEBRIS FILTERS AS NECESSARY.
- o CHECK INTAKE AREA LOCAL CWP-1D DISCHARGE PRESSURE GAUGE AND 95' ELEVATION TB LOCAL WATERBOX INLET PRESSURE GAUGE.

DISCUSSION:

THIS ALARM INDICATES CWP-1D IS PUMPING AGAINST SOME KIND OF FLOW RESTRICTION. THIS COULD BE, CLOGGED DEBRIS FILTERS OR DIRTY WATERBOX. IF A HIGH WATERBOX INLET PRESSURE EXISTS THEN A CLOGGED WATERBOX MAY BE INDICATED. CONSIDERATION SHOULD BE GIVEN TO REMOVING THE WATERBOX FROM SERVICE AND CLEANING THE BOX.

THIS ALARM ALSO IS AN ALERT THAT A POTENTIAL CIRCULATING WATER SYSTEM EXPANSION JOINT RUPTURE COULD RESULT, WITH EXPANSION JOINT ENCAPSULATION LEAKAGE GREATER THAN THOSE CALCULATED THAT WOULD ALLOW OPERATIONS A MINIMUM OF 30 MINUTES OF RESPONSE TIME PRIOR TO JEOPARDIZING SAFETY RELATED ELECTRICAL EQUIPMENT IN THE AB.

REFERENCES: DRAWING 208-018 SHEET CW-04

SENSING ELEMENT: CW-60-PS

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-05	M-02-05
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SCREEN WASH
TROUBLE

EVENT POINT 0141

INDICATED CONDITION:

- o DIFFERENTIAL LEVEL ACROSS THE TRAVELING SCREENS >6" WATER AS SENSED BY CW-125,126,127,128 OR 129-LIS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o ALL SCREEN WASH PUMPS AND ALL TRAVELING SCREENS AUTO START.
- o WATERFALL CONDITIONS EXIST ACROSS THE TRAVELING SCREENS.

OPERATOR ACTIONS FOR A VALID ALARM:

- o VERIFY ALL SCREEN WASH PUMPS AND TRAVELING SCREENS START.
- o REFER TO OP-604.

DISCUSSION:

ANY ONE LEVEL SWITCH ACROSS THE SCREENS WILL AUTO START ALL SCREENS AND SPRAY PUMPS.
AN "AUTO START RESET" PUSHBUTTON MUST BE DEPRESSED IN THE INTAKE MCC TO ALLOW SHUTTING DOWN THE SCREENS AND PUMPS.

REFERENCES: DRAWING 208-018 SHEET CW-09

SENSING ELEMENT: 3DL-5 RELAY

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-05	M-02-05
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SCREEN WASH
TROUBLE

EVENT POINT 0142

INDICATED CONDITION:

- o SCREEN WASH HEADER PRESSURE <70 PSIG FOR >10"SEC AND
DIFFERENTIAL LEVEL ACROSS THE TRAVELING SCREENS >6" H₂O
AS SENSED BY CW-53-PS, AND CW-125,126,127,128, OR 129-LIS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o ALL SCREEN WASH PUMPS AUTO START.

OPERATOR ACTIONS FOR A VALID ALARM:

- o VERIFY ALL SCREEN WASH PUMPS ARE RUNNING.
- o VERIFY WATERFALL CONDITIONS EXIST ACROSS THE TRAVELING SCREENS.
- o REFER TO OP-604.

DISCUSSION:

ANY ONE LEVEL SWITCH ACROSS THE SCREENS WILL AUTO START ALL SCREENS AND SPRAY PUMPS.
AN "AUTO START RESET" PUSHBUTTON MUST BE DEPRESSED IN THE INTAKE MCC TO ALLOW SHUTTING DOWN THE SCREENS AND PUMPS.

REFERENCES: DRAWING 208-018 SHEET CW-10

SENSING ELEMENT: CW-53-PS

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-05	M-02-05
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SCREEN WASH
TROUBLE

EVENT POINT 0143

INDICATED CONDITION:

- o SCREEN WASH PUMP 2A, MOTOR **AMPS** >115% RATED LOAD.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o CWP-2A RUNNING HOT.
- o CWP-2A TRIPS.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF CWP-2A MOTOR OVERLOAD.
- o NOTIFY ELECTRIC SHOP.

DISCUSSION:

RUNNING SCREEN WASH PUMPS FOR EXTENDED PERIODS OF TIME UNDER HIGH FLOW CONDITIONS CAN CAUSE SCREEN WASH PUMPS TO TRIP ON OVERLOAD.

REFERENCES: DRAWING 208-018 SHEET CW-10

SENSING ELEMENT: 49X OVERLOAD RELAY

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-05	M-02-05
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SCREEN WASH
TROUBLE

EVENT POINT 0144

INDICATED CONDITION:

- o SCREEN WASH PUMP 2B, MOTOR **AMPS** >115% RATED LOAD.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o CWP-2B RUNNING HOT.
- o CWP-2B TRIPS.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF CWP-2B MOTOR OVERLOAD.
- o NOTIFY ELECTRIC SHOP.

DISCUSSION:

RUNNING SCREEN WASH PUMPS FOR EXTENDED PERIODS OF TIME UNDER HIGH FLOW CONDITIONS CAN CAUSE SCREEN WASH PUMPS TO TRIP ON OVERLOAD.

REFERENCES: DRAWING 208-018 SHEET CW-11

SENSING ELEMENT: 49X OVERLOAD RELAY

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-05	M-02-05
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SCREEN WASH
TROUBLE

EVENT POINT 0145

INDICATED CONDITION:

- o SCREEN WASH PUMP 2C, MOTOR **AMPS** >115% RATED LOAD.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o CWP-2C RUNNING HOT.
- o CWP-2C TRIPS.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF CWP-2C MOTOR OVERLOAD.
- o NOTIFY ELECTRIC SHOP.

DISCUSSION:

RUNNING SCREEN WASH PUMPS FOR EXTENDED PERIODS OF TIME UNDER HIGH FLOW CONDITIONS CAN CAUSE SCREEN WASH PUMPS TO TRIP ON OVERLOAD.

REFERENCES: DRAWING 208-018 SHEET CW-12

SENSING ELEMENT: 49X OVERLOAD RELAY

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-05	M-02-05
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SCREEN WASH
TROUBLE

EVENT POINT 0148

INDICATED CONDITION:

- o CWTS-1A NOT RUNNING AND >6" DIFFERENTIAL LEVEL ACROSS SCREENS FOR >10 SECONDS.
- o CWTS-1A SHEER PIN FAILURE AS SENSED BY CW-138-KS.
- o CWTS-1A TRIPPED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o CWTS-1A NOT RUNNING.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF CWTS-1A NOT RUNNING.
- o START CWTS-1A AS REQUIRED.
- o NOTIFY ELECTRIC SHOP.

DISCUSSION:

TO CLEAR THESE ALARMS THE STOP PUSHBUTTON MUST BE DEPRESSED, OR SCREEN WASH HEADER PRESSURE MUST DROP BELOW 70 PSIG.

REFERENCES: DRAWING 208-018 SHEET CW-14

SENSING ELEMENT: 42/ICR, 42/3CR, 3CWTS-1A, 2CWTS-1A

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-05	M-02-05
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SCREEN WASH
TROUBLE

EVENT POINT 0149

INDICATED CONDITION:

- o CWTS-1B NOT RUNNING AND >6" DIFFERENTIAL LEVEL ACROSS SCREENS FOR >10 SECONDS.
- o CWTS-1B SHEER PIN FAILURE AS SENSED BY CW-139-KS.
- o CWTS-1B TRIPPED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o CWTS-1B NOT RUNNING.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF CWTS-1B NOT RUNNING.
- o START CWTS-1B AS REQUIRED.
- o NOTIFY ELECTRIC SHOP.

DISCUSSION:

TO CLEAR THESE ALARMS THE STOP PUSHBUTTON MUST BE DEPRESSED, OR SCREEN WASH HEADER PRESSURE MUST DROP BELOW 70 PSIG.

REFERENCES: DRAWING 208-018 SHEET CW-15

SENSING ELEMENT: 42/5CR, 42/7CR, 3CWTS-1B, 2CWTS-1B

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-05	M-02-05
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SCREEN WASH
TROUBLE

EVENT POINT 0150

INDICATED CONDITION:

- o CWTS-1C NOT RUNNING AND >6" DIFFERENTIAL LEVEL ACROSS SCREENS FOR >10 SECONDS.
- o CWTS-1C SHEER PIN FAILURE AS SENSED BY CW-140-KS.
- o CWTS-1C TRIPPED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o CWTS-1C NOT RUNNING.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF CWTS-1C NOT RUNNING.
- o START CWTS-1C AS REQUIRED.
- o NOTIFY ELECTRIC SHOP.

DISCUSSION:

TO CLEAR THESE ALARMS THE STOP PUSHBUTTON MUST BE DEPRESSED, OR SCREEN WASH HEADER PRESSURE MUST DROP BELOW 70 PSIG.

REFERENCES: DRAWING 208-018 SHEET CW-16

SENSING ELEMENT: 42/9CR, 42/11CR, 3CWTS-1C, 2CWTS-1C

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-05	M-02-05
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SCREEN WASH
TROUBLE

EVENT POINT 0151

INDICATED CONDITION:

- o CWTS-1D NOT RUNNING AND >6" DIFFERENTIAL LEVEL ACROSS SCREENS FOR >10 SECONDS.
- o CWTS-1D SHEER PIN FAILURE AS SENSED BY CW-141-KS.
- o CWTS-1D TRIPPED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o CWTS-1D NOT RUNNING.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF CWTS-1D NOT RUNNING.
- o START CWTS-1D AS REQUIRED.
- o NOTIFY ELECTRIC SHOP.

DISCUSSION:

TO CLEAR THESE ALARMS THE STOP PUSHBUTTON MUST BE DEPRESSED, OR SCREEN WASH HEADER PRESSURE MUST DROP BELOW 70 PSIG.

REFERENCES: DRAWING 208-018 SHEET CW-17

SENSING ELEMENT: 42/13CR, 42/15CR, 3CWTS-1D, 2CWTS-1D

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-05	M-02-05
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SCREEN WASH
TROUBLE

EVENT POINT 0152

INDICATED CONDITION:

- o CWTS-1E NOT RUNNING AND >6" DIFFERENTIAL LEVEL ACROSS SCREENS FOR >10 SECONDS.
- o CWTS-1E SHEER PIN FAILURE AS SENSED BY CW-142-KS.
- o CWTS-1E TRIPPED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o CWTS-1E NOT RUNNING.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF CWTS-1E NOT RUNNING.
- o START CWTS-1E AS REQUIRED.
- o NOTIFY ELECTRIC SHOP.

DISCUSSION:

TO CLEAR THESE ALARMS THE STOP PUSHBUTTON MUST BE DEPRESSED, OR SCREEN WASH HEADER PRESSURE MUST DROP BELOW 70 PSIG.

REFERENCES: DRAWING 208-018 SHEET CW-18

SENSING ELEMENT: 42/17CR, 42/19CR, 3CWTS-1E, 2CWTS-1E

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-05	M-02-05
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SCREEN WASH
TROUBLE

EVENT POINT 0153

INDICATED CONDITION:

- o CWTS-1F NOT RUNNING AND >6" DIFFERENTIAL LEVEL ACROSS SCREENS FOR >10 SECONDS.
- o CWTS-1F SHEER PIN FAILURE AS SENSED BY CW-143-KS.
- o CWTS-1F TRIPPED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o CWTS-1F NOT RUNNING.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF CWTS-1F NOT RUNNING.
- o START CWTS-1F AS REQUIRED.
- o NOTIFY ELECTRIC SHOP.

DISCUSSION:

TO CLEAR THESE ALARMS THE STOP PUSHBUTTON MUST BE DEPRESSED, OR SCREEN WASH HEADER PRESSURE MUST DROP BELOW 70 PSIG.

REFERENCES: DRAWING 208-018 SHEET CW-19

SENSING ELEMENT: 42/21CR, 42/23CR, 3CWTS-1F, 2CWTS-1F

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-05	M-02-05
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SCREEN WASH
TROUBLE

EVENT POINT 0154

INDICATED CONDITION:

- o CWTS-1G NOT RUNNING AND >6" DIFFERENTIAL LEVEL ACROSS SCREENS FOR >10 SECONDS.
- o CWTS-1G SHEER PIN FAILURE AS SENSED BY CW-144-KS.
- o CWTS-1G TRIPPED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o CWTS-1G NOT RUNNING.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF CWTS-1G NOT RUNNING.
- o START CWTS-1G AS REQUIRED.
- o NOTIFY ELECTRIC SHOP.

DISCUSSION:

TO CLEAR THESE ALARMS THE STOP PUSHBUTTON MUST BE DEPRESSED, OR SCREEN WASH HEADER PRESSURE MUST DROP BELOW 70 PSIG.

REFERENCES: DRAWING 208-018 SHEET CW-20

SENSING ELEMENT: 42/25CR, 42/27CR, 3CWTS-1G, 2CWTS-1G

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-05	M-02-05
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SCREEN WASH
TROUBLE

EVENT POINT 0155

INDICATED CONDITION:

- o CWTS-2 NOT RUNNING AND >6" DIFFERENTIAL LEVEL ACROSS SCREENS FOR >10 SECONDS.
- o CWTS-2 SHEER PIN FAILURE AS SENSED BY CW-145-KS.
- o CWTS-2 TRIPPED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o CWTS-2 NOT RUNNING.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF CWTS-2 NOT RUNNING.
- o START CWTS-2 AS REQUIRED.
- o NOTIFY ELECTRIC SHOP.

DISCUSSION:

TO CLEAR THESE ALARMS THE STOP PUSHBUTTON MUST BE DEPRESSED, OR SCREEN WASH HEADER PRESSURE MUST DROP BELOW 70 PSIG.
CWTS-2 IS THE NUCLEAR SERVICES RAW WATER TRAVELING SCREEN.

REFERENCES: DRAWING 208-018 SHEET CW-21

SENSING ELEMENT: 42/29CR, 42/31CR, 3CWTS-2, 2CWTS-2

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-02-05	M-02-05
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SCREEN WASH
TROUBLE

EVENT POINT 0156

INDICATED CONDITION:

- o AIR SUPPLY TO INTAKE SCREENS CONTROL AND DIFFERENTIAL LEVEL INDICATING SYSTEMS <60 PSIG AS SENSED BY CW-124-PS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o LOCAL AIR PRESSURE INDICATORS.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF LOSS OF AIR PRESSURE.

DISCUSSION:

THIS AIR SUPPLIES ALL AUTO START FUNCTIONS FOR THE SCREENS AND THE SCREEN WASH PUMPS.

REFERENCES: DRAWING 208-018 SHEET CW-23

SENSING ELEMENT: CW-124-PS

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-03-01	M-03-01
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CW PUMP C
TRIP

EVENT POINT 0130

INDICATED CONDITION:

- o CWP-1C BREAKER OPEN AND CONTROL HANDLE IN NORMAL AFTER START POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o GREEN LIGHT IS ON WITH A RED FLAG ON CWP-1C CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- o MONITOR CONDENSER VACUUM.
- o CLOSE ARV-45.
- o VERIFY ON LINE SC HEAT EXCHANGER IS BEING SUPPLIED BY AN ON LINE CWP.
- o REDUCE PLANT POWER AS NECESSARY TO MAINTAIN CONDENSER VACUUM.

DISCUSSION:

DO NOT CONTINUE TO OPERATE THE TURBINE WHEN BOTH CIRC WATER PUMPS ARE SHUTDOWN IN THE SAME CONDENSER.

MAXIMUM ΔT BETWEEN CONDENSERS USING LP TURBINE EXHAUST TEMPERATURE IS 50° F.

REFERENCES: DRAWING 208-018 SHEET CW-03

SENSING ELEMENT: BREAKER AND CONTROL SWITCH CONTACTS.

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-03-02	M-03-02
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CW PUMP C
MOTOR
OVERLOAD

EVENT POINT 0129

INDICATED CONDITION:

- o CWP-1C MOTOR **AMPS** >115% RATED LOAD.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o CWP-1C CURRENT INDICATOR.
- o LOCAL CWP-1C AMMETER.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CWP-1C FOR SIGNS OF ABNORMAL OPERATION.
- o CHECK BREAKER CUBICLE FOR DROPPED TARGETS.

DISCUSSION:

THIS ALARM INDICATES THAT EITHER THE TIMED OVERCURRENT OR THE 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 208-018 SHEET CW-03

SENSING ELEMENT: BREAKER OVERLOAD CONTACTS

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-03-03	M-03-03
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CW PUMP
LUBE FLOW
LOW

EVENT POINT 0124

INDICATED CONDITION:

- o CWP-1A BEARING LUBE WATER FLOW <6 GPM AS SENSED BY DO-5-FIS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o CWP-1A WHITE "LUBE WTR FLOW NORM" PERMISSIVE LIGHT NOT ON.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF LOW FLOW.
- o REFER TO OP-416 AND INCREASE COOLING WATER FLOW TO CWP-1A
- o IF DO IS LOST TO ALL CIRCULATING PUMPS,
THEN PLACE BACKUP FLUSH WATER TO THE CIRCULATING WATER PUMPS PER OP-604.

DISCUSSION:

LOW LUBE WATER FLOW OPERATION OF THE CIRC WATER PUMP SHOULD BE MINIMIZED TO PRECLUDE DAMAGE TO RUBBER BEARINGS OF THE PUMP SHAFT. IF ADEQUATE FLOW CANNOT BE RESTORED CONSIDER SHUTTING DOWN THE PUMP.

REFERENCES: DRAWING 208-018 SHEET CW-01

SENSING ELEMENT: DO-5-FIS

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-03-03	M-03-03
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CW PUMP
LUBE FLOW
LOW

EVENT POINT 0128

INDICATED CONDITION:

- o CWP-1B BEARING LUBE WATER FLOW <6 GPM AS SENSED BY DO-7-FIS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o CWP-1B WHITE "LUBE WTR FLOW NORM" PERMISSIVE LIGHT NOT ON.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF LOW FLOW.
- o REFER TO OP-416 AND INCREASE COOLING WATER FLOW TO CWP-1B.
- o IF DO IS LOST TO ALL CIRCULATING PUMPS,
THEN PLACE BACKUP FLUSH WATER TO THE CIRCULATING WATER PUMPS PER OP-604.

DISCUSSION:

LOW LUBE WATER FLOW OPERATION OF THE CIRC WATER PUMP SHOULD BE MINIMIZED TO PRECLUDE DAMAGE TO RUBBER BEARINGS OF THE PUMP SHAFT. IF ADEQUATE FLOW CANNOT BE RESTORED CONSIDER SHUTTING DOWN THE PUMP.

REFERENCES: DRAWING 208-018 SHEET CW-02

SENSING ELEMENT: DO-7-FIS

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-03-03	M-03-03
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CW PUMP
LUBE FLOW
LOW

EVENT POINT 0132

INDICATED CONDITION:

- o CWP-1C BEARING LUBE WATER FLOW <6 GPM AS SENSED BY DO-9-FIS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o CWP-1C WHITE "LUBE WTR FLOW NORM" PERMISSIVE LIGHT NOT ON.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF LOW FLOW.
- o REFER TO OP-416 AND INCREASE COOLING WATER FLOW TO CWP-1C.
- o IF DO IS LOST TO ALL CIRCULATING PUMPS,
THEN PLACE BACKUP FLUSH WATER TO THE CIRCULATING WATER PUMPS PER OP-604.

DISCUSSION:

LOW LUBE WATER FLOW OPERATION OF THE CIRC WATER PUMP SHOULD BE MINIMIZED TO PRECLUDE DAMAGE TO RUBBER BEARINGS OF THE PUMP SHAFT. IF ADEQUATE FLOW CANNOT BE RESTORED CONSIDER SHUTTING DOWN THE PUMP.

REFERENCES: DRAWING 208-018 SHEET CW-03

SENSING ELEMENT: DO-9-FIS

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-03-03	M-03-03
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CW PUMP
LUBE FLOW
LOW

EVENT POINT 0136

INDICATED CONDITION:

- o CWP-1D BEARING LUBE WATER FLOW <6 GPM AS SENSED BY DO-11-FIS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o CWP-1D WHITE "LUBE WTR FLOW NORM" PERMISSIVE LIGHT NOT ON.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF LOW FLOW.
- o REFER TO OP-416 AND INCREASE COOLING WATER FLOW TO CWP-1D.
- o IF DO IS LOST TO ALL CIRCULATING PUMPS,
THEN PLACE BACKUP FLUSH WATER TO THE CIRCULATING WATER PUMPS PER OP-604.

DISCUSSION:

LOW LUBE WATER FLOW OPERATION OF THE CIRC WATER PUMP SHOULD BE MINIMIZED TO PRECLUDE DAMAGE TO RUBBER BEARINGS OF THE PUMP SHAFT. IF ADEQUATE FLOW CANNOT BE RESTORED CONSIDER SHUTTING DOWN THE PUMP.

REFERENCES: DRAWING 208-018 SHEET CW-04

SENSING ELEMENT: DO-11-FIS

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-03-05	M-03-05
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**WATER BOX
VACUUM
LOST**

EVENT POINT 0039

INDICATED CONDITION:

- o WATERBOX PRIMING VACUUM <10.6" HG. AS SENSED BY AR-18-PS2.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o STANDBY WATERBOX PRIMING PUMP ARP-2A OR ARP-2B AUTO STARTS.

OPERATOR ACTIONS FOR A VALID ALARM:

- o ENSURE BACKUP WATERBOX PRIMING PUMP STARTS.
- o INVESTIGATE CAUSE OF LOSS OF WATERBOX VACUUM.
- o VERIFY WATERBOX PRIMING VACUUM <10.6" Hg, INDICATOR LOCATED AT ARV-5.
- o ENSURE WATERBOX INTEGRITY - CHECK MANWAYS AND VACUUM BREAKER VALVES ARE CLOSED AND PRIMING VALVES ARE OPEN.

DISCUSSION:

STANDBY WATERBOX PRIMING PUMP STARTS AT <20.2" HG.

THIS IS AN EXPECTED ALARM WHEN PRIMING AN OFF LINE WATERBOX.

REFERENCES: DRAWING 208-007 SHEET AR-05

SENSING ELEMENT: AR-18-PS2

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-04-01	M-04-01
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CW PUMP D
TRIP

EVENT POINT 0134

INDICATED CONDITION:

- o CWP-1D BREAKER OPEN AND CONTROL HANDLE IN NORMAL AFTER START POSITION.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o GREEN LIGHT IS ON WITH A RED FLAG ON CWP-1D CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- o MONITOR CONDENSER VACUUM.
- o CLOSE ARV-44.
- o VERIFY ON LINE SC HEAT EXCHANGER IS BEING SUPPLIED BY AN ON LINE CWP.
- o REDUCE PLANT POWER AS NECESSARY TO MAINTAIN CONDENSER VACUUM.

DISCUSSION:

DO NOT CONTINUE TO OPERATE THE TURBINE WHEN BOTH CIRC WATER PUMPS ARE SHUTDOWN IN THE SAME CONDENSER.

MAXIMUM ΔT BETWEEN CONDENSERS USING LP TURBINE EXHAUST TEMPERATURE IS 50° F.

REFERENCES: DRAWING 208-018 SHEET CW-04

SENSING ELEMENT: BREAKER AND CONTROL SWITCH CONTACTS.

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-04-02	M-04-02
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CW PUMP D
MOTOR
OVERLOAD

EVENT POINT 0133

INDICATED CONDITION:

- o CWP-1D MOTOR AMPS >115% RATED LOAD.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o CWP-1D CURRENT INDICATOR.
- o LOCAL CWP-1D AMMETER.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CWP-1D FOR SIGNS OF ABNORMAL OPERATION.
- o CHECK BREAKER CUBICLE FOR DROPPED TARGETS.

DISCUSSION:

THIS ALARM INDICATES THAT EITHER THE TIMED OVERCURRENT OR THE 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 208-018 SHEET CW-04

SENSING ELEMENT: BREAKER OVERLOAD CONTACTS

TGF-M ANNUNCIATOR RESPONSE	TGF-AX1-04-03	M-04-03
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CW PUMPS
LUBE WTR STRNR
Δ PRESS HIGH

EVENT POINT 1519

INDICATED CONDITION:

- o CIRC WATER LUBE WATER STRAINER DOFL-1, DIFFERENTIAL PRESSURE >5 PSID AS SENSED BY DO-25-PS.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- o FLUSH ZURN FILTER AS PER OP-416.
- o VERIFY CIRC WATER PUMP DO WATER FLOW IS ADEQUATE.
- o VERIFY ZURN FILTER PRESSURE INDICATIONS.

DISCUSSION:

REFERENCES: DRAWING 208-022 SHEET DO-08

SENSING ELEMENT: DO-25-PS