

CAROLINA POWER AND LIGHT COMPANY

H. B. ROBINSON SEG PLANT

PLANT OPERATING MANUAL

FOR INFORMATION ONLY

VOLUME 3

PART 4

END PATH PROCEDURE

EPP-1

LOSS OF ALL AC POWER

REVISION 11

Effective Date 5/31/93

RECOMMENDED BY: E. V. Lane 5-27-93
Operations Procedure Coordinator Date

APPROVED BY: Allen R. Wallace 5/27/93
Manager - Operations Date

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CONTROLLED
RECIPIENT
ID 228

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1.0 PURPOSE

This procedure provides actions to respond to a loss of all AC power.

2.0 ENTRY CONDITIONS

1. Upon any indication that all main and emergency AC busses are de-energized.
2. Path-1, upon indication that E-1 and E-2 busses are de-energized.

STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

CAUTION

- Critical Safety Function Status Trees are monitored for information only. This procedure is not exited to implement any Function Restoration Procedure.
- De-energized inputs cause erroneous values for ERFIS averaged parameters.

NOTE

Steps 1 through 4.a are Immediate Action steps.

1. Check Reactor Trip: Trip reactor.
 - REACTOR TRIP MAIN AND BYP
BKR's - OPEN
 - Neutron flux - DECREASING
2. Check Turbine Trip:
 - a. All turbine stop valves - CLOSED
 - a. Trip turbine.

STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

3. Check If RCS Is Isolated:

a. PZR PORVs - CLOSED

- PCV-455C
- PCV-456

b. LTDN LINE STOPs - CLOSED

- CVC-460A
- CVC-460B

c. EXCESS LTDN STOP - CLOSED

- CVC-387

d. RCS VENT SYSTEM valves -
CLOSED

- RC-567
- RC-568
- RC-569
- RC-570
- RC-571
- RC-572

a. IF PZR pressure less than
2335 psig, THEN close PZR
PORVs.

b. Close valves.

c. Close valve.

d. Close valves.

STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

4. Check AFW Flow:

- a. AFW flow - GREATER THAN
300 GPM

- a. Perform the following:

- 1) Locally open at least one
of the following SDAFW
Pump supply valves:

- V1-8B
- V1-8C

- 2) Maintain wide range level
in S/Gs B and C between
59% [74%] and 67% [83%] by
locally throttling SDAFW
Pump discharge valves:

- V2-14B
- V2-14C

- b. Maintain S/G levels - BETWEEN

- 10% [24%] and 50%

OR

- 59% [74%] WR and
67% [83%] WR

STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

5. Isolate S/G A:

a. Verify steam flow to SDAFW Pump:

- V1-8B OR V1-8C - OPEN

a. Perform the following:

1) Locally open the following SDAFW Pump supply valves:

- V1-8B
- V1-8C

2) Maintain wide range level in S/Gs B and C between 59% [74%] and 67% [83%] by locally throttling SDAFW Pump discharge valves:

- V2-14B
- V2-14C

b. Locally close the following valves:

- V1-8A, S.G. "A" STEAM SUPPLY TO AUXILIARY FWP
- V2-14A, STEAM DRIVEN FWP FDWTR DSCHG TO S/G "A"

6. Locally Establish Emergency Cooling Water To The SDAFW Pump:

- a. SW-246, INLET TO TCV-1902A - CLOSED
- b. SW-251, OIL COOLER OUTLET DRAIN - CLOSED
- c. SW-259, EMERGENCY OIL COOLER SUPPLY - OPEN
- d. SW-252, EMERGENCY OIL COOLER RETURN - OPEN
- e. SW-253, EMERGENCY OIL COOLER RETURN - UNLOCKED AND OPEN

STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

NOTE

- EDGs started from the RTGB will pre-lube for 4 to 4.5 minutes prior to starting.
- If it becomes necessary to implement EPP-21, Energizing Pressurizer Heaters From Emergency Busses and EPP-22, Energizing Plant Equipment Using Dedicated Shutdown Diesel Generator, both procedures should be completed within 1 hour following the loss of all AC power.
- If staffing levels allow only one procedure at a time to be performed, then EPP-22 should be performed first.

7. Restore Power To E-1 AND E-2:

a. Energize E-1 AND E-2 with
EDGs:

1) Start EDGs from the RTGB

1) Start EDGs using one or
both SAFETY INJECTION
pushbuttons.

(CONTINUED NEXT PAGE)

STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

7. (CONTINUED)

2) Check E-1 AND E-2 busses to be automatically energized:

- EDG A voltage - APPROXIMATELY 480 VOLTS AND output breaker 52-17B - CLOSED
- EDG B voltage - APPROXIMATELY 480 VOLTS AND output breaker 52-27B - CLOSED

2) IF E-1 OR E-2 is energized, THEN Go To Step 7.c.

IF either bus can NOT be energized, THEN perform the following:

- Continue attempts to energize E-1 OR E-2 from EDGs.
- Attempt to energize E-1 OR E-2 from offsite power.
- Check the following annunciators - EXTINGUISHED
 - APP-10-E2, EDG A LUBE OIL HI/LO TEMP
 - APP-10-E3, EDG B LUBE OIL HI/LO TEMP
 - APP-10-F2, EDG A COOL WTR HI/LO TEMP
 - APP-10-F3, EDG B COOL WTR HI/LO TEMP

IF any annunciators illuminate, THEN locally determine if a high temperature condition exists.

IF a high temperature condition exists, THEN shutdown the affected EDG.

(CONTINUED NEXT PAGE)

STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

7. (CONTINUED)

b. Check E-1 AND E-2 busses - AT
LEAST ONE ENERGIZED

b. Perform the following:

1) Complete the actions of
EPP-22, Energizing Plant
Equipment Using Dedicated
Shutdown Diesel Generator
AND EPP-21, Energizing
Pressurizer Heaters From
Emergency Busses, within 1
hour following the loss of
all AC power, while
continuing with this
procedure.

2) Observe Note prior to
Step 8 AND Go To Step 8.

c. Return to procedure and step
in effect

NOTE

Opening cabinet doors in the Control Room and Hagan Room facilitates
equipment cooling.

8. Open All Cabinet Doors In The
Control Room And Hagan Room
Within 30 Minutes Of Entry Into
This Procedure

STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

* 9 IF Control Room Temperature Rises To A Level Which Is Uncomfortable For Habitation, AND The Outside Air Temperature Is Less Than The Control Room Air Temperature, THEN Perform The Following:

- a. Open door from Control Room Vestibule to the outside
- b. Open door from the stairwell adjoining the Hagan Room to the outside
- c. Open all interior doors in the Control Room and Hagan Room

NOTE

- The 16 inch Super Vac Portable Blower and flexible duct are located in the Fire Equipment Building.
- Actions to limit the Control Room air temperature to 120°F may not be necessary until three hours after the start of the Station Blackout.

*10 IF Control Room Temperature Is Expected To Exceed 120°F, THEN Contact The Plant Operations Director To Place The 16 Inch Super Vac Portable Blower And 40 Feet Or Less Of Flexible Duct Into Service To Force Outside Air Into The Control Room

STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

- *11 Perform The Following As Applicable Under Changing Plant Conditions:
- WHEN power is restored to either E-1 OR E-2 emergency bus, THEN continue recovery actions by observing the Caution prior Step 34 and Go To Step 34
 - IF an SI signal exists or is initiated during this procedure, THEN reset SI to permit manual loading of equipment on an emergency bus
 - Maintain a SW Pump available to automatically load on its emergency bus to provide EDG cooling
12. Verify Open AND Locally Remove Control Power Fuses For The Following Breakers:
- CV Spray Pumps
 - SI Pumps
 - RHR Pumps
 - HVH 1,2,3,4
 - MDAFW Pumps
 - CCW Pumps B and C

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STEP	INSTRUCTIONS	RESPONSE NOT OBTAINED
13.	<p>Perform The Following Actions At The EDG Engine Control Panel To Restore AC Power:</p> <ol style="list-style-type: none"> Place the EDG control switches to LOCAL Start the EDGs by depressing the START pushbutton Check EDGs - AT LEAST ONE RUNNING 	<ol style="list-style-type: none"> Open the following breakers to open the starting air solenoid valves: <ul style="list-style-type: none"> Breaker 24 on 125V DC MCC A. Breaker 12 on 125V DC MCC B. <p><u>IF</u> either EDG starts <u>OR</u> starting air receiver pressure is less than 80 psig, <u>THEN</u> close the breakers for the starting air solenoids.</p> <p><u>IF</u> at least one EDG running, <u>THEN</u> Go To Step 13.d.</p> <p><u>IF NOT</u>, <u>THEN</u> Go To Step 14.</p>
	<ol style="list-style-type: none"> Close the operating EDG output breakers at the EDG Generator Control Panel Check E-1 <u>AND</u> E-2 emergency busses - AT LEAST ONE ENERGIZED Observe <u>CAUTION</u> prior to Step 34 <u>AND</u> Go To Step 34 	<ol style="list-style-type: none"> Close the operating EDG output breakers at the E-1/E-2 bus. Continue attempts to restore AC power from EDGs or offsite power. <p>Go To Step 14.</p>

STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

- *14 Determine the progress of EPP-22 implementation begun in Step 7:

IF RCP seal cooling is established OR will be established, THEN Go To Step 15

IF RCP seal cooling can NOT be established, THEN close CVC-381, SEAL WTR RTRN ISO

15. Connect STEAM LINE PORVs To Steam Dump Nitrogen Accumulator System Using Attachment 2 Of AOP-17, Loss Of Instrument Air, While Continuing With This Procedure

16. Locally Close C-47, CST MAKEUP TO HOTWELL

17. Close The Following:

- a. MSIVs AND MSIV BYPs
- b. FW REGs AND FW REG BYPs
- c. S/G-Blowdown AND Sample isolation valves

IF valves can NOT be closed from RTGB, THEN locally close valves.

18. Identify Faulted S/Gs:

- a. Check pressure in all S/Gs:

- ANY S/G PRESSURE DECREASING IN AN UNCONTROLLED MANNER

OR

- ANY S/G COMPLETELY DEPRESSURIZED

- a. Go To Step 20.

19. Isolate Faulted S/Gs Using Supplement G

STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

*20 Identify Ruptured S/Gs:

- a. Condenser air ejector radiation level - NORMAL
- b. S/G steamline radiation levels - NORMAL

21. Maintain Any S/G That Has Been Isolated Using Supplement G In An Isolated Condition

22. Maintain Steam Supply To The SDAFW Pump From At Least One S/G

23. Check Intact S/G Levels:

a. S/G levels:

- GREATER THAN 10% [24%]

OR

- WIDE RANGE S/G LEVELS GREATER THAN 59% [74%]

b. Control AFW flow to maintain S/G levels:

- BETWEEN 10% [24%] AND 50%

OR

- WIDE RANGE S/G LEVELS BETWEEN 59% [74%] AND 67% [83%]

Try to identify ruptured S/G.

IF level in any S/G continues to increase in an uncontrolled manner, THEN isolate the ruptured S/G using Supplement G.

a. Maintain maximum AFW flow until either:

- At least one S/G level greater than 10% [24%].

OR

- At least one S/G wide range level greater than 59% [74%].

b. IF level in any S/G continues to increase in an uncontrolled manner, THEN isolate the ruptured S/G using Supplement G.

STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

24. Check DC Bus Loads:

- a. Battery A - CURRENT LESS THAN 255 AMPS
- b. Battery B - CURRENT LESS THAN 115 AMPS
- c. Main Turbine - AT ZERO SPEED

- a. Shed loads from Battery A using Attachment 1, Load Shed Listing.
- b. Shed loads from Battery B using Attachment 1, Load Shed Listing.
- c. Monitor EMERG OIL PUMP and AIR SIDE SEAL OIL BACKUP PUMP power supply in Battery Room C.

WHEN Main Turbine at zero speed, THEN stop the EMERG OIL PUMP AND AIR SIDE SEAL OIL BACKUP PUMP.

Go To Step 25.

- d. Stop EMERG OIL PUMP AND AIR SIDE SEAL OIL BACKUP PUMP

25. Check CST Level - GREATER THAN 10%

Switch to alternate AFW water supply using OP-402, Auxiliary Feedwater System, while continuing with this procedure.

IF alternate AFW water supply NOT available, THEN fill the CST using fire hoses and the Unit 2 Diesel Driven Fire Pump using Attachment 2.

STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

CAUTION

- Accumulator nitrogen will be injected into the RCS if S/G pressures are decreased below 200 psig.
- S/G A is to remain isolated and is NOT to be depressurized.
- S/G depressurization is not stopped to prevent Reactor Vessel upper head voiding or loss of PZR level.

NOTE

The S/Gs are depressurized at maximum rate to minimize RCS inventory loss.

*26 Depressurize Intact S/Gs B AND C
At Maximum Rate To 300 PSIG

a. Check S/G levels:

- GREATER THAN 10% [24%] IN
AT LEAST ONE S/G

OR

- WIDE RANGE LEVEL GREATER
THAN 59% [74%] IN AT
LEAST ONE S/G

a. Perform the following:

- 1) Maintain maximum AFW flow
until either:
 - At least one S/G level
greater than 10% [24%].

OR

- At least one S/G wide
range level greater
than 59% [74%].

- 2) WHEN level greater than
10% [24%] OR wide range
level greater than 59%
[74%] in at least one S/G,
THEN perform Steps 26.a
through 26.f.

Go To Step 27.

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STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

26. (CONTINUED)

- b. Maintain S/G level greater than 10% [24%] OR wide range greater than 59% [74%] in at least one intact S/G during S/G depressurization

IF S/G level can NOT be maintained, THEN stop S/G depressurization until level is restored in at least one S/G

- c. IF steam dump nitrogen hook-up initiated in Step 15 has been completed, THEN dump steam at maximum rate using STEAM LINE PORVs B and C

Do NOT stop S/G depressurization to prevent reactor vessel upper head voiding or loss of PZR level

- d. Check RCS cold leg temperatures - GREATER THAN 345°F

- e. Check S/G pressures - LESS THAN 300 PSIG

- c. Dump steam at maximum rate as follows:

- 1) Locally open the following steam valves:

- MSIV above and below seat drains for S/Gs B and C.
- MSIV BYPs for S/Gs B and C.
- Seventy-two inch Header drain AND vent valves.
- North Header drain valves.
- South Header drain valves.

- d. Perform the following:

- 1) Stop S/G depressurization.
- 2) Go To Step 27.

- e. WHEN S/G pressures decrease to less than 300 psig, THEN perform Step 26.f.

Go To Step 27.

(CONTINUED NEXT PAGE)

STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

26. (CONTINUED)

f. Control STEAM LINE PORVs to maintain S/G pressures at 300 psig

f. Locally control steam valves to maintain S/G pressures at 300 psig.

27. Check Reactor Subcritical:

- Intermediate range channels - ZERO OR NEGATIVE STARTUP RATE
- Source range channels - ZERO OR NEGATIVE STARTUP RATE

Reduce rate of dumping steam to allow RCS temperature to increase.

NOTE

Depressurization of S/Gs will result in an SI signal initiation. The SI signal is reset to permit manual loading of equipment on E-1 and E-2 emergency busses.

*28 Check SI Signal Status:

a. SI - HAS BEEN ACTUATED

a. WHEN SI initiated, THEN perform Steps 28.b, 29, 30 and 31.

Go To Step 32.

b. Reset SAFETY INJECTION

29. Check CONTAINMENT ISOLATION PHASE A Valves - CLOSED

Initiate CONTAINMENT ISOLATION.

IF Phase A valves do NOT close, THEN locally isolate affected CV penetration.

30. Check CONTAINMENT VENTILATION ISOLATION Valves - CLOSED

Depress H.V. OFF on R-11 OR R-12 to initiate Containment Ventilation Isolation.

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STEP	INSTRUCTIONS	RESPONSE NOT OBTAINED
31.	Check If CV Spray Is Required:	
	a. CV pressure - HAS INCREASED TO GREATER THAN 20 PSIG	a. Go To Step 32.
	b. Check CONTAINMENT ISOLATION PHASE B Valves - CLOSED	b. Close valves.
	c. Reset CONTAINMENT SPRAY	
32.	Check CV Radiation - LESS THAN 100 R/HR	Initiate CONTAINMENT ISOLATION. <u>IF</u> Phase A valves do <u>NOT</u> close, <u>THEN</u> locally isolate affected CV penetration.

STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

33. Check If Power Is Restored To
E-1 OR E-2:

a. Check E-1 AND E-2 - AT LEAST
ONE ENERGIZED

a. Continue to control RCS
conditions and monitor plant
status:

1) Check status of local
actions initiated to
accomplish the following:

- Restore power to E-1
and E-2 emergency
busses, begun in
Step 7.
- Monitor DC power
supplies, begun in
Step 24.
- Install temporary
nitrogen supply to
STEAM LINE PORVs,
begun in Step 15.
- Completion of EPP-21,
Energizing Pressurizer
Heaters From Emergency
Busses and EPP-22,
Energizing Plant
Equipment Using
Dedicated Shutdown
Diesel Generator,
begun in Step 7.

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STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

33. (CONTINUED)

- 2) Locally check Boric Acid Tank temperatures greater than 155°F.

IF temperature less than 155°F, THEN consult Plant Operations Staff and initiate action to drain tanks and piping as necessary.

- 3) Locally check Spent Fuel Pit level greater than 36 feet, 2.5 inches.

IF level less than 36 feet, 2.5 inches, THEN consult Plant Operations Staff to initiate makeup to the Spent Fuel Pit

- 4) Go To Step 18.

STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

CAUTION

If only one SW Pump is running, it is subject to runout until the following step is completed.

34. Check SW Pump Availability:

a. SW PUMPS - AT LEAST TWO
RUNNING

a. Start additional SW Pumps to
obtain at least two running.

IF at least two SW Pumps NOT
running, THEN perform the
following:

1) Isolate SW to the Turbine
Building by closing:

- V6-16C

OR

- V6-16A AND V6-16B

2) Open root isolation valves
for PX-1619A AND B on SW
outlet from CCW Heat
Exchangers

3) Perform the CCW Heat
Exchanger Outlet Isolation
Valve lineup as follows:

- Close SW-739 AND
throttle SW-740 to
maintain SW Header
pressure between
40 psig and 50 psig

OR

- Close SW-740 AND
throttle SW-739 to
maintain SW Header
pressure between
40 psig and 50 psig.

STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

CAUTION

EDG temperatures may exceed alarm setpoints at any time during subsequent recovery actions.

*35 Check EDG Cooling:

IF any annunciators illuminate, THEN locally determine if a high temperature condition exists.

a. Check the following
annunciators - EXTINGUISHED

- APP-10-E2, EDG A LUBE OIL
HI/LO TEMP
- APP-10-E3, EDG B LUBE OIL
HI/LO TEMP
- APP-10-F2, EDG A COOL WTR
HI/LO TEMP
- APP-10-F3, EDG B COOL WTR
HI/LO TEMP

IF a high temperature condition exists, THEN shutdown the affected EDG.

IF EDG A AND EDG B are shutdown, THEN DO NOT continue with this procedure. Consult Plant Operations Staff for further guidance.

b. Continue to monitor EDG temperatures throughout subsequent recovery actions

STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

NOTE

MCC-16 cannot be energized from E-1 while MCC-5 is energized from the DS Bus.

*36 Check SW System Operation:

a. SW PUMPS - AT LEAST THREE
RUNNING

a. Start additional SW Pumps to
obtain at least three running.

IF at least three SW Pumps
NOT running, THEN isolate SW
to the Turbine Building by
closing:

- V6-16C

OR

- V6-16A AND V6-16B

b. SERVICE WATER BOOSTER PUMPS -
ALL STOPPED

b. Observe Caution prior to
Step 37 AND Go To Step 37.

c. Check if SW Booster Pump may
be started:

c. WHEN the conditions of
Step 36.c are achieved, THEN
perform Steps 36.d and 36.e.

- Two SW Pumps Running

Observe Cautions prior to
Step 37 AND Go To Step 37.

AND

- MCCs are energized as
follows:

MCC-16 for SW Booster
Pump A

OR

MCC-18 for SW Booster
Pump B

d. Start One SW Booster Pump

e. Throttle SW-739 OR SW-740 to
maintain SW Header pressure
between 40 psig and 50 psig

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STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

CAUTION

- If the loads placed on the energized E-1 or E-2 Emergency Busses exceed the capacity of the power source, the supply breaker will trip.
- A loss of DC power may occur if the DC busses are at maximum load and the battery chargers are not restarted within 60 minutes of a loss of all AC power.

37. Check The Following Equipment Load equipment, as necessary.
Loaded On E-1 AND E-2 Emergency
Busses:

a. Instrumentation and control:

- MCC-5 AND MCC-16
energized from E-1
- MCC-6 AND MCC-18
energized from E-2
- MCC-10 energized from
MCC-5
- MCC-9 energized from MCC-6

b. Load battery chargers using
OP-601, DC Supply System:

- Battery Charger A OR A-1
on MCC-5
- Battery Charger B OR B-1
on MCC-6

c. Load Instrument Air
Compressors:

- Instrument Air
Compressor A on MCC-5
- Instrument Air
Compressor B on MCC-6

d. Emergency lighting

- Lighting Panel LP-29
energized from MCC-5

e. Communications - PA system:

- Power Panel PP-48
energized from MCC-6

STEP

INSTRUCTIONS

RESPONSE NOT OBTAINED

38. Stabilize S/G Pressures:

a. Adjust STEAM LINE PORV controllers to maintain existing S/G pressures

a. Locally control STEAM LINE PORVs to maintain existing S/G pressures.

b. Locally close the following valves if previously opened for S/G depressurization:

- MSIV above and below seat drains for S/Gs B and C
- MSIV BYPs for S/Gs B and C
- Seventy-two inch Header drain AND vent valves
- North Header drain valves
- South Header drain valves

39. Select Recovery Procedure:

a. RCS subcooling - GREATER THAN 25°F [40°F]

a. Go To EPP-3, Loss Of All AC Power Recovery With SI Required.

b. PZR level - GREATER THAN 10% [30%]

b. Go To EPP-3, Loss Of All AC Power Recovery With SI Required.

c. Check SI signal - IS REQUIRED

c. Go To EPP-2, Loss Of All AC Power Recovery Without SI Required.

d. Go To EPP-3, Loss Of All AC Power Recovery With SI Required

- END -

ATTACHMENT 1LOAD SHED LISTING

1. Perform All Load Shedding Under The Direction Of The Shift Supervisor OR The Senior Control Operator
2. The Shift Supervisor May Modify This Load Shed Listing As Appropriate For The Plant Condition And Configuration.
 - a. Refer to the Electrical Distribution Procedures, Volume 3, Part 12, for additional loads to shed
3. Do NOT shed Inverter A OR Inverter B
4. Obtain A 10 Amp Fuse Puller From The Control Room To Assist In Shedding Circuit 23
5. Shed The Loads Given In Steps 6 Through 11
6. 125V DC MCC A and Distribution Panel Loads:
 - a. Circuit 7, Startup Transformer Motor Operated Disconnects
 - b. Circuit 10, Reactor Trip Breaker A and Reactor Trip Bypass Breaker B
 - c. Circuit 12, Rod Drive MG Set A
 - d. Circuit 13, Exciter Field Breaker
 - e. Circuit 14, Gas Stripper Control Cabinet A
 - f. Circuit 15, Generator Protective Relay Panel
 - g. Circuit 17, Auxiliary Transformer Annunciator
 - h. Circuit 22, Turbine Auto Trip

ATTACHMENT 1 (Continued)LOAD SHED LISTING

7. 125V DC MCC B and Distribution Panel Loads:
 - a. Circuit 9, Reactor Trip Breaker B and Reactor Trip Bypass Breaker A
 - b. Circuit 13, Turbine Emergency Trip
 - c. Circuit 14, Gas Stripper Panel B
 - d. Circuit 15, Gas Analyzer Panel
 - e. Circuit 17, Generator Lockout Relay
 - f. Circuit 19, Reverse Current Valves
 - g. Circuit 23, Steam Driven AFW Pump Control Power
 - h. Circuit 24, Rod Drive MG Set B
8. 125V DC MCC B - A Loads:
 - a. Circuit 1, Rad Waste Evaporator
 - b. Circuit 5, Rad Waste Evaporator
9. Instrument Bus 2 Loads:
 - a. Circuit 10, Quenching Valve Control
 - b. Circuit 13, Miscellaneous flow, level and temperature controls, FIC 632
 - c. Circuit 15, Turning Gear Automatic Control
 - d. Circuit 16, Waste Disposal System Panel
10. Instrument Bus 3 Loads:
 - a. Circuit 15, Exhaust Hood Spray Valves
 - b. Circuit 16, Governor Valves, Rotor - Position and Speed
 - c. Circuit 17, Fixed Incore Instrumentation
 - d. Circuit 18, Load, Frequency Control Panel

ATTACHMENT 1 (Continued)LOAD SHED LISTING

11. Instrument Bus 7 Loads:

a. Circuit 34, Aux Panel DB Turbine Emergency Trip

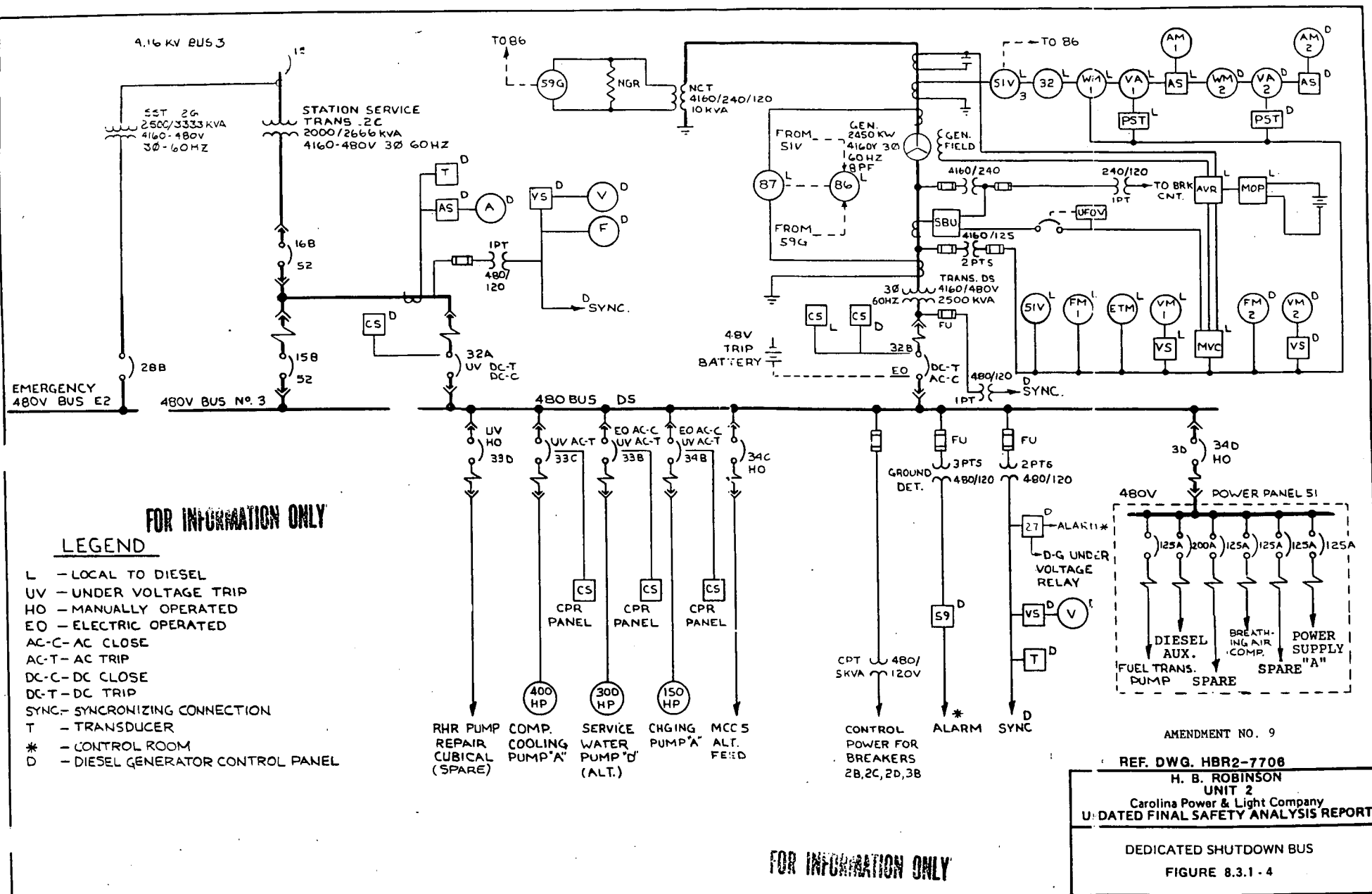
- END -

ATTACHMENT 2CST EMERGENCY FILL FROM FIRE SYSTEM

1. Contact The TSC To Instruct Maintenance To Perform The Following:
 - a. Install the CST Emergency Fill Manifold, located in the gangbox west of the Main FW Pumps, on the flange at the west side of the CST between C-411 and CDR-78
 - b. Install the fire hoses from the hydrant to the manifold. The hose station and hydrant by the main transformer may be used
2. Close CDR-78, Condensate Storage Tank to Sluice Water Pump
3. Open C-411, Condensate Polishing System Sluicing
4. Open hydrant
5. Check Diesel Driven Fire Pump - RUNNING

IF diesel driven fire pump NOT running, THEN contact Fire Protection Technician to start the pump
6. Run fire pump to maintain CST level - GREATER THAN 10%

- END -



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ANO	SUP	FPAC	PAGES	AVAIL
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NEW CODES

AA	RA	DKT	TASK	F2	DESCRIPTION:
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PRIMARY FILE LOCATION/LEVEL

DSB #:

FCEN	F1	F2	F3
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NOTES/SPECIAL INSTRUCTIONS

INDEXER QC DDC

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Encl Contains Prop Info

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