

SOUTH CAROLINA ELECTRIC AND GAS COMPANY

VIRGIL C. SUMMER NUCLEAR STATION

NUCLEAR OPERATIONS

POWER OPERATION TESTING

STATION ELECTRICAL BLACKOUT

POT-11

REVISION 1

MAY 6, 1982

NUCLEAR OPERATIONS

COPY No. 1

SAFETY RELATED (X)

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5/10/82
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Form AP-101-2, (1/80)

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ATTACHMENTS

ATTACHMENT I - DATA SHEET 1 - PLANT PARAMETERS SUMMARY SHEET

1.0 PURPOSE

- 1.1 To demonstrate that the necessary equipment, controls, and indications are available, following the isolation of the offsite power distribution system, to remove decay heat from the core using only emergency power supplies.

2.0 REFERENCES

- 2.1 V.C. Summer FSAR, Table 14.1-78.
- 2.2 V.C. Summer FSAR, Section 8.3.
- 2.3 AP-1700 Power Ascension Test Program.

3.0 PREREQUISITES

INITIAL/ DATE

3.1 The plant is operating steady-state at greater than or equal to 10% generator output (P-7 energized) _____/_____

3.2 Operation of OCB8902 has been cleared through the dispatcher and a switching order, form OD54SCE, has been filled in for both opening and closing the breaker. _____/_____

3.3 The normal at-power electrical distribution lineup exists. Both Diesel Generators are operable. _____/_____

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4.0 SPECIAL TEST EQUIPMENT

INITIAL/ DATE

NONE

5.0 LIMITATIONS AND PRECAUTIONS

INITIAL/ DATE

- 5.1 Ensure that sealwater injection flow and component cooling water flow to the RCP's are maintained throughout this test.

_____/____

- 5.2 Limit RCS cooldown equal to or less than 50°F for the 30 minute duration of the test.

_____/____

6.0 TEST METHOD

INITIAL/ DATE

- 6.1 Place the Supplemental Instrument Air Compressor in service, supplying the Instrument Air System, per SOP-220. _____/_____
- 6.2 Start Diesel Generator B per SOP-306. _____/_____
- 6.3 Load Diesel Generator B, per SOP-306, to carry the load on bus 1DB. _____/_____
- 6.4 When Diesel Generator B operating parameters stabilize, open bus 1DB normal and alternate feeder breakers. _____/_____
- 6.5 Push the emergency start pushbutton for Diesel Generator B. _____/_____
- 6.6 Ensure buses 1A, 1B and 1C are being fed by their normal feeder breakers per SOP-302. _____/_____
- 6.7 Ensure the transfer switches for buses 1A, 1B and 1C are in manual. _____/_____
- 6.8 Notify the System Dispatcher of the impending load transient. _____/_____
- 6.9 Record the "BEFORE" data on Attachment I. _____/_____
- 6.10 Announce the impending transient over the plant page. _____/_____

6.0 TEST METHOD

INITIAL/ DATE

6.11 Perform the following actions as close together as possible
(within 5 seconds):

6.11.1 Trip the main turbine. _____/_____

6.11.2 Open the generator output breaker. _____/_____

6.11.3 Open OCB-8902. _____/_____

6.11.4 Open bus 1DA normal and alternate feeder breakers. _____/_____

6.12 Verify the following:

6.12.1 Reactor trip. _____/_____

6.12.2 Turbine trip. _____/_____

6.12.3 Reactor Coolant Pumps tripped. _____/_____

6.12.4 Diesel Generator A starts and loads. _____/_____

6.13 Utilize EOP-4 and EOP-13 to stabilize the plant at Hot ^{standby} ~~Shutdown~~ conditions. (Some Steps will not be applicable because the B Train Load Sequencer was not started and they should be marked N/A).

6.14 Secure unnecessary loads on Diesel Generator A,
AS decided by the Shift Supervisor. _____/_____

6.15 When the plant has been stabilized at Hot ^{standby} ~~Shutdown~~, note the time and record the "AFTER" data on Attachment I. _____/_____

6.0 TEST METHOD

INITIAL/ DATE

Standby

6.16 Maintain stable Hot ~~Shutdown~~ conditions for 30 minutes.

_____/____

6.17 Record the "AFTER 30 MINUTES" data on Attachment I.

_____/____

6.18 Restore power to buses 1A, 1B, 1C, 1DA and 1DB per SOP's 302 and 304.

_____/____

7.0 DATA REQUIREMENTS

INITIAL/ DATE

- 7.1 The completion of each Step will be indicated by initialing and dating in ink in Section 6 and the attached data sheets. The signing or initialing of a part of procedure signifies that, based on personal observation or reports from assigned test personnel, the Step has been performed as written and the results are as recorded.
- 7.2 The Official Test Copy of the completed test procedure, along with the data collected, will be retained by Document Control as part of the plant historical record.

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8.0 ACCEPTANCE CRITERIA INITIAL/ DATE

LEVEL I

- 8.1 The Hot Standby condition is acheived and maintained for at least 30 minutes, using only emergency on-site power sources.

_____/____

DATA SHEET 1

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PLANT PARAMETERS SUMMARY SHEET

PLANT PARAMETER (Units)	INST. TAG NO.	RECORD DATA		
		BEFORE	AFTER	AFTER 30 MIN.
Pressurizer Pressure - Control Channel (psig)	PR-444 Red Pen			
Pressurizer Level - Control Channel (%)	LR-459 Red Pen			
Turbine First Stage Pressure (psig)	PI-446 or 447			----
Tavg - Auctioneered (°F)	TR-408 Red Pen			
T Loop "A" (control) (%)	TI-411B MCB			
T Loop "B" (control) (%)	TI-421B MCB			
T Loop "C" (control) (%)	TI-431B MCB			
Nuclear Power Level Channel (any PR channel)	NR-45			----
Control Bank C Position (steps)	Step Counter			----
Control Bank D Position (steps)	Step Counter			----
RCS Flow Loop "A" (%)	FI-415 MCB			
RCS Flow Loop "B" (%)	FI-425 MCB			
RCS Flow Loop "C" (%)	FI-435 MCB			
TIME	Clock			

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DATA SHEET 1

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PLANT PARAMETERS SUMMARY SHEET

PLANT PARAMETER (Units)	INST. TAG NO.	RECORD DATA		
		BEFORE	AFTER	AFTER 30 MIN.
Main Steam Hdr. Pressure (psig)	PI-464C			
FW Pump Discharge Hdr. Pressure (psig)	PI-508			
FW Pump A Speed (rpm)	SI-3347			----
FW Pump B Speed (rpm)	SI-3348			----
FW Pump C Speed (rpm)	SI-3349			----
Steam Pressure S/G A (psig)	PR-475 Red Pen			
Steam Pressure S/G B (psig)	PR-475 Green Pen			
Steam Pressure S/G C (psig)	PR-475 Blue Pen			
Generator Load (Gross MWe)	Turbine Panel			----
Reactor Status	MCB			----
Reactor Coolant Pump "A" Status	MCB			----
Reactor Coolant Pump "B" Status	MCB			----
Reactor Coolant Pump "C" Status	MCB			----
Status of Busses 1A, 1B, and 1C	Elect. Panel (MCB)			
Time	Clock			

DATA SHEET 1

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PLANT PARAMETERS SUMMARY SHEET

PLANT PARAMETER (Units)	INST. TAG NO.	RECORD DATA		
		BEFORE	AFTER	AFTER 30 MIN.
Steam Generator N.R. Level S/G A (%)	LR-478 Red Pen			
Steam Generator N.R. Level S/G B (%)	LR-488 Red Pen			
Steam Generator N.R. Level S/G C (%)	LR-498 Red Pen			
Auxiliary FW Pumps - Status	MCB			
Feedwater Flow, S/G A Channel (MPPH)	FR-478 Red Pen			
Steam Flow, S/G A Channel (MPPH)	FR-478 Green Pen			
Feedwater Flow, S/G B Channel (MPPH)	FR-488 Red Pen			*
Steam Flow, S/G B Channel (MPPH)	FR-488 Green Pen			
Feedwater Flow, S/G C Channel (MPPH)	FR-498 Red Pen			*
Steam Flow, S/G C Channel (MPPH)	FR-498 Green Pen			
Status of Diesel Generator A	Elect. Panel MCB			*
Status of Diesel Generator B	Elect. Panel MCB			
Time	Clock			

* - Auxiliary Feedwater Flow in GPM.