

Document Transmittal #: 100388

Date: 8/10/98

To: NRC (DC DESK)

MAC: N/A

Holder #: 1242

Destination:

Description:

Document:	Revision:	Comment:	Copy Totals		
			INFO	CNTL	MSTR
AR0703	14		1	0	0

Instructions to the Addressee:

Please verify the document(s) received agrees with the above information

Operations department must attach old document(s) or portions of document(s) superseded by the above to this transmittal.

The signature indicates acknowledgment of receipt of the above document(s) and that documents have been updated. Return signed and dated transmittal to Document Control within 15 working days of transmittal date to mail code:

____ NA1C

____ Florida Power Corporation
Document Control, NA1C
Crystal River Energy Complex
15760 W. Power Line St.
Crystal River, FL 34428-6708

Signature of Addressee: _____ Date: _____

9808180268 980810
PDR ADOCK 05000302
F PDR

Effective Date 8-10-98

INFORMATION
ONLY *Holder #1242*

ANNUNCIATOR RESPONSE

AR-703

FLORIDA POWER CORPORATION

CRYSTAL RIVER UNIT 3

SSF R ANNUNCIATOR RESPONSE

APPROVED BY: Procedure Owner

Frank Dole for MAF
(SIGNATURE ON FILE)

DATE: 8/10/98

PROCEDURE OWNER: Manager, Nuclear Plant
Operations

TABLE OF CONTENTS

SECTION

PAGE

<u>1.0 PURPOSE</u>	1
<u>2.0 REFERENCES</u>	1
<u>2.1 IMPLEMENTING REFERENCES</u>	1
<u>2.2 DEVELOPMENTAL REFERENCES</u>	1
<u>3.0 PERSONNEL INDOCTRINATION</u>	1
<u>4.0 INSTRUCTIONS</u>	1
<u>5.0 FOLLOW-UP-ACTIONS</u>	1
<u>ENCLOSURE</u>	
1 Annunciator Response.....	2

1.0 PURPOSE

- 1.1 Establish a reference document for each Annunciator Window on the SSF-A3 Lampbox.
- 1.2 Establish operator actions for valid Annunciator alarms on the SSF-A3 Lampbox.
- 1.3 Establish a reference to other procedures which address operator actions for valid Annunciator alarms on the SSF-A3 Lampbox.

2.0 REFERENCES

2.1 IMPLEMENTING REFERENCES

- 2.1.1 AP-660, Turbine Trip
- 2.1.2 EOP, Emergency Operating
- 2.1.3 AP-545, Plant Runback

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

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 SSF-A3 Lampbox as indicated on Enclosure 1, Annunciator Response.

5.0 FOLLOW-UP-ACTIONS

None

SSF ANNUNCIATOR RESPONSE	SSF-A3-01-01	R-01-01
--------------------------	--------------	---------

[illegible]

BREAKER 1661
TRIP

EVENT POINT 0803

INDICATED CONDITION:
o 500 KV BREAKER 1661 OPEN AND CONTROL SWITCH IN NORMAL AFTER CLOSED
REDUNDANT INDICATION WHICH WILL VERIFY ALARM:
o INFORMED BY DISPATCHER OF BKR 1661 TRIP CONDITION o GREEN LIGHT ON WITH RED FLAG ON BREAKER 1661 CONTROL STATION
OPERATOR ACTIONS FOR A VALID ALARM:
o <u>IF</u> BKR 1662 IS OPEN, <u>THEN</u> ENSURE MAIN TURBINE IS TRIPPED o POSITION CONTROL SWITCH TO OPEN TO PREVENT BREAKER CLOSING UPON RESTART OF POWER o STABILIZE PLANT AS NECESSARY o NOTIFY SYSTEM DISPATCHER
DISCUSSION:
REFERENCES: DRAWING 208-079 SB-01
SENSING ELEMENT: 52W/1661

SSF ANNUNCIATOR RESPONSE	SSF-A3-01-02	R-01-02
--------------------------	--------------	---------

BREAKER
1661
TROUBLE

EVENT POINT 0834

INDICATED CONDITION:

- o BREAKER 1661 AIR PRESSURE LOW

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o INFORMED BY DISPATCHER OF BKR 1661 TROUBLE ALARM

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER

DISCUSSION:

THE AIR SYSTEM IS MOTIVE AIR FOR OPENING AND CLOSING BREAKER 1661.

THE QUENCH GAS IS A AN UNRELATED SYSTEM THAT USES SULPHUR HEXAFLUORIDE GAS.

REFERENCES: DRAWING 208-079 SB-01; DRAWING S171-1349D (SUBSTATION)

SENSING ELEMENT: 500 KV SUBSTATION LOCAL MULTIPLEXING UNIT

SSF ANNUNCIATOR RESPONSE	SSF- A3-01-02	R-01-02
--------------------------	---------------	---------

[illegible]

BREAKER 1661 TROUBLE

EVENT POINT 0835

INDICATED CONDITION:

- o ANY OF THE FOLLOWING CONDITIONS ASSOCIATED WITH BKR 1661:

HI GAS TEMP	LOSS OF AC SOURCE POWER
LOW GAS TEMP	LOSS OF DC CONTROL POWER
LOW GAS PRESSURE	

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o INFORMED BY DISPATCHER OF BKR 1661 TROUBLE CONDITION

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER

DISCUSSION:

THE GAS IS SULPHUR HEXAFLUORIDE GAS THAT IS USED FOR QUENCHING ARC EMISSIONS DURING BREAKER OPERATION.

REFERENCES: DRAWING 208-079 SB-01

SENSING ELEMENT: 500 KV SUBSTATION LOCAL MULTIPLEXING UNIT

SSF ANNUNCIATOR RESPONSE	SSF-A3-01-04	R-01-04
--------------------------	--------------	---------

[illegible]

500 KV
SUBSTATION
FEED DEAD

EVENT POINT 0842

INDICATED CONDITION:

- o 500 KV SUBSTATION PRIMARY POWER FEED IS DE-ENERGIZED

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o SEND TURBINE BUILDING OPERATOR TO 500KV SUBSTATION BLOCKHOUSE TO VERIFY ABT TRANSFERRED TO UNIT #3 (ABT IS IN NORTHEAST CORNER OF BLOCKHOUSE)
- o INFORM UNIT #4 THAT UNIT #3 IS SUPPLYING 500KV SUBSTATION ALTERNATE POWER

DISCUSSION:

SUBSTATION POWER IS 480VAC AND IS NECESSARY FOR OPERATION OF SUBSTATION SWITCH AND RELAY EQUIPMENT.

UNIT #4 IS THE PRIMARY SOURCE OF POWER, WITH UNIT #3 AS ALTERNATE VIA "B" 480V TURBINE AUX BUS UNIT 2C.

A LOSS OF UNIT #3 POWER TO THE SUBSTATION WILL RESULT IN AUTOMATIC TRANSFER OF THE SUBSTATION'S POWER TO UNIT #4 IF UNIT #3 WAS SUPPLYING POWER. THE ABT IS LOCATED IN THE SUBSTATION BLOCKHOUSE (NORTHEAST CORNER) IN THE 500KV YARD.

REFERENCES: DRAWING 208-079

SENSING ELEMENT: 500KV SUBSTATION LOCAL MULTIPLEXING UNIT

SSF ANNUNCIATOR RESPONSE	SSF-A3-01-04	R-01-04
--------------------------	--------------	---------

[illegible]

500 KV
SUBSTATION
FEED DEAD

EVENT POINT 1528

INDICATED CONDITION:

- o 500 KV SUBSTATION ALTERNATE POWER FEED IS DE-ENERGIZED

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- O "B" 480V TURBINE AUX BUS BREAKER UNIT 2C (500KV SUBSTATION DISTRIBUTION PANEL FEEDER IS OPEN)

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o SEND TURBINE BUILDING OPERATOR TO 500KV SUBSTATION BLOCKHOUSE TO VERIFY ABT IS SUPPLYING SUBSTATION POWER FROM UNIT #4 (ABT IS IN NORTHEAST CORNER OF BLOCKHOUSE)
- o INFORM UNIT #4 THAT 500KV SUBSTATION ALTERNATE POWER FROM UNIT #3 IS UNAVAILABLE

DISCUSSION:

SUBSTATION POWER IS 480VAC AND IS NECESSARY FOR RELAYING AND SWITCH OPERATIONS.

UNIT #4 IS THE PRIMARY SOURCE OF POWER, WITH UNIT #3 AS ALTERNATE, VIA "B"
480V TURBINE AUX BUS UNIT 2C

A LOSS OF UNIT #4 POWER TO THE SUBSTATION WILL RESULT IN AN AUTOMATIC TRANSFER OF THE SUBSTATION'S POWER TO UNIT #3. THE ABT IS LOCATED IN THE SUBSTATION BLOCKHOUSE (NORTHEAST CORNER) IN THE 500KV YARD.

REFERENCES: DRAWING 208 AC-02

SENSING ELEMENT: 500KV SUBSTATION LOCAL MULTIPLEXING UNIT

R-01-05

EVENT POINT 0831

SENSING ELEMENT: 500KV SUBSTATION LOCAL MULTIPLEXING UNIT

SSF ANNUNCIATOR RESPONSE	SSF-A3-01-05	R-01-05
--------------------------	--------------	---------

500KV SUBSTATION TROUBLE

EVENT POINT 0832

INDICATED CONDITION:

- o 500 KV SUBSTATION DIGITAL FAULT RECORDER TROUBLE

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- 0 NOTIFIED BY SYSTEM DISPATCHER OF DIGITAL FAULT RECORDER TROUBLE

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER

DISCUSSION:

THE DIGITAL FAULT RECORDER (DFR) IS A FAULT MONITORING SYSTEM THAT REPLACES THE OSCILLOGRAPH. THE DFR PERFORMS THE SAME FAULT RECORDING FUNCTIONS AS THE OSCILLOGRAPH DID.

REFERENCES: DRAWING 208-079 SB-15

SENSING ELEMENT: 500 KV SUBSTATION LOCAL MULTIPLEXING UNIT

SSF ANNUNCIATOR RESPONSE	SSF-A3-01-05	R-01-05
--------------------------	--------------	---------

A large rectangular grid consisting of 10 columns and 10 rows of squares. The grid is empty, with the exception of a small black square in the second row, first column, which is likely a scanning artifact.

500KV SUBSTATION TROUBLE

EVENT POINT 0838

INDICATED CONDITION:

- o BREAKER 1660 TROUBLE

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o NOTIFIED BY DISPATCHER OF BREAKER 1660 TROUBLE

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER

DISCUSSION:

REFERENCES: DRAWING 208-079 SB-10

SENSING ELEMENT: 500KV SUBSTATION LOCAL MULTIPLEXING UNIT

SSF ANNUNCIATOR RESPONSE	SSF-A3-01-05	R-01-05
--------------------------	--------------	---------

[illegible]

500KV SUBSTATION TROUBLE

EVENT POINT 0839

INDICATED CONDITION:

- o BREAKER 1891 TROUBLE

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o NOTIFIED BY DISPATCHER OF BREAKER 1891 TROUBLE

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER

DISCUSSION:

REFERENCES: DRAWING 208-079 SB-10

SENSING ELEMENT: 500 KV SUBSTATION LOCAL MULTIPLEXING UNIT

SSF ANNUNCIATOR RESPONSE	SSF-A3-01-05	R-01-05
--------------------------	--------------	---------

[illegible]

500KV SUBSTATION TROUBLE

EVENT POINT 0840

INDICATED CONDITION:

- o 500 KV SUBSTATION RELAY SYSTEM LOSS OF DC POWER

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o NOTIFIED BY DISPATCHER OF 500 KV RELAY SYSTEM LOSS OF DC POWER.

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o NOTIFY TURBINE BUILDING OPERATOR TO GO TO THE 500KV BLOCKHOUSE AND READ THE FAULT INFORMATION RECORDED ON THE SUBSTATION EVENTS RECORDER PAPER PRINTOUT, REPORT THIS INFORMATION TO THE SYSTEM DISPATCHER

DISCUSSION:

REFERENCES: DRAWING 208-079 SB-14

SENSING ELEMENT: 500 KV SUBSTATION LOCAL MULTIPLEXING UNIT

SSF ANNUNCIATOR RESPONSE	SSF-A3-01-05	R-01-05
--------------------------	--------------	---------

[illegible]

500KV SUBSTATION TROUBLE

EVENT POINT 0841

INDICATED CONDITION:

- o 500 KV SUBSTATION BATTERY CHARGER TROUBLE

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- O NOTIFIED BY SYSTEM DISPATCHER OF 500 KV SUBSTATION BATTERY CHARGER TROUBLE

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o NOTIFY TURBINE BUILDING OPERATOR TO GO TO THE 500KV BLOCKHOUSE TO INSPECT BATTERY CHARGERS FOR PROPER OPERATION

DISCUSSION:

BATTERY CHARGERS ARE LOCATED IN THE 500KV BLOCKHOUSE, NORTH END - ADJACENT TO THE BATTERIES. THE CHARGERS HAVE VOLTAGE INSTRUMENTATION, POWER AVAILABLE, AND FAULT LIGHTS TO DETERMINE THEIR STATUS.

REFERENCES: DRAWING 208-079 SB-14

SENSING ELEMENT: 500 KV SUBSTATION LOCAL MULTIPLEXING UNIT

SSF ANNUNCIATOR RESPONSE	SSF-A3-01-05	R-01-05
--------------------------	--------------	---------

500KV SUBSTATION TROUBLE

EVENT POINT 0844

INDICATED CONDITION:

- o 500 KV SUBSTATION MULTIPLEXER FAILURE

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- 0 NOTIFIED BY DISPATCHER OF 500 KV SUBSTATION MULTIPLEXER FAILURE

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER

DISCUSSION:

THIS DEVICE ACTS AS AN INTERFACE BETWEEN SUBSTATION FAULT ALARMS AND THE UNIT #3 CONTROL ROOM ALARM SYSTEM. THE MULTIPLEXER MONITORS VARIOUS SUBSTATION PARAMETERS, AND THE ALARM INDICATES IT HAS FAILED.

SUBSTATION FAULT CONDITIONS MAY NOT ALARM IF THE MULTIPLEXER IS INOPERABLE.

REFERENCES: DRAWING 208-079 SB-15

SENSING ELEMENT: 500 KV SUBSTATION LOCAL MULTIPLEXING UNIT

R-01-05

EVENT POINT 0849

Page 14

SSF ANNUNCIATOR RESPONSE	SSF-A3-02-01	R-02-01
--------------------------	--------------	---------

A 10x10 grid with a blacked-out cell at (1,2).

BREAKER 1662
TRIP

EVENT POINT 0804

INDICATED CONDITION:

- o 500 KV BREAKER 1662 OPEN AND CONTROL SWITCH IN NORMAL AFTER CLOSED

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o INFORMED BY DISPATCHER OF BKR 1662 TRIP CONDITION
- o GREEN LIGHT ON WITH RED FLAG ON BREAKER 1662 CONTROL STATION

OPERATOR ACTIONS FOR A VALID ALARM:

- o IF BKR 1661 IS OPEN,
THEN ENSURE MAIN TURBINE IS TRIPPED
- o POSITION CONTROL SWITCH TO OPEN TO PREVENT BREAKER CLOSING UPON
RESTORATION OF POWER
- o STABILIZE PLANT AS NECESSARY
- o NOTIFY SYSTEM DISPATCHER

REFERENCES: DRAWING 208-079 SB-02

SENSING ELEMENT: 52W/1662

SSF ANNUNCIATOR RESPONSE	SSF-A3-02-02	R-02-02
--------------------------	--------------	---------

A 10x10 grid with a black rectangle in the top-left corner, spanning 2 rows and 2 columns.

BREAKER 1662 TROUBLE

EVENT POINT 0836

INDICATED CONDITION:

o BREAKER 1662 **LOW** AIR PRESSURE

- o BREAKER 1662 LOW AIR PRESSURE

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o INFORMED BY DISPATCHER OF BKR 1662 LOW GAS PRESSURE CONDITION

- 0 INFORMED BY DISPATCHER OF BKR 1662 LOW GAS PRESSURE CONDITION

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER

- o NOTIFY SYSTEM DISPATCHER

DISCUSSION:

THE AIR SYSTEM IS MOTIVE AIR FOR OPENING AND CLOSING BREAKER 1662.

THE QUENCH GAS IS A AN UNRELATED SYSTEM THAT USES SULPHUR HEXAFLUORIDE GAS.

THE AIR SYSTEM IS MOTIVE AIR FOR OPENING AND CLOSING BREAKER 1662.

THE QUENCH GAS IS A AN UNRELATED SYSTEM THAT USES SULPHUR HEXAFLUORIDE GAS.

REFERENCES: DRAWING 208-079 SB-02; DRAWING S171-1350D (SUBSTATION)

SENSING ELEMENT: 500 KV LOCAL MULTIPLEXING UNIT

SSF ANNUNCIATOR RESPONSE	SSF-A3-02-02	R-02-02
--------------------------	--------------	---------

A 10x10 grid with a black rectangle in the top-left corner, representing the letter 'L'.

BREAKER 1662 TROUBLE

EVENT POINT 0837

INDICATED CONDITION:

- o ANY OF THE FOLLOWING CONDITIONS ASSOCIATED WITH BKR 1662:

HI GAS TEMP

LOSS OF AC SOURCE POWER

LOW GAS TEMP

LOSS OF DC CONTROL POWER

LOW GAS PRESSURE

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o INFORMED BY DISPATCHER OF BKR 1662 TROUBLE CONDITION

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER

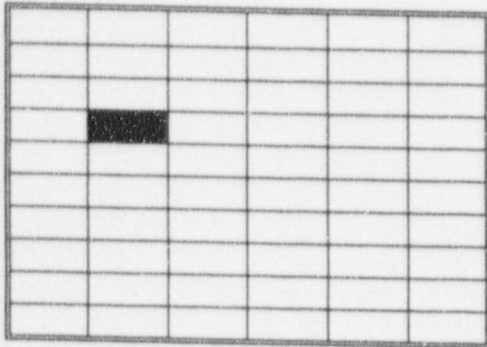
DISCUSSION:

THE GAS IS SULPHUR HEXAFLUORIDE GAS THAT IS USED FOR QUENCHING ARC EMISSIONS DURING BREAKER OPERATION.

REFERENCES: DRAWING 208-079 SB-02

SENSING ELEMENT: 500 KV SUBSTATION LOCAL MULTIPLEXING UNIT

SSF ANNUNCIATOR RESPONSE	SSF-A3-02-04	R-02-04
--------------------------	--------------	---------



500 KV YARD
MTR OPERATED
SWITCH OPEN

EVENT POINT 0833

INDICATED CONDITION:

- o ANY OF THE FOLLOWING 500 KV MOTOR OPERATED SWITCHES NOT FULLY CLOSED

1661 NORTH

1662 NORTH

1873

1661 SOUTH

1662 SOUTH

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o CONTROL BOARD INDICATING LIGHTS INDICATE MOTOR OPERATED SWITCH NOT FULLY CLOSED

OPERATOR ACTIONS FOR A VALID ALARM:

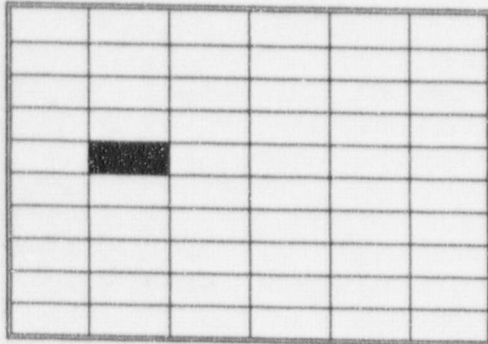
- o ENSURE APPLICABLE MOTOR OPERATED SWITCH IS REQUIRED TO BE OPEN
- o NOTIFY SYSTEM DISPATCHER

DISCUSSION:

REFERENCES: DRAWING 208-079 SB-07

SENSING ELEMENT: 500 KV LOCAL MULTIPLEXING UNIT

SSF ANNUNCIATOR RESPONSE	SSF-A3-02-05	R-02-05
--------------------------	--------------	---------



PRIMARY
RELAYING
ALARM

EVENT POINT 0781

INDICATED CONDITION:

- o UNIT #5 PILOT WIRE RELAYING ALARM

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o NOTIFIED BY SYSTEM DISPATCHER OF RELAY ALARM

OPERATOR ACTIONS FOR A VALID ALARM:

- o CONTACT SYSTEM DISPATCHER
- o RESET ALARM AS REQUESTED BY DISPATCHER

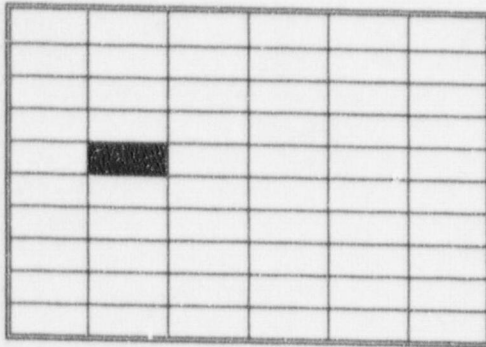
DISCUSSION:

THIS ALARM INDICATES A PROBLEM WITH UNIT #5 INPUT TO THE 500 KV GRID.

REFERENCES: DRAWING S171 (SUBSTATION)

SENSING ELEMENT: 500 KV LOCAL MULTIPLEXING UNIT

SSF ANNUNCIATOR RESPONSE	SSF-A3-02-05	R-02-05
--------------------------	--------------	---------



PRIMARY
RELAYING
ALARM

EVENT POINT 0782

INDICATED CONDITION:

- o CENTRAL FLORIDA TRANSFER TRIP AND LINE PROTECTION RELAYING ALARM

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o NOTIFIED BY SYSTEM DISPATCHER OF PRIMARY RELAY ALARM

OPERATOR ACTIONS FOR A VALID ALARM:

- o CONTACT SYSTEM DISPATCHER
- o RESET ALARM AS REQUESTED BY DISPATCHER

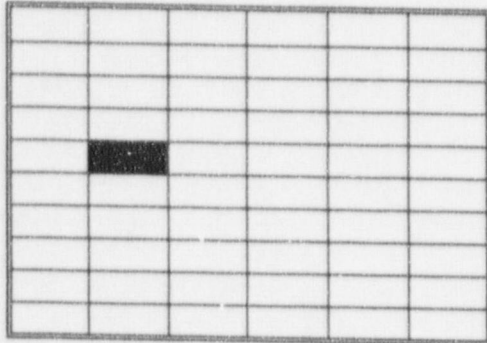
DISCUSSION:

THIS ALARM INDICATES A PROBLEM ON THE CENTRAL FLORIDA LINE.

REFERENCES: DRAWING S171 (SUBSTATION)

SENSING ELEMENT: 500 KV LOCAL MULTIPLEXING UNIT

SSF ANNUNCIATOR RESPONSE	SSF-A3-02-05	R-02-05
--------------------------	--------------	---------

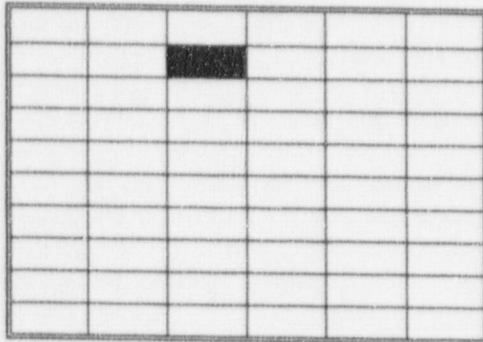


PRIMARY
RELAYING
ALARM

EVENT POINT 0867

INDICATED CONDITION: <ul style="list-style-type: none">o BROOKRIDGE TRANSFER TRIP AND LINE PROTECTION RELAYING ALARM
REDUNDANT INDICATION WHICH WILL VERIFY ALARM: <ul style="list-style-type: none">o NOTIFIED BY SYSTEM DISPATCHER OF PRIMARY RELAY ALARM
OPERATOR ACTIONS FOR A VALID ALARM: <ul style="list-style-type: none">o CONTACT SYSTEM DISPATCHERo RESET ALARM AS REQUESTED BY DISPATCHER
DISCUSSION: <p>THIS ALARM INDICATES A PROBLEM ON THE BROOKRIDGE LINE</p>
REFERENCES: DRAWINGS S171 (SUBSTATION)
SENSING ELEMENT: 500 KV LOCAL MULTIPLEXING UNIT

SSF ANNUNCIATOR RESPONSE	SSF-A-03-02	R-03-02
--------------------------	-------------	---------



STEPUP XFMR
MAJOR ALARM

EVENT POINT 0736

INDICATED CONDITION:

- o STEP-UP TRANSFORMER PHASE "A" TOP OIL TEMPERATURE $>90^{\circ}$ C.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED LIGHT IS ON, LOCATED ON "A" STEP UP XFMR (3-3) ALARM PANEL
- o COMPUTER POINT A-313

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o VERIFY ALL "A" STEP UP TRANSFORMER OIL PUMPS AND FANS OPERATING
- o FOR VALID ALARM REDUCE ELECTRICAL LOAD UNTIL ALARM CLEARS (100 MW LOAD REDUCTION INCREMENTS PER HALF HOUR RECOMMENDED). ENSURE MVAR LOADING LESS THAN 100 MVAR

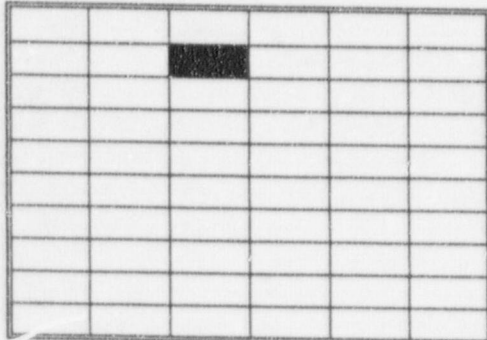
DISCUSSION:

IF XFMR FANS HAVE BEEN OFF FOR AN EXTENDED PERIOD OF TIME AND HIGH OIL TEMPS EXIST, RESTART OF FANS MAY ACTUATE FIRE DELUGE SYSTEM DUE TO HIGH FAN EXHAUST AIR TEMPS. THIS WILL TRIP THE FANS AND OIL PUMPS OFF AGAIN. IF THIS OCCURS THE DELUGE VALVES MUST BE RESET BEFORE XFMR FANS AND PUMPS WILL RESTART.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/6

SSF-A3 ANNUNCIATOR RESPONSE	SSF-A3-03-02	R-03-02
-----------------------------	--------------	---------



STEPUP XFMR
MAJOR ALARM

EVENT POINT 0737

INDICATED CONDITION:

- o STEP-UP TRANSFORMER PHASE "A" WINDING TEMPERATURE IS $>105^{\circ}$ C.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED LIGHT IS ON, LOCATED ON "A" STEP UP XFMR (3-3) ALARM PANEL
- o COMPUTER POINT A-310

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o VERIFY ALL "A" STEP UP TRANSFORMER OIL PUMPS AND FANS OPERATING
- o FOR VALID ALARM REDUCE ELECTRICAL LOAD UNTIL ALARM CLEARS (100 MW LOAD REDUCTION INCREMENTS PER HALF HOUR RECOMMENDED). ENSURE MVAR LOADING LESS THAN 100 MVAR

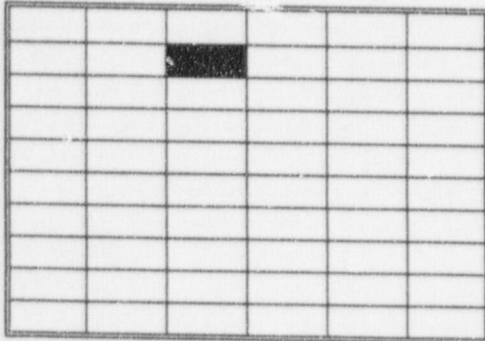
DISCUSSION:

IF XFMR FANS HAVE BEEN OFF FOR AN EXTENDED PERIOD OF TIME AND HIGH OIL TEMPS EXIST, RESTART OF FANS MAY ACTUATE FIRE DELUGE SYSTEM DUE TO HIGH FAN EXHAUST AIR TEMPS. THIS WILL TRIP THE FANS AND OIL PUMPS OFF AGAIN. IF THIS OCCURS THE DELUGE VALVES MUST BE RESET BEFORE XFMR FANS AND PUMPS WILL RESTART.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/7

SSF ANNUNCIATOR RESPONSE	SSF-A-03-02	R-03-02
--------------------------	-------------	---------



STEPUP XFMR
MAJOR ALARM

EVENT POINT 0738

INDICATED CONDITION:

- o STEP-UP TRANSFORMER PHASE "A" PRESSURE RELIEF DEVICE ACTUATED >10 PSIG

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED LIGHT IS ON, LOCATED ON THE "A" STEP UP XFMR (3-3) ALARM PANEL

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o VERIFY ALL "A" STEP UP XFMR OIL PUMPS AND FANS OPERATING
- o VERIFY TRANSFORMER TEMPERATURES NORMAL
- o CONSIDERATION SHOULD BE GIVEN TO REDUCE ELECTRICAL LOAD

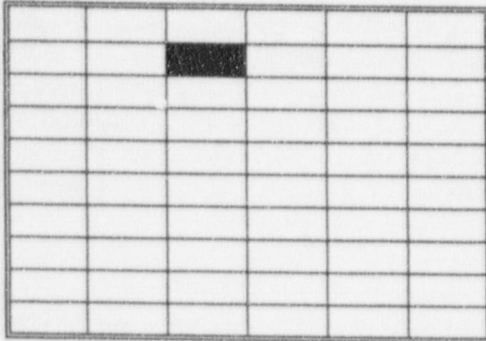
DISCUSSION:

THIS ALARM INDICATES A POSSIBLE INSULATION BREAKDOWN INSIDE THE TRANSFORMER. FURTHER DEGRADATION OF THIS INSULATION COULD CAUSE A FIRE/EXPLOSION IN THE TRANSFORMER.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/8

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-02	R-03-02
--------------------------	--------------	---------



STEPUP XFMR
MAJOR ALARM

EVENT POINT 0739

INDICATED CONDITION:

- o STEP-UP TRANSFORMER PHASE "A" COMBUSTIBLE GAS MONITOR ACTUATED > 200 CC GAS VOLUME

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED LIGHT IS ON, LOCATED ON THE "A" STEP UP XFMR (3-3) ALARM PANEL

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o VERIFY ALL "A" STEP UP XFMR OIL PUMPS AND FANS OPERATING
- o VERIFY TRANSFORMER TEMPERATURES NORMAL
- o CONSIDERATION SHOULD BE GIVEN TO REDUCE ELECTRICAL LOAD

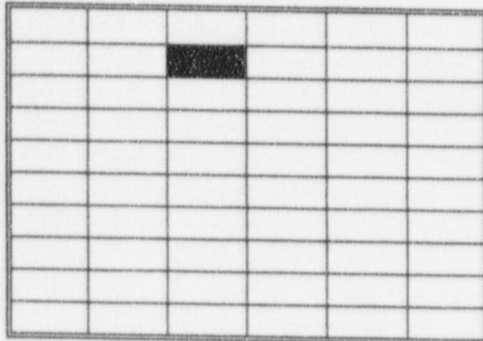
DISCUSSION:

THIS ALARM INDICATES A POSSIBLE INSULATION BREAKDOWN INSIDE THE TRANSFORMER. AS THE INSULATION DEGRADES COMBUSTIBLE GAS EVOLVES. THE GAS COLLECTS IN A CHAMBER ON THE TOP OF THE TRANSFORMER. THE AMOUNT OF THIS GAS IS READ ON A GAUGE ON THE TRANSFORMER.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/9

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-02	R-03-02
--------------------------	--------------	---------



STEPUP XFMR
MAJOR ALARM

EVENT POINT 1159

INDICATED CONDITION:

- o STEP-UP TRANSFORMER PHASE "B" TOP OIL TEMPERATURE $>90^{\circ}$ C

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED LIGHT IS ON, LOCATED ON THE "B" STEP UP XFMR (3-2) ALARM PANEL
- o COMPUTER POINT A-312

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o VERIFY ALL "B" STEP UP XFMR OIL PUMPS AND FANS OPERATING
- o FOR VALID ALARM REDUCE ELECTRICAL LOAD UNTIL ALARM CLEARS (100 MW LOAD REDUCTION INCREMENTS PER HALF HOUR RECOMMENDED). ENSURE MVAR LOADING LESS THAN 100 MVAR

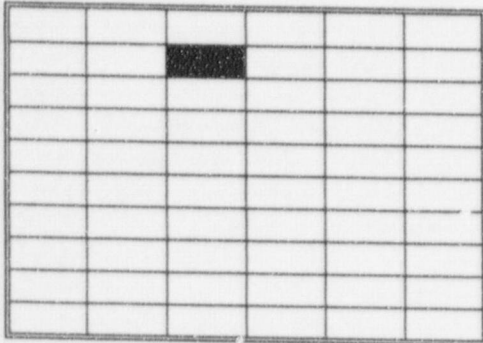
DISCUSSION:

IF XFMR FANS HAVE BEEN OFF FOR AN EXTENDED PERIOD OF TIME AND HIGH OIL TEMPS EXIST, RESTART OF FANS MAY ACTUATE FIRE DELUGE SYSTEM DUE TO HIGH FAN EXHAUST AIR TEMPS. THIS WILL TRIP THE FANS AND OIL PUMPS OFF AGAIN. IF THIS OCCURS THE DELUGE VALVES MUST BE RESET BEFORE XFMR FANS AND PUMPS WILL RESTART.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/6

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-02	R-03-02
--------------------------	--------------	---------



STEPUP XFMR
MAJOR ALARM

EVENT POINT 1160

INDICATED CONDITION:

- o STEP-UP TRANSFORMER PHASE "B" WINDING TEMPERATURE $>105^{\circ}\text{C}$

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED LIGHT IS ON, LOCATED ON THE "B" STEP UP XFMR (3-2) ALARM PANEL
- o COMPUTER POINT A-309

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o VERIFY ALL "B" STEP UP XFMR OIL PUMPS AND FANS OPERATING
- o FOR VALID ALARM REDUCE ELECTRICAL LOAD UNTIL ALARM CLEARS (100 MW LOAD REDUCTION INCREMENTS PER HALF HOUR RECOMMENDED). ENSURE MVAR LOADING LESS THAN 100 MVAR

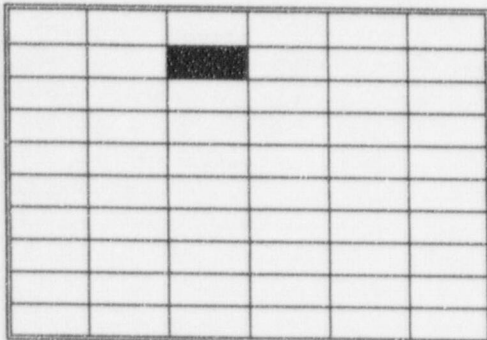
DISCUSSION:

IF XFMR FANS HAVE BEEN OFF FOR AN EXTENDED PERIOD OF TIME AND HIGH OIL TEMPS EXIST, RESTART OF FANS MAY ACTUATE FIRE DELUGE SYSTEM DUE TO HIGH FAN EXHAUST AIR TEMPS. THIS WILL TRIP THE FANS AND OIL PUMPS OFF AGAIN. IF THIS OCCURS THE DELUGE VALVES MUST BE RESET BEFORE XFMR FANS AND PUMPS WILL RESTART.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/7

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-02	R-03-02
--------------------------	--------------	---------



STEPUP XFMR
MAJOR ALARM

EVENT POINT 1161

INDICATED CONDITION:

- STEP-UP TRANSFORMER PHASE "B" PRESSURE RELIEF DEVICE ACTUATED > 10 PSIG

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- RED LIGHT IS ON, LOCATED ON THE "B" STEP UP XFMR (3-2) ALARM PANEL

OPERATOR ACTIONS FOR A VALID ALARM:

- NOTIFY SYSTEM DISPATCHER
- VERIFY ALL "B" STEP UP XFMR OIL PUMPS AND FANS OPERATING
- VERIFY TRANSFORMER TEMPERATURES NORMAL
- CONSIDERATION SHOULD BE GIVEN TO REDUCE ELECTRICAL LOAD

DISCUSSION:

THIS ALARM INDICATES A POSSIBLE INSULATION BREAKDOWN INSIDE THE TRANSFORMER. FURTHER DEGRADATION OF THIS INSULATION COULD CAUSE A FIRE/EXPLOSION IN THE TRANSFORMER.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/8

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-02	R-03-02
--------------------------	--------------	---------

[illegible]

STEPUP XFMR
MAJOR ALARM

EVENT POINT 1162

INDICATED CONDITION:

- o STEP-UP TRANSFORMER PHASE "B" COMBUSTIBLE GAS MONITOR ACTUATED > 200 CC GAS VOLUME

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED LIGHT IS ON, LOCATED ON THE "B" STEP UP XFMR (3-2) ALARM PANEL

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o VERIFY ALL "B" STEP UP XFMR OIL PUMPS AND FANS OPERATING
- o VERIFY TRANSFORMER TEMPERATURES NORMAL
- o CONSIDERATION SHOULD BE GIVEN TO REDUCE ELECTRICAL LOAD

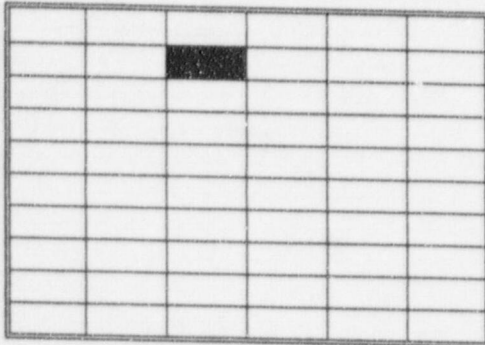
DISCUSSION:

THIS ALARM INDICATES A POSSIBLE INSULATION BREAKDOWN INSIDE THE TRANSFORMER. AS THE INSULATION DEGRADES COMBUSTIBLE GAS EVOLVES. THE GAS COLLECTS IN A CHAMBER ON THE TOP OF THE TRANSFORMER. THE AMOUNT OF THIS GAS IS READ ON A GAUGE ON THE TRANSFORMER.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/9

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-02	R-03-02
--------------------------	--------------	---------



STEPUP XFMR
MAJOR ALARM

EVENT POINT 1169

INDICATED CONDITION:

- STEP-UP TRANSFORMER PHASE "C" TOP OIL TEMPERATURE > 90° C

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- RED LIGHT IS ON, LOCATED ON THE "C" STEP UP XFMR (3-1) ALARM PANEL
- COMPUTER POINT A-311

OPERATOR ACTIONS FOR A VALID ALARM:

- NOTIFY SYSTEM DISPATCHER
- VERIFY ALL "C" STEP UP XFMR OIL PUMPS AND FANS OPERATING
- FOR VALID ALARM ELECTRICAL LOAD UNTIL ALARM CLEARS (100 MW LOAD REDUCTION INCREMENTS PER HALF HOUR RECOMMENDED). ENSURE MVAR LOADING LESS THAN 100 MVAR

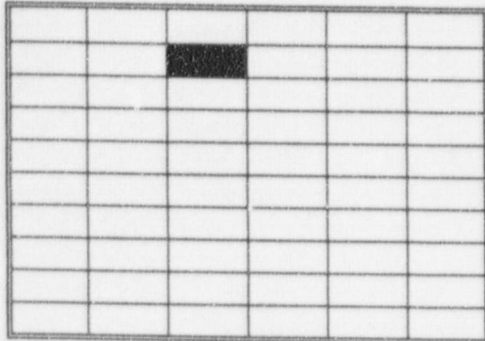
DISCUSSION:

IF XFMR FANS HAVE BEEN OFF FOR AN EXTENDED PERIOD OF TIME AND HIGH OIL TEMPS EXIST, RESTART OF FANS MAY ACTUATE FIRE DELUGE SYSTEM DUE TO HIGH FAN EXHAUST AIR TEMPS. THIS WILL TRIP THE FANS AND OIL PUMPS OFF AGAIN. IF THIS OCCURS THE DELUGE VALVES MUST BE RESET BEFORE XFMR FANS AND PUMPS WILL RESTART.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/6

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-02	R-03-02
--------------------------	--------------	---------



**STEPUP XFMR
MAJOR ALARM**

EVENT POINT 1170

INDICATED CONDITION:

- o STEP-UP TRANSFORMER PHASE "C" WINDING TEMPERATURE > 105° C

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED LIGHT IS ON, LOCATED ON THE "C" STEP UP XFMR (3-1) ALARM PANEL
- o COMPUTER POINT A-308

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o VERIFY ALL "C" STEP UP XFMR OIL PUMPS AND FANS OPERATING
- o FOR VALID ALARM REDUCE ELECTRICAL LOAD UNTIL ALARM CLEARS (100 MW LOAD REDUCTION INCREMENTS PER HALF HOUR RECOMMENDED). ENSURE MVAR LOADING LESS THAN 100 MVAR

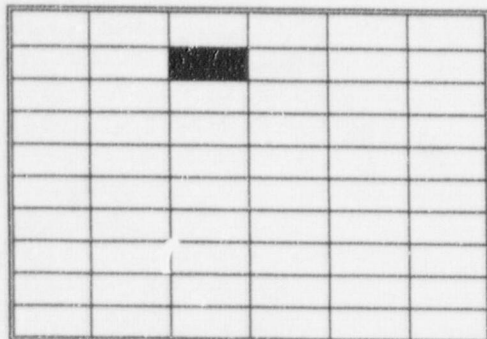
DISCUSSION:

IF XFMR FANS HAVE BEEN OFF FOR AN EXTENDED PERIOD OF TIME AND HIGH OIL TEMPS EXIST, RESTART OF FANS MAY ACTUATE FIRE DELUGE SYSTEM DUE TO HIGH FAN EXHAUST AIR TEMPS. THIS WILL TRIP THE FANS AND OIL PUMPS OFF AGAIN. IF THIS OCCURS THE DELUGE VALVES MUST BE RESET BEFORE XFMR FANS AND PUMPS WILL RESTART.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/7

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-02	R-03-02
--------------------------	--------------	---------



STEPUP XFMR
MAJOR ALARM

EVENT POINT 1171

INDICATED CONDITION:

- o STEP-UP TRANSFORMER PHASE "C" PRESSURE RELIEF DEVICE ACTUATED > 10 PSIG

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED LIGHT IS ON, LOCATED ON THE "C" STEP UP XFMR (3-1) ALARM PANEL

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o VERIFY ALL "C" STEP UP XFMR OIL PUMPS AND FANS OPERATING
- o VERIFY TRANSFORMER TEMPERATURES NORMAL
- o CONSIDERATION SHOULD BE GIVEN TO REDUCE ELECTRICAL LOAD

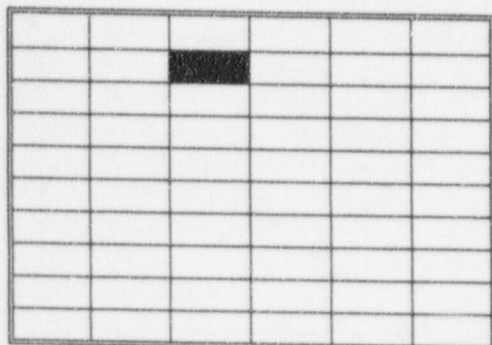
DISCUSSION:

THIS ALARM INDICATES A POSSIBLE INSULATION BREAKDOWN INSIDE THE TRANSFORMER. FURTHER DEGRADATION OF THIS INSULATION COULD CAUSE A FIRE/EXPLOSION IN THE TRANSFORMER.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/8

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-02	R-03-02
--------------------------	--------------	---------



STEPUP XFMR
MAJOR ALARM

EVENT POINT 1172

INDICATED CONDITION:

- o STEP-UP TRANSFORMER PHASE "C" COMBUSTIBLE GAS MONITOR ACTUATED > 200 CC GAS VOLUME

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED LIGHT IS ON, LOCATED ON THE "C" STEP UP XFMR (3-1) ALARM PANEL

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o VERIFY ALL "C" STEP UP XFMR OIL PUMPS AND FANS OPERATING
- o VERIFY TRANSFORMER TEMPERATURES NORMAL
- o CONSIDERATION SHOULD BE GIVEN TO REDUCE ELECTRICAL LOAD

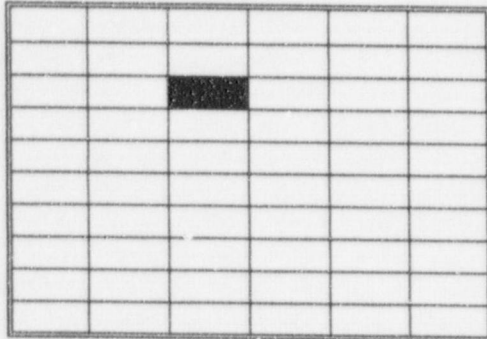
DISCUSSION:

THIS ALARM INDICATES A POSSIBLE INSULATION BREAKDOWN INSIDE THE TRANSFORMER. AS THE INSULATION DEGRADES COMBUSTIBLE GAS EVOLVES. THE GAS COLLECTS IN A CHAMBER ON THE TOP OF THE TRANSFORMER. THE AMOUNT OF THIS GAS IS READ ON A GAUGE ON THE TRANSFORMER.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/9

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-03	R-03-03
--------------------------	--------------	---------



STEPUP XFMR
MINOR ALARM

EVENT POINT 0731

INDICATED CONDITION:

- o STEP-UP TRANSFORMER PHASE "A" AUXILIARY POWER NORMAL SOURCE FAILURE ALARM

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o TRANSFORMER LOCAL ALARM LIGHT ON CABINET DOOR

OPERATOR ACTIONS FOR A VALID ALARM:

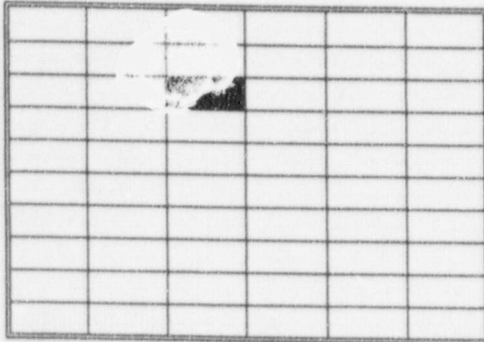
- o NOTIFY SYSTEM DISPATCHER
- o VERIFY NORMAL POWER AVAILABLE (ACDP-1 BREAKER 5)
- o VERIFY ALTERNATE POWER AVAILABLE (ACDP-2 BREAKER 5)

DISCUSSION:

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/1 STEPUP XFMR ϕ A CONTROL PANEL

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-03	R-03-03
--------------------------	--------------	---------



STEPUP XFMR
MINOR ALARM

EVENT POINT 0732

INDICATED CONDITION:

- o STEP-UP TRANSFORMER PHASE "A" AUX POWER ALTERNATE SOURCE FAILURE ALARM

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o TRANSFORMER LOCAL ALARM LIGHT ON CABINET DOOR

OPERATOR ACTIONS FOR A VALID ALARM:

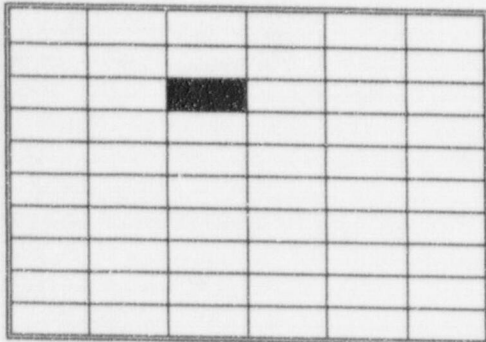
- o NOTIFY SYSTEM DISPATCHER
- o VERIFY ALTERNATE POWER AVAILABLE (ACDP-2 BREAKER 5)
- o VERIFY NORMAL POWER AVAILABLE (ACDP-1 BREAKER 5)

DISCUSSION:

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/2 STEPUP XFMR ϕ A CONTROL PANEL

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-03	R-03-03
--------------------------	--------------	---------



STEPUP XFMR
MINOR ALARM

EVENT POINT 0733

INDICATED CONDITION:

- o STEP-UP TRANSFORMER PHASE "A" CONTROL CIRCUIT POWER FAILURE ALARM

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o TRANSFORMER LOCAL ALARM LIGHT ON CABINET DOOR

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o CHECK CONTROL PANEL INTERNAL BREAKERS

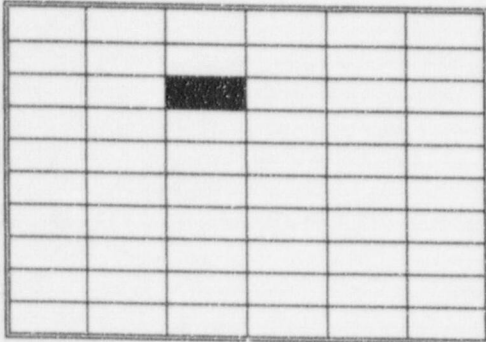
DISCUSSION:

THIS ALARM INDICATES THAT POWER HAS BEEN INTERRUPTED TO ONE OR MORE MAIN CONTROL CIRCUITS. ADDITIONAL ALARMS ON OIL PUMP FLOW MAY BE COINCIDENT.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/3 STEPUP XFMR ϕ A CONTROL PANEL

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-03	R-03-03
--------------------------	--------------	---------



STEPUP XFMR
MINOR ALARM

EVENT POINT 0734

INDICATED CONDITION:

- STEP-UP TRANSFORMER PHASE "A" OIL FLOW LOW

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- TRANSFORMER LOCAL ALARM LIGHT ON CABINET DOOR
- TRANSFORMER LOCAL OIL FLOW INDICATOR (FIVE INDICATORS PER TRANSFORMER)

OPERATOR ACTIONS FOR A VALID ALARM:

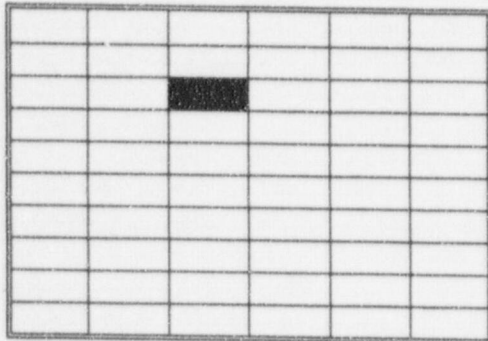
- NOTIFY SYSTEM DISPATCHER
- VERIFY PUMP BREAKER(S) CLOSED (INSIDE CABINET)

DISCUSSION:

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/4 STEPUP XFMR ϕ A CONTROL PANEL

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-03	R-03-03
--------------------------	--------------	---------



STEPUP XFMR
MINOR ALARM

EVENT POINT 0735

INDICATED CONDITION:

- o STEP-UP TRANSFORMER PHASE "A" OIL LEVEL LOW

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o TRANSFORMER LOCAL ALARM LIGHT ON CABINET DOOR
- o TRANSFORMER LOCAL OIL LEVEL INDICATOR

OPERATOR ACTIONS FOR A VALID ALARM:

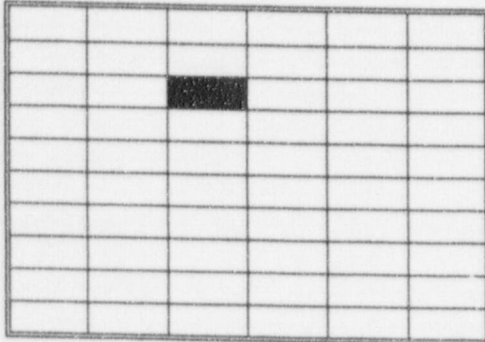
- o NOTIFY SYSTEM DISPATCHER
- o OBSERVE LOCAL OIL LEVEL (NORMAL INDICATION >25%)
- o CHECK TRANSFORMER FOR OIL LEAKAGE

DISCUSSION:

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/5 STEPUP XFMR ϕ A CONTROL PANEL

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-03	R-03-03
--------------------------	--------------	---------



STEPUP XFMR
MINOR ALARM

EVENT POINT 0740

INDICATED CONDITION:

- STEP-UP TRANSFORMER PHASE "A" ALARM SYSTEM LOSS OF DC POWER

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- TRANSFORMER LOCAL ALARM LIGHT ON CABINET DOOR

OPERATOR ACTIONS FOR A VALID ALARM:

- NOTIFY SYSTEM DISPATCHER°
- VERIFY DC POWER AVAILABLE (DPDP-3A BREAKER 1)

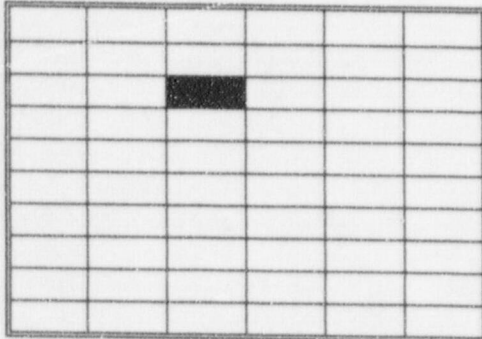
DISCUSSION:

THIS ALARM INDICATES NO OTHER LOCAL ALARMS ON THE TRANSFORMER ARE AVAILABLE. INCREASED MONITORING FREQUENCY FOR THIS TRANSFORMER SHOULD BE CONSIDERED.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 27/6 STEPUP XFMR ϕ A CONTROL PANEL

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-03	R-03-03
--------------------------	--------------	---------



STEPUP XFMR
MINOR ALARM

EVENT POINT 1154

INDICATED CONDITION:

- STEP-UP TRANSFORMER PHASE "B" AUXILIARY POWER NORMAL SOURCE FAILURE ALARM

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- TRANSFORMER LOCAL ALARM LIGHT IS ON, LOCATED ON THE CABINET DOOR

OPERATOR ACTIONS FOR A VALID ALARM:

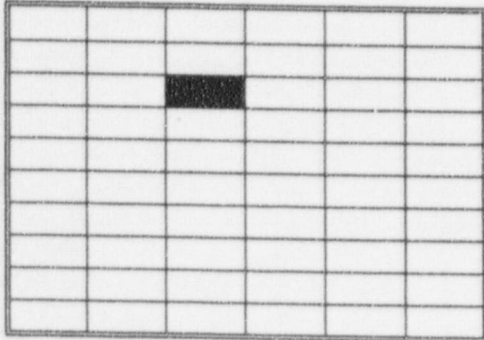
- NOTIFY SYSTEM DISPATCHER
- VERIFY NORMAL POWER AVAILABLE (ACDP-1 BREAKER 4)
- VERIFY ALTERNATE POWER AVAILABLE (ACDP-2 BREAKER 4)

DISCUSSION:

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/1 STEPUP XFMR ϕ B CONTROL PANEL

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-03	R-03-03
--------------------------	--------------	---------



STEPUP XFMR
MINOR ALARM

EVENT POINT 1155

INDICATED CONDITION:

- o STEP-UP TRANSFORMER PHASE "B" AUX POWER ALTERNATE SOURCE FAILURE ALARM

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o TRANSFORMER LOCAL ALARM LIGHT IS ON, LOCATED ON THE CABINET DOOR

OPERATOR ACTIONS FOR A VALID ALARM:

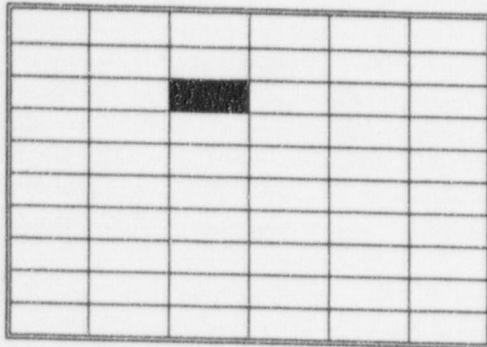
- o NOTIFY SYSTEM DISPATCHER
- o VERIFY ALTERNATE POWER AVAILABLE (ACDP-2 BREAKER 4)
- o VERIFY NORMAL POWER AVAILABLE (ACDP-1 BREAKER 4)

DISCUSSION:

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/2 STEPUP XFMR ϕ B CONTROL PANEL

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-03	R-03-03
--------------------------	--------------	---------



STEPUP XFMR
MINOR ALARM

EVENT POINT 1156

INDICATED CONDITION:

- o STEP-UP TRANSFORMER PHASE "B" CONTROL CIRCUIT POWER FAILURE ALARM

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o TRANSFORMER LOCAL ALARM LIGHT IS ON, LOCATED ON THE CABINET DOOR

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o CHECK CONTROL PANEL INTERNAL BREAKERS

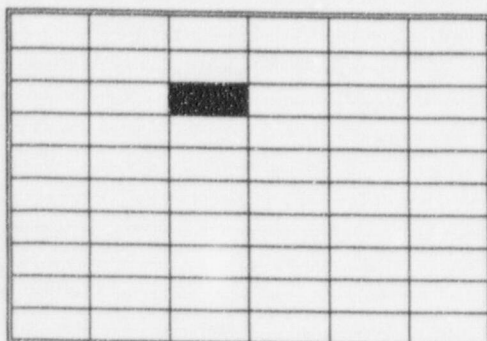
DISCUSSION:

THIS ALARM INDICATES THAT POWER HAS BEEN INTERRUPTED TO ONE OR MORE MAIN CONTROL CIRCUITS. ADDITIONAL ALARMS ON OIL PUMP FLOW MAY BE COINCIDENT.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/3 STEPUP XFMR ϕ B CONTROL PANEL

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-03	R-03-03
--------------------------	--------------	---------

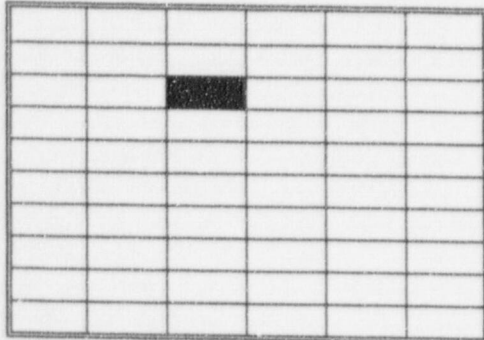


STEPUP XFMR
MINOR ALARM

EVENT POINT 1157

<p>INDICATED CONDITION:</p> <ul style="list-style-type: none"> o STEP-UP TRANSFORMER PHASE "B" OIL FLOW LOW
<p>REDUNDANT INDICATION WHICH WILL VERIFY ALARM:</p> <ul style="list-style-type: none"> o TRANSFORMER LOCAL ALARM LIGHT IS ON, LOCATED ON THE CABINET DOOR o TRANSFORMER LOCAL OIL FLOW INDICATOR (FIVE INDICATORS PER TRANSFORMER)
<p>OPERATOR ACTIONS FOR A VALID ALARM:</p> <ul style="list-style-type: none"> o NOTIFY SYSTEM DISPATCHER o VERIFY PUMP BREAKER(S) CLOSED (INSIDE CABINET)
<p>DISCUSSION:</p>
<p>REFERENCES: DRAWING 208-040 SHEET MT-90</p>
<p>SENSING ELEMENT: 30/4 STEPUP XFMR ϕB CONTROL PANEL</p>

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-03	R-03-03
--------------------------	--------------	---------



STEPUP XFMR
MINOR ALARM

EVENT POINT 1158

INDICATED CONDITION:

- o STEP-UP TRANSFORMER PHASE "B" OIL LEVEL LOW

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o TRANSFORMER LOCAL ALARM LIGHT IS ON, LOCATED ON THE CABINET DOOR
- o TRANSFORMER LOCAL OIL LEVEL INDICATOR

OPERATOR ACTIONS FOR A VALID ALARM:

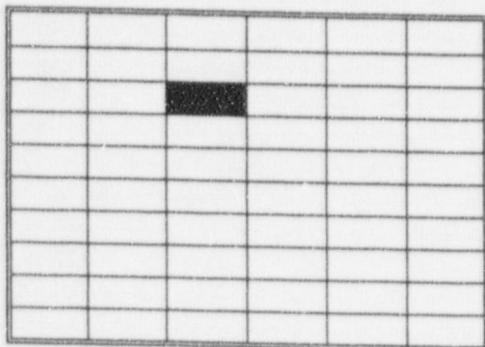
- o NOTIFY SYSTEM DISPATCHER
- o OBSERVE LOCAL OIL LEVEL (NORMAL INDICATION >25%)
- o CHECK TRANSFORMER FOR OIL LEAKAGE

DISCUSSION:

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/5 STEPUP XFMR ϕ B CONTROL PANEL

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-03	R-03-03
--------------------------	--------------	---------



STEPUP XFMR
MINOR ALARM

EVENT POINT 1163

INDICATED CONDITION:

- STEP-UP TRANSFORMER PHASE "B" ALARM SYSTEM LOSS OF DC POWER

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- TRANSFORMER LOCAL ALARM LIGHT IS ON, LOCATED ON THE CABINET DOOR

OPERATOR ACTIONS FOR A VALID ALARM:

- NOTIFY SYSTEM DISPATCHER
- VERIFY DC POWER AVAILABLE (DPDP-3A BREAKER 1)

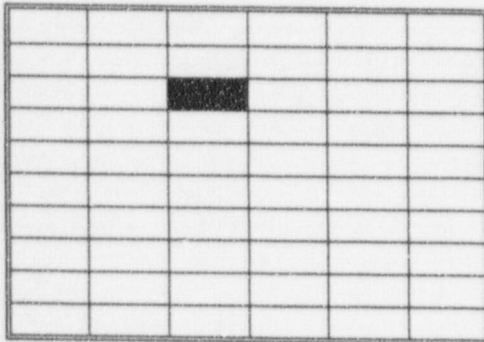
DISCUSSION:

THIS ALARM INDICATES NO OTHER LOCAL ALARMS ON THE TRANSFORMER ARE AVAILABLE. INCREASED MONITORING FREQUENCY FOR THIS TRANSFORMER SHOULD BE CONSIDERED.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 27/6 STEPUP XFMR ϕ B CONTROL PANEL

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-03	R-03-03
--------------------------	--------------	---------



STEPUP XFMR
MINOR ALARM

EVENT POINT 1164

INDICATED CONDITION:

- STEP-UP TRANSFORMER PHASE "C" AUX POWER NORMAL SOURCE FAILURE ALARM

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- TRANSFORMER LOCAL ALARM LIGHT ON CABINET DOOR

OPERATOR ACTIONS FOR A VALID ALARM:

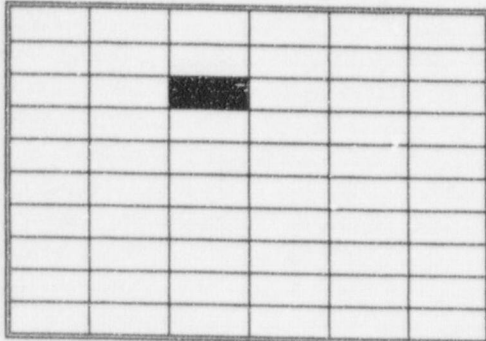
- NOTIFY SYSTEM DISPATCHER
- VERIFY NORMAL POWER AVAILABLE (ACDP-1 BREAKER 1)
- VERIFY ALTERNATE POWER AVAILABLE (ACDP-2 BREAKER 3)

DISCUSSION:

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/1 STEPUP XFMR ϕ C CONTROL PANEL

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-03	R-03-03
--------------------------	--------------	---------

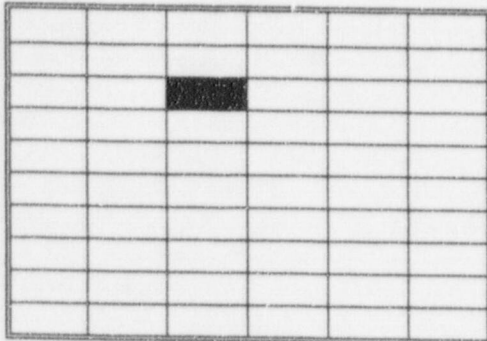


STEPUP XFMR
MINOR ALARM

EVENT POINT 1165

INDICATED CONDITION: <ul style="list-style-type: none">◦ STEP-UP TRANSFORMER PHASE "C" AUX POWER ALTERNATE SOURCE FAILURE ALARM
REDUNDANT INDICATION WHICH WILL VERIFY ALARM: <ul style="list-style-type: none">◦ TRANSFORMER LOCAL ALARM LIGHT IS ON, LOCATED ON THE CABINET DOOR
OPERATOR ACTIONS FOR A VALID ALARM: <ul style="list-style-type: none">◦ NOTIFY SYSTEM DISPATCHER◦ VERIFY ALTERNATE POWER AVAILABLE (ACDP-2 BREAKER 3)◦ VERIFY NORMAL POWER AVAILABLE (ACDP-1 BREAKER 1)
DISCUSSION:
REFERENCES: DRAWING 208-040 SHEET MT-90
SENSING ELEMENT: 30/2 STEPUP XFMR ϕ C CONTROL PANEL

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-03	R-03-03
--------------------------	--------------	---------



STEPUP XFMR
MINOR ALARM

EVENT POINT 1166

INDICATED CONDITION:

- o STEP-UP TRANSFORMER PHASE "C" CONTROL CIRCUIT POWER FAILURE ALARM

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o TRANSFORMER LOCAL ALARM LIGHT IS ON, LOCATED ON THE CABINET DOOR

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o CHECK CONTROL PANEL INTERNAL BREAKERS

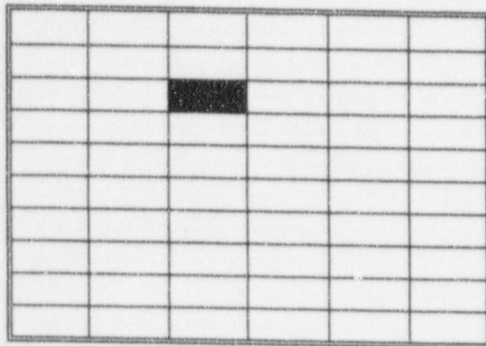
DISCUSSION:

THIS ALARM INDICATES THAT POWER HAS BEEN INTERRUPTED TO ONE OR MORE MAIN CONTROL CIRCUITS. ADDITIONAL ALARMS ON OIL PUMP FLOW MAY BE COINCIDENT.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/3 STEPUP XFMR ϕ C CONTROL PANEL

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-03	R-03-03
--------------------------	--------------	---------



STEPUP XFMR
MINOR ALARM

EVENT POINT 1167

INDICATED CONDITION:

- o STEP-UP XFMR PHASE "C" OIL FLOW LOW

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o TRANSFORMER LOCAL ALARM LIGHT ON CABINET DOOR
- o TRANSFORMER LOCAL OIL FLOW INDICATOR (FIVE INDICATORS PER TRANSFORMER)

OPERATOR ACTIONS FOR A VALID ALARM:

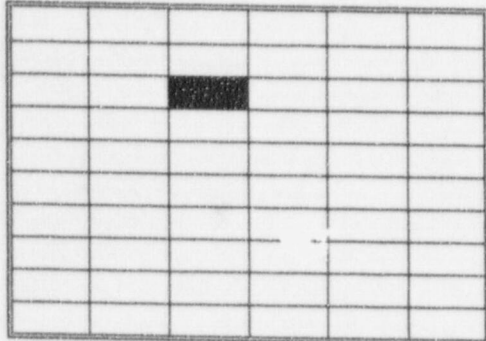
- o NOTIFY SYSTEM DISPATCHER
- o VERIFY PUMP BREAKER(S) CLOSED (INSIDE CABINET)

DISCUSSION:

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/4 STEPUP XFMR ϕ C CONTROL PANEL

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-03	R-03-03
--------------------------	--------------	---------



STEPUP XFMR
MINOR ALARM

EVENT POINT 1168

INDICATED CONDITION:

- o STEP-UP XFMR PHASE "C" OIL LEVEL LOW

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o TRANSFORMER LOCAL ALARM LIGHT ON CABINET DOOR
- o TRANSFORMER LOCAL OIL LEVEL INDICATOR

OPERATOR ACTIONS FOR A VALID ALARM:

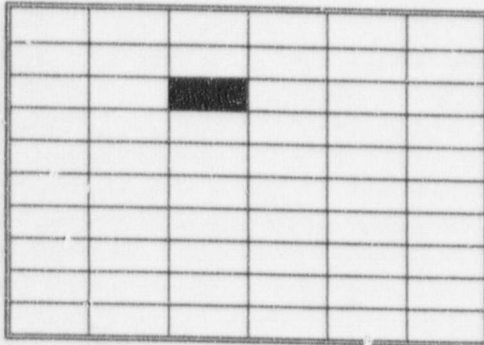
- o NOTIFY SYSTEM DISPATCHER
- o OBSERVE LOCAL OIL LEVEL (NORMAL INDICATION >25%)
- o CHECK TRANSFORMER FOR OIL LEAKAGE

DISCUSSION:

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 30/5 STEPUP XFMR ϕ C CONTROL PANEL

SSF ANNUNCIATOR RESPONSE	SSF-A3-03-03	R-03-03
--------------------------	--------------	---------



STEPUP XFMR
MINOR ALARM

EVENT POINT 1173

INDICATED CONDITION:

- o STEP-UP XFMR PHASE "C" ALARM SYSTEM LOSS OF DC POWER

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o TRANSFORMER LOCAL ALARM LIGHT ON CABINET DOOR

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o VERIFY DC POWER AVAILABLE (DPDP-3A BREAKER 1)

DISCUSSION:

THIS ALARM INDICATES NO OTHER LOCAL ALARMS ON THE TRANSFORMER ARE AVAILABLE. INCREASED MONITORING FREQUENCY FOR THIS TRANSFORMER SHOULD BE CONSIDERED.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 27/6 STEPUP XFMR ϕ C CONTROL PANEL

SSF ANNUNCIATOR RESPONSE	SSF-A3-04-01	R-04-01
--------------------------	--------------	---------

[illegible]

UNIT AUX XFMR
FAULT

EVENT POINT 0691

INDICATED CONDITION:

- UNIT AUXILIARY TRANSFORMER NEUTRAL GROUND

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o TURBINE TRIP <45% RTP; TURBINE AND REACTOR TRIP >45% RTP
- o THE FOLLOWING BREAKERS TRIP OPEN: 3101, 3102, 3201, 3202, 3207, 3208, 1661, 1662, 1660, EXCITER REGULATOR BREAKER.
- o THE FOLLOWING BREAKERS WILL CLOSE (IF AUTO/MANUAL SEL SW IS IN AUTO): 3103, 3104, 3203, 3204.
- o 86TNUA-2 LOCKOUT HAS TRIPPED ON SSR SECTION OF REAR MCB

OPERATOR ACTIONS FOR A VALID ALARM:

- o ENSURE ELECTRICAL POWER AUTOMATICALLY TRANSFERS TO THE AFFECTED BUSES
- o IF A UNIT 4160 VAC BUS IS DE-ENERGIZED RUN THE PLANT BACK PER AP-545
- o IF A 6900 VAC BUS IS DE-ENERGIZED, ENSURE THE REACTOR IS TRIPPED, REFER TO EOP

DISCUSSION:

THIS ALARM INDICATES A POSSIBLE INSULATION BREAKDOWN INSIDE THE TRANSFORMER. FURTHER DEGRADATION OF THIS INSULATION COULD CAUSE A FIRE/EXPLOSION IN THE TRANSFORMER.

REFERENCES: DRAWING 208-040 SHEET MT-81

SENSING ELEMENT: 86TNUA-2

SSF ANNUNCIATOR RESPONSE	SSF-A3-04-01	R-04-01
--------------------------	--------------	---------

[illegible]UNIT AUX XFMR
FAULT

EVENT POINT 0692

INDICATED CONDITION:

- o UNIT AUXILIARY TRANSFORMER SUDDEN PRESSURE

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o TURBINE TRIP <45% RTP; TURBINE AND REACTOR TRIP >45% RTP
- o THE FOLLOWING BREAKERS TRIP OPEN: 3101, 3102, 3201, 3202, 3207, 3208, 1661, 1662, 1660, EXCITER REGULATOR BREAKER.
- o THE FOLLOWING BREAKERS TRIP CLOSED (IF AUTO/MANUAL SEL SW IS IN AUTO): 3103, 3104, 3203, 3204.
- o 86SPSUA-2 LOCKOUT HAS TRIPPED ON SSR SECTION OF REAR MCB

OPERATOR ACTIONS FOR A VALID ALARM:

- o ENSURE ELECTRICAL POWER AUTOMATICALLY TRANSFERS TO THE AFFECTED BUSES
- o IF A UNIT 4160 VAC BUS IS DE-ENERGIZED RUN THE PLANT BACK PER AP-545
- o IF A 6900 VAC BUS IS DE-ENERGIZED ENSURE THE REACTOR IS TRIPPED, REFER TO EOP

DISCUSSION:

REFERENCES: DRAWING 208-040 SHEET MT-82

SENSING ELEMENT: 86SPSUA-2

[illegible]

EVENT POINT 0693

0 UNIT AUXILIARY TRANSFORMER PHASE DIFFERENTIAL

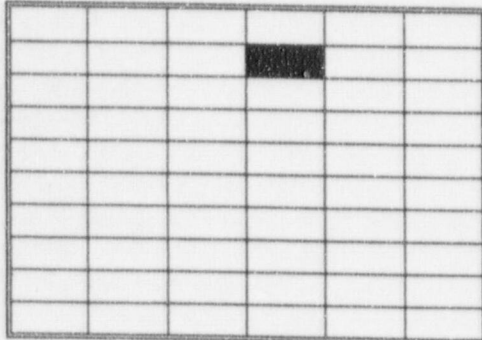
- o TURBINE TRIP <45% RTP; TURBINE AND REACTOR TRIP >45% RTP
- o THE FOLLOWING BREAKERS TRIP OPEN: 3101, 3102, 3201, 3202, 3207, 3208, 1661, 1662, 1660, EXCITER REGULATOR BREAKER.
- o THE FOLLOWING BREAKERS TRIP CLOSED (IF AUTO/MANUAL SEL SW IS IN AUTO): 3103, 3104, 3203, 3204.
- o 86TUA-2 LOCKOUT HAS TRIPPED ON SSR SECTION OF REAR MCB

- o ENSURE ELECTRICAL POWER AUTOMATICALLY TRANSFERS TO THE AFFECTED BUSES
- o IF A UNIT 4160 VAC BUS IS DE-ENERGIZED RUN THE PLANT BACK PER AP-545
- o IF A 6900 VAC BUS IS DE-ENERGIZED ENSURE THE REACTOR IS TRIPPED, REFER TO EOP

REFERENCES: DRAWING 208-040 SHEET MT-83

Page 54

SSF ANNUNCIATOR RESPONSE	SSF-A3-04-02	R-04-02
--------------------------	--------------	---------



UNIT AUX XFMR
MAJOR ALARM

EVENT POINT 0746

INDICATED CONDITION:

- o UNIT AUX TRANSFORMER PRESSURE RELIEF DEVICE > 10 PSIG

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED LIGHT IS ON, LOCATED ON THE UNIT AUX TRANSFORMER ALARM PANEL

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o VERIFY ALL UNIT AUX TRANSFORMER FANS AND PUMPS OPERATING
- o VERIFY TRANSFORMER TEMPERATURES NORMAL
- o CONSIDERATION SHOULD BE GIVEN TO REDUCE ELECTRICAL LOAD

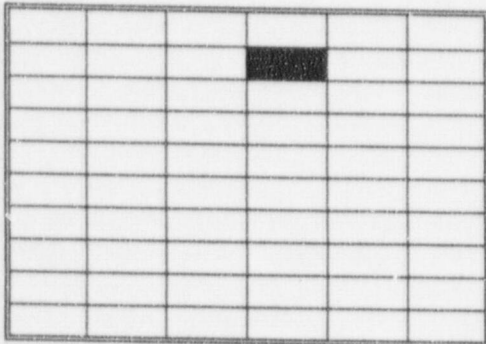
DISCUSSION:

THIS ALARM INDICATES A POSSIBLE INSULATION BREAKDOWN INSIDE THE TRANSFORMER. FURTHER DEGRADATION OF THIS INSULATION COULD CAUSE A FIRE/EXPLOSION IN THE TRANSFORMER.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 63PRX

SSF ANNUNCIATOR RESPONSE	SSF-A3-04-02	R-04-02
--------------------------	--------------	---------

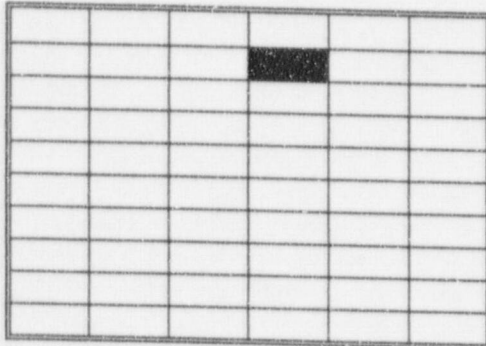


UNIT AUX XFMR
MAJOR ALARM

EVENT POINT 0747

INDICATED CONDITION: <ul style="list-style-type: none">UNIT AUX TRANSFORMER TOP OIL TEMPERATURE > 90° C
REDUNDANT INDICATION WHICH WILL VERIFY ALARM: <ul style="list-style-type: none">RED LIGHT IS ON, LOCATED ON THE UNIT AUX TRANSFORMER ALARM PANELCOMPUTER POINT G-228
OPERATOR ACTIONS FOR A VALID ALARM: <ul style="list-style-type: none">NOTIFY SYSTEM DISPATCHERVERIFY ALL AUX TRANSFORMER OIL PUMPS AND FANS OPERATINGCONSIDERATION SHOULD BE GIVEN TO REDUCE ELECTRICAL LOAD
DISCUSSION: <p>IF XFMR FANS HAVE BEEN OFF FOR AN EXTENDED PERIOD OF TIME AND HIGH OIL TEMPS EXIST, RESTART OF FANS MAY ACTUATE FIRE DELUGE SYSTEM DUE TO HIGH FAN EXHAUST AIR TEMPS. THIS WILL TRIP THE FANS AND OIL PUMPS OFF AGAIN. IF THIS OCCURS THE DELUGE VALVES MUST BE RESET BEFORE XFMR FANS AND PUMPS WILL RESTART.</p>
REFERENCES: DRAWING 208-040 SHEET MT-90
SENSING ELEMENT: 26/QX

SSF ANNUNCIATOR RESPONSE	SSF-A3-04-02	R-04-02
--------------------------	--------------	---------



UNIT AUX XFMR
MAJOR ALARM

EVENT POINT 0748

INDICATED CONDITION:

- o UNIT AUXILIARY TRANSFORMER WINDING TEMPERATURE > 120° C

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED LIGHT IS ON, LOCATED ON THE UNIT AUX TRANSFORMER ALARM PANEL
- o COMPUTER POINTS A-314 (4160V), A-315 (6900V)

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o VERIFY ALL UNIT AUX TRANSFORMER OIL PUMPS AND FANS OPERATING
- o CONSIDERATION SHOULD BE GIVEN TO REDUCE ELECTRICAL LOAD

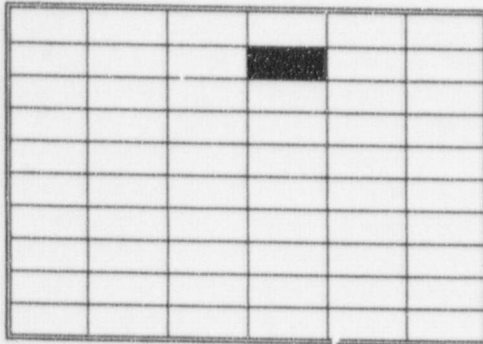
DISCUSSION:

IF XFMR FANS HAVE BEEN OFF FOR AN EXTENDED PERIOD OF TIME AND HIGH OIL TEMPS EXIST, RESTART OF FANS MAY ACTUATE FIRE DELUGE SYSTEM DUE TO HIGH FAN EXHAUST AIR TEMPS. THIS WILL TRIP THE FANS AND OIL PUMPS OFF AGAIN. IF THIS OCCURS THE DELUGE VALVES MUST BE RESET BEFORE XFMR FANS AND PUMPS WILL RESTART.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 49/X

SSF ANNUNCIATOR RESPONSE	SSF-A3-04-02	R-04-02
--------------------------	--------------	---------



UNIT AUX XFMR
MAJOR ALARM

EVENT POINT 0750

INDICATED CONDITION:

- o UNIT AUXILIARY TRANSFORMER COMBUSTIBLE GAS MONITOR > 200 CC GAS VOLUME

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED LIGHT IS ON, LOCATED ON THE UNIT AUX TRANSFORMER ALARM PANEL

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o VERIFY ALL UNIT AUX TRANSFORMER FANS AND OIL PUMPS ARE OPERATING
- o VERIFY TRANSFORMER TEMPERATURES NORMAL
- o CONSIDERATION SHOULD BE GIVEN TO REDUCE ELECTRICAL LOAD

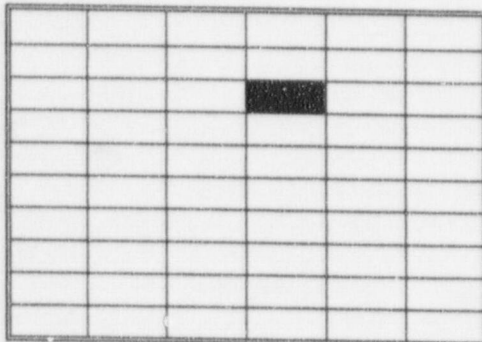
DISCUSSION:

THIS ALARM INDICATES A POSSIBLE INSULATION BREAKDOWN INSIDE THE TRANSFORMER. AS THE INSULATION DEGRADES COMBUSTIBLE GAS EVOLVES. THE GAS COLLECTS IN A CHAMBER ON THE TOP OF THE TRANSFORMER. THE AMOUNT OF THIS GAS IS READ ON A GAUGE ON THE TRANSFORMER.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 63GDRX

SSF ANNUNCIATOR RESPONSE	SSF-A3-04-03	R-04-03
--------------------------	--------------	---------



UNIT AUX XFMR
MINOR ALARM

EVENT POINT 0741

INDICATED CONDITION:

- o UNIT AUXILIARY TRANSFORMER ALARM SYSTEM LOSS OF DC POWER

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o ALARM INDICATION ON UNIT AUX TRANSFORMER CABINET DOOR

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o VERIFY POWER AVAILABLE FROM DPDP-3A SWITCH 16

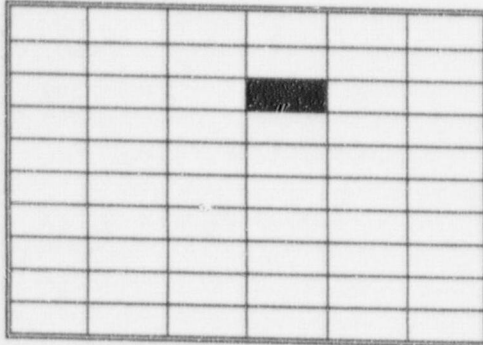
DISCUSSION:

THIS ALARM INDICATES NO OTHER LOCAL ALARMS ON THE TRANSFORMER ARE AVAILABLE. INCREASED MONITORING FREQUENCY FOR THIS TRANSFORMER SHOULD BE CONSIDERED.

REFERENCES: 208-040-SHEET MT-90

SENSING ELEMENT: 27 DC AUX TRANSFORMER RELAY

SSF ANNUNCIATOR RESPONSE	SSF-A3-04-03	R-04-03
--------------------------	--------------	---------



UNIT AUX XFMR
MINOR ALARM

EVENT POINT 0742

INDICATED CONDITION:

- o UNIT AUXILIARY TRANSFORMER PUMP NO FLOW

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o ALARM IS IN, LOCATED ON THE LOCAL ALARM PANEL
- o NO FLOW INDICATED ON LOCAL FLOW INDICATORS

OPERATOR ACTIONS FOR A VALID ALARM:

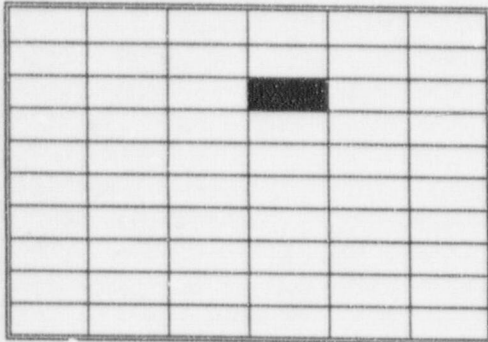
- o NOTIFY SYSTEM DISPATCHER
- o ENSURE POWER AVAILABLE TO OIL PUMPS (CHECK BREAKERS INSIDE CABINET)

DISCUSSION:

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 74X AUX TRANSFORMER RELAY

SSF ANNUNCIATOR RESPONSE	SSF-A3-04-03	R-04-03
--------------------------	--------------	---------



UNIT AUX XFMR
MINOR ALARM

EVENT POINT 0743

INDICATED CONDITION:

- o UNIT AUXILIARY TRANSFORMER NORMAL AUXILIARY POWER FAILURE

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o TRANSFORMER LOCAL ALARM LIGHT IS ON, LOCATED ON THE UNIT AUX TRANSFORMER CABINET DOOR

OPERATOR ACTIONS FOR A VALID ALARM:

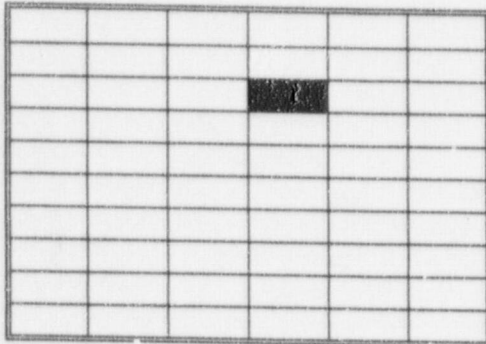
- o NOTIFY SYSTEM DISPATCHER
- o VERIFY NORMAL POWER AVAILABLE (ACDP-1 BREAKER 6)
- o VERIFY PROPER OPERATION OF TRANSFORMER FANS AND OIL PUMPS

DISCUSSION:

REFERENCES: 208-040-MT-90

SENSING ELEMENT: 83 X AUXILIARY TRANSFORMER RELAY

SSF-A3 ANNUNCIATOR RESPONSE	SSF-A3-04-03	R-04-03
-----------------------------	--------------	---------



UNIT AUX XFMR
MINOR ALARM

EVENT POINT 0744

INDICATED CONDITION:

- o UNIT AUXILIARY TRANSFORMER EMERGENCY POWER FAILURE

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o TRANSFORMER LOCAL ALARM LIGHT IS ON, LOCATED ON THE UNIT AUX TRANSFORMER CABINET DOOR

OPERATOR ACTIONS FOR A VALID ALARM:

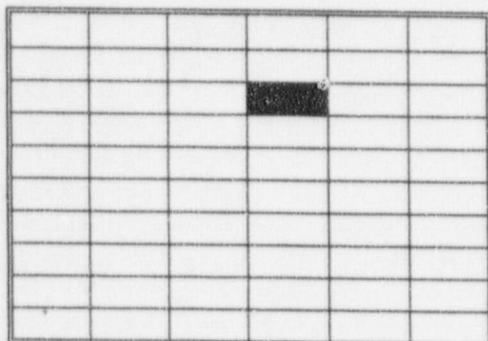
- o NOTIFY SYSTEM DISPATCHER
- o VERIFY EMERGENCY POWER AVAILABLE (ACDP-2 BREAKER 7)
- o VERIFY PROPER OPERATION OF TRANSFORMER FANS AND OIL PUMPS

DISCUSSION:

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 27 EX AUX XFMR RELAY

SSF ANNUNCIATOR RESPONSE	SSF-A3-04-03	R-04-03
--------------------------	--------------	---------



UNIT AUX XFMR
MINOR ALARM

EVENT POINT 0745

INDICATED CONDITION:

- o UNIT AUXILIARY TRANSFORMER AUXILIARY POWER AUTO TRANSFER

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o LOCAL ALARM PANEL INDICATOR
- o ALARMS INDICATING NORMAL POWER IS NOT AVAILABLE (ACDP-1 BKR 6)

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o VERIFY PROPER OPERATION OF TRANSFORMER FANS AND PUMPS
- o VERIFY POWER IS AVAILABLE FROM ACDP-1 BKR 6

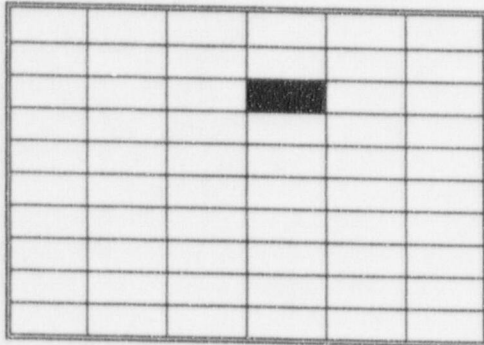
DISCUSSION:

THIS ALARM INDICATES AN AUTO BUS TRANSFER DEVICE HAS ACTUATED INSIDE THE AUX TRANSFORMER CONTROL CABINET. THE NORMAL FEED FOR THIS DEVICE IS ACDP-1 THE ALTERNATE FEED IS ACDP-2. THIS ABT IS A NORMAL SEEKING DEVICE AND SHOULD AUTO RETRANSFER WHEN NORMAL POWER IS REGAINED.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 89 EX AUX TRANSFORMER RELAY

SSF ANNUNCIATOR RESPONSE	SSF-A3-04-03	R-04-03
--------------------------	--------------	---------



UNIT AUX XFMR
MINOR ALARM

EVENT POINT 0749

INDICATED CONDITION:

- o UNIT AUXILIARY TRANSFORMER LIQUID LEVEL LOW

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o LOCAL ALARM PANEL INDICATION
- o LOCAL INDICATOR READING LESS THAN 25% LEVEL

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o INSPECT TRANSFORMER FOR ANY OIL LEAKAGE (ATTEMPT TO CONTAIN ANY LEAKAGE)
- o VERIFY PROPER TRANSFORMER PUMP AND FAN OPERATION

DISCUSSION:

IF AN ACTUAL LOW OIL LEVEL EXISTS CONSIDERATION SHOULD BE GIVEN TO REMOVING ALL LOADS FROM THE TRANSFORMER.

REFERENCES: DRAWING 208-040 SHEET MT-90

SENSING ELEMENT: 63 QLX AUX TRANSFORMER RELAY