DOCUMENT REVISION DISTRIBUTION SHEET - UNIT II
OFF NORMAL & EMERGENCY OPER. PROCEDURE

DOCUMENT TITLE BLACKOUT OPERATION

DOCUMENT FILE NUMBER 2-0030140

DOCUMENT REVISION NUMBER 5

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FLORIDA POWER & LIGHT COMPANY
ST. LUCIE UNIT 2
EMERGENCY PROCEDURE NUMBER 2-0030140
REVISION 5

BLACKOUT OPERATION
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TOTAL NUMBER OF PAGES: 14

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1.0 SCOPE:

This procedure provides the action to be taken in the event of a complete loss of off-site electrical power concurrent with a Turbine trip.

2.0 SYMPTOMS:

2.1 Alarms associated with the loss of operating plant components.

2.2 Loss of normal Control Room lighting and DC lighting energized.

2.3 Reactor and Turbine trip.

2.4 Emergency Diesel Generators start.

2.5 Reactor Coolant Pump trip and Main Feedwater Pump trip.

3.0 AUTOMATIC ACTIONS:

NOTE: Any Automatic Actions that should occur and do not, must be manually initiated.

AUTOMATIC ACTION		INITIATING EVENT	
3.1	Reactor Trip	3.1	RCS Low Flow $\leq$95%
3.2	Turbine Trip	3.2	Reactor trip bus low voltage
3.3	Generator lock-out	3.3	Turbine trip/Bkrs closed
3.4	Generator breakers open	3.4	Turbine Trip
3.5	Incoming feeder breakers open to 4160V and 6900V buses	3.5	Startup transformer breakers fail to close
3.6	Tie breakers between normal 4160V buses (2A2 and 2B2) and the emergency 4160V buses (2A3 and 2B3) open	3.6	Undervoltage on 2A2 and 2B2 4160 buses
3.7	Ties between essential and non-essential sections of emergency 480V MCCs open	3.7	Undervoltage on Emergency 480V MCCs

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3.0 IMMEDIATE AUTOMATIC ACTIONS: (Cont.)

	AUTOMATIC ACTION	INITIATING EVENT
3.8	Breakers open for the following non-safety related loads which are normally fed from emergency buses	3.8 Diesel load shedding sequence

NOTE: These loads can be manually reconnected to the emergency buses as needed (approximate starting KVA in parentheses).

Reactor cavity sump pump 2A and 2B (55.7 KVA each)

120/208 Power Panel 221 transformer (45 KVA)

Lighting Panel transformers 210, 212, 214, 225, 226 (45 KVA each, 226 = 15 KVA)

Incoming feeder from 2A2 and 2B2 4160V buses (load dependent)

RCP oil lift pumps (B pumps only - A pumps running) (40.3 KVA each)

Pressurizer relief isol valves (1476 and 1477) (12.5 KVA each)

480V Lighting Panel 2-2A1, 2-2B1, 2-2A2 and 2-2B2 (required at night for security) (45 KVA each except 2-2B2 = 15 KVA)

Waste management heat tracing transformers 2A and 2B (45 KVA each)

Air conditioner HVA-4, ACC-4 (45 KVA)

Power Panel 220 (45 KVA)

Lighting Panels 213, 209, 215, (45 KVA each)

Lighting Panels 216, 230 (15 KVA each)

Refueling water to charging pumps (V-2504) (12.5 KVA)

Boric Acid batching tank heaters (63.6 KVA)

NOTE: Maximum starting KVA of the D/G = 28,500 KVA
Available starting KVA = 28,500 - [(Bus Volts) X (Bus Amps) X 1.732]

*** CAUTION ***

These loads could create overload conditions if proper care is not taken to ensure there is adequate margin on the D/G for them. It should be determined there is sufficient starting KVA available prior to energizing these loads, then only energize one at a time and re-evaluate the D/G load.

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3.0 IMMEDIATE AUTOMATIC ACTION: (Cont.)

	AUTOMATIC ACTION	INITIATING EVENT
3.9	All loads on emergency buses are tripped except the following: Boric Acid Makeup Pumps Charging Pumps Emergency lighting Class I power panels RCP oil lift pumps (A pumps only - B pumps off) Diesel fuel oil transfer pump	3.9 Diesel load shedding sequence
3.10	2A and 2B Diesel Generators start and energize 4160V emergency buses 2A3, 2B3, and 2AB and loads listed in Step 3.9.	3.10 Undervoltage on 2A3 and 2B3 4160V buses
3.11	Subsequent loads are started at three second intervals (See Table 1, Emergency Diesel Generator Loading Sequence).	3.11 Diesel Generator loading sequence
3.12	Auxiliary Feedwater auto start initiates	3.12 2A or 2B Steam Generator level decreases to 20.6%

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4.0 IMMEDIATE OPERATOR ACTION:

	ACTION		LOCATIONS
4.1	Trip Turbine and Reactor manually	4.1	RTGB-201 and 204
4.2	Check all CEAs are fully inserted and reactor trip breakers are open	4.2	RTGB-204 and top of RPS Panels
4.3	Check turbine valves are closed	4.3	RTGB-201
4.4	Check generator exciter supply breaker and generator breakers 8W49 and 8W52 are open	4.4	RTGB-201
4.5	Place reheater control system in MANUAL, close TCVs	4.5	RTGB-201
4.6	Check that Diesel Generators have started and are feeding only emergency buses	4.6	RTGB-201
4.7	Open startup transformer breakers	4.7	RTGB-201
4.8	Reduce Tavg to reference setpoint by manual operation of the steam dump valves to atmosphere	4.8	RTGB-203
4.9	Isolate steam generator blowdown	4.9	RTGB-206
4.10	Verify 2C steam-driven AFW pump has started and has established flow to the Steam Generators. If AFW pumps have started due to the auto start feature, the motor driven pumps may be secured, if desired	4.10	RTGB-202

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5.0 SUBSEQUENT ACTIONS:

CHECK

5.1 Implement the Emergency Plan as necessary in accordance with EPIP 3100021E, "Duties of the Emergency Coordinator." ____

5.2 Verify adequate natural circulation flow by ensuring that hot and cold leg temperatures, Pressurizer pressure and level stabilize within approximately 15 minutes. The core ΔT should be $<49^{\circ}F$ (ΔT for full power). ____

1. If the above conditions are not established:

   A. Check RCS temperature and pressure to ensure that the RCS is at least $20^{\circ}F$ subcooled.

   B. Ensure AFW flow to the Steam Generators has been initiated and the steam dumps to atmosphere are in operation.

   C. Refer to EOP 2-0120043, "Inadequate Core Cooling."

2. Return at least one RCP in each loop to operation as soon as off-site power is available and the requirements for pump restart are satisfied in accordance with EOP 2-0120040, Paragraph 5.8.

5.3 Start equipment in Table 1, if required.

5.4 If one Diesel fails to start, attempt a manual start. ____

1. If manual start attempt is unsuccessful, an operator should be sent to the diesel local control station to inspect status of local alarm panel.

2. If no alarms are present on the local alarm panel, an inspection of the overspeed trip lever should be made to ensure it has not tripped.

3. If the overspeed trip levers are latched, the Normal/Isolate switches on the local control panel should be placed in the ISOLATE position and a local start attempt should be made.

4. Refer to OP 2-2200020 and OP 2-2200050.

5.5 Locally open Condenser Vacuum breakers (MV-10-1A and MV-10-1B). Locally close MSR main steam block valves (MV-08-4, MV-08-6, MV-08-8, and MV-08-10). ____

5.6 Check MSR warm-up valves (MV-08-5, MV-08-7, MV-08-9, and MV-08-11) to be closed or close manually. ____

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5.0 SUBSEQUENT ACTION: (Cont.)

CHECK

5.7 Send an operator to align and start emergency cooling water to the Instrument Air Compressor, then reset Control Room handswitch and manually start the Instrument Air Compressor (Plant Auxiliaries Control Panel). ____

CAUTION: Do not overload the Diesel Generators when starting additional equipment (3685 KW maximum continuous rating).

5.8 When Diesel Generator power is available, energize equipment as may be required for plant safety and to achieve an orderly shutdown within the Diesel Generator load limitations as follows:

1. Verify one set of reactor cavity and reactor support cooling fans operating. If not, start one set. ____

2. Lock out automatic starting equipment that is not in service. ____

3. Manually open all breakers on any non-vital bus or Motor Control Center that is to be re-energized. ____

4. Reset lockout relays for each required bus to allow closing of feeder breakers. ____

5.9 Remove the following components from service: ____

Steam jet air ejectors
Priming ejector
Auxiliary priming ejector
Auxiliary steam to RAB
Gland seal system

5.10 Start 2A and 2B CEDM cooling fans. ____

5.11 Start 2A and 2B reactor support cooling fans. ____

CAUTION: Consider equipment starting requirements. Alternate operation of equipment may be required to avoid overloading the Diesel Generators (3685 KW maximum continuous rating).

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5.0 SUBSEQUENT ACTIONS: (Cont.)

CHECK

5.12 Manually close breakers for Pressurizer heater buses on OVERRIDE position and reset the Backup heater breakers. This should be accomplished within two hours following the loss of off-site power. ____

CAUTION: Consider equipment starting requirements. Alternate operation of equipment may be required to avoid overloading the Diesel Generators (3685 KW maximum continuous rating).

NOTE: The above actions will only energize B-1 and B-4 banks of Backup heaters.

NOTE: If SIAS has occurred, Pressurizer heaters cannot be re-energized as per Step 5.12 until SIAS has been reset. /R5

5.13 Check that the Bearing Oil Lift Pump starts automatically when Turbine speed decreases to approximately 600 rpm. ____

5.14 Start oil reservoir vapor extractor and generator oil vapor extractor. ____

5.15 Check that the turning gear engages and starts automatically when turbine speed decreases to zero rpm, or manually engage it. ____

5.16 Reduce the flow of cooling water to maintain the temperature of the oil leaving the turbine lube oil and the air side and hydrogen side oil coolers between 95°F - 100°F. ____

5.17 Isolate cooling water supply to the Generator hydrogen coolers. ____

5.18 If additional Condensate Storage Tank water is required, have Unit 1 personnel place the Water Treatment Plant in service. ____

5.19 Place the Spent Fuel Pool Cooling Pump in operation as necessary. ____

NOTE: With spent fuel element assemblies from 3-1/3 cores present, the Spent Fuel Pool can safely withstand at least five hours without cooling before reaching the boiling point.

5.20 Periodically check fuel oil levels in the Diesel Generator day tanks to confirm proper operation of the fuel oil transfer system and to ensure uninterrupted Diesel Generator operation. ____

5.21 Sample and analyze the reactor coolant to determine if fuel element clad failure has occurred. ____

5.22 Determine expected duration of power outage. If unable to do so or if outage is to be prolonged, borate RCS to Cold Shutdown concentration. ____

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5.0 SUBSEQUENT ACTIONS: (Cont.)

CHECK

5.23 If the outage will exceed four hours and the RWT is available, proceed to Cold Shutdown conditions utilizing natural circulation, atmospheric steam dump and feedwater addition. Refer to EOP 2-0120040, "Natural Circulation/Cooldown." Place Shutdown Cooling in service when appropriate temperatures and pressures are reached. ____

NOTE: Do not begin plant cooldown until Cold Shutdown boron concentration is verified.

5.24 If Pressurizer cooldown cannot be accomplished in a timely manner from the addition of cooler liquid (auxiliary spray) from the Charging Pump via the Pressurizer spray line, proceed with the alternate positive means of depressurization as follows: ____

1. Place the switches for the Power Operated Relief Valves (V-1474 and V-1475) in the OVERRIDE position.

2. Initiate a high Pressurizer pressure trip signal on two RPS channel trip units.

3. Place the switch for either Power Operated Relief Valve (V-1474 or V-1475) in the OFF position and vent the Pressurizer to the Quench Tank. Return the switch to OVERRIDE to close valve.

4. Control the rate of cooldown and depressurization by selective operation of the Power Operated Relief Valves in this mode until cooldown via the auxiliary spray valves can be initiated.

5.25 When normal AC power is available: ____

1. Restore bus sections to their normal supplies.

2. Place the Diesel Generator System in standby lineup as per OP 2-2200020.

3. Restore all plant systems to normal.

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6.0 DISCUSSION:

6.1 A loss of power to the 4160V buses results in a loss of power to all 480V Load Centers and Motor Control Centers and to all instrumentation not fed directly or indirectly from the station battery. A reactor trip will occur from a low reactor coolant flow rate signal due to the loss of power to the 6900V buses supplying the Reactor Coolant Pumps and will be accompanied by a Turbine Trip and Generator lockout.

6.2 Steam dump to atmosphere must be used to remove reactor decay heat. Initially, Steam Generator safety valves may actuate to augment the steam flow and to help control Steam Generator pressure immediately after the trip.

6.3 On-site power will be supplied by the Emergency Diesel Generators.

6.4 A rapid reduction in Steam Generator water levels will occur due to the reduction of the Steam Generator void fraction on the secondary side and also because steam flow will continue after normal feedwater flow stops. Auxiliary feedwater flow will automatically initiate after the first Steam Generator level reaches 20.6% (2/4 logic).

6.5 Core decay heat removal is accomplished by natural circulation in the reactor coolant loops.

6.6 Core damage is not expected as a result of a loss of power condition since the Steam Generators are maintained as a heat sink and RCS pressure and inventory control are available.

6.7 If operating under blackout conditions and an Engineered Safety Features Actuation signal occurs, any non-emergency loads that are running will be automatically tripped and the required emergency loads will be automatically started.

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TABLE 1

DIESEL GENERATOR LOADING SEQUENCE

ITEM	Automatic Starting Equipment (4)	Per Diesel Generator Quantity	Nominal Load or Nameplate HP	Starting KVA	RUNNING LOAD (KW) Shutdown Timing Sequence	LOCA (Recirculation) With Loss of Off-Site Power (LOOP)	LOCA (Recirculation) With Loss of Off-Site Power (LOOP)	Main Steam Line Break With Loss of Offsite Power (LOOP)
1	High Pressure Safety Inj. Pump	1	400	2422.0	0 Sec.	-	324	324
2	Motor Operated Valves	Lot	-	-	0 Sec.	6.7	27.2	33.1
3	Emergency Lighting	Lot	-	-	0 Sec.	125	125	125
4	Power Panels	Lot	-	-	o Sec.	195	195	195
5	Diesel Oil Transfer Pumps	1	3	21.5	0 Sec.	3	3	3
6	RCP Oil Lift Pumps	4	10	66.85	0 Sec.	40	20	20
7	Uninterruptible Power Supply	1	-	-	0 Sec.	55	55	55
8	HVAC Dampers	Lot	-	-	0 Sec.	4	4	4
9	HVAC Valves	Lot	-	-	0 Sec.	1.5	1.5	1.5
10	Low Pressure Safety Inj. Pump	1	400	2183.3	3 Sec.	274	321	274
11	Containment Fan Coolers	2	125/83	828.4	3 Sec.	134	96	96
12	Elec. Equip. Room Supply	1	100	584.12	3 Sec.	95	95	95
13	Component Cooling Water	1	450	2491.2	6 Sec.	351	351	351
14	Shield Building Exhaust	1	60	340.6	6 Sec.	-	40.2	40.2
15	Shield Building Heaters	Lot	-	-	6 Sec.	-	31.5	31.5

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TABLE 1

DIESEL GENERATOR LOADING SEQUENCE

ITEM	Automatic Starting Equipment (4)	Per Diesel Generator Quantity	Nominal Load or Nameplate HP	Starting KVA	RUNNING LOAD (KW) Shutdown Timing Sequence	LOCA (Recirculation) With Loss of Off-Site Power (LOOP)	LOCA (Recirculation) With Loss of Off-Site Power (LOOP)	Main Steam Line Break With Loss of Offsite Power (LOOP)
16	Intake Cooling Water Pump	1	600	3709.0	9 Sec.	453	453	453
17	Containment Spray Pump	1	500	2892.6	12 Sec.	-	405	405
18	Hydrazine Pump	1	3	21.5	12 Sec.	-	1	1
19	Reactor Supports Cooling	1	40	234.76	18 Sec.	22	-	-
20	Reactor Cavity Supply Fan	1	20	124.15	18 Sec.	15	-	-
21	Intake Building Cooling Fan	1	7.5	44.0	21 Sec.	7.5	7.13	7.5
22	Battery Room Roof Ventilator 2-RV-1	1	0.75	8.5	21 Sec.	.75	.75	.75
23	Elec. Equip. Room Exhaust 2-RV-3	1	5	34.22	21 Sec.	5	5	5
24	ECCS Area Exhaust Fan	1	60	358	24 Sec.	45	45	45
25	Control Room Emer. Filter Fan	1	10	62.0	24 Sec.	-	10	10
26	Control Room Air Conditioning	2	55	-	24 Sec.	68	68	68
27	Boric Acid Heat Trace	Lot	Lot	-	27 Sec.	30	30	30
28	Battery Charger	1	60KW	-	27 Sec.	60	60	60
29	Auxiliary Feedwater Pump	1	350	1951.4	30 Sec.	255	255	255
30	RAB Supply Fan	1	150	900.1	33 Sec.	111	111	111

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TABLE 1

DIESEL GENERATOR LOADING SEQUENCE

ITEM	Automatic Starting Equipment (4)	Per Diesel Generator Quantity	Nominal Load or Nameplate HP	Starting KVA	Shutdown Timing Sequence	RUNNING LOAD (KW) LOCA (Recirculation) With Loss of Off-Site Power (LOOP)	LOCA (Recirculation) With Loss of Off-Site Power (LOOP)	Main Steam Line Break With Loss of Offsite Power (LOOP)
31	Elec. Equip. Room Exhaust 2-HVE-11	1	150	900.1	33 Sec.	38	38	38
32	Charging Pumps	2	125	1656.8	5 Min.	60	60	60
33	Boric Acid Makeup Pump (2)	2	25	124.1	5 Min.	24	24	24
34	Instrument Air Compressor	1	60	340.6	Manual load	60	60	60
35	Fuel Pool Cooling Pump	1	40	234.6	Manual load	26	-	26
36	Hydrogen Recombiner	1	75KW	-	Manual load	-	75	75
37	Pressurizer Heaters	1	200KW	-	Manual load	200	-	-
					after 2 hours LOOP			

NOTES:
(1) Actuated on RAS
(2) Both Boric Acid Makeup Pumps are loaded onto Diesel Generator A

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7.0 REFERENCES:

7.1 St. Lucie Unit 2 FSAR, Sections 8 and 15

7.2 Off-Normal OP 2-0030130, "Shutdown Resulting From Reactor/Turbine Trip"

7.3 OP 2-0210020, "Charging and Letdown"

7.4 OP 2-0330020, "Turbine Cooling Water Operation"

7.5 Off-Normal OP 2-0250031, "Boron Concentration Control, Off-Normal"

7.6 Off-Normal OP 2-1010040, "Loss of Instrument Air"

7.7 OP 2-1540020, "Water Plant Startup and Shutdown"

7.8 OP 2-2200020, "Emergency Diesels - Standby Lineup"

7.9 OP 2-0700022, "Auxiliary Feedwater System Operation"

8.0 RECORDS/NOTIFICATIONS:

8.1 Normal log entries

8.2 AP 0010134, "Component Cycles and Transients"

9.0 REVIEW AND APPROVAL:

Reviewed by Facility Review Group October 26 1982

Approved by J. H. Barrow (for) Plant Manager October 26 1982

Revision 5 Reviewed by FRG 7-8 1983

Approved by C M Wethy Plant Manager 9-28- 1983

"LAST PAGE"

DOCUMENT REVISION DISTRIBUTION SHEET - UNIT II

DOCUMENT TITLE LOSS OF SUPS - NON-SAFETY OFF NORMAL & EMERGENCY OPER. PROCEDURE
VITAL AC OR FIRE AND SECURITY INVERTERS

DOCUMENT FILE NUMBER 2-0970031

DOCUMENT REVISION NUMBER 0

DOCUMENT DISTRIBUTED ON 10-6-83

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FLORIDA POWER & LIGHT COMPANY
ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0970031
REVISION 0

1. TITLE: LOSS OF SUPS - NON-SAFETY VITAL AC OR FIRE AND SECURITY INVERTERS

2. PREPARED BY: P. B. ISAACS AUGUST 9, 1983

3. SUBCOMMITTE REVIEW BY: (including content list)
G. Imbriale for FPL PNE AUGUST 9, 1983

4. REVIEWED BY FACILITY REVIEW GROUP: 10/5 19 83

5. APPROVED BY J. H. Barrow for PLANT MANAGER 10/5 19 83

6. REVISION ___ REVIEWED BY F R G ___ 19__

7. APPROVED BY ___ PLANT MANAGER ___ 19__

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FLORIDA POWER & LIGHT COMPANY
ST. LUCIE UNIT NO. 2
OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0970031
REVISION 0

1.0 Title:

Loss of SUPS - Non-Safety Vital AC or Fire and Security Inverters

2.0 Review and Approval:

Reviewed by Facility Review Group 10/5 1983

Approved by J. H. Barrow Plant Manager 10/5 1983

Revision Reviewed by F R G 19__

Approved by Plant Manager 19__

3.0 Purpose and Discussion:

3.1 Purpose:

This procedure provides instructions and guidance for restoration of power to the SUPS Vital AC and the Fire and Security Inverters.

3.2 Discussion:

3.2.1 The SUPS Vital AC main feed is from MCC 2AB and a bypass source is from MCC 2AB. The DC source comes from 125 V DC bus 2AB.

3.2.2 The Fire and Security Inverters main feed is from MCC 2AB and a bypass source is from MCC 2C. The DC source comes from 125 V DC bus 2C.

4.0 Symptoms:

4.1 Loss of SUPS Vital AC or Fire and Security Inverter.

4.1.1 SUPS Inverter Trouble annunciator (B-33) on RTGB-201.

4.1.2 Failure of Feedwater Regulating Systems for SUPS.

4.1.3 Failure of Turbine Generator Control System for SUPS.

4.1.4 For Fire and Security Inverter, loss of Fire Detection and access to vital areas.

4.1.5 Failure of Heater level control on loss of SUPS.

4.1.6 Loss of RM-11 indications or loss of Fire and Security Inverter.

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OFF-NORMAL OPERATING PROCEDURE NUMBER 2-0970031, REVISION 0
LOSS OF SUPS - NON-SAFETY VITAL AC OR FIRE AND SECURITY INVERTER

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5.0 Instructions:

5.1 Immediate Automatic Actions:

5.1.1 SUPS and Fire and Security inverters shift to alternate source.

5.2 Immediate Operator Actions:

5.2.1 If a reactor trip occurs, carry out Off-Normal OP 2-0030130, "Reactor Trip/Turbine Trip".

5.3 Subsequent Operator Action:

5.3.1 Check Reflash Module RA-RAB-4 to determine which SUPS is in alarm and cause (Northwest wall of Cable Spreading Room). If unable to gain entry, skip to Step 5.3.7.

NOTE
Steps 5.3.2 - 5.3.6 are for the Vital AC SUPS.
Steps 5.3.7 - 5.3.12 are for the Fire and Security Inverter.

5.3.2 Restore power to the bus by placing the Manual Bypass switch in the ALTERNATE TO LOAD position. Insure breaker CB-4 is closed and breakers to 2A, 2B, and 2A1/2B1 are closed.

5.3.3 Check with Control Room to ensure power has been restored.

5.3.4 If power is not restored, check that alternate source breaker 2-42434 on the MCC 2AB is closed.

5.3.5 Notify Electrical Department to investigate cause and repair.

5.3.6 Restore inverter to service per OP 2-0970021, "120 Volt Vital AC System Operation (Non Class 1E)".

5.3.7 If unable to gain entry to the Cable Spreading Room, have Security man the Control Room access and Cable Spreading Room access. (This would indicate the Fire and Security Inverter is out of service).

5.3.8 Restore power to the bus by placing the Manual Bypass switch in the ALTERNATE TO LOAD position, and check CB-4 and CB-6 closed.

5.3.9 Check with Control Room to ensure power is restored.

5.3.10 If power is not restored, check the alternate source breaker 2-42508 on the MCC 2C is closed.

5.3.11 Notify Electrical Department to investigate the cause and repair.

5.3.12 Restore the inverter to service per OP 2-(LATER).

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5.0 Instructions: (continued)

5.3 Subsequent Operator Action: (continued)

NOTE

If this bus is left out of service for an extended period of time (> 15 minutes), fire watches will be required and local sampling by the Chemistry Department will be required.

2

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6.0 References:

6.1 St. Lucie Unit 2 FSAR, Section 8.

6.2 Ebasco P & ID 2998-G-332, 480V Miscellaneous, 125 V DC and Vital AC one line diagram.

6.3 AP-0930020, "St. Lucie Unit 2 Power Distritubion List".

7.0 Records Required:

7.1 Normal Log entries.