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EISENHUT,D.G. Division of Licensing

SUBJECT: Forwards draft emergency operating procedure "Alternate Shutdown," & indices "App R Cables W/Fire Area Routes," App R Equipment & Cables By Fire Area," per 10CFR50 App R Section III.G.3 requirements.
SEE REPTS.

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BOX 14000, JUNO BEACH, FL 33408

FLORIDA POWER & LIGHT COMPANY

October 7, 1983
L-83-514

Office of Nuclear Reactor Regulations
Attention: Mr. Darrell G. Eisenhut, Director
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Eisenhut:

RE: St. Lucie Unit No. 1
Docket No. 50-335
Fire Protection
Alternative Shutdown Report
10 CFR 50 Appendix R Section III.L

Pursuant to the requirement of 10 CFR 50 Appendix R Section III.G.3, Florida Power and Light herewith submits the Alternative Shutdown Report for St. Lucie Unit 1. Alternate shutdown capability is being provided in accordance with the requirements set forth in Appendix R Section III.L for a fire in either the Control Room or the Cable Spread Room.

Alternate shutdown will be accomplished through the use of the Hot Standby Panel (HSP) which is capable of maintaining the unit at hot standby. To achieve and maintain cold shutdown, local manual actions will be coordinated by the HSP operator.

If additional information is required, please contact us accordingly.

Very truly yours,

Robert E. Uhrig
Vice President
Advanced Systems and Technology

REU/GJK/mp
Attachment

cc: J.P. O'Reilly, Region II
Harold F. Reis, Esquire

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B/B

FLORIDA POWER & LIGHT COMPANY
ST LUCIE PLANT - UNIT NO. 1
ALTERNATIVE SHUTDOWN

Since the separation defined in Appendix "R" Section III.G.2 cannot be provided for essential components and circuits in the Control and Cable Spread Rooms, alternative shutdown capability is provided. This insures that in the unlikely event a fire makes the Control Room uninhabitable or renders equipment in either room inoperable, the plant can be safely taken to cold shutdown from a remote location. All other areas of the plant containing essential equipment comply with Section III.G.2 of Appendix "R". A description of the alternative shutdown capability provided is given below:

a) Table 2 lists those systems and the components within those systems which are relied upon to provide alternative shutdown capability. Employing this equipment, plant operators can maintain the Unit at hot standby conditions from the Hot Standby Panel (HSP) and bring the Unit to cold shutdown with local manual actions. All equipment is operable following a loss of offsite power. (See Table 3 for a complete list of instruments and controls available at the HSP).

b) Alternative shutdown capability is provided for the Control and Cable Spread Rooms which contain control circuits for virtually all essential equipment. A detailed list of the essential components and cables in these areas can be found in Attachment 2 under Fire Zones 70 and 57 respectively. Existing components and systems as listed in Table 2 will be employed to achieve and maintain cold shutdown in the event of a fire in either of these areas. Wherever necessary, electrical components and circuitry required for the operation of the above equipment will be relocated or protected to insure both physical and electrical separation from the Control and Cable Spread Rooms. Physical separation is achieved by means of protective enclosures within or complete relocation from these areas and will meet the requirements of Section III.G.2. Electrical isolation devices are provided where necessary.

c) Process and Instrumentation Drawings (P&IDs) for piping and components essential to alternative shutdown are presently contained in the SL-1 FSAR since only existing systems are utilized. The fire zone locations of all equipment containing breakers and isolation devices are listed in Table 1. Three examples of Control Wiring Diagrams (CWDs) showing typical isolation devices are presented in Attachment 3.

d) All new isolation or control switches required for alternative shutdown will be installed in a manner consistent with FSAR design criteria and will not degrade that system. In general, isolation switches actuate an alarm in the Control Room when placed in the "isolated" position.

e) Attachment 1 outlines the basic steps required to bring the plant to cold shutdown from outside the Control Room. This procedure has been developed to instruct plant operators in the specific tasks required to effect safe shutdown.

f) The manpower available to perform safe shutdown functions as well as fight fires is described in Attachment 1.

g) Tests will be performed periodically in accordance with Technical Specification requirements for the remote shutdown system.

h) Technical Specifications will be prepared to cover all new isolation/transfer switches added for alternative shutdown.

i) Only existing components and systems will be employed for alternative shutdown. As such, verification of system capabilities is not required. Circuitry modifications will be consistent with existing design criteria.

j) No credit is taken for repair of damaged cold shutdown equipment.

TABLE 2

EQUIPMENT REQUIRED FOR ALTERNATE SHUTDOWN

ST LUCIE UNIT NO 1

SYSTEM/FUNCTION	EQUIPMENT	
1.Diesel Generator:	DOT Pump 1B	
	DO Storage Tank 1B	
	DG-1B Set	(1)
	SE-17-1B (DG Fuel Oil Supply Valves)	
	S22, S23, S24 (DG Day Tank 1B Level Switches)	
2. Auxiliary Feedwater:	AFW Pump 1B	1&2)
	I-MV-09-10 (AFW Pump 1B Iso Valve)	(1&2)
	Condensate Storage Tank	
3. CVCS:	Charging Pump 1B	(1&2)
	Boric Acid Makeup Tank 1A or 1B	
	V-2508 or 2509 BAMT Gravity Feed Valves)	(1)
	V-2504 (RWT Supply Valve)	(1)
	I-SE-02-01 (Charging Line Iso Valve)	
4. Reactor Coolant:	V-1404 (Power Operated Relief Valve)	
5. HVAC Equipment:	HVS-5B (Elec Equip Rm Supply Fan)	
	HVE-12 (Elec Equip Rm Exhaust Fan)	
	HVE-9B (ECCS Area Exhaust Fan)	

TABLE 2

EQUIPMENT REQUIRED FOR ALTERNATE SHUTDOWN
ST LUCIE UNIT NO 1

SYSTEM/FUNCTION		EQUIPMENT	
6.	Electrical Equipment:	Battery 1B	
		Battery Charger 1B	
7.	Safety Injection:	Refueling Water Tank	
		LPSI Pump 1B	(1)
		V-3651 (SDC Iso Valve)	
		V-3652 (SDC Iso Valve)	
		FCV-3306 (SDC Control)	
		V-3453 (SDC Block Valve)	
		V-3457 (SDC Block Valve)	
		HCV-3657 (SDC Control)	
		V-3452 (SDC Block Valve)	
		I-MV-07-3B (CS Block Valve)	
		HCV-3645 (SIS Block Valve)	
		V-3614, 3624,3634 & 3644 (SIT Iso Valve)	
		I-HCV-08-1A (Atmospheric Dump Valve)	
8.	Main Steam:	I-HCV-08-1B (Atmospheric Dump Valve)	(1&2)

TABLE 2

EQUIPMENT REQUIRED FOR ALTERNATE SHUTDOWN
ST LUCIE UNIT NO 1

SYSTEM/FUNCTION		EQUIPMENT	
9.	Component Cooling Water:	CCW Pump 1B	(1)
		CCW Heat Exchanger 1B	
10.	Intake Cooling Water:	ICW Pump 1B	(1)
11.	Instrumentation:	LIC-9006 (Steam Gen 1B Level)	(1&2)
		PIC-08-1B1 (Steam Gen 1B Pressure)	(1&2)
		HIC (EP -1100Y (Pressurizer Pressure)	(1&2)
		HIC (EP)-1110Y (Pressurizer Level)	(1&2)
		TI (EP-1125 RCS Temperature)	(1&2)

NOTES:

1) Isolation Switches are provided for these components.
2) Available on Hot Standby Panel.

TABLE 3

HOT STANDBY PANEL
INSTRUMENTATION & CONTROLS
ST LUCIE UNIT NO. 1

INSTRUMENTATION

		TRAIN
HIC-1100X	Pressurizer Pressure and Spray Valve Control	A
HIC-1100Y	Pressurizer Pressure and Spray Valve Control	B
HIC-1110X	Pressurizer Level and Letdown Valve Control	A
HIC-1110Y	Pressurizer Level and Letdown Valve Control	B
TI (EP) -1115	RCS Cold Leg Temperature	A
TI (EP)-1125	RCS Cold Leg Temperature	B
PIC-08-1A1	SG-1A Pressure and ADV Control	A
PIC-08-1B1	SG-1B Pressure and ADV Control	B
LI-9005	SG-1A Level	A
LI-9006	SG-1B Level	B
LI-9012-1	SG-1A Level (Wide Range)	A
LI-9022-1	SG-1B Level (Wide Range)	B
VI-09-2	AFW Pump 1C Turbine Speed	AB
	Source Range Neutron Flux	B

CONTROLS

Auxiliary Feedwater

CS-629-2	AFW Pump 1A	A
CS-630-2	AFW Pump 1B	B
HIC-09-1C1	AFW Pump 1C Turbine	AB
CS-632	I-MV-08-3, AFW Pump 1C Steam Valve	AB
CS-608-2	I-MV-09, AFW Pump 1A Isolation Valve	A

TABLE 3

HOT STANDBY PANEL
INSTRUMENTATION & CONTROLS
ST LUCIE UNIT NO. 1

INSTRUMENTATION

		TRAIN
CS609-2	I-MV-09-10, AFW Pump 1B Isolation Valve	B
CS-610-2	I-MV-09-13, AFW 1A/1B Cross Tie Valve	A
CS-611-2	I-MV-09-14, AFW 1A/1B Cross Tie Valve	B
CS-612-2	I-MV-09-11, AFW Pump 1C Isolation Valve	AB
CS-613-2	I-MV-09-12, AFW Pump 1C Isolation Valve	AB
CVCS		
CS-177	Charging Pump 1A	A
CS-178	Charging Pump 1B	B
CS-179	Charging Pump 1C	AB
CS-189-1	I-SE-03-3, Auxiliary Spray Valve	A
CS-189-2	I-SE-03-4, Auxiliary Spray Valve	B
CS-157-1	V-2516, Letdown Isolation Valve	A
CS-157-2	V-2515, Letdown Isolation Valve	B
CS-158	LCV-2110P&Q, Letdown Control Valves	A
Reactor Coolant		
CS-122	Pressurizer Proportional Heater Bank P1	A
CS-123	Pressurizer Proportional Heater Bank P2	B
CS-124	Pressurizer Backup Heater Bank B1	A
CS-125	Pressurizer Backup Heater Bank B2	A
CS-126	Pressurizer Backup Heater Bank B3	A

TABLE 3

HOT STANDBY PANEL
INSTRUMENTATION & CONTROLS
ST LUCIE UNIT NO. 1

INSTRUMENTATION

		TRAIN
CS-127	Pressurizer Backup Heater Bank B4	B
CS-128	Pressurizer Backup Heater Bank B5	B
CS-129	Pressurizer Backup Heater Bank B6	B
CS-130	PCV-1100E&F, Pressurizer Spray Valves	A