Rev. 17

Effective Date 12-1-98

ANNUNCIATOR RESPONSE

AR-702

FLORIDA POWER CORPORATION

CRYSTAL RIVER UNIT 3

SSF Q ANNUNCIATOR RESPONSE

APPROVED BY: Procedure Owner

Michael Winship
(SIGNATURE ON FILE)

DATE: 12-1-98

PROCEDURE WRITER Ernest R. Humphries

RESPONSIBLE DEPARTMENT: Operations Support

TABLE OF CONTENTS

Document Transmittal #: 108347 Date: 12/1/98

To: NRC (DC DESK) **MAC: N/A** **Holder #: 1242**
Destination: **Description:**

Document:	Revision:	Comment:	Copy Totals INFO	CNTL	MSTR
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Engineering managers are required by NEP-121 to determine if new, revised, or temporary changes to procedures affect job functions of their personnel. Managers will communicate change information appropriately and provide documentation of any training conducted to the Engineering Training Coordinator.

Operations department must attach old document(s) or portions of document(s) superseded by the above to this transmittal.

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Crystal River, FL 34428-6708

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1.0 PURPOSE

1.1 Establish a reference document for each Annunciator Window on the SSF-A2 Lampbox.

1.2 Establish operator actions for valid Annunciator alarms on the SSF-A2 Lampbox.

1.3 Establish a reference to other procedures which address operator actions for valid Annunciator alarms on the SSF-A2 Lampbox.

2.0 REFERENCES

2.1 IMPLEMENTING REFERENCES

2.1.1 AP-770, Emergency Diesel Generator Actuation

2.1.2 OP-703, Plant Distribution System

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.

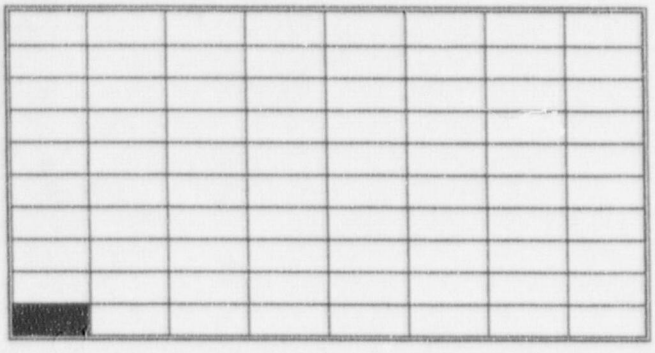
4.0 INSTRUCTIONS

4.1 Respond to alarms on the SSF-A2 Lampbox as indicated on Enclosure 1, Annunciator Response.

5.0 FOLLOW-UP-ACTIONS

None

SSF ANNUNCIATOR RESPONSE	SF-A2-01 10	Q-01-10



BUS
PARALLELED

EVENT POINT 0540

INDICATED CONDITION:

- o "A" 6900V RX AUX BUS BREAKERS 3101 AND 3103 CLOSED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o BREAKER POSITION INDICATION FOR BREAKERS 3101 AND 3103.

OPERATOR ACTIONS FOR A VALID ALARM:

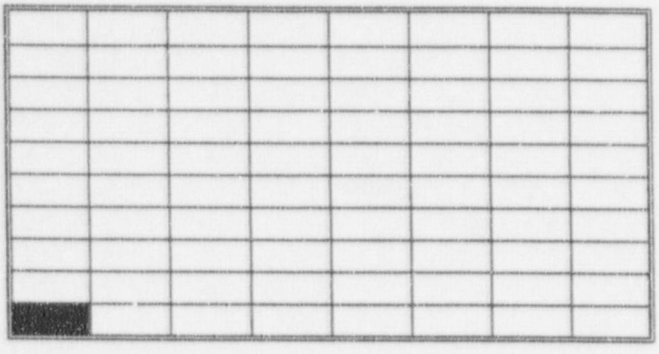
DISCUSSION:

THIS IS A NORMAL ALARM WHILE TRANSFERRING BUSSES TO ALTERNATE SUPPLIES WHEN MORE THAN ONE SUPPLY BREAKER IS CLOSED.

REFERENCES: DRAWING 208-040 MT-03

SENSING ELEMENT: 3101/52A CONTACT AND 3103/52A CONTACT (6900V BREAKERS)

SSF ANNUNCIATOR RESPONSE	SF-A2-01-10	Q-01-10



BUS
PAPALLELED

EVENT POINT 0543

INDICATED CONDITION:

o "B" 6900V RX AUX BUS BREAKERS 3102 AND 3104 CLOSED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

o BREAKER POSITION INDICATION FOR BREAKERS 3102 AND 3104.

OPERATOR ACTIONS FOR A VALID ALARM:

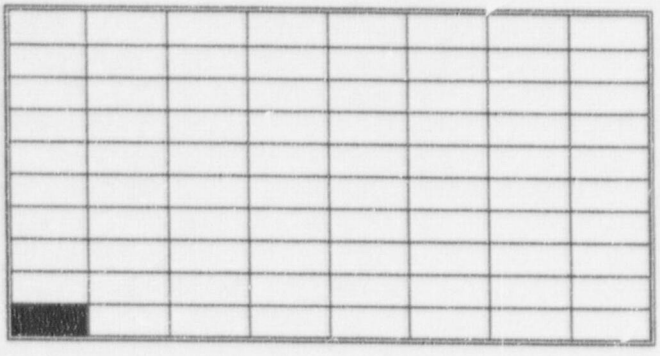
DISCUSSION:

THIS IS A NORMAL ALARM WHILE TRANSFERRING BUSSES TO ALTERNATE SUPPLIES WHEN MORE THAN ONE SUPPLY BREAKER IS CLOSED.

REFERENCES: DRAWING 208-040 MT-04

SENSING ELEMENT: 3102/52A CONTACT AND 3104/52A CONTACT (6900V BREAKERS)

SSF ANNUNCIATOR RESPONSE	SF-A2-01-10	Q-01-10



BUS
PARALLELED

EVENT POINT 0546

INDICATED CONDITION:

- o "A" 4160V UNIT BUS BREAKERS 3201 AND 3203 CLOSED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o BREAKER POSITION INDICATION FOR BREAKERS 3201 AND 3203.

OPERATOR ACTIONS FOR A VALID ALARM:

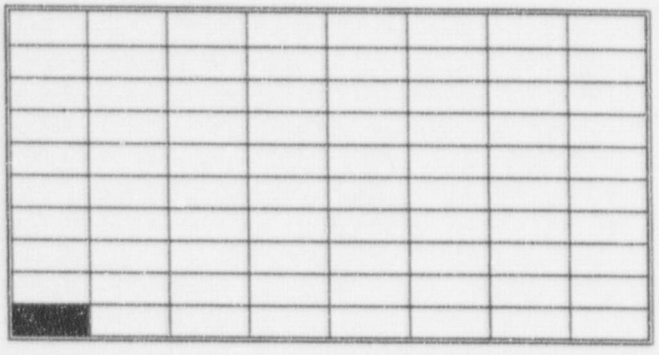
DISCUSSION:

THIS IS A NORMAL ALARM WHILE TRANSFERRING BUSSES TO ALTERNATE SUPPLIES WHEN MORE THAN ONE SUPPLY BREAKER IS CLOSED.

REFERENCES: DRAWING 208-040 MT-05

SENSING ELEMENT: 3201/52A CONTACT AND 3203/52A CONTACT (4160V BREAKERS)

SSF ANNUNCIATOR RESPONSE	SF-A2-01-10	Q-01-10



BUS PARALLELED

EVENT POINT 0549

INDICATED CONDITION:

- o "B" 4160V UNIT BUS BREAKERS 3202 AND 3204 CLOSED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o BREAKER POSITION INDICATION FOR BREAKERS 3202 AND 3204.

OPERATOR ACTIONS FOR A VALID ALARM:

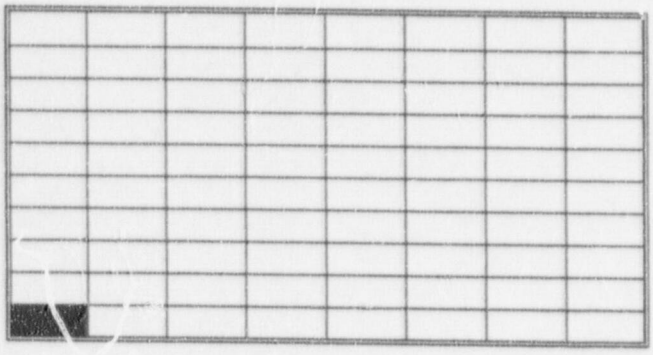
DISCUSSION:

THIS IS A NORMAL ALARM WHILE TRANSFERRING BUSSES TO ALTERNATE SUPPLIES WHEN MORE THAN ONE SUPPLY BREAKER IS CLOSED.

REFERENCES: DRAWING 208-040 MT-06

SENSING ELEMENT: 3202/52A CONTACT AND 3204/52A CONTACT (4160V BREAKERS)

SSF ANNUNCIATOR RESPONSE	SF-A2-01-10	Q-01-10



BUS PARALLELED

EVENT POINT 0556

INDICATED CONDITION:

- o ANY COMBINATION OF "A" ES 4160V BUS BREAKERS 3205, 3207, 3209, 3211 CLOSED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o BREAKER POSITION INDICATION FOR BREAKERS 3205,3207,3209,3211.

OPERATOR ACTIONS FOR A VALID ALARM:

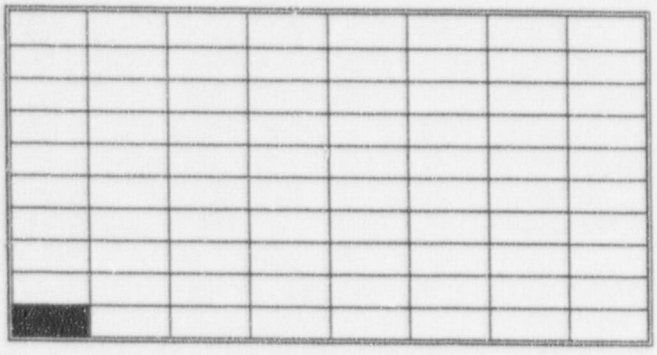
DISCUSSION:

THIS IS A NORMAL ALARM WHILE TRANSFERRING BUSSES TO ALTERNATE SUPPLIES WHEN MORE THAN ONE SUPPLY BREAKER IS CLOSED.

REFERENCES: DRAWING 208-040 MT-09

SENSING ELEMENT: 3205/52A, 3207/52A, 3209/52A, 3211/52A CONTACTS

SSF ANNUNCIATOR RESPONSE	SF-A2-01-10	Q-01-10



BUS PARALLELED

EVENT POINT 0560

INDICATED CONDITION:

- ANY COMBINATION OF "B" ES 4160V BUS BREAKERS 3206, 3208, 3210, 3212 CLOSED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- BREAKER POSITION INDICATION FOR BREAKERS 3206, 3208, 3210, 3212.

OPERATOR ACTIONS FOR A VALID ALARM:

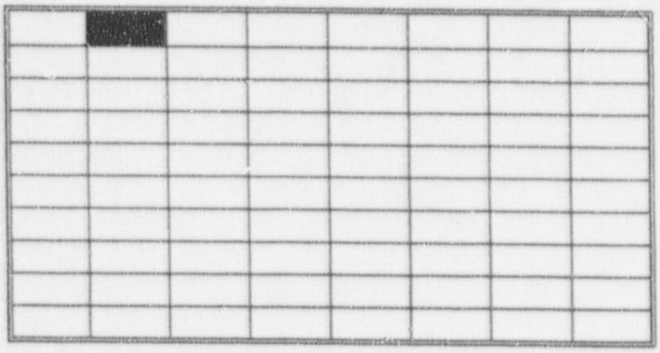
DISCUSSION:

THIS IS A NORMAL ALARM WHILE TRANSFERRING BUSSES TO ALTERNATE SUPPLIES WHEN MORE THAN ONE SUPPLY BREAKER IS CLOSED.

REFERENCES: DRAWING 208-040 MT-10

SENSING ELEMENT: 3206/52A, 3208/52A, 3210/52A, 3212/52A CONTACTS

SSF ANNUNCIATOR RESPONSE	SF-A2-02-01	Q-02-01



**4 KV
ES BUS A
DEAD**

EVENT POINT 0649

INDICATED CONDITION:

- "A" ES 4160V BUS UNDERVOLTAGE

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- "A" ES 4160V VOLTAGE INDICATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- REFER TO AP-770.

DISCUSSION:

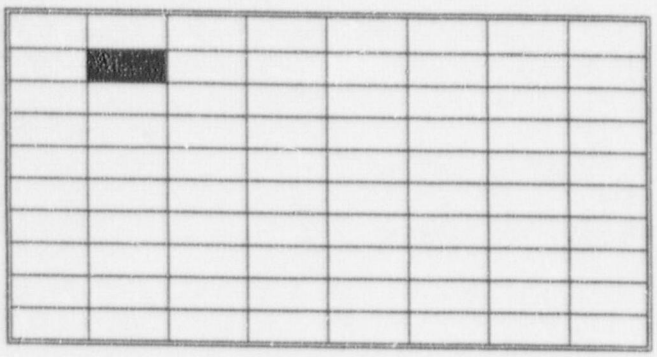
THIS ALARM IS THE RESULT OF A 2 OUT OF 3 UNDERVOLTAGE (FLUR) RELAY LOGIC.

THE FLUR RELAYS ARE INTENDED TO PROVIDE ES 4150VAC UNDERVOLTAGE RESPONSE WHEN VOLTAGE DROPS INSTANTLY TO ZERO. THE SLUR RELAY WILL PROVIDE UNDERVOLTAGE RESPONSE WHEN THE VOLTAGE DROPS GRADUALLY BELOW THE SLUR SETPOINT.

REFERENCES: DRAWING 208-040 MT-65

SENSING ELEMENT: 27Y-3/32EA RELAY

SSF ANNUNCIATOR RESPONSE	SF-A2-02-02	Q-02-02



DIESEL GEN A
BREAKER
TRIP

EVENTPOINT 0315

INDICATED CONDITION:

- o DIESEL GENERATOR "A" BKR 3209 LOCKOUT ACTUATED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED FLAG WITH A GREEN LIGHT IS ON, LOCATED ON BREAKER 3209 CONTROL STATION.
- o VERIFY 86B EDG BREAKER LOCKOUT RELAY OPEN.

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO AP-770.

DISCUSSION: THE 86B EDG BREAKER LOCKOUT RELAY WILL TRIP AND PREVENT RECLOSURE OF THE EDG OUTPUT BREAKER FOR:

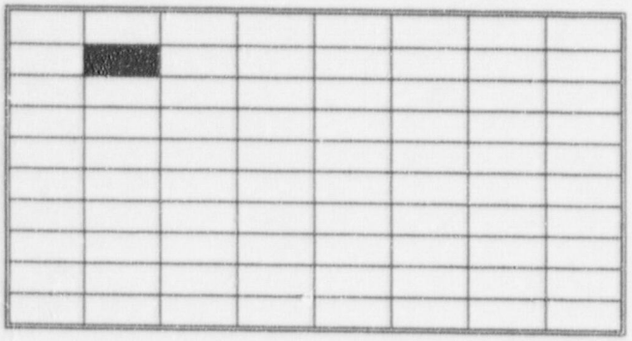
- o OVERCURRENT DEVICE (51V)
- o NEGATIVE SEQUENCE (DEVICE 46)
- o GENERATOR GROUND (DEVICE 64)
- o ES BUS FEEDER BREAKER OVERCURRENT (DEVICE 51B, 51BN)

THE ACTUATION OF THE NEW 86B LOCKOUT WILL RESULT IN THE ENGINE REMAINING RUNNING WITH THE OUTPUT BREAKER OPEN. THIS WILL REQUIRE THE ENGINE SHUTDOWN WITHIN 2 HOURS.

REFERENCES: DRAWING 208-040 MT-13

SENSING ELEMENT: CS/SC,CS/O CS CONTACTS, 52H/A, 52S/B & 86B/3209 CONTACTS

SSF ANNUNCIATOR RESPONSE	SF-A2-02-02	Q-02-02



DIESEL GEN A
BREAKER
TRIP

EVENT POINT 0568

INDICATED CONDITION:

- o DIESEL GENERATOR "A" BKR 3209 AUTO TRIP.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o RED FLAG WITH A GREEN LIGHT IS ON, LOCATED ON BREAKER 3209 CONTROL STATION.
- o VERIFY 86B EDG BREAKER LOCKOUT RELAY OPEN.

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO AP-770.

DISCUSSION: THE 86B EDG BREAKER LOCKOUT RELAY WILL TRIP AND PREVENT RECLOSURE OF THE EDG OUTPUT BREAKER FOR:

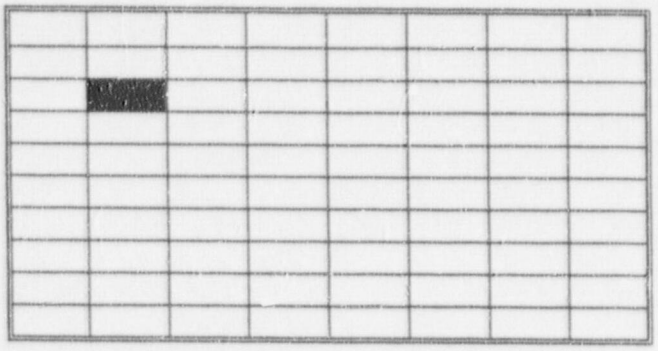
- o OVERCURRENT DEVICE (51V)
- o NEGATIVE SEQUENCE (DEVICE 46)
- o GENERATOR GROUND (DEVICE 64)
- o ES BUS FEEDER BREAKER OVERCURRENT (DEVICE 51B, 51BN)

THE ACTUATION OF THE NEW 86B LOCKOUT WILL RESULT IN THE ENGINE REMAINING RUNNING WITH THE OUTPUT BREAKER OPEN. THIS WILL REQUIRE THE ENGINE SHUTDOWN WITHIN 2 HOURS.

REFERENCES: DRAWING 208-040 MT-13

SENSING ELEMENT: CS/SC,CS/O CONTROL SWITCH CONTACTS, 52H/A, 52S/B CONTACTS

SSF ANNUNCIATOR RESPONSE	SF-A2-02-03	Q-02-03



DIESEL GEN A
BREAKER
CLOSED

EVENT POINT 1182

INDICATED CONDITION:

- "A" EMERGENCY DIESEL GENERATOR OUTPUT BREAKER CLOSED, WITH ES ACTUATION SIGNAL OR UNDERVOLTAGE SIGNAL PRESENT.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- RED LIGHT IS ON WITH A GREEN FLAG ON BREAKER 3209 CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

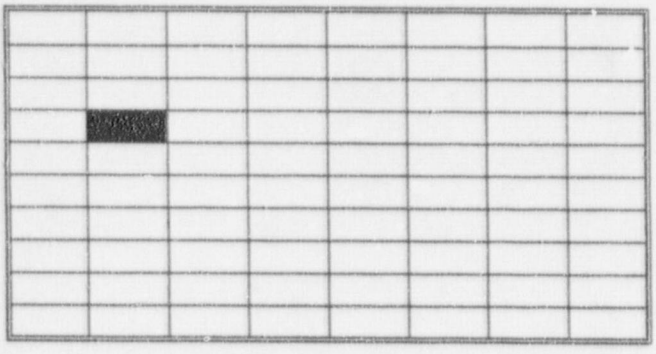
- REFER TO AP-770.

DISCUSSION:

REFERENCES: DRAWING 208-040 MT-129

SENSING ELEMENT: 86B/ESA

SSF ANNUNCIATOR RESPONSE	SF-A2-02-04	Q-02-04



4KV ES A
CROSS-TIE
BLOCKED

EVENT POINT 1183

INDICATED CONDITION:

o BREAKERS 3209 AND 3210 CLOSED WITH EITHER 3206, 3208, OR 3212 CLOSED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

o DIESEL GEN "A" CROSS-TIE LIGHT EXTINGUISHED.
o IF 3206 CLOSED, THEN BLOCK CLOSING ACTUATED 3205 LIGHT IS ON.
o IF 3208 CLOSED, THEN BLOCK CLOSING ACTUATED 3207 LIGHT IS ON.
o. IF 3212 CLOSED, THEN BLOCK CLOSING ACTUATED 3211 LIGHT IS ON.

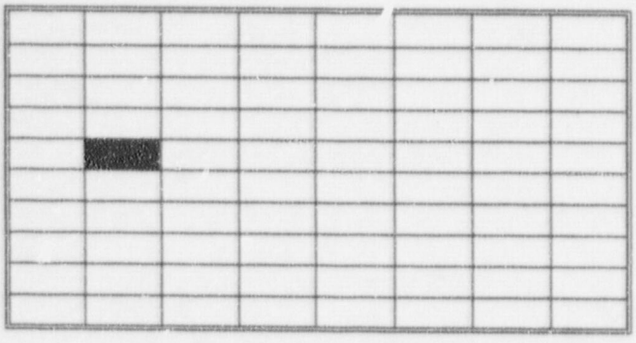
OPERATOR ACTIONS FOR A VALID ALARM:

DISCUSSION:

REFERENCES: DRAWING 208-040 MT-129

SENSING ELEMENT: 3-52-1, 3-52S CONTACTS

SSF ANNUNCIATOR RESPONSE	SF-A2-02-05	Q-02-05



DIESEL GEN A
VOLTAGE ADJ
IN CONTROL RM

EVENT POINT 1177

INDICATED CONDITION:

- o DIESEL GENERATOR "A" VOLTAGE ADJUST SELECTED TO THE CONTROL ROOM.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o DIESEL GENERATOR A "EXC VOLT ADJ SELECT" SWITCH SELECTED TO "CONT RM" POSITION.

OPERATOR ACTIONS FOR A VALID ALARM:

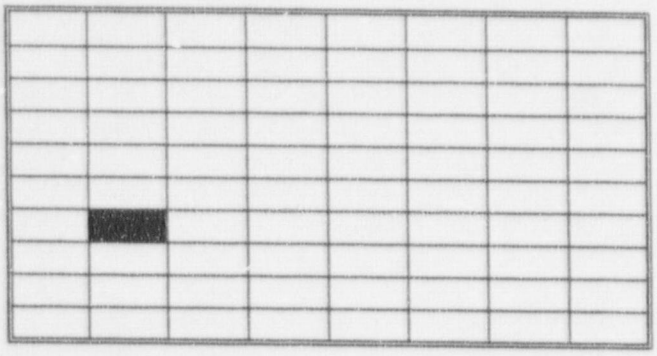
DISCUSSION:

THIS SWITCH IS NORMALLY SELECTED TO THE "DG RM" POSITION.

REFERENCES: DRAWING 208-027 EG-17

SENSING ELEMENT: SS/O,CB/SSF CONTACT

SSF ANNUNCIATOR RESPONSE	SF-A2-02-07	Q-02-07



480V
ES BUS A
DEAD

EVENT POINT 0653

INDICATED CONDITION:

- o "A" ES 480V BUS UNDERVOLTAGE.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o 480V ES BUS "A" VOLTAGE INDICATES LESS THAN NORMAL.

OPERATOR ACTIONS FOR A VALID ALARM:

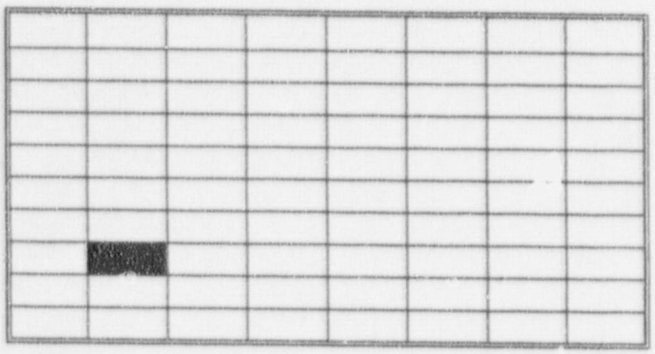
- o REFER TO AP-770

DISCUSSION:

REFERENCES: DRAWING 208-040 MT-66

SENSING ELEMENT: 27Y-1/33EA

SSF ANNUNCIATOR RESPONSE	SF-A2-02-08	Q-02-08



480V
ES BUS A
UV LOCKOUT ACT

EVENT POINT 0719

INDICATED CONDITION:

- "A" ES 480V BUS UNDERVOLTAGE LOCK OUT RELAY ACTUATED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- 4160V ES BUS "A" VOLTAGE INDICATES LESS THAN NORMAL.
- 480V ES BUS "A" VOLTAGE INDICATES LESS THAN NORMAL.
- BREAKER 3209 INDICATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- REFER TO AP-770

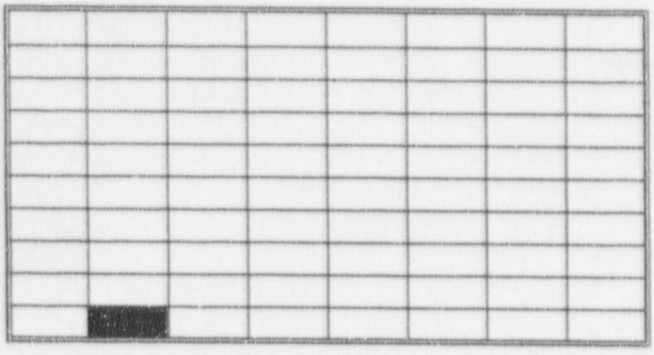
DISCUSSION:

THE 480V ES UNDERVOLTAGE LOCK OUT RELAY IS ACTUATED WHEN, EITHER THE "A" DIESEL OUTPUT BREAKER IS CLOSED, OR 4160V ES BUS A UNDERVOLTAGE OCCURS WITH AN ES ACTUATION.

REFERENCES: DRAWING 208-040 MT-77

SENSING ELEMENT: 86/27ESA

SSF ANNUNCIATOR RESPONSE	SF-A2-02-10	Q-02-10



POTENTIAL
TRANSFORMER
TROUBLE

EVENT POINT 0642

INDICATED CONDITION:

- "A" 6900V REACTOR AUX BUS UNDERVOLTAGE ON "1 OUT OF 3" LOGIC **OR** A SINGLE POTENTIAL TRANSFORMER CIRCUIT HAS FAILED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- OBSERVE BUS VOLTAGE WITHIN NORMAL VALUES

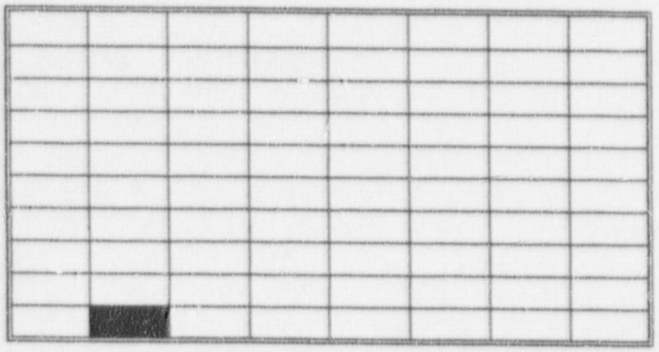
DISCUSSION:

THIS ALARM MAY BE ONE OF THE FIRST ALARMS TO ACTUATE DURING A BUS UNDERVOLTAGE CONDITION. POTENTIAL TRANSFORMER TROUBLE USES A "1 OUT OF 3" UNDERVOLTAGE LOGIC. IF MORE THAN 1 UNDERVOLTAGE RELAY OR POTENTIAL TRANSFORMER IS INVOLVED THEN THE ALARM UPGRADES TO BUS UNDERVOLTAGE AND THE POTENTIAL TRANSFORMER ALARM IS DISABLED.

REFERENCES: DRAWING 208-040 MT-63

SENSING ELEMENT: 27Y-1/31RA 27Z/31RA RELAYS

SSF ANNUNCIATOR RESPONSE	SF-A2-02-10	Q-02-10



POTENTIAL
TRANSFORMER
TROUBLE

EVENT POINT 0644

INDICATED CONDITION:

- "B" 6900V REACTOR AUX BUS UNDERVOLTAGE ON "1 OUT OF 3" LOGIC **OR** A SINGLE POTENTIAL TRANSFORMER CIRCUIT HAS FAILED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- OBSERVE BUS VOLTAGE WITHIN NORMAL VALUES

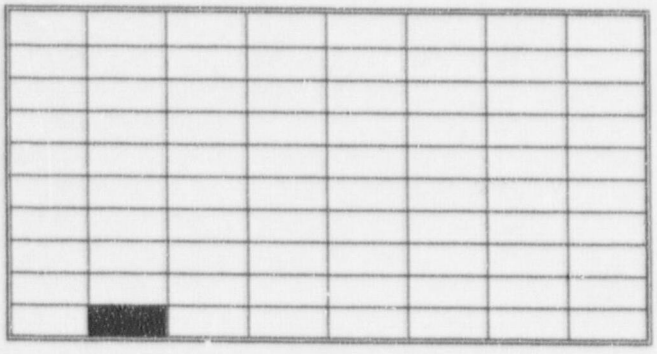
DISCUSSION:

THIS ALARM MAY BE ONE OF THE FIRST ALARMS TO ACTUATE DURING A BUS UNDERVOLTAGE CONDITION. POTENTIAL TRANSFORMER TROUBLE USES A "1 OUT OF 3" UNDERVOLTAGE LOGIC. IF MORE THAN 1 UNDERVOLTAGE RELAY OR POTENTIAL TRANSFORMER IS INVOLVED THEN THE ALARM UPGRADES TO BUS UNDERVOLTAGE AND THE POTENTIAL TRANSFORMER ALARM IS DISABLED.

REFERENCES: DRAWING 208-040 MT-63

SENSING ELEMENT: 27Y-1/31RB 27Z/31RB RELAYS

SSF ANNUNCIATOR RESPONSE	SF-A2-02-10	Q-02-10



POTENTIAL
TRANSFORMER
TROUBLE

EVENT POINT 0646

INDICATED CONDITION:

- "A" 4160V UNIT BUS UNDERVOLTAGE ON "1 OUT OF 3" LOGIC **OR** A SINGLE POTENTIAL TRANSFORMER CIRCUIT HAS FAILED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- OBSERVE BUS VOLTAGE WITHIN NORMAL VALUES

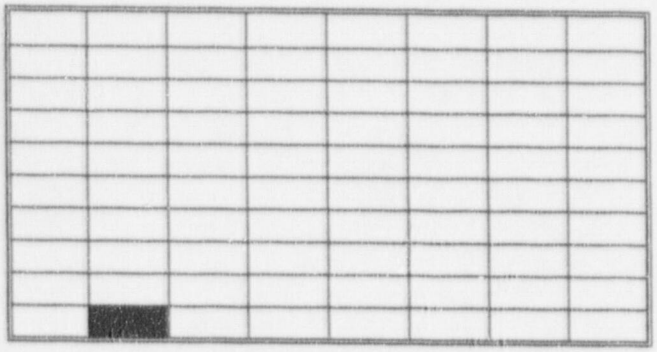
DISCUSSION:

THIS ALARM MAY BE ONE OF THE FIRST ALARMS TO ACTUATE DURING A BUS UNDERVOLTAGE CONDITION. POTENTIAL TRANSFORMER TROUBLE USES A "1 OUT OF 3" UNDERVOLTAGE LOGIC. IF MORE THAN 1 UNDERVOLTAGE RELAY OR POTENTIAL TRANSFORMER IS INVOLVED THEN THE ALARM UPGRADES TO BUS UNDERVOLTAGE AND THE POTENTIAL TRANSFORMER ALARM IS DISABLED.

REFERENCES: DRAWING 208-040 MT-64

SENSING ELEMENT: 27Y-1/32UA 27Z/32UA RELAYS

SSF ANNUNCIATOR RESPONSE	SF-A2-02-10	Q-02-10



POTENTIAL
TRANSFORMER
TROUBLE

EVENT POINT 0648

INDICATED CONDITION:

- "B" 4160V UNIT BUS 3B UNDERVOLTAGE ON "1 OUT OF 3" LOGIC **OR** A SINGLE POTENTIAL TRANSFORMER CIRCUIT HAS FAILED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- OBSERVE BUS VOLTAGE WITHIN NORMAL VALUES

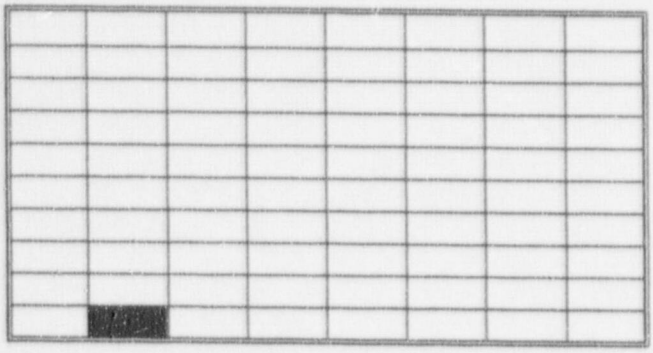
DISCUSSION:

THIS ALARM MAY BE ONE OF THE FIRST ALARMS TO ACTUATE DURING A BUS UNDERVOLTAGE CONDITION. POTENTIAL TRANSFORMER TROUBLE USES A "1 OUT OF 3" UNDERVOLTAGE LOGIC. IF MORE THAN 1 UNDERVOLTAGE RELAY OR POTENTIAL TRANSFORMER IS INVOLVED THEN THE ALARM UPGRADES TO BUS UNDERVOLTAGE AND THE POTENTIAL TRANSFORMER ALARM IS DISABLED.

REFERENCES: DRAWING 208-040 MT-64

SENSING ELEMENT: 27Y-1/32UB 27Z/32UB RELAYS

SSF ANNUNCIATOR RESPONSE	SF-A2-02-10	Q-02-10



POTENTIAL
TRANSFORMER
TROUBLE

EVENT POINT 0650

INDICATED CONDITION:

- "A" ES 4160V BUS UNDERVOLTAGE ON "1 OUT OF 3" LOGIC OR A SINGLE POTENTIAL TRANSFORMER CIRCUIT HAS FAILED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- OBSERVE BUS VOLTAGE WITHIN NORMAL VALUES

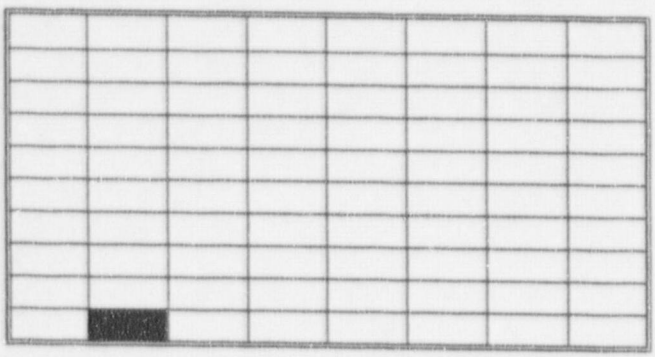
DISCUSSION:

THIS ALARM MAY BE ONE OF THE FIRST ALARMS TO ACTUATE DURING A BUS UNDERVOLTAGE CONDITION. POTENTIAL TRANSFORMER TROUBLE USES A "1 OUT OF 3" UNDERVOLTAGE LOGIC. IF MORE THAN 1 UNDERVOLTAGE RELAY OR POTENTIAL TRANSFORMER IS INVOLVED THEN THE ALARM UPGRADES TO BUS UNDERVOLTAGE AND THE POTENTIAL TRANSFORMER ALARM IS DISABLED.

REFERENCES: DRAWING 208-040 MT-65

SENSING ELEMENT: 27Y-1/32EA 27Z/32EA RELAYS

SSF ANNUNCIATOR RESPONSE	SF-A2-02-10	Q-02-10



POTENTIAL
TRANSFORMER
TROUBLE

EVENT POINT 0652

INDICATED CONDITION:

- "B" ES 4160V BUS UNDERVOLTAGE ON "1 OUT OF 3" LOGIC OR A SINGLE POTENTIAL TRANSFORMER CIRCUIT HAS FAILED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- OBSERVE BUS VOLTAGE WITHIN NORMAL VALUES

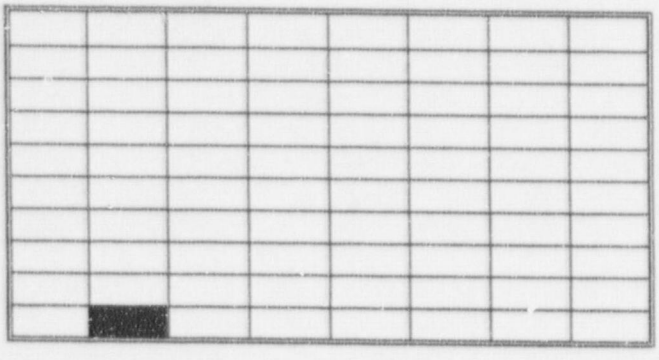
DISCUSSION:

THIS ALARM MAY BE ONE OF THE FIRST ALARMS TO ACTUATE DURING A BUS UNDERVOLTAGE CONDITION. POTENTIAL TRANSFORMER TROUBLE USES A "1 OUT OF 3" UNDERVOLTAGE LOGIC. IF MORE THAN 1 UNDERVOLTAGE RELAY OR POTENTIAL TRANSFORMER IS INVOLVED THEN THE ALARM UPGRADES TO BUS UNDERVOLTAGE AND THE POTENTIAL TRANSFORMER ALARM IS DISABLED.

REFERENCES: DRAWING 208-040 MT-65

SENSING ELEMENT: 27Y-1/32EB 27Z/32EB RELAYS

SSF ANNUNCIATOR RESPONSE	SF-A2-02-10	Q-02-10



POTENTIAL
TRANSFORMER
TROUBLE

EVENT POINT 0654

INDICATED CONDITION:

- "A" ES 480V BUS UNDERVOLTAGE ON "1 OUT OF 3" LOGIC **OR** A SINGLE POTENTIAL TRANSFORMER CIRCUIT HAS FAILED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- OBSERVE BUS VOLTAGE WITHIN NORMAL VALUES

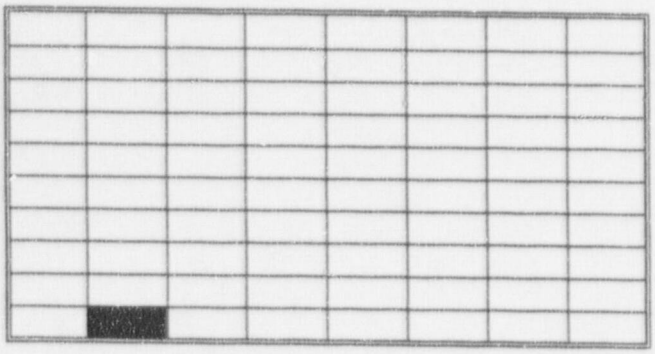
DISCUSSION:

THIS ALARM MAY BE ONE OF THE FIRST ALARMS TO ACTUATE DURING A BUS UNDERVOLTAGE CONDITION. POTENTIAL TRANSFORMER TROUBLE USES A "1 OUT OF 3" UNDERVOLTAGE LOGIC. IF MORE THAN 1 UNDERVOLTAGE RELAY OR POTENTIAL TRANSFORMER IS INVOLVED THEN THE ALARM UPGRADES TO BUS UNDERVOLTAGE AND THE POTENTIAL TRANSFORMER ALARM IS DISABLED.

REFERENCES: DRAWING 208-040 MT-66

SENSING ELEMENT: 27Y-1/33EA 27Z/33EA RELAYS

SSF ANNUNCIATOR RESPONSE	SF-A2-02-10	Q-02-10



POTENTIAL TRANSFORMER TROUBLE

EVENT POINT 0656

INDICATED CONDITION:

- "B" ES 480V BUS UNDERVOLTAGE ON "1 OUT OF 3" LOGIC **OR** A SINGLE POTENTIAL TRANSFORMER CIRCUIT HAS FAILED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- OBSERVE BUS VOLTAGE WITHIN NORMAL VALUES

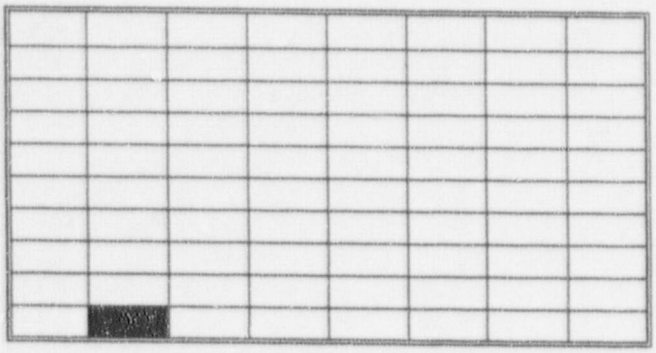
DISCUSSION:

THIS ALARM MAY BE ONE OF THE FIRST ALARMS TO ACTUATE DURING A BUS UNDERVOLTAGE CONDITION. POTENTIAL TRANSFORMER TROUBLE USES A "1 OUT OF 3" UNDERVOLTAGE LOGIC. IF MORE THAN 1 UNDERVOLTAGE RELAY OR POTENTIAL TRANSFORMER IS INVOLVED THEN THE ALARM UPGRADES TO BUS UNDERVOLTAGE AND THE POTENTIAL TRANSFORMER ALARM IS DISABLED.

REFERENCES: DRAWING 208-040 MT-66

SENSING ELEMENT: 27Y-1/33EB 27Z/33EB RELAYS

SSF ANNUNCIATOR RESPONSE	SF-A2-02-10	Q-02-10



POTENTIAL
TRANSFORMER
TROUBLE

EVENT POINT 0658

INDICATED CONDITION:

- "A" 480V REACTOR AUX BUS UNDERVOLTAGE ON "1 OUT OF 3" LOGIC **OR** A SINGLE POTENTIAL TRANSFORMER CIRCUIT HAS FAILED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- OBSERVE BUS VOLTAGE WITHIN NORMAL VALUES

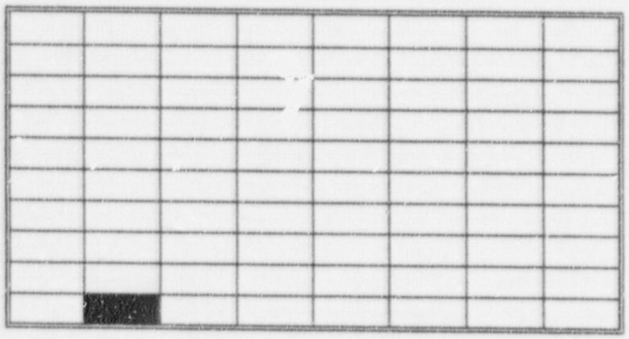
DISCUSSION:

THIS ALARM MAY BE ONE OF THE FIRST ALARMS TO ACTUATE DURING A BUS UNDERVOLTAGE CONDITION. POTENTIAL TRANSFORMER TROUBLE USES A "1 OUT OF 3" UNDERVOLTAGE LOGIC. IF MORE THAN 1 UNDERVOLTAGE RELAY OR POTENTIAL TRANSFORMER IS INVOLVED THEN THE ALARM UPGRADES TO BUS UNDERVOLTAGE AND THE POTENTIAL TRANSFORMER ALARM IS DISABLED.

REFERENCES: DRAWING 208-040 MT-67

SENSING ELEMENT: 27Y-1/33RA 27Z/33RA RELAYS

SSF ANNUNCIATOR RESPONSE	SF-A2-02-10	Q-02-10



POTENTIAL
TRANSFORMER
TROUBLE

EVENT POINT 0660

INDICATED CONDITION:

- "B" 480V REACTOR AUX BUS UNDERVOLTAGE ON "1 OUT OF 3" LOGIC **OR** A SINGLE POTENTIAL TRANSFORMER CIRCUIT HAS FAILED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- OBSERVE BUS VOLTAGE WITHIN NORMAL VALUES

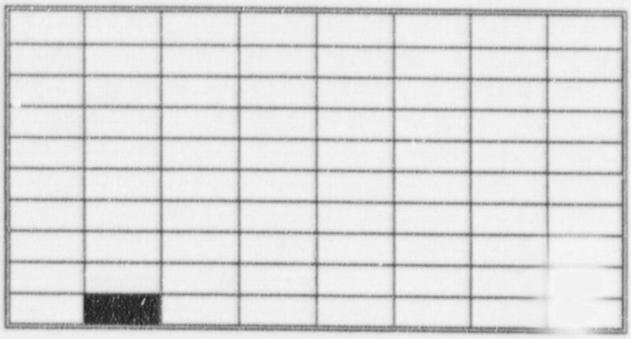
DISCUSSION:

THIS ALARM MAY BE ONE OF THE FIRST ALARMS TO ACTUATE DURING A BUS UNDERVOLTAGE CONDITION. POTENTIAL TRANSFORMER TROUBLE USES A "1 OUT OF 3" UNDERVOLTAGE LOGIC. IF MORE THAN 1 UNDERVOLTAGE RELAY OR POTENTIAL TRANSFORMER IS INVOLVED THEN THE ALARM UPGRADES TO BUS UNDERVOLTAGE AND THE POTENTIAL TRANSFORMER ALARM IS DISABLED.

REFERENCES: DRAWING 208-040 MT-67

SENSING ELEMENT: 27Y-1/33RB 27Z/33RB RELAYS

SSF ANNUNCIATOR RESPONSE	SF-A2-02-10	Q-02-10



POTENTIAL
TRANSFORMER
TROUBLE

EVENT POINT 0662

INDICATED CONDITION:

- "A" 480V TURBINE AUX BUS UNDERVOLTAGE ON "1 OUT OF 3" LOGIC OR A SINGLE POTENTIAL TRANSFORMER CIRCUIT HAS FAILED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- OBSERVE BUS VOLTAGE WITHIN NORMAL VALUES

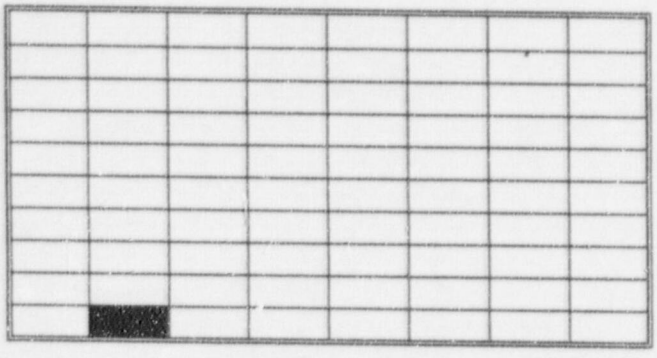
DISCUSSION:

THIS ALARM MAY BE ONE OF THE FIRST ALARMS TO ACTUATE DURING A BUS UNDERVOLTAGE CONDITION. POTENTIAL TRANSFORMER TROUBLE USES A "1 OUT OF 3" UNDERVOLTAGE LOGIC. IF MORE THAN 1 UNDERVOLTAGE RELAY OR POTENTIAL TRANSFORMER IS INVOLVED THEN THE ALARM UPGRADES TO BUS UNDERVOLTAGE AND THE POTENTIAL TRANSFORMER ALARM IS DISABLED.

REFERENCES: DRAWING 208-040 MT-68

SENSING ELEMENT: 27Y-1/33TA 27Z/33TA RELAYS

SSF ANNUNCIATOR RESPONSE	SF-A2-02-10	Q-02-10



POTENTIAL
TRANSFORMER
TROUBLE

EVENT POINT 0664

INDICATED CONDITION:

- "B" 480V TURBINE AUX BUS UNDERVOLTAGE ON "1 OUT OF 3" LOGIC **OR** A SINGLE POTENTIAL TRANSFORMER CIRCUIT HAS FAILED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- OBSERVE BUS VOLTAGE WITHIN NORMAL VALUES

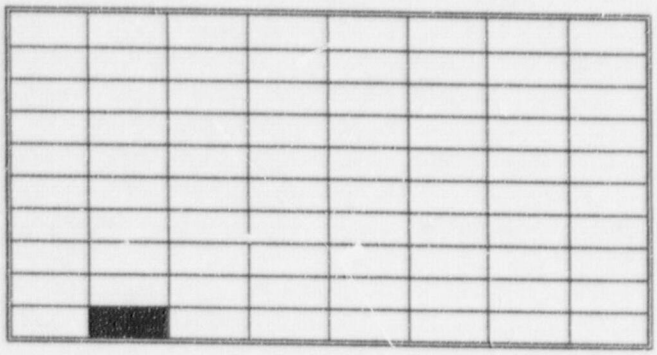
DISCUSSION:

THIS ALARM MAY BE ONE OF THE FIRST ALARMS TO ACTUATE DURING A BUS UNDERVOLTAGE CONDITION. POTENTIAL TRANSFORMER TROUBLE USES A "1 OUT OF 3" UNDERVOLTAGE LOGIC. IF MORE THAN 1 UNDERVOLTAGE RELAY OR POTENTIAL TRANSFORMER IS INVOLVED THEN THE ALARM UPGRADES TO BUS UNDERVOLTAGE AND THE POTENTIAL TRANSFORMER ALARM IS DISABLED.

REFERENCES: DRAWING 208-040 MT-68

SENSING ELEMENT: 27Y-1/33TB 27Z/33TB RELAYS

SSF ANNUNCIATOR RESPONSE	SF-A2-02-10	Q-02-10



POTENTIAL TRANSFORMER TROUBLE

EVENT POINT 0666

INDICATED CONDITION:

- "A" 480V INTAKE AUX BUS UNDERVOLTAGE ON "1 OUT OF 3" LOGIC **OR** A SINGLE POTENTIAL TRANSFORMER CIRCUIT HAS FAILED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- OBSERVE BUS VOLTAGE WITHIN NORMAL VALUES

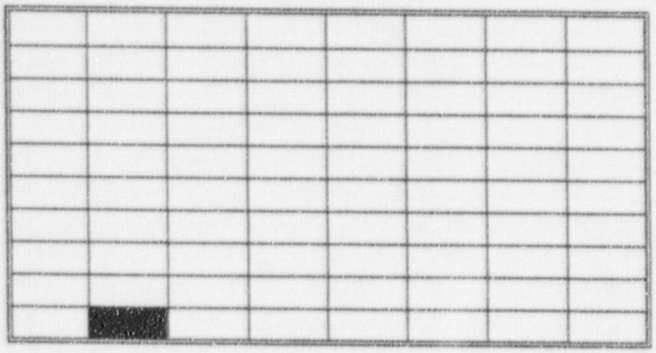
DISCUSSION:

THIS ALARM MAY BE ONE OF THE FIRST ALARMS TO ACTUATE DURING A BUS UNDERVOLTAGE CONDITION. POTENTIAL TRANSFORMER TROUBLE USES A "1 OUT OF 3" UNDERVOLTAGE LOGIC. IF MORE THAN 1 UNDERVOLTAGE RELAY OR POTENTIAL TRANSFORMER IS INVOLVED THEN THE ALARM UPGRADES TO BUS UNDERVOLTAGE AND THE POTENTIAL TRANSFORMER ALARM IS DISABLED.

REFERENCES: DRAWING 208-040 MT-69

SENSING ELEMENT: 27Y-1/33IA 27Z/33IA RELAYS

SSF ANNUNCIATOR RESPONSE	SF-A2-02-10	Q-02-10



POTENTIAL TRANSFORMER TROUBLE

EVENT POINT 0668

INDICATED CONDITION:

- "B" 480V INTAKE AUX BUS UNDERVOLTAGE ON "1 OUT OF 3" LOGIC **OR** A SINGLE POTENTIAL TRANSFORMER CIRCUIT HAS FAILED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- OBSERVE BUS VOLTAGE WITHIN NORMAL VALUES

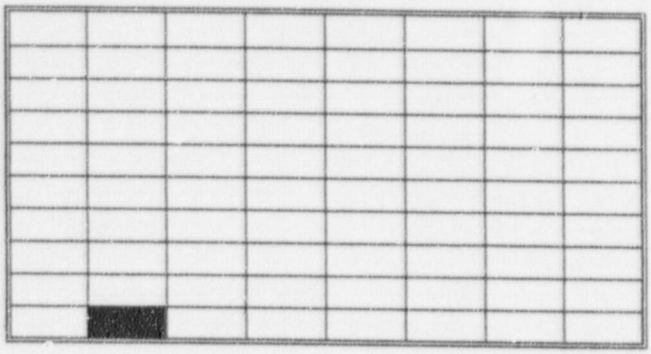
DISCUSSION:

THIS ALARM MAY BE ONE OF THE FIRST ALARMS TO ACTUATE DURING A BUS UNDERVOLTAGE CONDITION. POTENTIAL TRANSFORMER TROUBLE USES A "1 OUT OF 3" UNDERVOLTAGE LOGIC. IF MORE THAN 1 UNDERVOLTAGE RELAY OR POTENTIAL TRANSFORMER IS INVOLVED THEN THE ALARM UPGRADES TO BUS UNDERVOLTAGE AND THE POTENTIAL TRANSFORMER ALARM IS DISABLED.

REFERENCES: DRAWING 208-040 MT-69

SENSING ELEMENT: 27Y-1/33IB 27Z/33IB RELAYS

SSF ANNUNCIATOR RESPONSE	SF-A2-02-10	Q-02-10



POTENTIAL
TRANSFORMER
TROUBLE

EVENT POINT 0670

INDICATED CONDITION:

- o 480V PLANT AUX BUS UNDERVOLTAGE ON "1 OUT OF 3" LOGIC OR A SINGLE POTENTIAL TRANSFORMER CIRCUIT HAS FAILED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- o OBSERVE BUS VOLTAGE WITHIN NORMAL VALUES

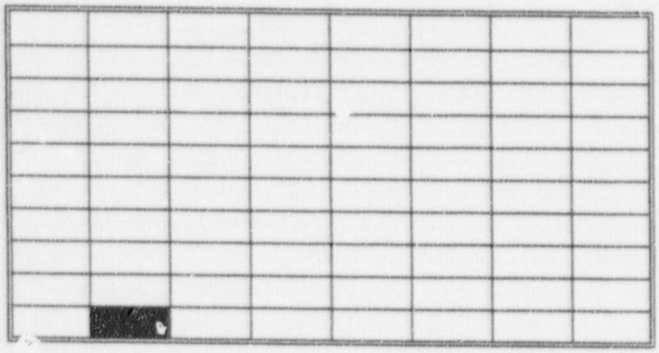
DISCUSSION:

THIS ALARM MAY BE ONE OF THE FIRST ALARMS TO ACTUATE DURING A BUS UNDERVOLTAGE CONDITION. POTENTIAL TRANSFORMER TROUBLE USES A "1 OUT OF 3" UNDERVOLTAGE LOGIC. IF MORE THAN 1 UNDERVOLTAGE RELAY OR POTENTIAL TRANSFORMER IS INVOLVED THEN THE ALARM UPGRADES TO BUS UNDERVOLTAGE AND THE POTENTIAL TRANSFORMER ALARM IS DISABLED.

REFERENCES: DRAWING 208-040 MT-70

SENSING ELEMENT: 27Y-1/33P 27Z/33P RELAYS

SSF ANNUNCIATOR RESPONSE	SF-A2-02-10	Q-02-10



POTENTIAL
TRANSFORMER
TROUBLE

EVENT POINT 0672

INDICATED CONDITION:

- 480V HEATING AUX BUS UNDERVOLTAGE ON "1 OUT OF 3" LOGIC OR A SINGLE POTENTIAL TRANSFORMER CIRCUIT HAS FAILED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- OBSERVE BUS VOLTAGE WITHIN NORMAL VALUES

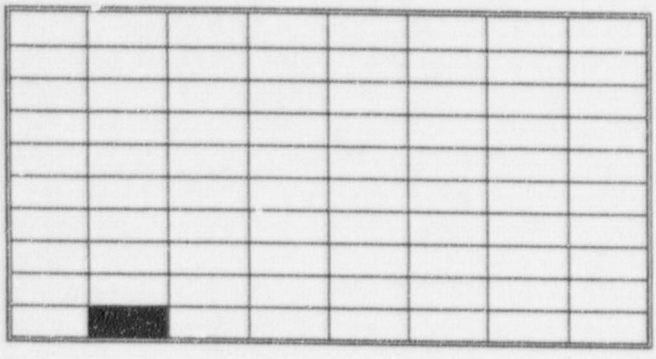
DISCUSSION:

THIS ALARM MAY BE ONE OF THE FIRST ALARMS TO ACTUATE DURING A BUS UNDERVOLTAGE CONDITION. POTENTIAL TRANSFORMER TROUBLE USES A "1 OUT OF 3" UNDERVOLTAGE LOGIC. IF MORE THAN 1 UNDERVOLTAGE RELAY OR POTENTIAL TRANSFORMER IS INVOLVED THEN THE ALARM UPGRADES TO BUS UNDERVOLTAGE AND THE POTENTIAL TRANSFORMER ALARM IS DISABLED.

REFERENCES: DRAWING 208-040 MT-70

SENSING ELEMENT: 27Y-1/33H 27Z/33H RELAYS

SSF ANNUNCIATOR RESPONSE	SF-A2-02-10	Q-02-10



POTENTIAL
TRANSFORMER
TROUBLE

EVENT POINT 1991

INDICATED CONDITION:

- 4160V REACTOR AUX BUS UNDERVOLTAGE ON "1 OUT OF 3" LOGIC **OR** A SINGLE POTENTIAL TRANSFORMER CIRCUIT HAS FAILED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- OBSERVE BUS VOLTAGE WITHIN NORMAL VALUES

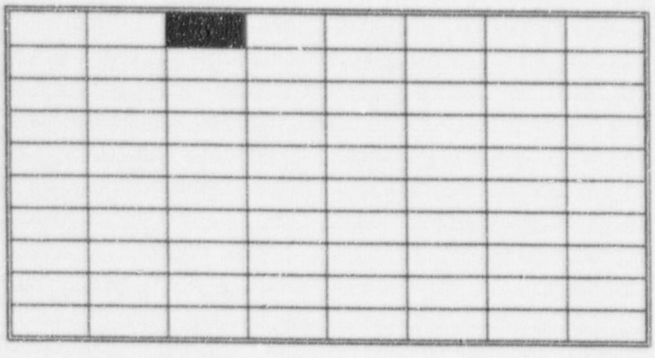
DISCUSSION:

THIS ALARM MAY BE ONE OF THE FIRST ALARMS TO ACTUATE DURING A BUS UNDERVOLTAGE CONDITION. POTENTIAL TRANSFORMER TROUBLE USES A "1 OUT OF 3" UNDERVOLTAGE LOGIC. IF MORE THAN 1 UNDERVOLTAGE RELAY OR POTENTIAL TRANSFORMER IS INVOLVED THEN THE ALARM UPGRADES TO BUS UNDERVOLTAGE AND THE POTENTIAL TRANSFORMER ALARM IS DISABLED.

REFERENCES: DRAWING 208-040 MT-136

SENSING ELEMENT: 32RA

SSF ANNUNCIATOR RESPONSE	SF-A2-03-01	Q-03-01



DIESEL GEN A
IN THE 30 MIN LIMIT

EVENT POINT 1590

INDICATED CONDITION:

- o DIESEL GENERATOR "A" OVER 3250 KW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o DIESEL GENERATOR "A" KW INDICATION.
- o DIESEL GENERATOR "A" "EDG-3A ELAPSED TIME IN 30 MIN RATING." TIMER IS OPERATING.

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO AP-770.
- o REDUCE LOAD IF SURVEILLANCE TESTING.

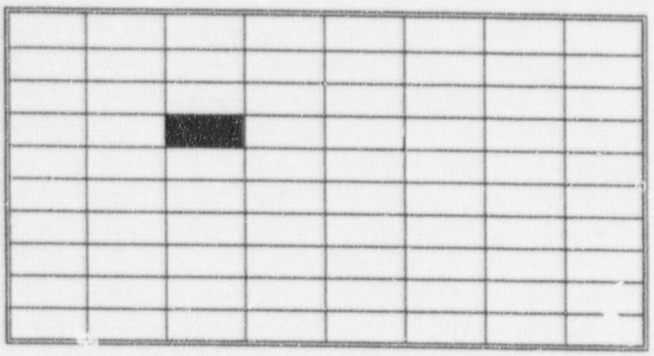
DISCUSSION:

THIS ALARM IS INSTANTANEOUS WHEN DIESEL LOAD EXCEEDS 3250 KW

REFERENCES: DRAWING 208-027 EG-22

SENSING ELEMENT: 62BX

SSF ANNUNCIATOR RESPONSE	SF-A2-03-04	Q-03-04



4KV ES A
UNDERVOLTAGE
TRIP BLOCKED

EVENT POINT 0823

INDICATED CONDITION:

o "A" ES 4160V BUS UNDERVOLTAGE PROTECTION DISABLED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

TRIP BLOCK SWITCHES, TBS1 AND TBS2, LOCATED IN MTCP-1A IN THE 4160V ES "A" SWITCHGEAR ROOM ARE IN OPEN POSITION.

OPERATOR ACTIONS FOR A VALID ALARM:

o MONITOR "A" ES BUS VOLTAGES DURING UNDERVOLTAGE RELAY TESTING.

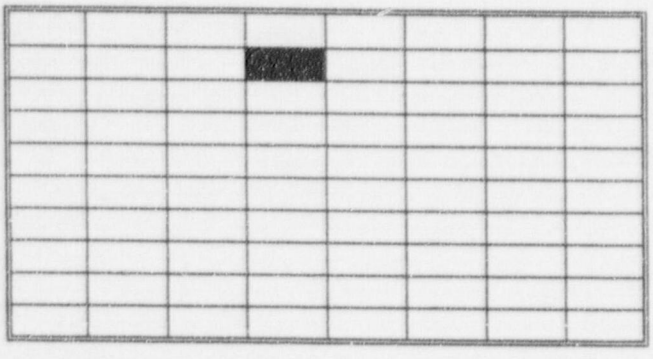
DISCUSSION:

THIS ALARM WILL OCCUR WHEN TESTING THE BUS UNDERVOLTAGE RELAYS. NO UNDERVOLTAGE PROTECTION IS AVAILABLE DURING TESTING.

REFERENCES: DRAWING 208-040 MT-65B

SENSING ELEMENT: TBS1, TBS2

SSF ANNUNCIATOR RESPONSE	SF-A2-04-02	Q-04-02



4KV ES BUS DEGRADED VOLT TRIP

EVENT POINT 1747

INDICATED CONDITION:

- o "A" ES 4160V BUS VOLTAGE **<3952 VOLTS** FOR **>5 SECONDS.**

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o "A" ES 4160V BUS VOLTAGE METER INDICATING < 3952 VAC

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO AP-770.

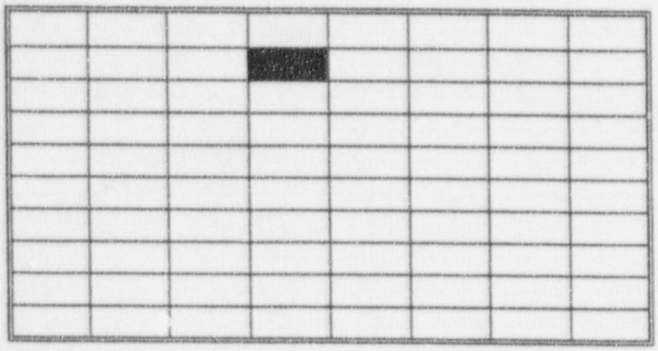
DISCUSSION:

THIS ALARM WILL OCCUR WHEN ANY OF THREE VOLTAGE SENSE RELAYS DETECT LESS THAN 3952 VOLTS FOR GREATER THAN 5 SECONDS. A DIESEL GENERATOR START SIGNAL IS INITIATED IF ALL THREE VOLTAGE RELAYS SENSE THIS CONDITION.

REFERENCES: DRAWING 208-040 MT-131

SENSING ELEMENT: 27B-A/32EA, 27B-B/32EA, 27B-C/32EA

SSF ANNUNCIATOR RESPONSE	SF-A2-04-02	Q-04-02



4KV ES BUS DEGRADED VOLT TRIP

EVENT POINT 1818

INDICATED CONDITION:

- o "B" ES 4160V BUS VOLTAGE **<3952 VOLTS** FOR **>5 SECONDS**.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o "B" ES 4160V BUS VOLTAGE METER INDICATING < 3952 VAC

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO AP-770.

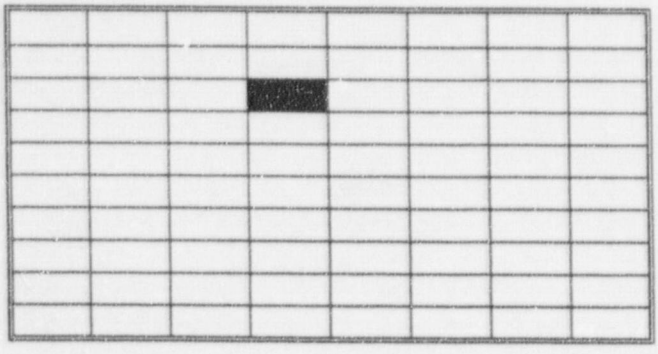
DISCUSSION:

THIS ALARM WILL OCCUR WHEN ANY OF THREE VOLTAGE SENSE RELAYS DETECT LESS THAN 3952 VOLTS FOR GREATER THAN 5 SECONDS. A DIESEL GENERATOR START SIGNAL IS INITIATED IF ALL THREE VOLTAGE RELAYS SENSE THIS CONDITION.

REFERENCES: DRAWING 208-040 MT-132

SENSING ELEMENT: 27B-A/32EB, 27B-B/32EB, 27B-C/32EB

SSF ANNUNCIATOR RESPONSE	SF-A2-04-03	Q-04-03



CROSS-TIE
BLOCKED
LOSS OF DC

EVENT POINT 1184

INDICATED CONDITION:

- o "A" ES 4160V BUS CROSS TIE LOCKOUT RELAY LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.

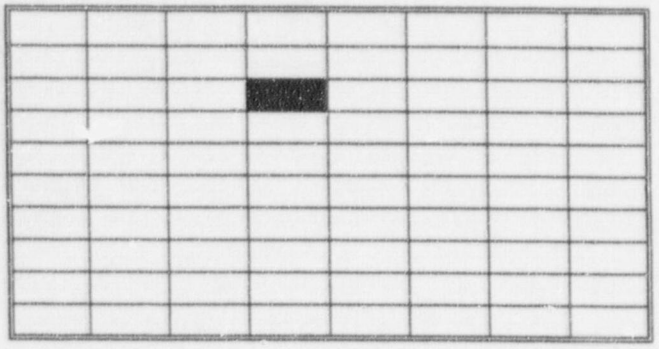
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5A FUSE #6. FUSES ARE LOCATED INSIDE THE MCB FOR THIS CIRCUIT.

REFERENCES: DRAWING 208-040 MT-129, MT-127

SENSING ELEMENT: 27C-1A

SSF ANNUNCIATOR RESPONSE	SF-A2-04-03	Q-04-03



CROSS-TIE
BLOCKED
LOSS OF DC

EVENT POINT 1185

INDICATED CONDITION:

- o "A" ES 4160V BUS CROSS TIE CIRCUIT LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.

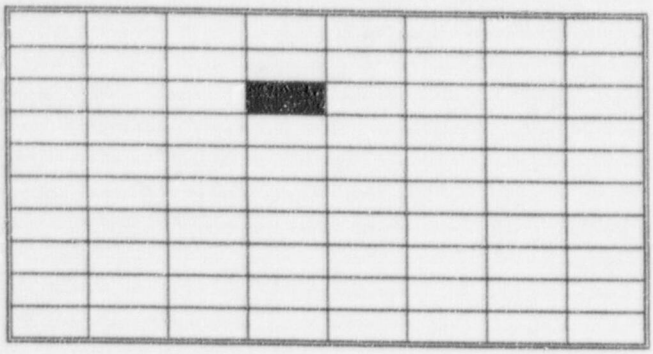
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5A FUSE #6. ADDITIONAL FUSES BEHIND THE CONTROL BOARD ARE ALSO INVOLVED.

REFERENCES: DRAWING 208-040 MT-129, MT-127

SENSING ELEMENT: 27C-2A

SSF ANNUNCIATOR RESPONSE	SF-A2-04-03	Q-04-03



CROSS-TIE
BLOCKED
LOSS OF DC

EVENT POINT 1188

INDICATED CONDITION:

- "B" ES 4160V BUS CROSS TIE LOCKOUT RELAY LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.

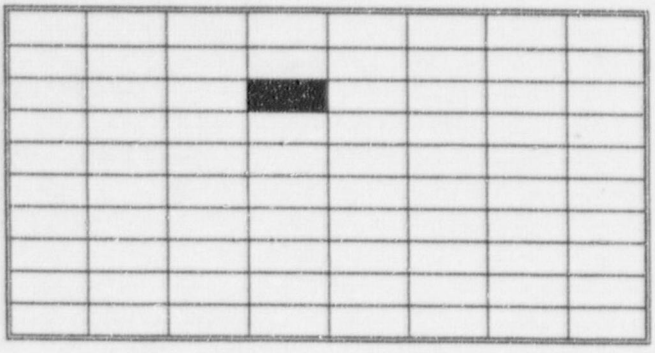
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5B FUSE #6. FUSES ARE LOCATED INSIDE THE MCB FOR THIS CIRCUIT.

REFERENCES: DRAWING 208-040 MT-129, MT-128

SENSING ELEMENT: 27C-1B

SSF ANNUNCIATOR RESPONSE	SF-A2-04-03	Q-04-03



CROSS-TIE
BLOCKED
LOSS OF DC

EVENT POINT 1189

INDICATED CONDITION:

o "B" ES 4160V BUS CROSS TIE CIRCUIT LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

o INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.

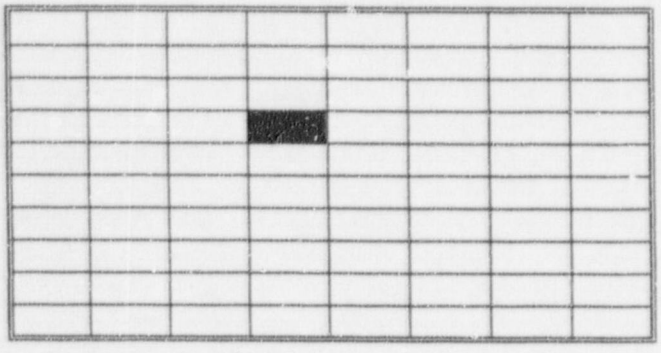
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5B FUSE #6. ADDITIONAL FUSES BEHIND THE CONTROL BOARD ARE ALSO INVOLVED.

REFERENCES: DRAWING 208-040 MT-129, MT-128

SENSING ELEMENT: 27C-2B

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0555

INDICATED CONDITION:

- "A" ES 4160V BUS SUPPLY BREAKER 3205 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- NO INDICATING LIGHTS ARE ON, LOCATED ON THE BREAKER 3205 CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.
- REFER TO OP-703.

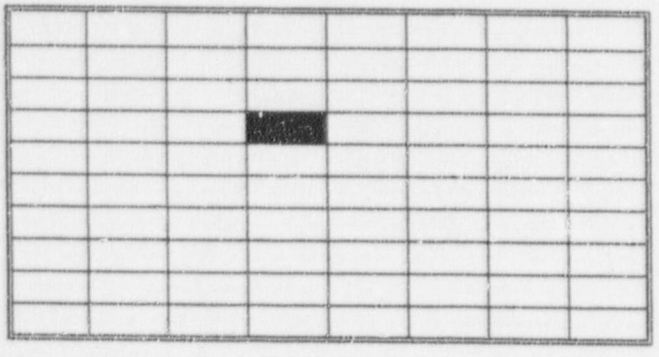
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5A FUSE #10.

REFERENCES: DRAWING 208-040 MT-9

SENSING ELEMENT: 27C/3205

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0559

INDICATED CONDITION:

- "B" ES 4160V BUS SUPPLY BREAKER 3206 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- NO INDICATING LIGHTS ARE ON, LOCATED ON THE BREAKER 3206 CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.
- REFER TO OP-703.

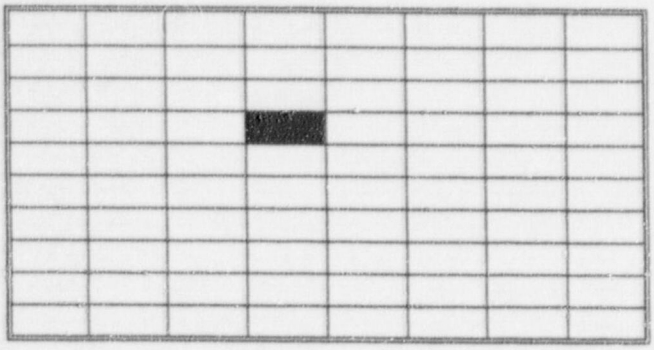
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5B FUSE #10.

REFERENCES: DRAWING 208-040 MT-10

SENSING ELEMENT: 27C/3206

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0563

INDICATED CONDITION:

- o "A" ES 4160V BUS SUPPLY BREAKER 3207 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o NO INDICATING LIGHTS ARE ON, LOCATED ON THE BREAKER 3207 CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.
- o REFER TO OP-703.

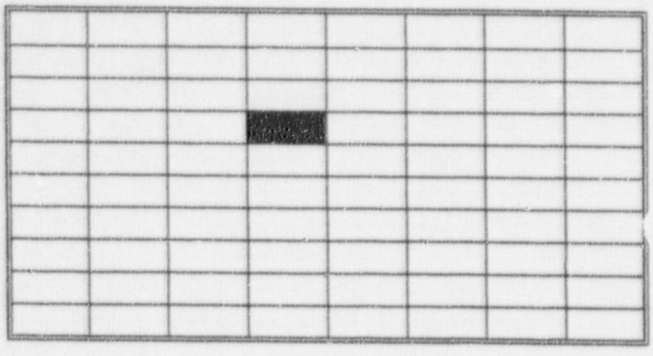
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5A FUSE #10.

REFERENCES: DRAWING 208-040 MT-11

SENSING ELEMENT: 27C/3207

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0566

INDICATED CONDITION:

- o "B" ES 4160V BUS SUPPLY BREAKER 3208 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o NO INDICATING LIGHTS ARE ON, LOCATED ON THE BREAKER 3208 CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.
- o REFER TO OP-703.

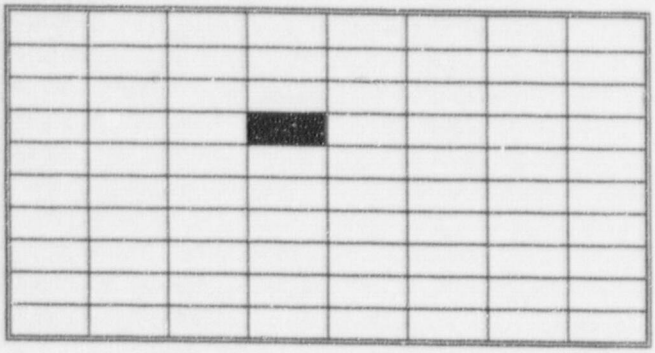
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5B FUSE #10.

REFERENCES: DRAWING 208-040 MT-12

SENSING ELEMENT: 27C/3208

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0569

INDICATED CONDITION:

- "A" ES 4160V BUS SUPPLY BREAKER 3209 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- NO INDICATING LIGHTS ARE ON, LOCATED ON THE BREAKER 3209 CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.
- REFER TO OP-703.

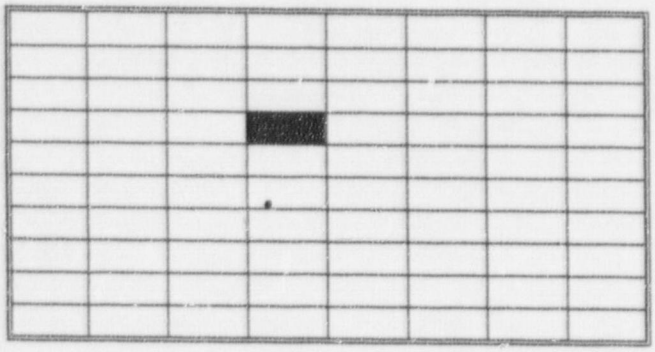
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5A FUSE #10.

REFERENCES: DRAWING 208-040 MT-13

SENSING ELEMENT: 27C/3209

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0572

INDICATED CONDITION:

- o "B" ES 4160V BUS SUPPLY BREAKER 3210 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o NO INDICATING LIGHTS ARE ON, LOCATED ON THE BREAKER 3210 CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.
- o REFER TO OP-703.

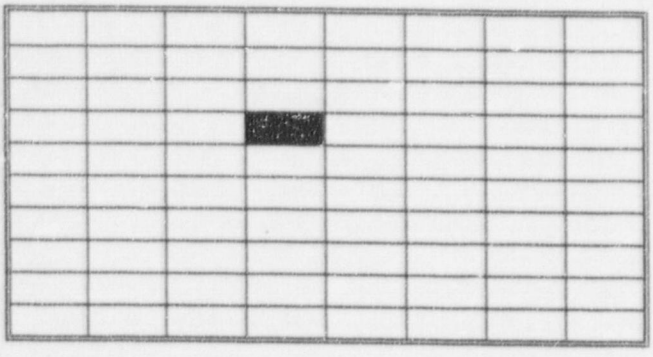
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5B FUSE #10.

REFERENCES: DRAWING 208-040 MT-14

SENSING ELEMENT: 27C/3210

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0575

INDICATED CONDITION:

- o "A" ES 4160V BUS SUPPLY BREAKER 3211 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o NO INDICATING LIGHTS ARE ON, LOCATED ON THE BREAKER 3211 CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.
- o REFER TO OP-703.

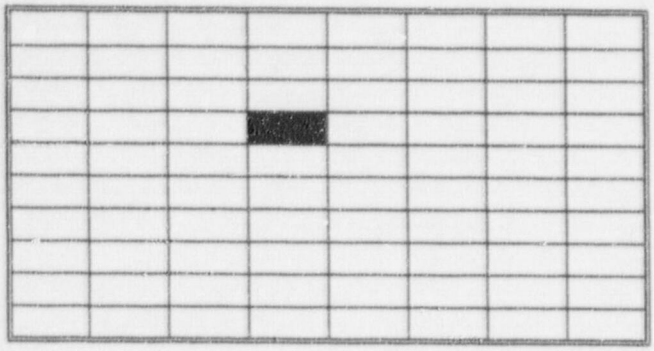
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5A FUSE #10.

REFERENCES: DRAWING 208-040 MT-15

SENSING ELEMENT: 27C/3211

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0578

INDICATED CONDITION:

- "B" ES 4160V BUS SUPPLY BREAKER 3212 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- NO INDICATING LIGHTS ARE ON, LOCATED ON THE BREAKER 3212 CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.
- REFER TO OP-703.

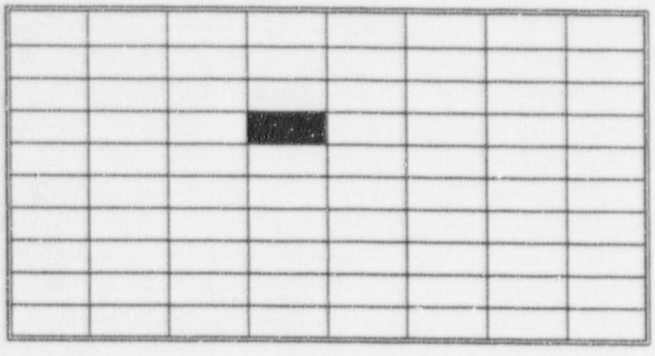
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5B FUSE #10.

REFERENCES: DRAWING 208-040 MT-16

SENSING ELEMENT: 27C/3212

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0588

INDICATED CONDITION:

- "B" ES 480V BUS TRANSFORMER SUPPLY BREAKER 3220 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- NO INDICATING LIGHTS ARE ON, LOCATED ON THE BREAKER 3220 CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.

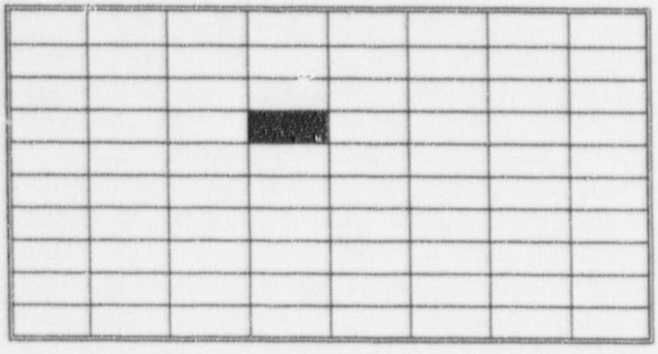
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5B FUSE #10.

REFERENCES: DRAWING 208-040 MT-24

SENSING ELEMENT: 27C/3220

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0590

INDICATED CONDITION:

- "A" ES 480V BUS TRANSFORMER SUPPLY BREAKER 3221 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- NO INDICATING LIGHTS ARE ON, LOCATED ON THE BREAKER 3221 CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.

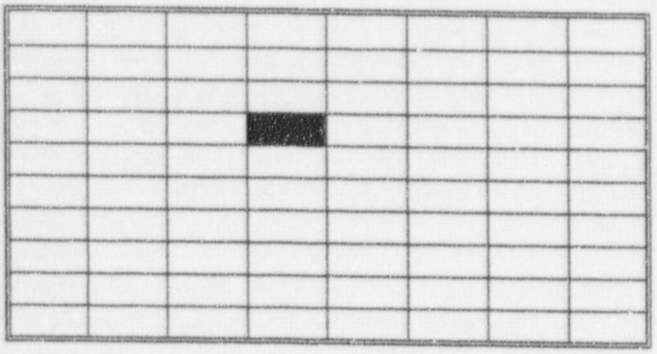
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5A FUSE #10.

REFERENCES: DRAWING 208-040 MT-25

SENSING ELEMENT: 27C/3221

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



**ES BKR
DC POWER
LOSS**

EVENT POINT 0592

INDICATED CONDITION:

- 480V PLANT AUX BUS TRANSFORMER SUPPLY BREAKER 3222 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- NO INDICATING LIGHTS ARE ON, LOCATED ON THE BREAKER 3222 CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.

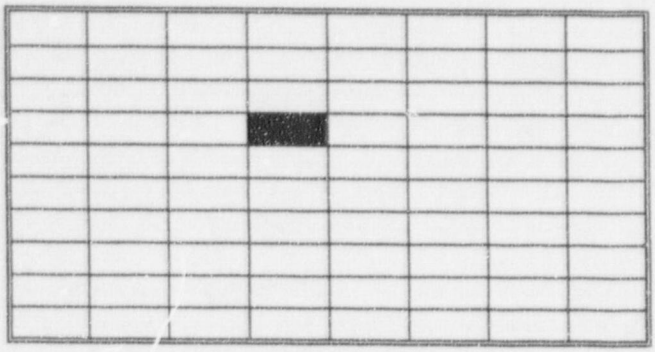
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM D/DP-5B FUSE #10.

REFERENCES: DRAWING 208-040 MT-26

SENSING ELEMENT: 27C/3222

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0609

INDICATED CONDITION:

- "B" ES 480V BUS SUPPLY BREAKER 3310 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- NO INDICATING LIGHTS ARE ON, LOCATED ON THE BREAKER 3310 CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.

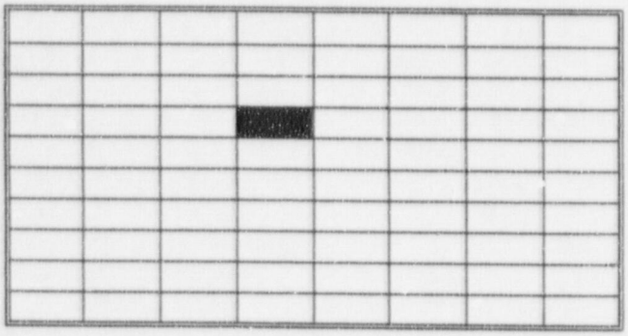
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5B FUSE #9.

REFERENCES: DRAWING 208-040 MT-34

SENSING ELEMENT: 27C/3310

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0612

INDICATED CONDITION:

- "A" ES 480V BUS SUPPLY BREAKER 3311 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- NO INDICATING LIGHTS ARE ON, LOCATED ON THE BREAKER 3311 CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.

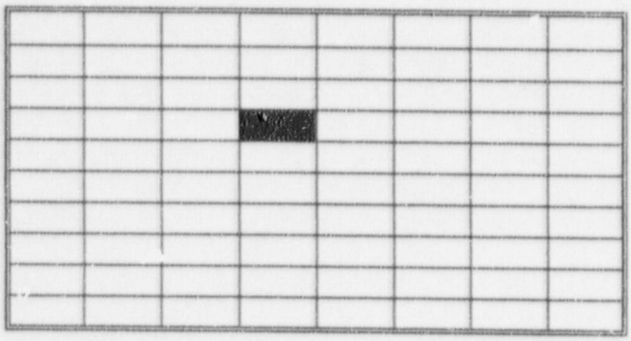
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5A FUSE #9.

REFERENCES: DRAWING 208-040 MT-35

SENSING ELEMENT: 27C/3311

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0616

INDICATED CONDITION:

- "B" ES 480V BUS CROSS-TIE BREAKER 3390 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- NO INDICATING LIGHTS ARE ON, LOCATED ON THE BREAKER 3390 CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.

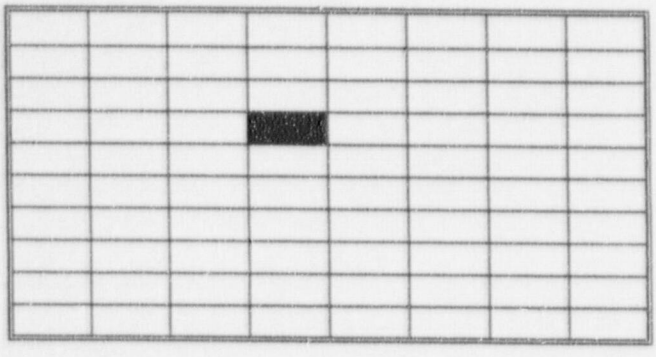
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5B FUSE #9.

REFERENCES: DRAWING 208-040 MT-37

SENSING ELEMENT: 27C/3390

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0618

INDICATED CONDITION:

- "A" ES 480V BUS CROSS-TIE BREAKER 3391 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- NO INDICATING LIGHTS ARE ON, LOCATED ON THE BREAKER 3391 CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.

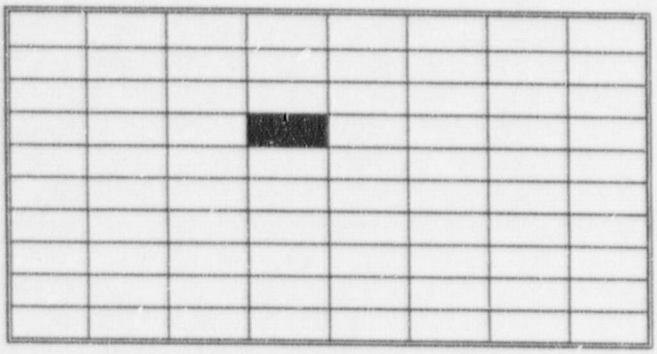
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5A FUSE #9.

REFERENCES: DRAWING 208-040 MT-38

SENSING ELEMENT: 27C/3391

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0673

INDICATED CONDITION:

- 480V ES MCC 3B1 SUPPLY BREAKER 3340 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.

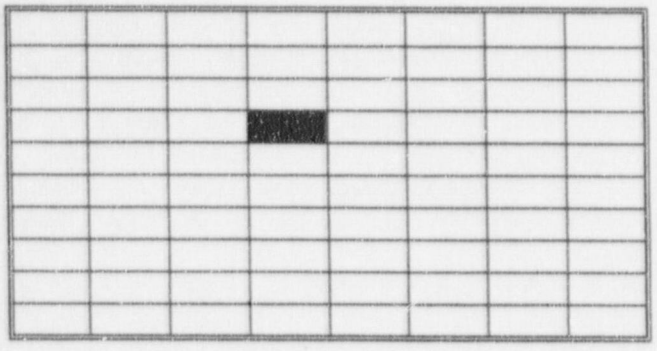
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5B FUSE #9.

REFERENCES: DRAWING 208-040 MT-47

SENSING ELEMENT: 27C/3340

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0674

INDICATED CONDITION:

o 480V ES MCC 3A1 SUPPLY BREAKER 3341 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

o INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.

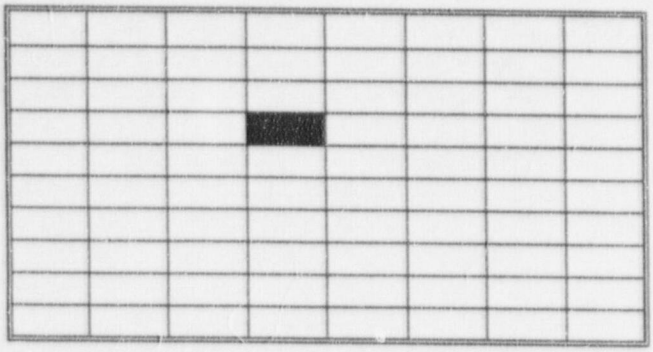
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5A FUSE #9.

REFERENCES: DRAWING 208-040 MT-54

SENSING ELEMENT: 27C/3341

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0677

INDICATED CONDITION:

o 480V ES MCC 3AB CROSS-TIE BREAKER 3361 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

o INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.

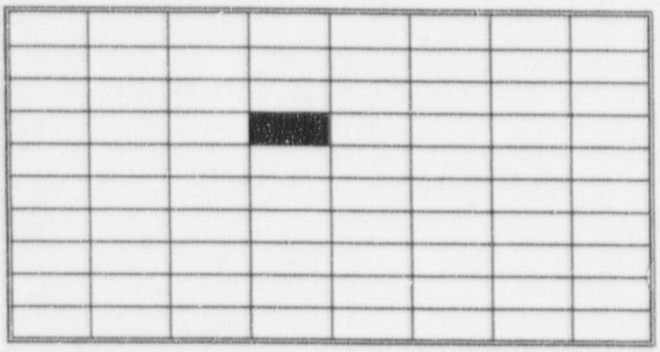
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5A FUSE #9.

REFERENCES: DRAWING 208-040 MT-89

SENSING ELEMENT: 27C/3361

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0679

INDICATED CONDITION:

- 480V ES MCC 3AB CROSS-TIE BREAKER 3360 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.

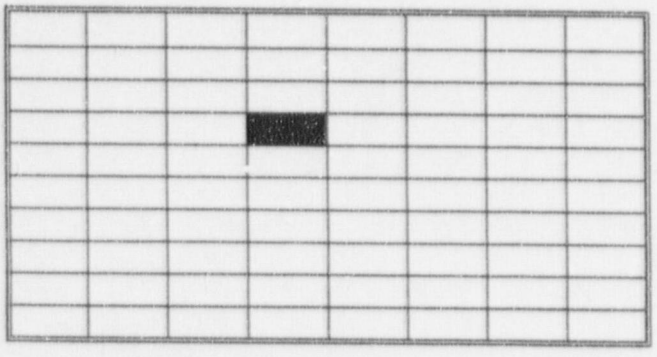
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5B FUSE #9.

REFERENCES: DRAWING 208-040 MT-88

SENSING ELEMENT: 27C/3360

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0681

INDICATED CONDITION:

o 480V ES MCC 3A2 SUPPLY BREAKER 3351 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

o INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.

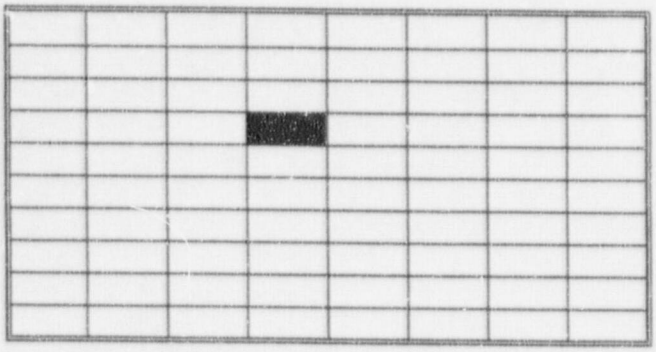
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5A FUSE #9.

REFERENCES: DRAWING 208-040 MT-46

SENSING ELEMENT: 27C/3351

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0765

INDICATED CONDITION:

o 480V ES MCC 3B3 SUPPLY BREAKER 3330 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

o INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.

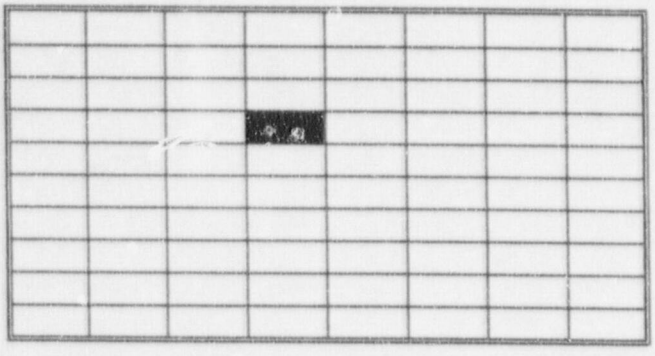
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5B FUSE #9.

REFERENCES: DRAWING 208-040 MT-116

SENSING ELEMENT: 27C/3330

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 0766

INDICATED CONDITION:

o 480V ES MCC 3A3 SUPPLY BREAKER 3331 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

o INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.

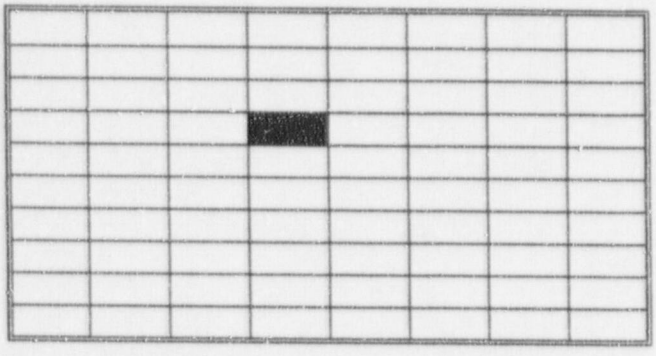
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5A FUSE #9.

REFERENCES: DRAWING 208-040 MT-113

SENSING ELEMENT: 27C/3331

SSF ANNUNCIATOR RESPONSE	SF-A2-04-04	Q-04-04



ES BKR
DC POWER
LOSS

EVENT POINT 1152

INDICATED CONDITION:

- 480V ES MCC 3B2 SUPPLY BREAKER 3350 LOSS OF DC CONTROL POWER.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE CAUSE OF LOSS OF DC CONTROL POWER.

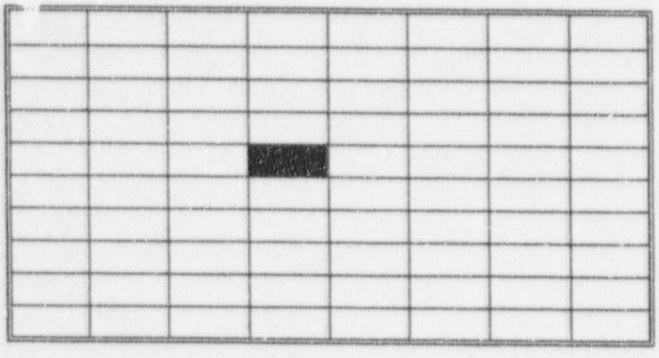
DISCUSSION:

DC CONTROL POWER IS SUPPLIED FROM DPDP-5B FUSE #9.

REFERENCES: DRAWING 208-040 MT

SENSING ELEMENT: 27C/3350

SSF ANNUNCIATOR RESPONSE	SF-A2-04-05	Q-04-05



ES
BREAKER
WITHDRAWN

EVENT POINT 0573

INDICATED CONDITION:

- o UNIT #3 DUMMY BREAKER WITHDRAWN.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE THE CAUSE FOR BREAKER BEING RACKED OUT.

DISCUSSION:

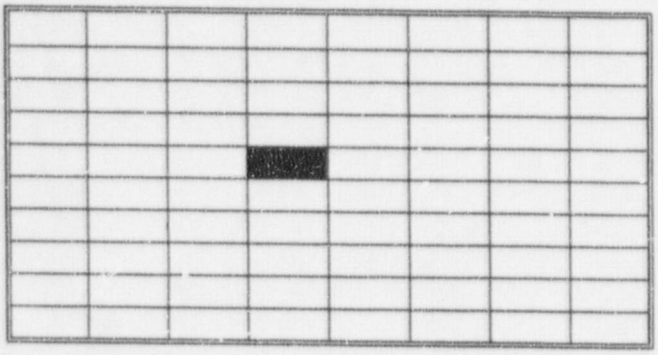
THIS BREAKER IS LOCATED IN THE "B" ES 4160V BUS SWITCHGEAR. THIS IS AN EXPECTED ALARM WHEN THE BREAKER IS IN THE TEST POSITION. TO RACK THIS BREAKER IN/OUT THE BACKUP ES TRANSFORMER AND ES 4160VAC BUSSES MUST BE DEENERGIZED.

THE DUMMY BREAKER HAS NO AUTOMATIC TRIP FUNCTIONS, IT ACTS TO CONNECT THE BACKUP ES TRANSFORMER FEED TO BREAKERS 3205 AND 3206 FOR THE ES 4160VAC BUSSES.

REFERENCES: DRAWING 208-040 MT-90 206-011

SENSING ELEMENT: 52H/B CONTACT FOR DUMMY BREAKER.

SSF ANNUNCIATOR RESPONSE	SF-A2-04-05	Q-04-05



ES
BREAKER
WITHDRAWN

EVENT POINT 0698

INDICATED CONDITION:

- o "B" ES 480V BUS TRANSFORMER SUPPLY BREAKER 3220 NOT RACKED IN.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o NEITHER RED NOR GREEN LIGHTS ARE ON, LOCATED ON BREAKER 3220 CONTROL STATION

OPERATOR ACTIONS FOR A VALID ALARM:

- o INVESTIGATE THE CAUSE FOR BREAKER BEING RACKED OUT.

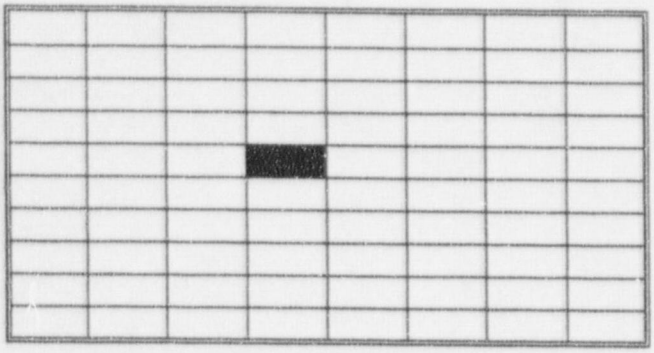
DISCUSSION:

THIS IS AN EXPECTED ALARM WHEN THE BREAKER IS IN THE TEST POSITION.

REFERENCES: DRAWING 208-040 MT-24

SENSING ELEMENT: 52H/B CONTACT FOR BREAKER 3220.

SSF ANNUNCIATOR RESPONSE	SF-A2-04-05	Q-04-05



ES
BREAKER
WITHDRAWN

EVENT POINT 0699

INDICATED CONDITION:

- "A" ES 480V BUS TRANSFORMER SUPPLY BREAKER 3221 NOT RACKED IN.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- NEITHER RED NOR GREEN LIGHTS ARE ON, LOCATED ON BREAKER 3221 CONTROL STATION

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE THE CAUSE FOR BREAKER BEING RACKED OUT.

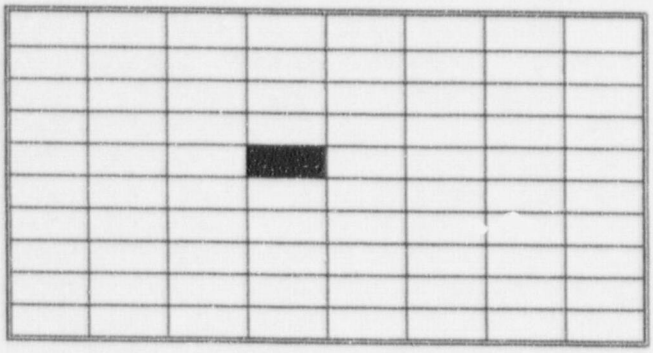
DISCUSSION:

THIS IS AN EXPECTED ALARM WHEN THE BREAKER IS IN THE TEST POSITION.

REFERENCES: DRAWING 208-040 MT-25

SENSING ELEMENT: 52H/B CONTACT FOR BREAKER 3221.

SSF ANNUNCIATOR RESPONSE	SF-A2-04-05	Q-04-05



ES
BREAKER
WITHDRAWN

EVENT POINT 0707

INDICATED CONDITION:

- "B" ES 480V BUS SUPPLY BREAKER 3310 NOT RACKED IN.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- NEITHER RED NOR GREEN LIGHTS ARE ON, LOCATED ON BREAKER 3310 CONTROL STATION

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE THE CAUSE FOR BREAKER BEING RACKED OUT.

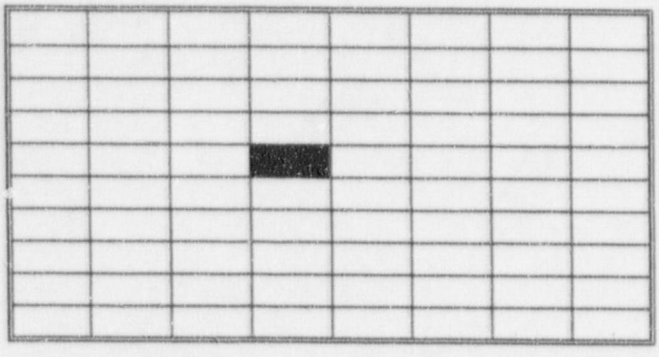
DISCUSSION:

THIS IS AN EXPECTED ALARM WHEN THE BREAKER IS IN THE TEST POSITION.

REFERENCES: DRAWING 208-040 MT-34

SENSING ELEMENT: 52H/B CONTACT FOR BREAKER 3310.

SSF ANNUNCIATOR RESPONSE	SF-A2-04-05	Q-04-05



ES
BREAKER
WITHDRAWN

EVENT POINT 0709

INDICATED CONDITION:

- "A" ES 480V BUS SUPPLY BREAKER 3311 NOT RACKED IN.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- NEITHER RED NOR GREEN LIGHTS ARE ON, LOCATED ON BREAKER 3311 CONTROL STATION

OPERATOR ACTIONS FOR A VALID ALARM:

- INVESTIGATE THE CAUSE FOR BREAKER BEING RACKED OUT.

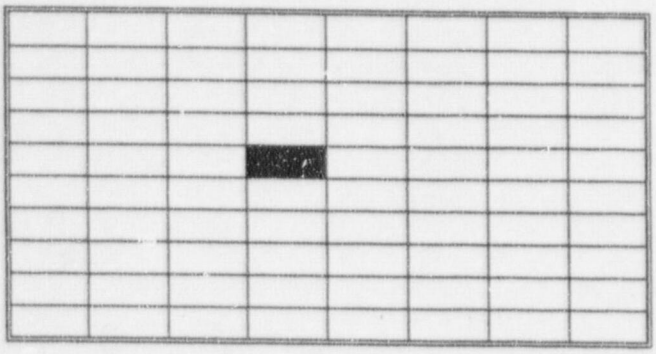
DISCUSSION:

THIS IS AN EXPECTED ALARM WHEN THE BREAKER IS IN THE TEST POSITION.

REFERENCES: DRAWING 208-040 MT-35

SENSING ELEMENT: 52H/B CONTACT FOR BREAKER 3311.

SSF ANNUNCIATOR RESPONSE	SF-A2-04-05	Q-04-05



ES
BREAKER
WITHDRAWN

EVENT POINT 0712

INDICATED CONDITION:

- o 480V ES MCC 3AB CROSS-TIE BREAKERS 3360 AND 3361 NOT RACKED IN.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

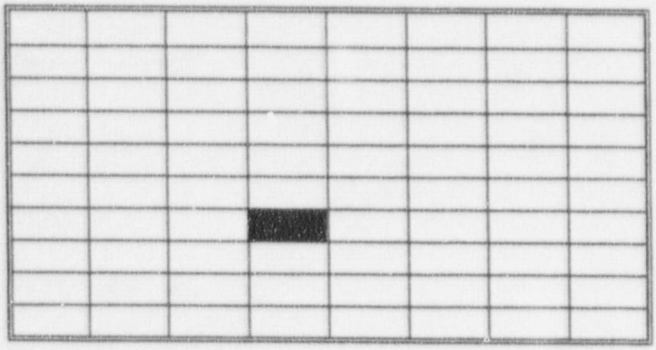
- o INVESTIGATE THE CAUSE FOR BOTH BREAKERS BEING RACKED OUT.

DISCUSSION:

REFERENCES: DRAWING 208-040 MT-88, MT-89

SENSING ELEMENT: 52H/B CONTACTS FOR BREAKERS 3360 AND 3361.

SSF ANNUNCIATOR RESPONSE	SF-A2-04-07	Q-04-07



ES
MCC 3AB
DEAD

EVENT POINT 0697

INDICATED CONDITION:

- 480V ES MCC 3AB LOSS OF VOLTAGE AS SENSED BY THE AR RELAY.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- REFER TO OP-700B
- INVESTIGATE CAUSE FOR MCC 3AB LOSS OF VOLTAGE.
- DEPRESS PUSH-BUTTON LABELED "TRANSFER TO 480V AC ES SWGR 3A/3B" TO RESTORE POUER TO MCC.

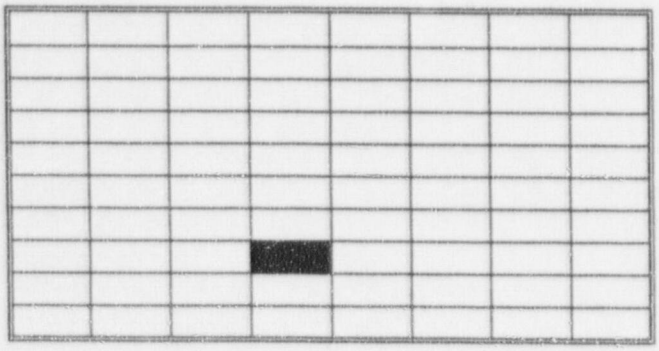
DISCUSSION:

WHEN TRANSFER OF POWER IS COMPLETE, THE INDICATOR LIGHT ON MCB LABELED "LOAD TO MCC 3AB" WILL ILLUMINATE.

REFERENCES: DRAWING 208-040 MT-125

SENSING ELEMENT: AR RELAY.

SSF ANNUNCIATOR RESPONSE	SF-A2-04-08	Q-04-08

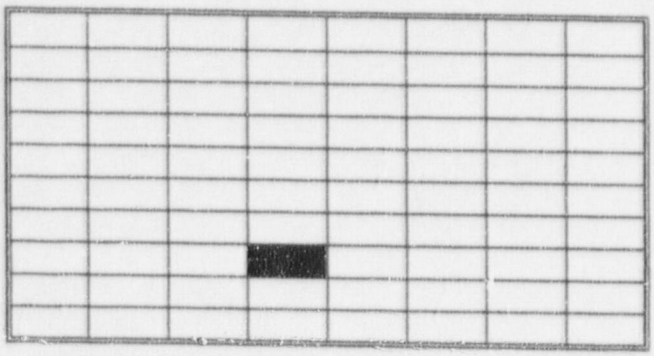


ES MCC 3AB
BREAKER
OPEN

EVENT POINT 0678

INDICATED CONDITION: o 480V ES MCC 3AB CROSS-TIE BREAKER 3361 OPEN.
REDUNDANT INDICATION WHICH WILL VERIFY ALARM:
OPERATOR ACTIONS FOR A VALID ALARM: o INVESTIGATE CAUSE FOR MCC 3AB BREAKER 3361 OPEN.
DISCUSSION:
REFERENCES: DRAWING 208-040 MT-89
SENSING ELEMENT: R/B SWITCHGEAR CONTACT FOR BREAKER 3361

SSF ANNUNCIATOR RESPONSE	SF-A2-04-08	Q-04-08



ES MCC 3AB
BREAKER
OPEN

EVENT POINT 0680

INDICATED CONDITION:

- o 480V ES MCC 3AB CROSS-TIE BREAKER 3360 OPEN.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

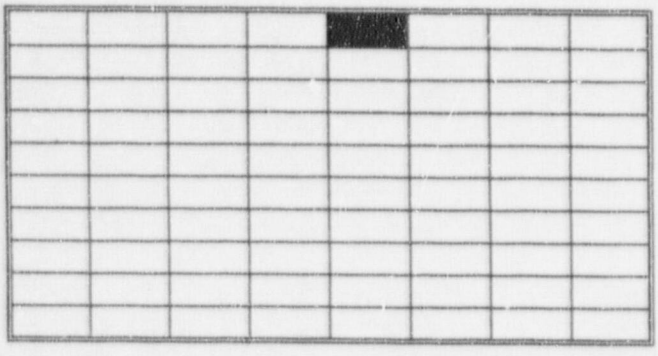
- o INVESTIGATE CAUSE FOR MCC 3AB BREAKER 3360 OPEN.

DISCUSSION:

REFERENCES: DRAWING 208-040 MT-88

SENSING ELEMENT: R/B SWITCHGEAR CONTACT FOR BREAKER 3360

SSF ANNUNCIATOR RESPONSE	SF-A2-05-01	Q-05-01



4KV
ES BUS B
DEAD

EVENT POINT 0651

INDICATED CONDITION:

- o "B" ES 4160V BUS UNDERVOLTAGE

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o 4160V ES BUS 3B VOLTAGE INDICATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO AP-770.

DISCUSSION:

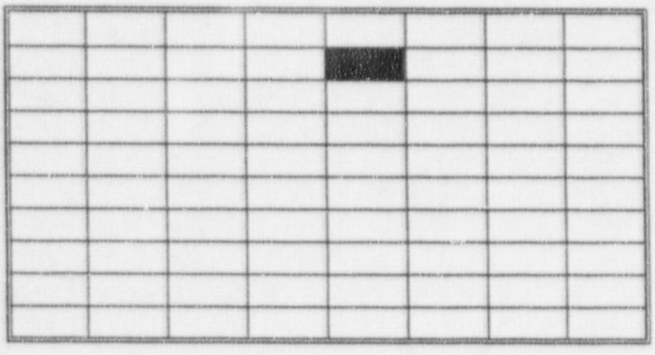
THIS ALARM IS THE RESULT OF A 2 OUT OF 3 UNDERVOLTAGE (FLUR) RELAY LOGIC.

THE FLUR RELAYS ARE INTENDED TO PROVIDE ES 4160VAC UNDERVOLTAGE RESPONSE WHEN VOLTAGE DROPS INSTANTLY TO ZERO. THE SLUR RELAY WILL PROVIDE UNDERVOLTAGE RESPONSE WHEN THE VOLTAGE DROPS GRADUALLY BELOW THE SLUR SETPOINT.

REFERENCES: DRAWING 208-040 MT-65

SENSING ELEMENT: 27Y-3/32EA RELAY

SSF ANNUNCIATOR RESPONSE	SF-A2-05-02	Q-05-02



DIESEL GEN B
BREAKER
TRIP

EVENT POINT 0336

INDICATED CONDITION:

- o DIESEL GENERATOR "B" BKR 3210 LOCKOUT ACTUATED

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o GREEN LIGHT IS ON WITH A RED FLAG ON THE BREAKER 3210 CONTROL STATION.
- o VERIFY 86B EDG BREAKER LOCKOUT RELAY OPEN

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO AP-770.

DISCUSSION: THE 86B EDG BREAKER LOCKOUT RELAY WILL TRIP AND PREVENT RECLOSURE OF THE EDG OUTPUT BREAKER FOR:

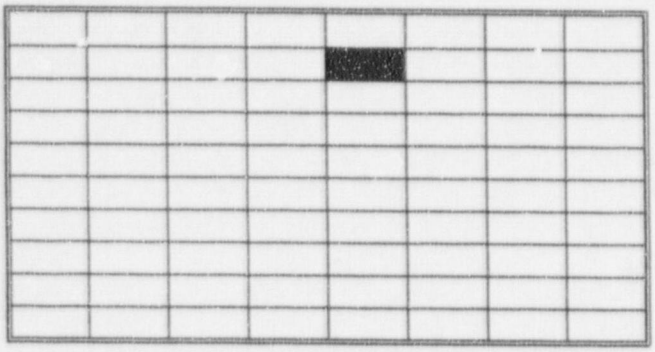
- o OVERCURRENT (DEVICE 51V)
- o NEGATIVE SEQUENCE (DEVICE 46)
- o GENERATOR GROUND (DEVICE 64)
- o ES BUS FEEDER BREAKER OVERCURRENT (DEVICE 51B, 51 BN)

THE ACTUATION OF THE NEW 86B LOCKOUT WILL RESULT IN THE ENGINE REMAINING RUNNING WITH THE OUTPUT BREAKER OPEN. THIS WILL REQUIRE THE ENGINE SHUTDOWN WITHIN 2 HOURS

REFERENCES: DRAWING 208-040 MT-14

SENSING ELEMENT: CS/SC,CS/O CS CONTACTS, 52H/A, 52S/B & 86B/3210 CONTACTS

SSF ANNUNCIATOR RESPONSE	SF-A2-05-02	Q-05-02



DIESEL GEN B
BREAKER
TRIP

EVENT POINT 0571

INDICATED CONDITION:

- o DIESEL GENERATOR "B" BKR 3210 AUTO TRIP

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o GREEN LIGHT IS ON WITH A RED FLAG ON THE BREAKER 3210 CONTROL STATION.
- o VERIFY 86B EDG BREAKER LOCKOUT RELAY OPEN

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO AP-770.

DISCUSSION: THE 86B EDG BREAKER LOCKOUT RELAY WILL TRIP AND PREVENT RECLOSURE OF THE EDG OUTPUT BREAKER FOR:

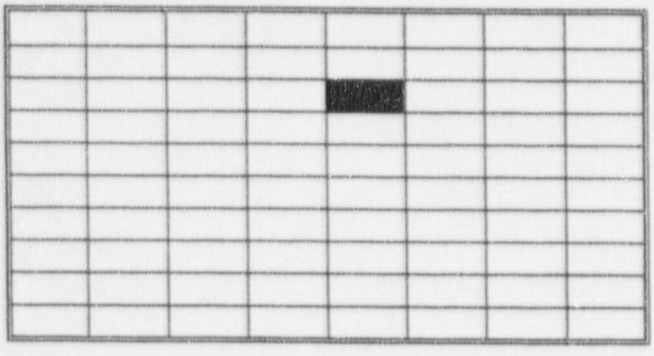
- o OVERCURRENT (DEVICE 51V)
- o NEGATIVE SEQUENCE (DEVICE 46)
- o GENERATOR GROUND (DEVICE 64)
- o ES BUS FEEDER BREAKER OVERCURRENT (DEVICE 51B, 51 BN)

THE ACTUATION OF THE NEW 86B LOCKOUT WILL RESULT IN THE ENGINE REMAINING RUNNING WITH THE OUTPUT BREAKER OPEN. THIS WILL REQUIRE THE ENGINE SHUTDOWN WITHIN 2 HOURS

REFERENCES: DRAWING 208-040 MT-14

SENSING ELEMENT: CS/SC,CS/O CONTROL SWITCH CONTACTS, 52H/A, 52S/B CONTACTS

SSF ANNUNCIATOR RESPONSE	SF-A2-05-03	Q-05-03



DIESEL GEN B
BREAKER
CLOSED

EVENT POINT 1186

INDICATED CONDITION:

- "B" ES 4160V BUS DIESEL OUTPUT BREAKER 3210 IS CLOSED, WITH **EITHER** AN ES ACTUATION SIGNAL **OR** BUS UNDERVOLTAGE SIGNAL PRESENT

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- RED LIGHT IS ON WITH A GREEN FLAG ON BREAKER 3210 CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

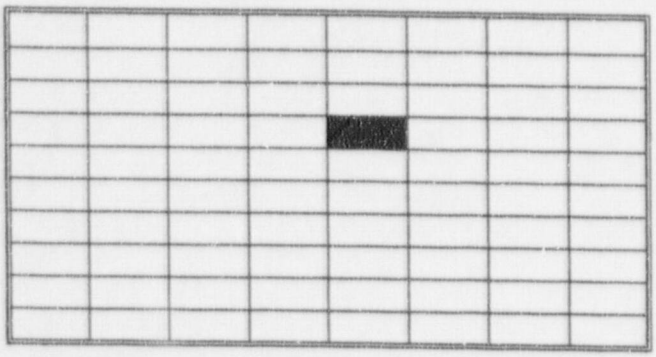
- REFER TO AP-770.

DISCUSSION:

REFERENCES: DRAWING 208-040 MT-128, MT-129

SENSING ELEMENT: 86B/ESB

SSF ANNUNCIATOR RESPONSE	SF-A2-05-04	Q-05-04



4KV ES B CROSS-TIE BLOCKED

EVENT POINT 1187

INDICATED CONDITION:

- o BREAKERS 3209 AND 3210 CLOSED WITH **EITHER** 3205, 3207, **OR** 3211 CLOSED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o DIESEL GEN "A" CROSS-TIE LIGHT EXTINGUISHED.
- o IF 3205 CLOSED THEN, BLOCK CLOSING ACTUATED 3206 LIGHT IS ON.
- o IF 3207 CLOSED THEN, BLOCK CLOSING ACTUATED 3208 LIGHT IS ON.
- o IF 3211 CLOSED THEN, BLOCK CLOSING ACTUATED 3212 LIGHT IS ON.

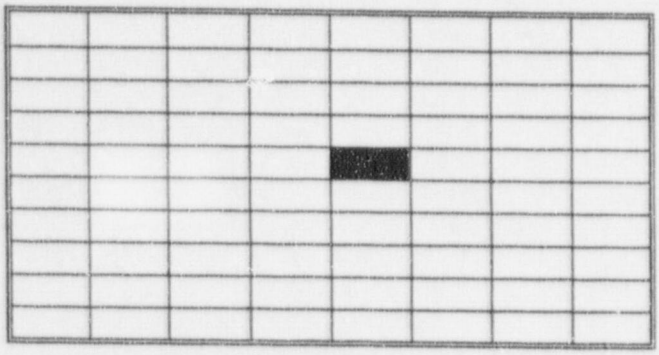
OPERATOR ACTIONS FOR A VALID ALARM:

DISCUSSION:

REFERENCES: DRAWING 208-040 MT-127, MT-129

SENSING ELEMENT: 3-52-2, 3-52S CONTACTS

SSF ANNUNCIATOR RESPONSE	SF-A2-05-05	Q-05-05



DIESEL GEN B
VOLTAGE ADJ
IN CONTROL RM

EVENT POiNT 1178

INDICATED CONDITION:

- o DIESEL GENERATOR "B" VOLTAGE ADJUST SELECTED TO THE CONTRO_ ROOM.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o DIESEL GENERATOR B "EXC VOLT ADJ SELECT" SWITCH SELECTED TO "CONT RM" POSITION.

OPERATOR ACTIONS FOR A VALID ALARM:

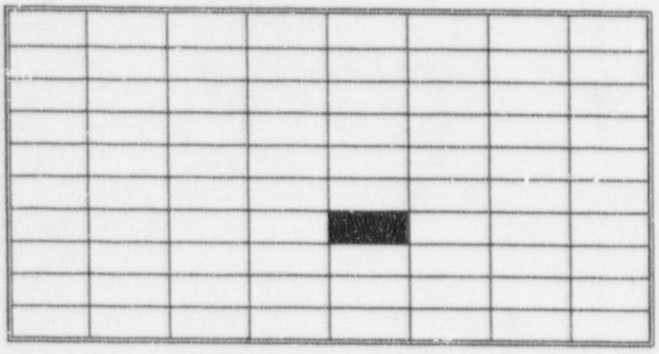
DISCUSSION:

THIS SWITCH IS NORMALLY SELECTED TO THE "DG RM" POSITION.

REFERENCES: DRAWING 208-027 EG-18

SENSING ELEMENT: SS/O,CB/SSF CONTACT

SSF ANNUNCIATOR RESPONSE	SF-A2-05-07	Q-05-07



480V
ES BUS B
DEAD

EVENT POINT 0655

INDICATED CONDITION:

- o "B" 480. BUS UNDERVOLTAGE.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o 480V ES BUS "B" VOLTAGE INDICATES LESS THAN NORMAL.

OPERATOR ACTIONS FOR A VALID ALARM:

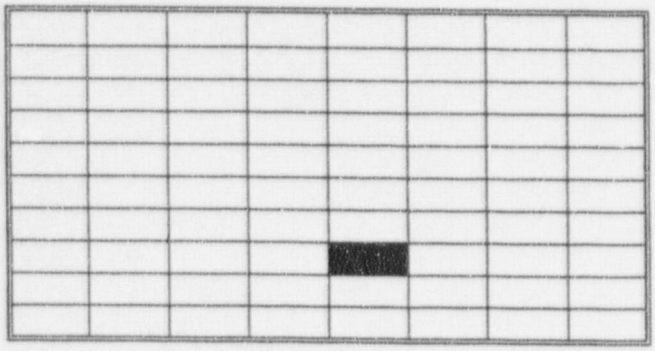
- o REFER TO AP-770

DISCUSSION:

REFERENCES: DRAWING 208-040 MT-66

SENSING ELEMENT: 27Y-1/33EB

SSF ANNUNCIATOR RESPONSE	SF-A2-05-08	Q-05-08



480V
ES BUS B
UV LOCKOUT ACT

EVENT POINT 0722

INDICATED CONDITION:

- o "B" ES 480V BUS UNDERVOLTAGE LOCK OUT RELAY ACTUATED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o 4160V ES BUS B VOLTAGE INDICATES LESS THAN NORMAL.
- o 480V ES BUS B VOLTAGE INDICATES LESS THAN NORMAL.
- o BREAKER 3210 INDICATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO AP-770

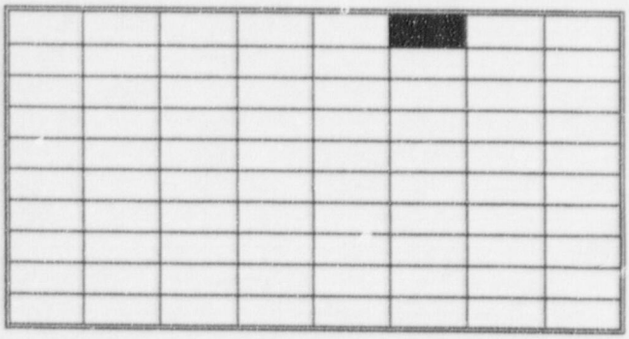
DISCUSSION:

THE 480V ES UNDERVOLTAGE LOCK OUT RELAY IS ACTUATED WHEN, EITHER THE 'B' DIESEL OUTPUT BREAKER IS CLOSED, OR 4160V ES BUS B UNDERVOLTAGE OCCURS WITH AN ES ACTUATION.

REFERENCES: DRAWING 208-040 MT-79

SENSING ELEMENT: 86/27ESB

SSF ANNUNCIATOR RESPONSE	SF-A2-06-01	Q-06-01



DIESEL GEN B
IN THE 30 MIN LIMIT

EVENT POINT 1996

INDICATED CONDITION:

- o DIESEL GENERATOR "B" OVER 3250 KW.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o DIESEL GENERATOR "B" KW INDICATION.
- o DIESEL GENERATOR "B" "EDG-3B ELAPSED TIME IN 30 MIN RATING." TIMER OPERATING.

OPERATOR ACTIONS FOR A VALID ALARM:

- o REFER TO AP-770.
- o REDUCE LOAD IF SURVEILLANCE TESTING.

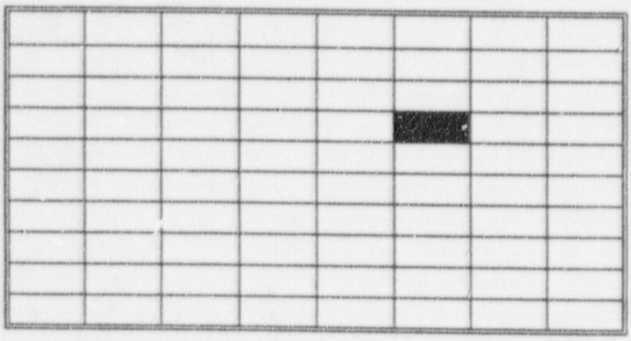
DISCUSSION:

THIS ALARM IS INSTANTANEOUS WHEN DIESEL LOAD EXCEEDS 3250 K

REFERENCES: DRAWING 208-027 EG-21

SENSING ELEMENT: 62[illegible]Y

SSF ANNUNCIATOR RESPONSE	SF-A2-06-04	Q-06-04



4KV ES B
UNDERVOLTAGE
TRIP BLOCKED

EVENT POINT 0824

INDICATED CONDITION:

o "B" ES 4160V BUS UNDERVOLTAGE PROTECTION DISABLED.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

TRIP BLOCK SWITCHES, TBS1 AND TBS2, LOCATED IN MTCP-1B IN THE 4160V ES "B" SWITCHGEAR ROOM ARE IN OPEN POSITION.

OPERATOR ACTIONS FOR A VALID ALARM:

o MONITOR "B" ES BUS VOLTAGES DURING UNDERVOLTAGE RELAY TESTING.

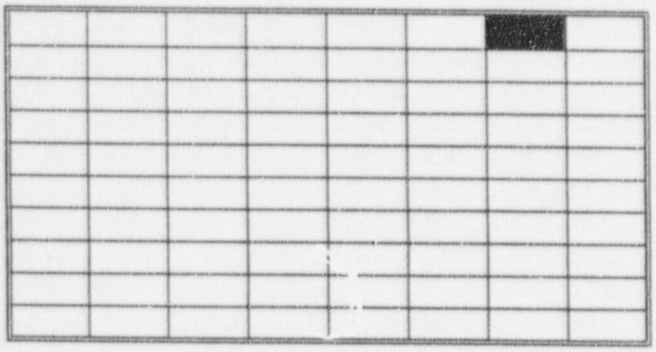
DISCUSSION:

THIS ALARM WILL OCCUR WHEN TESTING THE BUS UNDERVOLTAGE RELAYS. NO UNDERVOLTAGE PROTECTION IS AVAILABLE DURING TESTING.

REFERENCES: DRAWING 208-040 MT-65B

SENSING ELEMENT: TBS1, TBS2

SSF ANNUNCIATOR RESPONSE	SF-A2-07-01	Q-07-01



B/U ES XFMR FAULT

EVENT POINT 0727

INDICATED CONDITION:

- o BACKUP ES TRANSFORMER PRIMARY PROTECTION ALARM
- o BACKUP ES TRANSFORMER PHASE DIFFERENTIAL LOCK-OUT RELAY, 86TBEST-1, HAS ACTUATED DUE TO A DIFFERENCE IN CURRENT ON THE INDIVIDUAL PHASES AS SENSED BY RELAYS 87TBEST-ϕA, 87TBEST-ϕB, OR 87TBEST-ϕC

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o THE FOLLOWING BREAKERS WILL AUTOMATICALLY TRIP AND LOCKOUT

BREAKER 3103	BREAKER 3203	BREAKER 3205	BREAKER 1691
BREAKER 3104	BREAKER 3204	BREAKER 3206	BREAKER 1692

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o VERIFY FOLLOWING BREAKERS OPEN

BREAKER 3103	BREAKER 3203	BREAKER 3205	BREAKER 1691
BREAKER 3104	BREAKER 3204	BREAKER 3206	BREAKER 1692

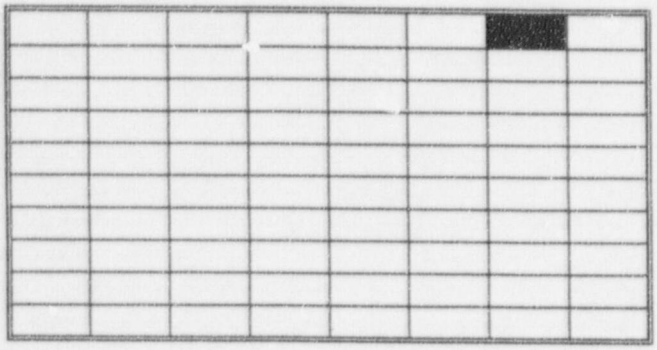
DISCUSSION:

THIS IS AN INDICATION OF A PHASE IMBALANCE ON THE BACKUP ES TRANSFORMER. THE LOCK-OUT RELAY ACTUATES TO STRIP THE POWER FEED AND THE LOADS OFF OF THE TRANSFORMER, AND TO PREVENT CLOSING IN A BREAKER ON A FAULTED TRANSFORMER.

REFERENCES: DRAWING 208-040 MT-139

SENSING ELEMENT: 86TBEST-1, 87TBEST-ϕA, 87TBEST-ϕB, 87TBEST-ϕC

SSF ANNUNCIATOR RESPONSE	SF-A2-07-01	Q-07-01



B/U ES XFMR FAULT

EVENT POINT 0728

INDICATED CONDITION:

- BACKUP ES TRANSFORMER SUDDEN PRESSURE RELAY, 86SPBEST-1 AND/OR NEUTRAL GROUND & GROUND DIFFERENTIAL RELAY, 86TNGDBEST-1 HAVE ACTUATED

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- THE FOLLOWING BREAKERS WILL AUTOMATICALLY TRIP AND LOCKOUT
  BREAKER 3103 BREAKER 3203 BREAKER 3205 BREAKER 1691
  BREAKER 3104 BREAKER 3204 BREAKER 3206 BREAKER 1692

OPERATOR ACTIONS FOR A VALID ALARM:

- NOTIFY SYSTEM DISPATCHER
- VERIFY FOLLOWING BREAKERS OPEN
  BREAKER 3103 BREAKER 3203 BREAKER 3205 BREAKER 1691
  BREAKER 3104 BREAKER 3204 BREAKER 3206 BREAKER 1692

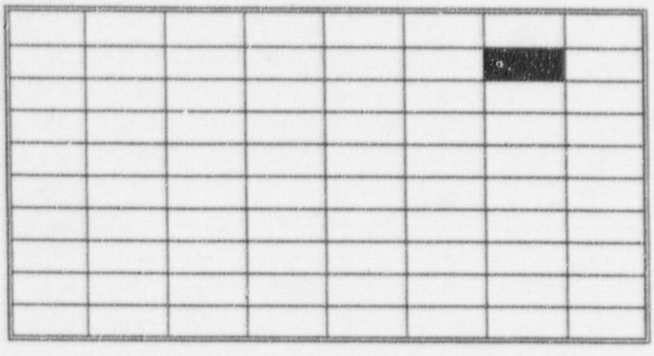
DISCUSSION:

THIS IS INDICATION OF A FLASH OVER OR AN INTERNAL GROUND ON THE BACKUP ES TRANSFORMER. THE LOCKOUT RELAY ACTUATES TO STRIP THE POWER FEED AND THE LOADS OFF OF THE TRANSFORMER, AND TO PREVENT CLOSING IN A BREAKER ON A FAULTED TRANSFORMER.

REFERENCES: DRAWING 208-040 MT-137, 138

SENSING ELEMENT: 27C/86TNGDBEST-1, 86SPBEST-1, 51TN, 87GN, 63FPX

SSF ANNUNCIATOR RESPONSE	SF-A2-07-02	Q-07-02



BREAKER 1691/1692 OPEN

EVENT POINT 0855

INDICATED CONDITION:

- o BREAKER 1692 IS OPEN

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o GREEN LIGHT IS ON, LOCATED ON THE BREAKER 1692 CONTROL STATION

OPERATOR ACTIONS FOR A VALID ALARM:

- o CONTACT UNITS 1 & 2
- o CONTACT SYSTEM DISPATCHER

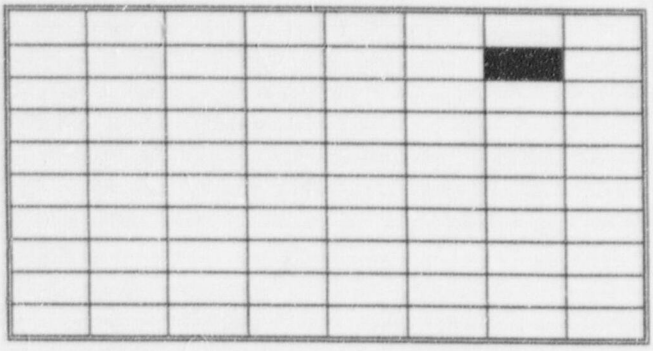
DISCUSSION:

THIS IS A NORMAL ALARM WHEN THE BREAKER IS NOT CLOSED. ONE OF THE FEEDER BREAKERS BEING OPENED ON THE START-UP TRANSFORMERS MAY PRESENT AN OFFSITE POWER AVAILABILITY CONCERN REFER TO TS FOR ADMINISTRATIVE REQUIREMENTS.

REFERENCES: DRAWING 229-102

SENSING ELEMENT: AUXILIARY CONTACT 52a 5/5c

SSF ANNUNCIATOR RESPONSE	SF-A2-07-02	Q-07-02



BREAKER
1691/1692
OPEN

EVENT POINT 0860

INDICATED CONDITION:

- BREAKER 1692 GROUND FAULT LOCK-OUT RELAY 86FDM HAS ACTUATED, DUE TO CURRENT ON THE NEUTRAL/GROUND SENSED BY RELAY 50G/M

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- THE FOLLOWING BREAKERS WILL AUTOMATICALLY TRIP AND LOCK-OUT

BREAKER 3103	BREAKER 3104	BREAKER 3203	BREAKER 3204
BREAKER 3205	BREAKER 3206	BREAKER 1691	BREAKER 1692

OPERATOR ACTIONS FOR A VALID ALARM:

- ENSURE BREAKER 1691 HAS OPENED
- VERIFY THE OPERATION OF THE FOLLOWING LOCK-OUT RELAYS:
  86/FDM 86/PL4 86BU/PL4 86/BBB
- VERIFY ALL FEEDER BREAKERS FROM STARTUP TRANSFORMER ARE OPEN.

BREAKER 3103	BREAKER 3104	BREAKER 3203
BREAKER 3204	BREAKER 3205	BREAKER 3206

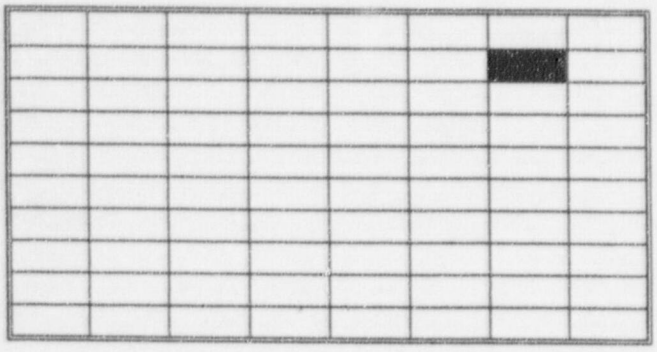
DISCUSSION:

THIS IS INDICATION OF A GROUND ON THE NEUTRAL FOR BREAKER 1692. THE LOCK-OUT RELAY ACTUATES TO STRIP THE POWER FEED AND THE LOADS OFF OF THE TRANSFORMER, AND TO PREVENT CLOSING IN A BREAKER ON A FAULTED TRANSFORMER.

REFERENCES: DRAWING 229-103

SENSING ELEMENT: 50G/M, 86/FDM

SSF ANNUNCIATOR RESPONSE	SF-A2-07-02	Q-07-02



BREAKER 1691/1692 OPEN

EVENT POINT 0861

INDICATED CONDITION:

- o BREAKER 1691 IS OPEN

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o GREEN LIGHT IS ON, LOCATED ON THE BREAKER 1691 CONTROL STATION.

OPERATOR ACTIONS FOR A VALID ALARM:

- o CONTACT UNITS 1 & 2
- o CONTACT SYSTEM DISPATCHER

DISCUSSION:

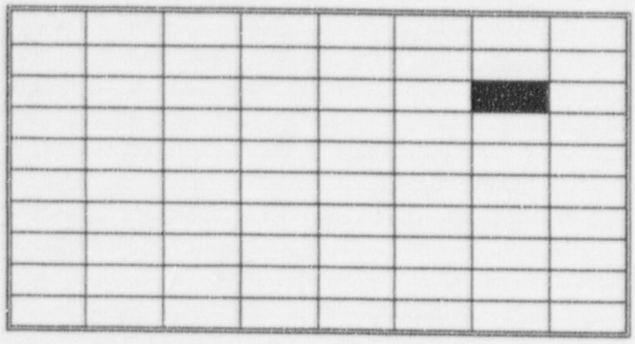
THIS IS A NORMAL ALARM WHEN THE BREAKER IS NOT CLOSED. ONE OF THE FEEDER BREAKERS BEING OPENED ON THE START-UP TRANSFORMERS MAY PRESENT AN OFFSITE POWER AVAILABILITY CONCERN.

REFER TO TS FOR ADMINISTRATIVE REQUIREMENTS.

REFERENCES: DRAWING 104

SENSING ELEMENT: AUXILIARY CONTACT 52a 5/5c

SSF ANNUNCIATOR RESPONSE	SF-A2-07-03	Q-07-03



BACKUP ES XFMR
MAJOR ALARM

EVENT POINT 0631

INDICATED CONDITION:

- BACKUP ES TRANSFORMER PRESSURE RELIEF DEVICE HAS ACTUATED DUE TO A PRESSURE >10 PSIG AS SENSED BY DEVICE 63 PR

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- LOCAL PRESSURE INDICATOR

OPERATOR ACTIONS FOR A VALID ALARM:

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

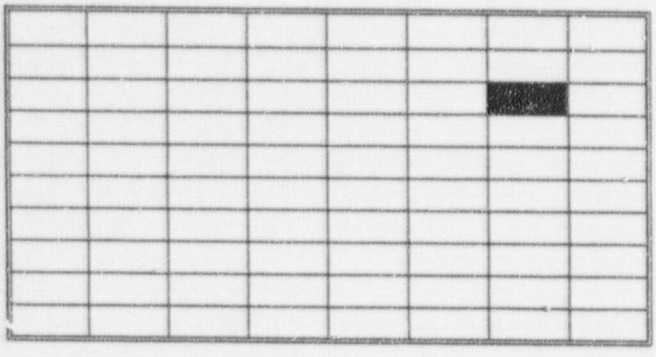
DISCUSSION:

THIS ALARM IS INDICATIVE OF A FAULT INTERNAL TO THE TRANSFORMER, THE LOAD ON THE TRANSFORMER SHOULD BE REDUCED AS MUCH AS POSSIBLE

REFERENCES: DRAWING 208-040 MT-140, MT-138

SENSING ELEMENT: 63PR, 86SPBEST-1

SSF ANNUNCIATOR RESPONSE	SF-A2-07-03	Q-07-03



BACKUP ES XFMR
MAJOR ALARM

EVENT POINT 0857

INDICATED CONDITION:

- BACKUP ES TRANSFORMER OIL LEVEL LOW

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- LOCAL LEVEL INDICATION

OPERATOR ACTIONS FOR A VALID ALARM:

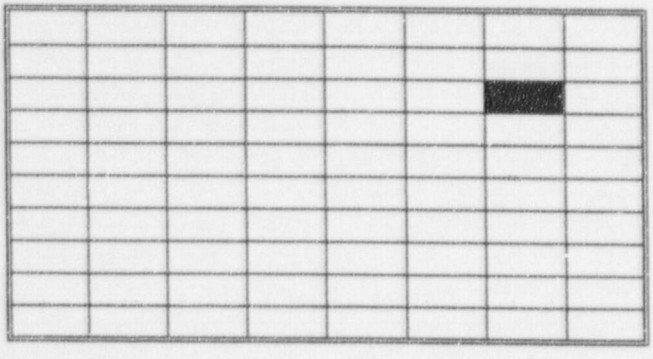
- NOTIFY SYSTEM DISPATCHER
- CHECK TRANSFORMER FOR OIL LEAKAGE

DISCUSSION:

REFERENCES: DRAWING 208-040 MT-140

SENSING ELEMENT: 71Q

SSF ANNUNCIATOR RESPONSE	SF-A2-07-03	Q-07-03



BACKUP ES XFMR
MAJOR ALARM

EVENT POINT 1813

INDICATED CONDITION:

- BACKUP ES TRANSFORMER TEMPERATURE HIGH DUE TO EITHER OIL TEMPERATURE >**90**°C AS SENSED BY DEVICE 26Q **OR** WINDING TEMPERATURE >**105**°C AS SENSED BY DEVICE 49

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- LOCAL INDICATING GAGES FOR OIL TEMPERATURE AND WINDING TEMPERATURE

OPERATOR ACTIONS FOR A VALID ALARM:

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

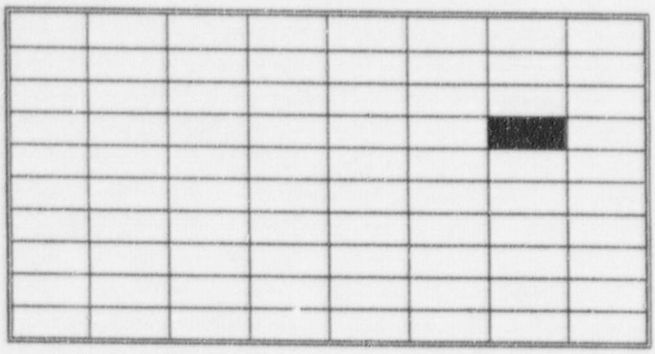
DISCUSSION:

THIS IS INDICATIVE OF A PROBLEM WITH THE TRANSFORMER COOLING SYSTEM CONSIDERATION SHOULD BE GIVEN TO REDUCING THE LOAD ON THE TRANSFORMER.

REFERENCES: DRAWING 208-40 MT-140

SENSING ELEMENT: 26Q

SSF ANNUNCIATOR RESPONSE	SF-A2-07-04	Q-07-04



BACKUP ES XFMR
MINOR ALARM

EVENT POINT 1151

INDICATED CONDITION:

- o BACKUP ES TRANSFORMER LOSS OF COOLING/GAS CONTROL

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o LOCAL FLOW INDICATION

OPERATOR ACTIONS FOR A VALID ALARM:

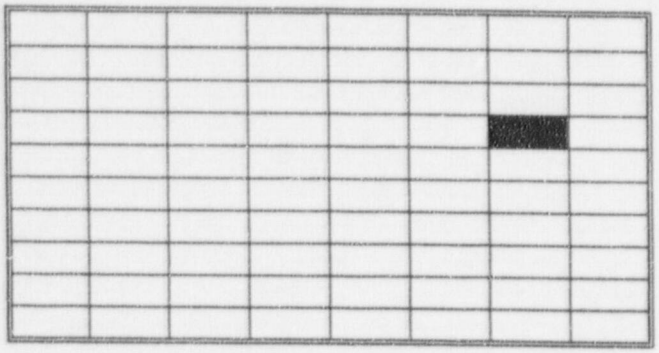
- o NOTIFY SYSTEM DISPATCHER
- o VERIFY BEST TRANSFORMER OIL PUMP & FANS OPERATING

DISCUSSION:

REFERENCES: DRAWING 208-040 MT-140

SENSING ELEMENT: 74TDOE, 63C, 63PG, 63LG

SSF ANNUNCIATOR RESPONSE	SF-A2-07-04	Q-07-04



BACKUP ES XFMR
MINOR ALARM

EVENT POINT 1153

INDICATED CONDITION:

- BACKUP ES TRANSFORMER LOSS OF AUXILIARY AC POWER

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- NOTIFY SYSTEM DISPATCHER

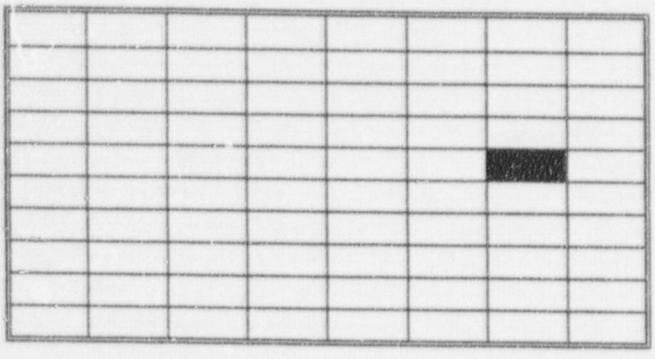
DISCUSSION:

THE TRANSFORMER SHOULD CONTINUE TO BE FUNCTIONAL ON THE NORMAL POWER SUPPLY

REFERENCES: DRAWING 208-040 MT-140

SENSING ELEMENT: 27-1, 27-2, 27-3

SSF ANNUNCIATOR RESPONSE	SF-A2-07-05	Q-07-05



BREAKER
1692
TROUBLE

EVENT POINT 0856

INDICATED CONDITION:

- o BREAKER 1692 LP AIR SYSTEM PRESSURE IS LOW

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER

DISCUSSION:

BREAKER 1692 IS A 230KV AIR OPERATED (ATB) TYPE OF BREAKER.

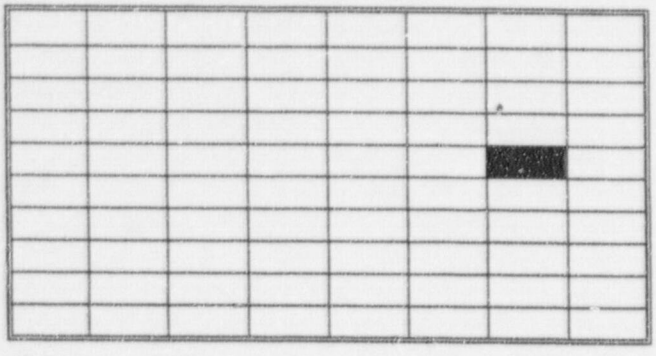
THIS ALARM INDICATES THE BREAKER 1692 AIR OPERATING SYSTEM LP AIR PRESSURE IS BELOW NORMAL, AND THEREFORE LARGE AIR LEAKS, OR COMPRESSOR/COMPRESSOR CONTROL FAILURES ARE PROBABLE.

OPERATING BREAKER 1692 SEVERAL TIMES IN A BRIEF PERIOD OF TIME CAN USE MORE AIR THAN THE RATE AT WHICH THE COMPRESSOR CAN MAINTAIN.

REFERENCES: DRAWING 229-102; DRAWING S171 (SUBSTATION)

SENSING ELEMENT: 63AL

SSF ANNUNCIATOR RESPONSE	SF-A2-07-05	Q-07-05



BREAKER
1692
TROUBLE

EVENT POINT 0859

INDICATED CONDITION:

- o BREAKER 1692 HP AIR SYSTEM PRESSURE IS LOW

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER

DISCUSSION:

BREAKER 1692 IS A 230KV AIR OPERATED (ATB) TYPE OF BREAKER.

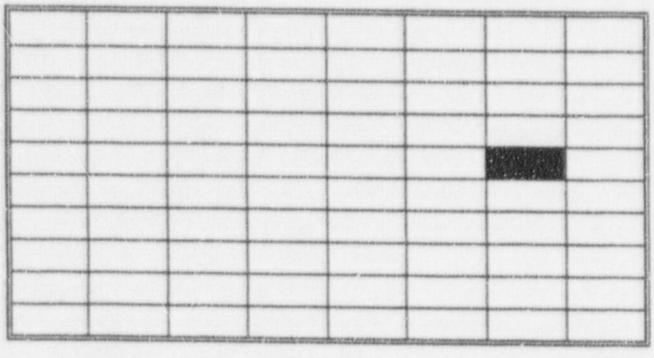
THIS ALARM INDICATES THE BREAKER 1692 AIR OPERATING SYSTEM LP AIR PRESSURE IS BELOW NORMAL, AND THEREFORE LARGE AIR LEAKS, OR COMPRESSOR/COMPRESSOR CONTROL FAILURES ARE PROBABLE.

OPERATING BREAKER 1692 SEVERAL TIMES IN A BRIEF PERIOD OF TIME CAN USE MORE AIR THAN THE RATE AT WHICH THE COMPRESSOR CAN MAINTAIN.

REFERENCES: DRAWING 229-102; DRAWING S171 (SUBSTATION)

SENSING ELEMENT: 63AH

SSF ANNUNCIATOR RESPONSE	SF-A2-07-05	Q-07-05



BREAKER
1692
TROUBLE

EVENT POINT 0866

INDICATED CONDITION:

- BREAKER 1692 AIR COMPRESSOR RUN TIME EXCESSIVE

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- NOTIFY SYSTEM DISPATCHER

DISCUSSION:

BREAKER 1692 IS A 230KV AIR OPERATED (ATB) TYPE OF BREAKER.

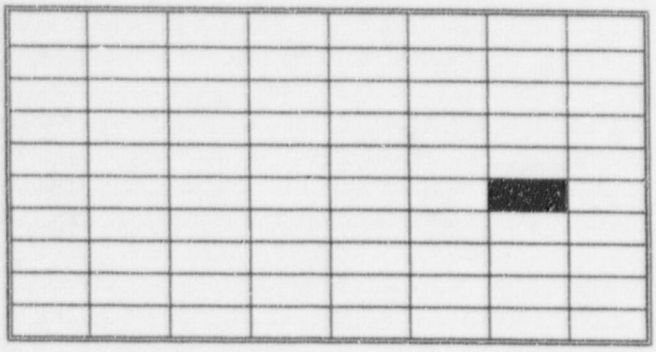
THIS ALARM INDICATES THE BREAKER 1692 AIR OPERATING SYSTEM AIR COMPRESSOR HAS BEEN RUNNING LONGER THAN NORMAL, AND THEREFORE LARGE AIR LEAKS OR FAILURES ARE PROBABLE. THE COMPRESSOR IS USED FOR MAINTAINING THE HIGH PRESSURE RESERVOIR ABOVE THE HP AIR MINIMUM PRESSURE SETPOINT.

OPERATING BREAKER 1692 SEVERAL TIMES IN A BRIEF PERIOD OF TIME CAN USE MORE AIR THAN THE RATE AT WHICH THE COMPRESSOR CAN MAINTAIN.

REFERENCES: DRAWING 229-102; DRAWING S171 (SUBSTATION)

SENSING ELEMENT: COMPRESSOR CONTROLLER

SSF ANNUNCIATOR RESPONSE	SF-A2-07-06	Q-07-06



PLANT LINE 4 FAULT

EVENT POINT 0858

INDICATED CONDITION:

- o PLANT LINE 4 PRIMARY DIFFERENTIAL LOCK-OUT RELAY 86/PL4 HAS ACTUATED, DUE TO CURRENT DIFFERENTIAL ON THE PRIMARY SIDE OF THE STARTUP AND BEST TRANSFORMER AS SENSED BY 87PL4ϕA, 87PL4ϕB, OR 87PL4ϕC

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o THE FOLLOWING BREAKERS WILL AUTOMATICALLY TRIP AND LOCK-OUT

BREAKER 3103	BREAKER 3104	BREAKER 3203	BREAKER 3204
BREAKER 3205	BREAKER 3206	BREAKER 1691	BREAKER 1692

OPERATOR ACTIONS FOR A VALID ALARM:

- o VERIFY THE OPERATION OF THE LOCK OUT RELAYS 86/PL4, 86X/PL4
- o ENSURE THAT ALL FEEDER BREAKERS FROM THE STARTUP AND 'BEST' TRANSFORMERS ARE OPEN.

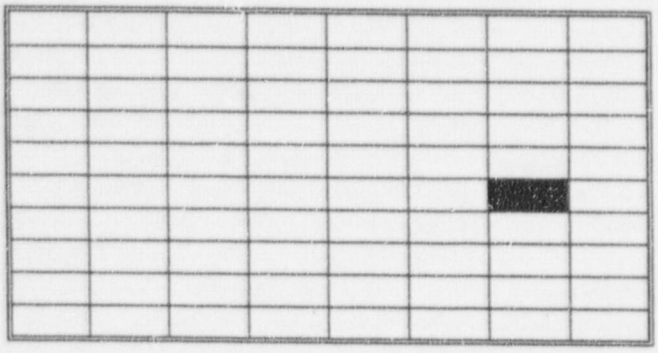
DISCUSSION:

THIS IS INDICATION OF A FAULT ON THE INCOMING 230KV LINE TO THE STARTUP AND BEST TRANSFORMERS. THE LOCK-OUT RELAY ACTUATES TO STRIP THE POWER FEED AND THE LOADS OFF OF THE TRANSFORMERS, AND TO PREVENT CLOSING IN A BREAKER ON A FAULTED TRANSFORMER.

REFERENCES: DRAWING 207-012, 229-107

SENSING ELEMENT: RELAY 86BU/PL4-1, 86BU/PL4-2, 87AUX-ϕA, 87AUX-ϕB, 87AUX-ϕC

SSF ANNUNCIATOR RESPONSE	SF-A2-07-06	Q-07-06



PLANT LINE 4
FAULT

EVENT POINT 0862

INDICATED CONDITION:

- PLANT LINE 4 BACK-UP DIFFERENTIAL LOCK-OUT RELAY 86BU/PL4 HAS ACTUATED, DUE TO AN OVER CURRENT ON THE PRIMARY SIDE OF THE STARTUP AND BEST TRANSFORMERS AS SENSED BY 87AUXϕA, 87AUXϕB, OR 8AUX4ϕC

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- THE FOLLOWING BREAKERS WILL AUTOMATICALLY TRIP AND LOCK-OUT

BREAKER 3103	BREAKER 3104	BREAKER 3203	BREAKER 3204
BREAKER 3205	BREAKER 3206	BREAKER 1691	BREAKER 1692

OPERATOR ACTIONS FOR A VALID ALARM:

- VERIFY THE OPERATION OF THE LOCK OUT RELAYS 86BU/PL4, 86BU/PL4
- ENSURE THAT ALL FEEDER BREAKERS FROM THE STARTUP AND 'BEST' TRANSFORMERS ARE OPEN.

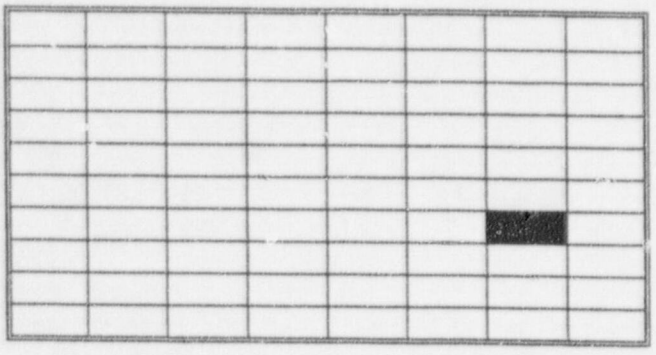
DISCUSSION:

THIS IS INDICATION OF A FAULT ON THE INCOMING 230KV LINE TO THE STARTUP AND BEST TRANSFORMER. THE LOCK-OUT RELAY ACTUATES TO STRIP THE POWER FEED AND THE LOADS OFF OF THE TRANSFORMERS, AND TO PREVENT CLOSING IN A BREAKER ON A FAULTED TRANSFORMER.

REFERENCES: DRAWING 207-012, 229-107

SENSING ELEMENT: RELAY 86BU/PL4-1, 86BU/PL4-2, 87AUX-ϕA, 87AUX-ϕB, 87AUX-ϕC

SSF ANNUNCIATOR RESPONSE	SF-A2-07-07	Q-07-07



230KV
GRID
DEGRADING

EVENT POINT 0827

INDICATED CONDITION:

- 4160V ES BUS 3A VOLTAGE IS < **4019 VAC FOR >2 SECS** AS SENSED BY RELAY 27SLUA/32EA

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- "A" ES 4160V BUS VOLTAGE METER INDICATING < 4019 VAC

OPERATOR ACTIONS FOR A VALID ALARM:

- NOTIFY SYSTEM DISPATCHER TO INCREASE GRID VOLTAGE

DISCUSSION:

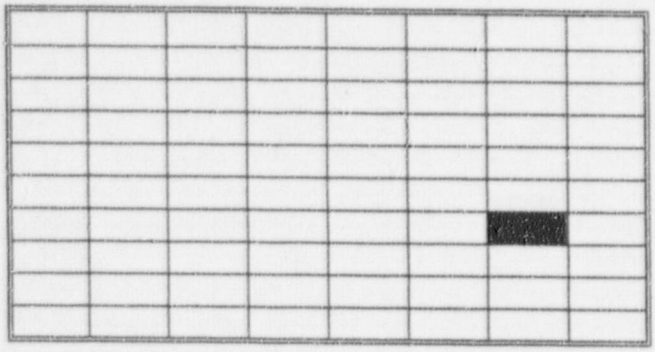
THIS ALARM IS INTENDED TO ALERT OPERATORS OF AN IMPENDING DEGRADED VOLTAGE (SLUR) CONDITION IN THE 230KV GRID. THIS CONDITION IS A PRECURSOR TO A DEGRADED VOLTAGE TRIP OF THE "A" ES 4160V BUS.

ALARM RESET SHOULD OCCUR BETWEEN 4038 AND 4058 VOLTS AC.

REFERENCES: DRAWING 208-040 SHEET MT-131

SENSING ELEMENT: RELAY 27SLUA/32EA

SSF ANNUNCIATOR RESPONSE	SF-A2-07-07	Q-07-07



230KV
GRID
DEGRADING

EVENT POINT 0828

INDICATED CONDITION:

- 4160V ES BUS 3B VOLTAGE IS < **4019 VAC FOR >2 SECS** AS SENSED BY RELAY 27SLUB/32EB

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- "B" ES 4160V BUS VOLTAGE METER INDICATING < 4019 VAC

OPERATOR ACTIONS FOR A VALID ALARM:

- NOTIFY SYSTEM DISPATCHER TO INCREASE GRID VOLTAGE

DISCUSSION:

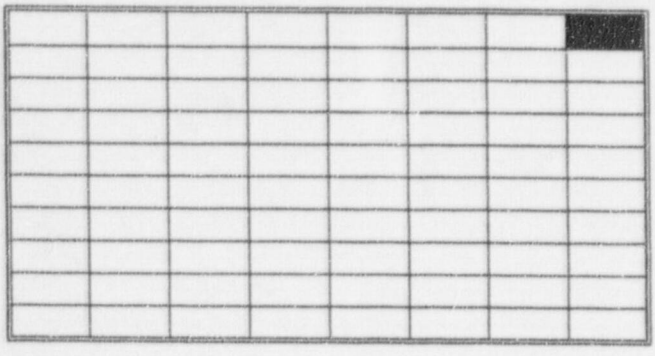
THIS ALARM IS INTENDED TO ALERT OPERATORS OF AN IMPENDING DEGRADED VOLTAGE (SLUR) CONDITION IN THE 230KV GRID. THIS CONDITION IS A PRECURSOR TO A DEGRADED VOLTAGE TRIP OF THE "B" ES 4160V BUS.

ALARM RESET SHOULD OCCUR BETWEEN 4038 AND 4058 VOLTS AC.

REFERENCES: DRAWING 208-040 SHEET MT-132

SENSING ELEMENT: RELAY 27SLUB/32EB

SSF ANNUNCIATOR RESPONSE	SF-A2-08-01	Q-08-01



OFFSITE PWR
SOURCE XFMR
FAULT

EVENT POINT 0777

INDICATED CONDITION:

- OFFSITE POWER TRANSFORMER GROUND FAULT LOCK-OUT RELAYS 71T9TD, 7BD9, 71T9TN HAS ACTUATED, DUE TO CURRENT ON THE NEUTRAL/GROUND SENSED BY RELAY 50N, 50AN, OR 50AM.

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- THE FOLLOWING BREAKERS WILL AUTOMATICALLY TRIP AND LOCK-OUT

  BREAKER 4900 BREAKER 4902 BREAKER 3211 BREAKER 3212

OPERATOR ACTIONS FOR A VALID ALARM:

- ENSURE THAT FEEDER AND LOAD BREAKERS FROM OFFSITE POWER TRANSFORMER ARE OPEN.
  BREAKER 4900 BREAKER 4902 BREAKER 3211 BREAKER 3212

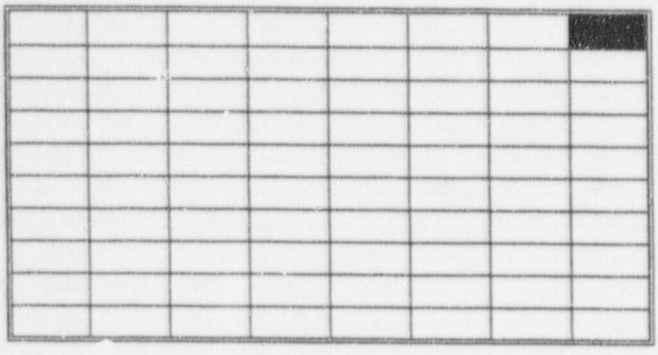
DISCUSSION:

THIS IS INDICATION OF AN INTERNAL GROUND ON THE OFFSITE POWER TRANSFORMER. THE LOCK-OUT RELAY ACTUATES TO STRIP THE POWER FEED AND THE LOADS OFF OF THE TRANSFORMER, AND TO PREVENT CLOSING IN A BREAKER ON A FAULTED TRANSFORMER.

REFERENCES: DRAWING 208-079 SHEET SB-18

SENSING ELEMENT: RELAYS 50N 50AN 50AM

SSF ANNUNCIATOR RESPONSE	SF-A2-08-01	Q-08-01



OFFSITE PWR SOURCE XFMR FAULT

EVENT POINT 2043

INDICATED CONDITION:

- OFFSITE POWER TRANSFORMER LOCK-OUT RELAYS 71T9SP, 7BOC9 HAVE ACTUATED, DUE TO DETECTION OF A SUDDEN PRESSURE RISE, OR A PHASE DIFFERENTIAL AS SENSED BY DEVICE 50M, AND 50AD

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- THE FOLLOWING BREAKERS WILL AUTOMATICALLY TRIP AND LOCK-OUT

  BREAKER 4900 BREAKER 4902 BREAKER 3211 BREAKER 3212

OPERATOR ACTIONS FOR A VALID ALARM:

- ENSURE THAT FEEDER AND LOAD BREAKERS FROM OFFSITE POWER TRANSFORMER ARE OPEN.
  BREAKER 4900 BREAKER 4902 BREAKER 3211 BREAKER 3212

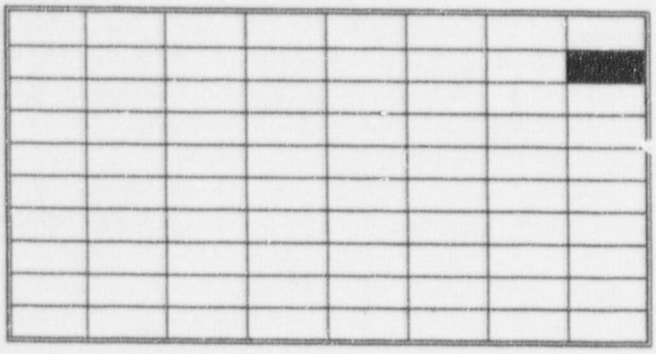
DISCUSSION:

THIS IS INDICATION OF A FLASH OVER ON THE OFFSITE POWER TRANSFORMER. THE LOCK-OUT RELAY ACTUATES TO STRIP THE POWER FEED AND THE LOADS OFF OF THE TRANSFORMER, AND TO PREVENT CLOSING IN A BREAKER ON A FAULTED TRANSFORMER.

REFERENCES: DRAWING 208-079 SHEET SB-18

SENSING ELEMENT: RELAYS 50AD, 50M

SSF ANNUNCIATOR RESPONSE	SF-A2-08-02	Q-08-02



BREAKER 4900/4902 TRIP

EVENT POINT 1103

INDICATED CONDITION:

- OFF SITE POWER TRANSFORMER PROTECTIVE LOCKOUT RELAY 7BDA-PRI, AND/OR 7BDA-BU HAVE ACTUATED

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- THE FOLLOWING BREAKERS WILL AUTOMATICALLY TRIP AND LOCK-OUT

  BREAKER 4900 BREAKER 4902 BREAKER 3211 BREAKER 3212

OPERATOR ACTIONS FOR A VALID ALARM:

- REFER TO AP-770
- VERIFY FEEDER AND LOAD BREAKERS FROM OFFSITE POWER TRANSFORMER OPEN
- NOTIFY SYSTEM DISPATCHER

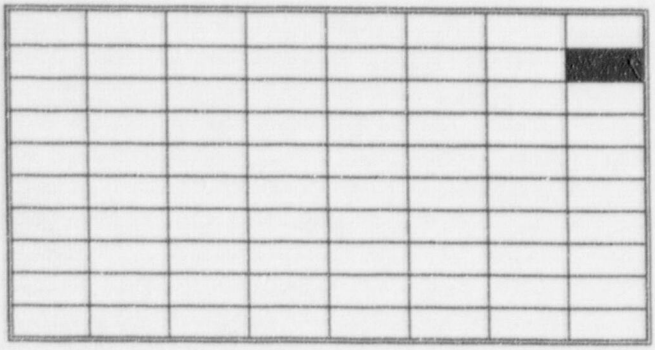
DISCUSSION:

THIS IS INDICATION OF A FAULT ON THE OFFSITE POWER TRANSFORMER. THE LOCK-OUT RELAY ACTUATES TO STRIP THE POWER FEED AND THE LOADS OFF OF THE TRANSFORMER, AND TO PREVENT CLOSING IN A BREAKER ON A FAULTED TRANSFORMER.

REFERENCES: DRAWING 208-079 SHEET SB-18

SENSING ELEMENT: RELAY 49M/7BDA-PRI, 49N/7BDA-BU

SSF ANNUNCIATOR RESPONSE	SF-A2-08-02	Q-08-02



BREAKER 4900/4902 TRIP

EVENT POINT 1104

INDICATED CONDITION:

- OFF SITE POWER TRANSFORMER PROTECTIVE LOCKOUT RELAY 7BDB-PRI, AND/OR 7BDB-BU HAVE ACTUATED

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- THE FOLLOWING BREAKERS WILL AUTOMATICALLY TRIP AND LOCK-OUT

  BREAKER 4900 BREAKER 4902 BREAKER 3211 BREAKER 3212

OPERATOR ACTIONS FOR A VALID ALARM:

- REFER TO AP-770
- VERIFY FEEDER AND LOAD BREAKERS FROM OFFSITE POWER TRANSFORMER OPEN
- NOTIFY SYSTEM DISPATCHER

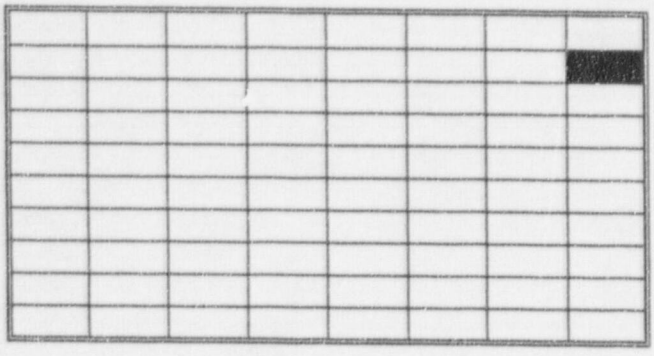
DISCUSSION:

THIS IS INDICATION OF A FAULT ON THE OFFSITE POWER TRANSFORMER. THE LOCK-OUT RELAY ACTUATES TO STRIP THE POWER FEED AND THE LOADS OFF OF THE TRANSFORMER, AND TO PREVENT CLOSING IN A BREAKER ON A FAULTED TRANSFORMER.

REFERENCES: DRAWING 208-079 SHEET SB-18

SENSING ELEMENT: RELAY 49AM/7BDB-PRI, 49AN/7BDB-BU

SSF ANNUNCIATOR RESPONSE	SF-A2-08-02	Q-08-02



BREAKER
4900/4902
TRIP

EVENT POINT 1132

INDICATED CONDITION:

- o OFFSITE POWER TRANSFORMER BREAKER 4900 HAS AUTO TRIPPED

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o GREEN BREAKER STATUS LIGHT WILL BE ON

OPERATOR ACTIONS FOR A VALID ALARM:

- o VERIFY BREAKER POSITION
- o REFER TO AP-770
- o NOTIFY SYSTEM DISPATCHER

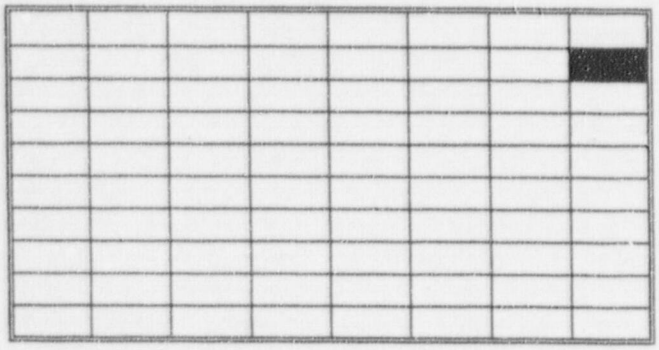
DISCUSSION:

ONE OF THE FEEDER BREAKERS BEING OPEN ON THE OFFSITE POWER TRANSFORMER MAY PRESENT AN OFFSITE POWER AVAILABILITY CONCERN; REFER TO TS FOR ADMINISTRATIVE REQUIREMENTS.

REFERENCES: 229-109

SENSING ELEMENT: 52b/4900, CS/O, CS/SC

SSF ANNUNCIATOR RESPONSE	SF-A2-08-02	Q-08-02



BREAKER
4900/4902
TRIP

EVENT POINT 1030

INDICATED CONDITION:

- o OFFSITE POWER TRANSFORMER BREAKER 4902 HAS AUTO TRIPPED

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o GREEN BREAKER STATUS LIGHT WILL BE ON

OPERATOR ACTIONS FOR A VALID ALARM:

- o VERIFY BREAKER POSITION
- o REFER TO AP-770
- o NOTIFY SYSTEM DISPATCHER

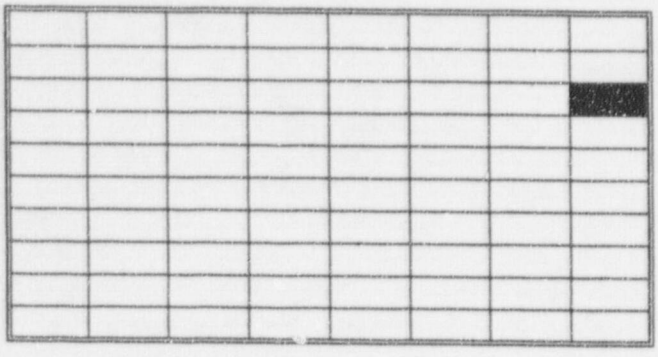
DISCUSSION:

ONE OF THE FEEDER BREAKERS BEING OPEN ON THE OFFSITE POWER TRANSFORMER MAY PRESENT AN OFFSITE POWER AVAILABILITY CONCERN; REFER TO TS FOR ADMINISTRATIVE REQUIREMENTS.

REFERENCES: 229-110

SENSING ELEMENT: 52b/4902, CS/O, CS/SC

SSF ANNUNCIATOR RESPONSE	SF-A2-08-03	Q-08-03



OFFSITE PWR
SOURCE XFMR
MAJOR ALARM

EVENT POINT 1337

INDICATED CONDITION:

- OFFSITE POWER TRANSFORMER PRESS RELIEF DEVICE HAS ACTUATED, DUE TO A PRESSURE **>10 PSIG** AS SENSED BY DEVICE 63PR

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- LOCAL PRESSURE INDICATOR

OPERATOR ACTIONS FOR A VALID ALARM:

- NOTIFY SYSTEM DISPATCHER
- REFER TO OP-703

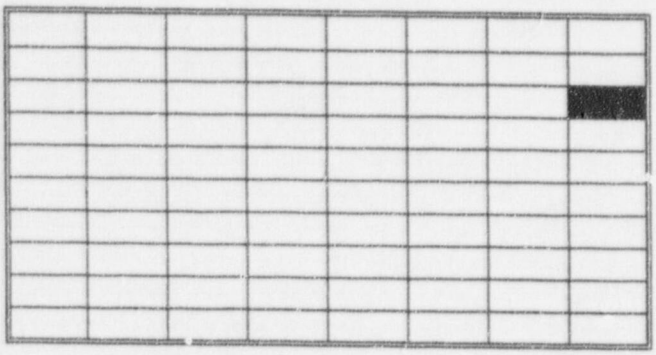
DISCUSSION:

THIS ALARM IS INDICATIVE OF A FAULT INSIDE THE TRANSFORMER, THE LOAD ON THE TRANSFORMER SHOULD BE REDUCED AS MUCH AS POSSIBLE.

REFERENCES: DRAWING 208-079 SHEET SB-018

SENSING ELEMENT: DEVICE 63PR

SSF ANNUNCIATOR RESPONSE	SF-A2-08-03	Q-08-03



OFFSITE PWR
SOURCE XFMR
MAJOR ALARM

EVENT POINT 1423

INDICATED CONDITION:

- OFFSITE POWER TRANSFORMER TEMPERATURE HIGH DUE TO EITHER OIL TEMPERATURE >90°C AS SENSED BY DEVICE 26Q OR WINDING TEMPERATURE >110°C AS SENSED BY DEVICE 49

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- LOCAL INSTRUMENTS FOR WINDING AND OIL TEMPERATURE

OPERATOR ACTIONS FOR A VALID ALARM:

- NOTIFY SYSTEM DISPATCHER
- VERIFY ALL OFFSITE POWER TRANSFORMER OIL PUMPS AND FANS OPERATING
- CONSIDERATION SHOULD BE GIVEN TO REDUCE ELECTRICAL LOAD
- REFER TO OP-703

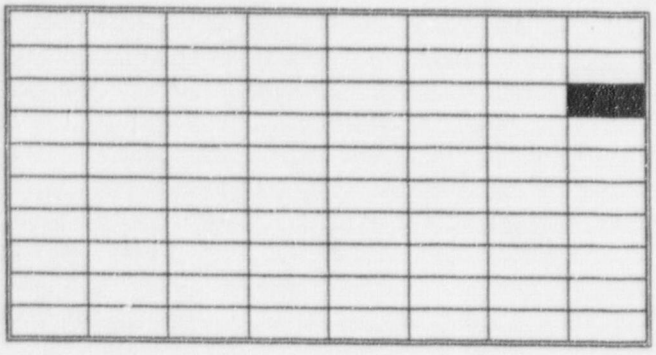
DISCUSSION:

THIS IS INDICATIVE OF A PROBLEM WITH THE TRANSFORMER COOLING SYSTEM CONSIDERATION SHOULD BE GIVEN TO REDUCING THE LOAD ON THE TRANSFORMER. THE FANS WILL AUTO START AT 70°C, THE FANS AND PUMP AUTO START AT 80°C.

REFERENCES: DRAWING 208-079 SHEET SB-018

SENSING ELEMENT: 26Q, 49

SSF ANNUNCIATOR RESPONSE	SF-A2-08-03	Q-08-03



OFFSITE POWER
SOURCE XFMR
MAJOR ALARM

EVENT POINT 1527

INDICATED CONDITION:

- o OFFSITE POWER SOURCE XFMR LOW OIL LEVEL

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o LOCAL LEVEL INSTRUMENT

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER
- o REFER TO OP-703

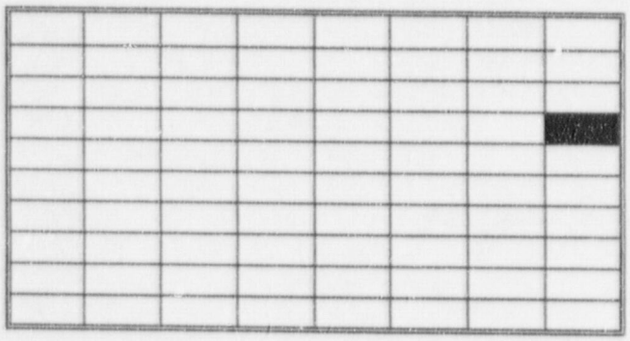
DISCUSSION:

- o SEND OPERATOR TO SWITCHYARD TO CHECK FOR POSSIBLE LEAK & GET READINGS FROM LOCAL INSTRUMENTATION.

REFERENCES: 208-079 - SB-18

SENSING ELEMENT: T9AL(71Q)

SSF ANNUNCIATOR RESPONSE	SF-A2-08-04	Q-08-04



OFFSITE PWR
SOURCE XFMR
MINOR ALARM

EVENT POINT 0496

INDICATED CONDITION:

- OFFSITE POWER TRANSFORMER HAS EXPERIENCED A LOSS OF 480V AUXILIARY POWER AS SENSED BY T9AL(27) VOLTAGE RELAY

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- NOTIFY THE SYSTEM DISPATCHER

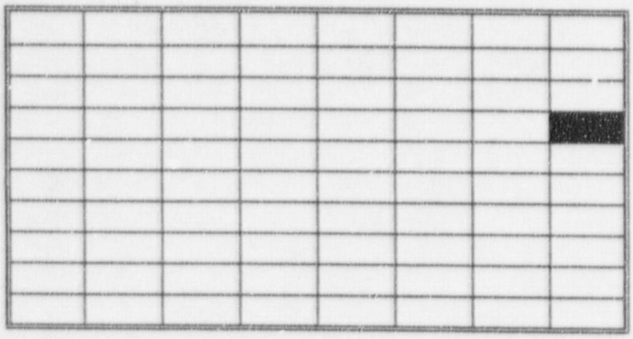
DISCUSSION:

THIS CONDITION SHOULD NOT CAUSE ANY CONCERN, AS THERE IS A BACK UP POWER SUPPLY AS WELL AS A NORMAL POWER SUPPLY. THE TRANSFORMER SHOULD CONTINUE TO BE FUNCTIONAL.

REFERENCES: DRAWING 208-079 SHEET SB-018

SENSING ELEMENT: T9AL(27)

SSF ANNUNCIATOR RESPONSE	SF-A2-08-04	Q-08-04



OFFSITE PWR
SOURCE XFMR
MINOR ALARM

EVENT POINT 0797

INDICATED CONDITION:

- o OFFSITE POWER TRANSFORMER COOLING FANS, OR OIL PUMPS ARE NOT RUNNING AS REQUIRED BY THE TEMPERATURE SWITCHES. AS SENSED BY T9AL(74/TDOE)

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o LOCAL OBSERVATION OF COOLING FANS AND OIL PUMP

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY THE SYSTEM DISPATCHER
- o REDUCE LOAD ON THE TRANSFORMER
- o START ALL PUMPS AND FANS IN MANUAL
- o REFER TO OP-703

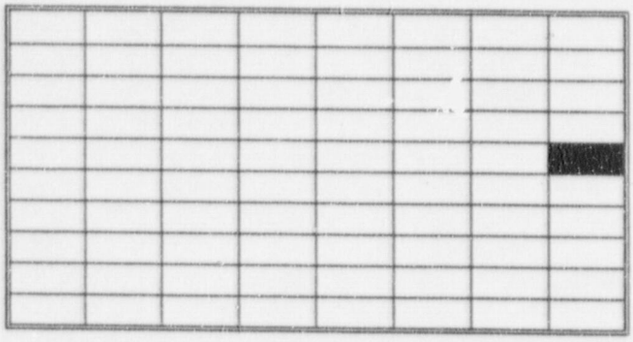
DISCUSSION:

THIS CONDITION COULD CAUSE AN OVERHEATING PROBLEM WITH THE TRANSFORMER, CONSIDERATIONS SHOULD BE GIVING TO UNLOADING THE TRANSFORMER UNTIL THE PROBLEM IS CORRECTED.

REFERENCES: DRAWING 208-079 SHEET SB-018

SENSING ELEMENT: T9AL(74/TDOE)

SSF ANNUNCIATOR RESPONSE	SF-A2-08-05	Q-08-05



BREAKER
4900/4902
TROUBLE

EVENT POINT 0146

INDICATED CONDITION:

- o BREAKER 4900 FAILED TO TRIP OPEN

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o BREAKER 4900 IS CLOSED

OPERATOR ACTIONS FOR A VALID ALARM:

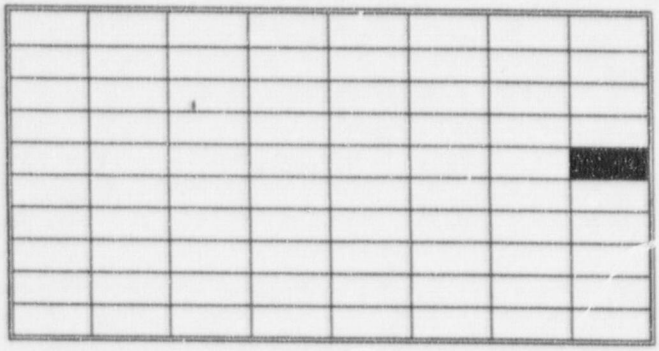
- o OPEN BREAKER 4900
- o NOTIFY SYSTEM DISPATCHER

DISCUSSION:

REFERENCES: DRAWING 208-079, SB-18

SENSING ELEMENT: BF4900

SSF ANNUNCIATOR RESPONSE	SF-A2-08-05	Q-08-05



BREAKER
4900/4902
TROUBLE

EVENT POINT 0147

INDICATED CONDITION:

- o BREAKER 4902 FAILED TO TRIP OPEN

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

- o BREAKER 4902 IS CLOSED

OPERATOR ACTIONS FOR A VALID ALARM:

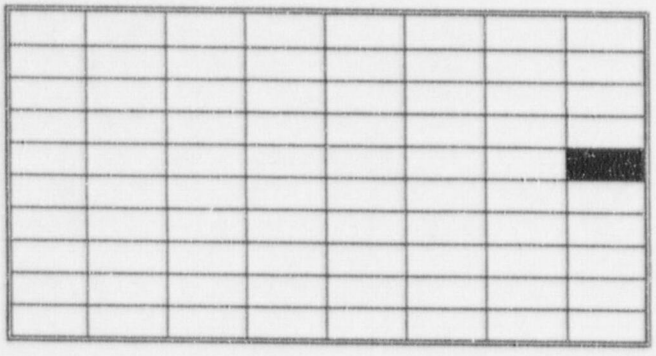
- o OPEN BREAKER 4902
- o NOTIFY SYSTEM DISPATCHER

DISCUSSION:

REFERENCES: DRAWING 209-079, SB-18

SENSING ELEMENT: BF4902

SSF ANNUNCIATOR RESPONSE	SF-A2-08-05	Q-08-05

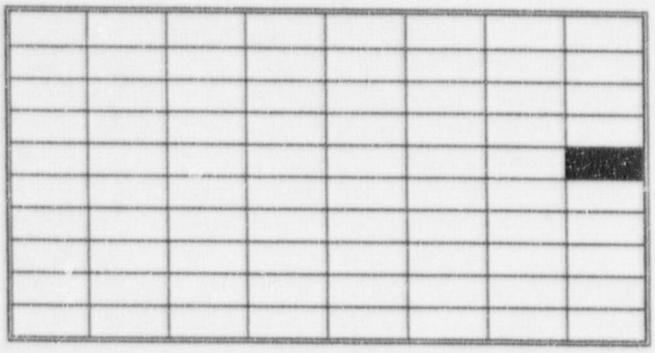


BREAKER
4900/4902
TROUBLE

EVENT POINT 1883

INDICATED CONDITION: o BREAKER 4900 LOW GAS/SPRING CHARGE
REDUNDANT INDICATION WHICH WILL VERIFY ALARM:
OPERATOR ACTIONS FOR A VALID ALARM: o NOTIFY SYSTEM DISPATCHER
DISCUSSION:
REFERENCES: DRAWING 229-109
SENSING ELEMENT: 48EE, 48FF

SSF ANNUNCIATOR RESPONSE	SF-A2-08-05	Q-08-05



BREAKER
4900/4902
TROUBLE

EVENT POINT 1891

INDICATED CONDITION:

- o BREAKER 4902 LOW GAS/SPRING CHARGE

REDUNDANT INDICATION WHICH WILL VERIFY ALARM:

OPERATOR ACTIONS FOR A VALID ALARM:

- o NOTIFY SYSTEM DISPATCHER

DISCUSSION:

REFERENCES: DRAWING 229-110

SENSING ELEMENT: 48KK, 48LL

PROCEDURE DEVELOPMENT AND REVISION RECORD

Procedure: AR0702 New Rev: 17 PRR#: 16119

Title: SSF-Q ANNUNCIATOR RESPONSE

MINOR CHANGES

If Minor Changes are included, check the applicable box(es) and provide a list of affected steps.
The following corrections are incorporated throughout:

- _ Sentence Structure
- _ Punctuation
- _ Capitalization
- _ Spelling
- _ Organizational Changes: position titles, department names, or telephone numbers
- _ Redundant words or phrases
- _ Abbreviations
- _ Obviously incorrect units of measure
- _ Inadvertently omitted symbols (#, %, etc.)
- _ Obvious step numbering discrepancies
- _ Format

The following corrections are incorporated in the step(s) indicated: "Throughout" is used in lieu of Step# if a specific change affects a large number of steps.

Correcting equipment nomenclature that does not agree with field labels or balance of procedure

---

Changing information that is obviously incorrect and referenced correctly elsewhere

---

Misplaced decimals that are neither setpoint values nor tolerances

---

Reference to a procedure when an approved procedure has taken the place of another procedure

---

Fixing branching points when it is clear the branching steps were originally intended but were overlooked or incorrectly stated due to step number changes

---

Adding clarifying information such as NOTES and CAUTIONS

Adding words to clarify steps, NOTES, or CAUTIONS which clearly do not change the methodology or intent of the steps

---

PROCEDURE DEVELOPMENT AND REVISION RECORD

Procedure: AR0702 **New Rev:** 17 **PRR#:** 16119

Title: SSF-Q ANNUNCIATOR RESPONSE

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PROCEDURE DEVELOPMENT AND REVISION RECORD

Procedure: AR0702 **New Rev:** 17 **PRR#:** 16119

Title: SSF-Q ANNUNCIATOR RESPONSE

NON-INTENT CHANGES

Changes are incorporated for the reasons provided. "Throughout" is used in lieu of Step # if a specific change affects a large number of steps. For new or cancelled procedures the reason is provided.

Event point 568	this event point was removed in error by the previous revision.
Event point 571	this event point was removed in error by the previous revision.