

1991
August 16, 1991

Docket Nos. 50-250
and 50-251

DISTRIBUTION
See attached sheet

Mr. J. H. Goldberg
President-Nuclear Division
Florida Power and Light Company
P.O. Box 14000
Juno Beach, Florida 33408-0420

Dear Mr. Goldberg:

SUBJECT: TURKEY POINT UNITS 3 AND 4 - ISSUANCE OF AMENDMENTS RE: RELAY
SETPOINTS, FIRE DETECTION AND ADMINISTRATIVE CHANGES
(TAC NOS. 80183 AND 80184)

The Commission has issued the enclosed Amendment No. 145 to Facility Operating License No. DPR-31 and Amendment No. 140 to Facility Operating License No. DPR-41 for the Turkey Point Plant, Units Nos. 3 and 4, respectively. The amendments consist of changes to the Technical Specifications in response to your application transmitted by letter dated April 4, 1991, as supplemented June 12, 1991.

These amendments (1) revise the setpoint values of the 480V load centers undervoltage relays, (2) incorporate the additional fire detection and manual fire fighting features installed as a part of the Emergency Power System Enhancement Project, and (3) incorporate miscellaneous administrative changes. Since the voltage and time delay trip settings have been calculated using a new computer program, the staff requires that the new software's analytical techniques and assumptions be verified by actual test and the results be provided to the NRC prior to the next refueling outage.

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,
(Original Signed By)

Rajender Auluck, Sr. Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

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PDR ADDCK 05000250
P PDR

Enclosures:

1. Amendment No.145 to DPR-31
2. Amendment No.140 to DPR-41
3. Safety Evaluation

cc w/enclosures:
See next page

NRC FILE CENTER COPY

CP-1

OFC	:LA:PDII-2	:PE:PDII-2	:PM:PDII-2	:D:PDII-2	:OGC	AC		
NAME	:DMM	:DDocment	:Kdj	:RAAuluck	:HBerk			
DATE	:8/5/91	:8/5/91	:8/5/91	:8/6/91	:8/7/91			

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411

Mr. J. H. Goldberg
Florida Power and Light Company

Turkey Point Plant

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

FLORIDA POWER AND LIGHT COMPANY

DOCKET NO. 50-250

TURKEY POINT PLANT UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 145
License No. DPR-31

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Florida Power and Light Company (the licensee) dated April 4, 1991, as supplemented June 12, 1991, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public;
and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

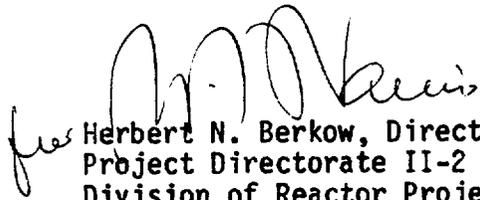
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-31 is hereby amended to read as follows:

(B) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No.145 , are hereby incorporated in the license. The Environmental Protection Plan contained in Appendix B is hereby incorporated into the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


for Herbert N. Berkow, Director
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 16, 1991



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

FLORIDA POWER AND LIGHT COMPANY
DOCKET NO. 50-251
TURKEY POINT PLANT UNIT NO. 4
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 140
License No. DPR-41

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Florida Power and Light Company (the licensee) dated April 4, 1991, as supplemented June 12, 1991, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public;
and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

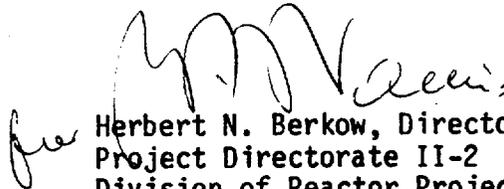
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-41 is hereby amended to read as follows:

(B) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 140, are hereby incorporated in the license. The Environmental Protection Plan contained in Appendix B is hereby incorporated into the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


Herbert N. Berkow, Director
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 16, 1991

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 145 FACILITY OPERATING LICENSE NO. DPR-31

AMENDMENT NO. 140 FACILITY OPERATING LICENSE NO. DPR-41

DOCKET NOS. 50-250 AND 50-251

Revise Appendix A as follows:

<u>Remove Pages</u>	<u>Insert Pages</u>
3/4 3-28	3/4 3-28
3/4 3-29	3/4 3-29
3/4 3-47	3/4 3-47
3/4 3-48	3/4 3-48
3/4 3-49	3/4 3-49
3/4 5-3	3/4 5-3
3/4 5-4	3/4 5-4
3/4 7-30	3/4 7-30
3/4 8-8	3/4 8-8
3/4 8-21	3/4 8-21
3/4 8-22	3/4 8-22
3/4 8-23	3/4 8-23

TURKEY POINT - UNITS 3 & 4

3/4 3-28

AMENDMENT NOS. 145 AND 140

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM
INSTRUMENTATION TRIP SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>ALLOWANCE (TA)</u>	<u>Z</u>	<u>S</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE#</u>
7. Loss of Power (Continued)					
b. 480V Load Centers (Instantaneous Relays) Degraded Voltage					
<u>Load Center</u>					
3A	[]	[]	[]	430V±5V (10 sec ± 1 sec delay)[]	
3B	[]	[]	[]	438V±5V (10 sec ± 1 sec delay)[]	
3C	[]	[]	[]	434V±5V (10 sec ± 1 sec delay)[]	
3D	[]	[]	[]	434V±5V (10 sec ± 1 sec delay)[]	
4A	[]	[]	[]	435V±5V (10 sec ± 1 sec delay)[]	
4B	[]	[]	[]	434V±5V (10 sec ± 1 sec delay)[]	
4C	[]	[]	[]	434V±5V (10 sec ± 1 sec delay)[]	
4D	[]	[]	[]	430V±5V (10 sec ± 1 sec delay)[]	
Coincident with: Safety Injection and					
	see item 1			See Item 1. above for all Safety Injection Trip Setpoints and Allowable Values.	
Diesel Generator Breaker Open				N.A.	N.A.

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM
INSTRUMENTATION TRIP SETPOINTS

TURKEY POINT - UNITS 3 & 4

3/4 3-29

AMENDMENT NOS. 145 AND 140

<u>FUNCTIONAL UNIT</u>	<u>ALLOWANCE (TA)</u>	<u>Z</u>	<u>S</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE#</u>
7. Loss of Power (Continued)					
c. 480V Load Centers (Inverse Time Relays) Degraded Voltage					
<u>Load Center</u>					
3A	[]	[]	[]	424V±5V(60 sec ±30 sec delay)	[]
3B	[]	[]	[]	427V±5V(60 sec ±30 sec delay)	[]
3C	[]	[]	[]	437V±5V(60 sec ±30 sec delay)	[]
3D	[]	[]	[]	435V±5V(60 sec ±30 sec delay)	[]
4A	[]	[]	[]	430V±5V(60 sec ±30 sec delay)	[]
4B	[]	[]	[]	436V±5V(60 sec ±30 sec delay)	[]
4C	[]	[]	[]	434V±5V(60 sec ±30 sec delay)	[]
4D	[]	[]	[]	434V±5V(60 sec ±30 sec delay)	[]
Coincident with: Diesel Generator Breaker Open	N.A.	N.A.	N.A.	N.A.	N.A.

INSTRUMENTATION

FIRE DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.4 As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.3-6 shall be OPERABLE.

APPLICABILITY: Whenever equipment protected by the fire detection instrument is required to be OPERABLE.

ACTION:

- a. With any, but not more than one-half the total in any fire zone, Function A fire detection instruments shown in Table 3.3-6 inoperable, restore the inoperable instrument(s) to OPERABLE status within 14 days or within the next 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour, unless the instrument(s) is located inside the containment, then inspect that containment zone at least once per 8 hours (or monitor the containment air temperature at least once per hour at the locations listed in Specification 4.6.1.5).
- b. With more than one-half of the Function A fire detection instruments in any fire zone shown in Table 3.3-6 inoperable, or with any Function B fire detection instruments shown in Table 3.3-6 inoperable, or with any two or more adjacent fire detection instruments shown in Table 3.3-6 inoperable, within 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour, unless the instrument(s) is located inside the containment, then inspect that containment zone at least once per 8 hours (or monitor the containment air temperature at least once per hour at the locations listed in Specification 4.6.1.5).
- c. With the fire watch patrol not established at the 18 foot level of the turbine area, restore the fire watch patrol within one hour, or prepare and submit a Special Report to the Commission within 30 days.
- d. The provisions of Specifications 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.4.1 Each of the above required fire detection instruments which are accessible during plant operation shall be demonstrated OPERABLE at least once per 6 months by performance of a TRIP ACTUATING DEVICE OPERATIONAL TEST. Fire detectors which are not accessible during plant operation shall be demonstrated OPERABLE by the performance of a TRIP ACTUATING DEVICE OPERATIONAL TEST during each COLD SHUTDOWN exceeding 24 hours unless performed in the previous 6 months.

4.3.3.4.2 The NFPA Standard 72D supervised circuits supervision associated with the detector alarms of each of the above required fire detection instruments shall be demonstrated OPERABLE at least once per 6 months.

TABLE 3.3-6

FIRE DETECTION INSTRUMENTS
FOR ESSENTIAL EQUIPMENT

<u>INSTRUMENT LOCATION</u>	<u>TOTAL NUMBER OF INSTRUMENTS</u>		
	<u>HEAT</u> <u>(x/y)*</u>	<u>FLAME</u> <u>(x/y)</u>	<u>SMOKE</u> <u>(x/y)</u>
<u>FIRE ZONE AREA</u>			
4 - Aux. Bldg. Corridor E. 10'			(2/0)
5 - Chem. Drain/Laundry/Shower Tank Room			(2/0)
9 - Laundry/Chemical Drain Tank Room			(1/0)
10 - Pipeway			(11/0)
11 - Unit 3 RHR Heat Exchanger Room			(5/0)
12 - RHR Pump 3A Room			(2/0)
13 - RHR Pump 3B Room			(2/0)
14 - Unit 4 RHR Heat Exchanger Room			(5/0)
15 - RHR Pump 4A Room			(2/0)
16 - RHR Pump 4B Room			(2/0)
19 - Unit 3 W Elect Penet Room			(5/0)
20 - Unit 3 S Elect Penet Room			(11/0)
21 - Instrument Shop			(2/0)
22 - Radioactive Laboratory			(2/0)
25 - Aux. Bldg. Elect. Equipmt. Room			(6/0)
25A- Spare Battery Room	(2/0)		
26 - Unit 4 N Elect Penet Room			(8/0)
27 - Unit 4 W Elect Penet Room			(6/0)
30 - Unit 4 Piping and Valve Room			(4/0)
40 - Unit 3 Piping and Valve Room			(4/0)
45 - Unit 4 Charging Pump Room	(0/4)		(3/0)
47 - Unit 4 Component Cooling Water Area	(0/4)	(5/2)	
54 - Unit 3 Component Cooling Water Area	(0/4)	(4/2)	
55 - Unit 3 Charging Pump Room	(0/4)		(3/0)
58 - Aux Bldg Corridor, El. 18'			(18/0)
59 - Unit 4 Containment Electrical Penet. Area**			(10/0)
60 - Unit 3 Containment Electrical Penet. Area**			(16/0)
61 - Reactor Control Rod Eqpmt Room - Unit 4			(4/0)
62 - Computer Room			(11/0)
63 - Reactor Control Rod Eqpmt Room - Unit 3			(4/0)
67 - 4160V Switchgear 4B			(10/0)
68 - 4160V Switchgear 4A			(6/0)
70 - 4160V Switchgear 3B			(10/0)
71 - 4160V Switchgear 3A			(6/0)
72 - Diesel Generator 3B	(0/3)	(1/0)	(1/0)
73 - Diesel Generator 3A	(0/3)	(1/0)	(1/0)
74 - Day Tank Room 3B	(1/1)		
75 - Day Tank Room 3A	(1/1)		
76 - Unit 4 Turbine Lube Oil Reservoir	(1/0)		
79A- North-South Breezeway	(0/6)		(4/0)
81 - Unit 4 Main Transformer	(1/0)		
82 - Unit 4 Aux Transformer Area	(1/0)		
84 - Unit 3 and 4 Aux Feedwater Pump Area (DC Enclosure Bldg.)			(3/0)

TABLE 3.3-6 (Continued)
FIRE DETECTION INSTRUMENTS
FOR ESSENTIAL EQUIPMENT

<u>INSTRUMENT LOCATION</u>	<u>TOTAL NUMBER OF INSTRUMENTS</u>		
	<u>HEAT</u> <u>(x/y)*</u>	<u>FLAME</u> <u>(x/y)</u>	<u>SMOKE</u> <u>(x/y)</u>
<u>FIRE ZONE AREA</u>			
87 - Unit 3 Aux Transformer Area	(1/0)		
93 - 480V Load Center 4A and 4B			(1/0)
94 - 480V Load Center 4C and 4D			(2/0)
95 - 480V Load Center 3A and 3B			(1/0)
96 - 480V Load Center 3C and 3D			(2/0)
97 - Mechanical Equipment Room			(1/0)
98 - Cable Spreading Room			(16/15)
101- RPI Inverter and MG Sets			(1/0)
102- Battery Rack 4B	(1/0)		
103- Battery Rack 3A	(1/0)		
104- RPI Inverter and MG Sets			(2/0)
106- Control Room	(1/0)		(16/0)
108A- Train A Inverters			(3/4)
108B- Train B Inverters			(4/4)
109- Battery Rack 4A	(1/0)		
110- Battery Rack 3B	(1/0)		
113- Unit 4 Feedwater Platform		(2/0)	
116- Unit 3 Feedwater Platform		(2/0)	
119- Unit 4 Intake Cooling Water Pump Area		(4/0)	
120- Unit 3 Intake Cooling Water Pump Area		(4/0)	
132- Control Room Electrical Chase			(1/2)
133- Diesel Generator 4B	(5/5)	(3/0)	(5/0)
134- 4160V Switchgear 3D Room			(2/0)
135- Diesel Generator 4B Control Panel Room			(2/0)
136- Diesel Generator 4B Fuel Transfer Pump			(2/0)
138- Diesel Generator 4A	(5/5)	(3/0)	(5/0)
139- 4160V Switchgear 4D Room			(2/0)
140- Diesel Generator 4A Control Panel Room			(2/0)
141- Diesel Generator 4A Fuel Transfer Pump			(2/0)
N/A - 18' level of the Turbine Area	(N/A)#	(N/A)#	(N/A)#

TABLE NOTATIONS

- * (x/y): x is number of Function A (early warning fire detection and notification only) instruments.
y is number of Function B (actuation of Fire Suppression Systems and early warning fire detection and notification) instruments.
- ** The fire detection instruments located within the containment are not required to be operable during the performance of Type A Containment Leakage Rate Test.
- # A fire watch patrol shall be established to inspect the 18 foot level of the Turbine Area once each hour.

EMERGENCY CORE COOLING SYSTEMS

3/4.5.2 ECCS SUBSYSTEMS - T_{avg} GREATER THAN OR EQUAL TO 350°F

LIMITING CONDITION FOR OPERATION

3.5.2 The following Emergency Core Cooling System (ECCS) equipment and flow paths shall be OPERABLE:

- a. Four OPERABLE Safety Injection (SI) pumps, each capable of being powered from its associated OPERABLE diesel generator[#], with discharge aligned to the RCS cold legs,*
- b. Two OPERABLE RHR heat exchangers,
- c. Two OPERABLE RHR pumps with discharge aligned to the RCS cold legs,
- d. An OPERABLE flow path capable of taking suction from the refueling water storage tank as defined in Specification 3.5.4, and
- e. Two OPERABLE flow paths capable of taking suction from the containment sump.

APPLICABILITY: MODES 1, 2, and 3**.

ACTION:

- a. With any one of the required ECCS components or flow paths inoperable, except for inoperable Safety Injection Pump(s), restore the inoperable component or flow path to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. In the event the ECCS is actuated and injects water in the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date since January 1, 1990.
- c. With one of the four required Safety Injection pumps inoperable and the opposite unit in MODE 1, 2, or 3, restore the pump to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 12 hours and in HOT SHUTDOWN within the following 6 hours.***

*Only three OPERABLE Safety Injection (SI) pumps (two associated with the unit and one from the opposite unit), each capable of being powered from its associated OPERABLE diesel generator[#], with discharge aligned to the RCS cold leg are required if the opposite unit is in MODE 4, 5, or 6.

**The provisions of Specifications 3.0.4 and 4.0.4 are not applicable for entry into MODE 3 for the Safety Injection flow paths isolated pursuant to Specification 3.4.9.3 provided that the Safety Injection flow paths are restored to OPERABLE status prior to T_{avg} exceeding 380°F. Safety Injection flow paths may be isolated when T_{avg} is less than 380°F.

***The provisions of Specifications 3.0.4 and 4.0.4 are not applicable.

#Inoperability of the required EDG's does not constitute inoperability of the associated Safety Injection pumps.

EMERGENCY CORE COOLING SYSTEMS

3/4.5.2 ECCS SUBSYSTEMS - T_{avg} GREATER THAN OR EQUAL TO 350°F

LIMITING CONDITION FOR OPERATION

- d. With two of the four required Safety Injection pumps inoperable and the opposite unit in MODE 1, 2, or 3, restore one of the two inoperable pumps to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 12 hours and in HOT SHUTDOWN within the following 6 hours. This ACTION applies to both units simultaneously.
- e. With one of the three required Safety Injection pumps inoperable and the opposite unit in MODE 4, 5, or 6, restore the pump to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- f. With a required Safety Injection pump OPERABLE but not capable of being powered from its associated diesel generator, restore the capability within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- shall be maintained within these limits during this test. Within 5 minutes after completing this 24-hour test, perform Specification 4.8.1.1.2.g.4)b);**
- 8) Verifying that the auto-connected loads to each diesel generator do not exceed 2500 kW (Unit 3), 2874 kW (Unit 4);
 - 9) Verifying the diesel generator's capability to:
 - a) Synchronize with the offsite power source while the generator is loaded with its emergency loads upon a simulated restoration of offsite power,
 - b) Transfer its loads to the offsite power source, and
 - c) Be restored to its standby status.
 - 10) Verifying that the diesel generator operating in a test mode, connected to its bus, a simulated Safety Injection signal overrides the test mode by: (1) returning the diesel generator to standby operation, and (2) automatically energizing the emergency loads with offsite power;
 - 11) Verifying that the fuel transfer pump transfers fuel from the fuel storage tank (Unit 3), fuel storage tanks (Unit 4) to the day tanks of each diesel associated with the unit via the installed cross-connection lines;
 - 12) Verifying that the automatic load sequence timer is OPERABLE with the interval between each load block within $\pm 10\%$ of its design interval;
 - 13) Verifying that the diesel generator lockout relay prevents the diesel generator from starting;
- h. At least once per 10 years or after any modifications which could affect diesel generator interdependence by starting all required diesel generators simultaneously and verifying that all required diesel generators provide 60 ± 1.2 Hz frequency and 4160 ± 420 volts in less than or equal to 15 seconds; and
- i. At least once per 10 years by:
- 1) Draining each fuel oil storage tank, removing the accumulated sediment and cleaning the tank.
 - 2) For Unit 4 only, performing a pressure test of those portions of the diesel fuel oil system designed to Section III, subsection ND of the ASME Code in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda.

**If Specification 4.8.1.1.2.g.4)b) is not satisfactorily completed, it is not necessary to repeat the 24-hour test. Instead, the diesel generator may be operated between 2300-2500 kW Unit 3, 2650-2850 kW (Unit 4) for 1 hour or until operating temperature has stabilized and then within 5 minutes repeat Specification 4.8.1.1.2.g.4)b).

TABLE 3.7-4
FIRE HOSE STATIONS

<u>IDENTIFICATION</u>	<u>LOCATION</u>	<u>FIRE ZONE</u>
HS-03-01	EL. 18' - East of 4160V SWGR Room on Column	88
HS-03-02	EL. 18' - West of 3A Condensate Pump on Pedestal	87
HS-03-03	EL. 18' - Passageway South of SG Feed Pump Room	83
HS-03-04	EL. 30' - East of 480V Load Center on Column	105
HS-03-05	EL. 30' - South End of Mezzanine Deck	105
HS-03-06	EL. 42' - NW End of Turbine Deck	117
HS-03-07	EL. 42' - North of 6A HPFW Heater	117
HS-03-08	EL. 42' - NW Corner of Entrance to Elevator	79
HS-04-01	EL. 18' - South of 4160V SWGR Room on Column	82
HS-04-02	EL. 18' - Passageway South of SG Feed Pump Room	78
HS-04-03	EL. 30' - East of 480V Load Center at Stairway	105
HS-04-04	EL. 30' - South End of Mezzanine Deck	105
HS-04-05	EL. 42' - West End of Turbine Deck	117
HS-04-06	EL. 42' - East Side of Turbine Deck and North of 6A FW Heater	117
HS-04-07	EL. 42' - East Side of Turbine Deck and North of 6B FW Heater	117
HS-04-08	EL. 42' - Southwest Corner of Turbine Deck	117
HS-04-09	EL. 18' - Entrance to Unit 4 Diesel Generator Building	999
HS-AB-01	EL. 18' - East-West Passageway at West End	58
HS-AB-02	EL. 18' - East-West Passageway at East End	58
HS-AB-03	EL. 18' - North-South Passageway Outside Unit 3 Charging Pump Room	58
HS-AB-04	EL. 50' - Roof of Unit 3 New Fuel Storage Area	118
HS-AB-05	EL. 50' - Roof of Unit 4 New Fuel Storage Area	118

TABLE 3.8-1

APPLICABLE TO UNIT 3 BASED ON UNIT 4 LOAD
CENTERS AND MOTOR CONTROL CENTERS INOPERABLE

ALLOWABLE OUTAGE TIMES

<u>Unit 4</u> Load Centers and Motor Control Centers Inoperable (Any MODE)	Allowable Outage Times (hours) Unit 3 - MODES 1, 2, 3 or 4		
	With AC Trains 3A, 3B, 4A, & 4B OPERABLE	With AC Trains 3A, 3B, & 4A OPERABLE	With AC Trains 3A, 3B, & 4B OPERABLE
LC 4A	N/A	72	N/A
MCC 4A	N/A	N/A	N/A
LC 4C and/or MCC 4C	2*	2*	N/A
LC 4H and/or MCC 4D	2**	2**	2**
LC 4B and/or MCC 4B	2*	N/A	2*
LC 4D	N/A	N/A	72

*If the battery charger powered from the out-of-service LC and/or MCC is not required by LCO 3.8.2.1, the out-of-service time is not applicable (N/A).

**If neither of the battery chargers powered from the out-of-service LC and/or MCC is required by LCO 3.8.2.1, the out-of-service time is 72 hours.

TABLE 3.8-2

APPLICABLE TO UNIT 4 BASED ON UNIT 3 LOAD
CENTERS AND MOTOR CONTROL CENTERS INOPERABLE

ALLOWABLE OUTAGE TIMES

<u>Unit 3</u> Load Centers and Motor Control Centers Inoperable (Any MODE)	Allowable Outage Times (hours) Unit 4 - MODES 1, 2, 3 or 4		
	With AC Trains 4A, 4B, 3A, & 3B OPERABLE	With AC Trains 4A, 4B, & 3A OPERABLE	With AC Trains 4A, 4B, & 3B OPERABLE
LC 3A	N/A	72	N/A
LC 3C and/or MCC 3C	2*	2*	N/A
LC 3H and/or MCC 3D	2**	2**	2**
LC 3B and/or MCC 3B	2*	N/A	2*
LC 3D	N/A	N/A	72

*If the battery charger powered from the out-of-service LC and/or MCC is not required by LCO 3.8.2.1, the out-of-service time is not applicable (N/A).
**If neither of the battery chargers powered from the out-of-service LC and/or MCC is required by LCO 3.8.2.1, the out-of-service time is 72 hours.

ONSITE POWER DISTRIBUTION

SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.3.2 As a minimum, the following electrical busses shall be energized in the specified manner:

- a. One train of A.C. emergency busses associated with the unit (3.8.3.1a. or b.) consisting of one 4160-volt and three 480-volt A.C. emergency busses load centers* and three (four for Unit 4 Train A) vital sections of motor control center busses,
- b. Two 120-volt A.C. vital busses for the unit energized from their associated inverters** connected to their respective D.C. busses, and
- c. Three 125-volt D.C. busses energized from their associated battery banks.

APPLICABILITY MODES 5*** and 6***.

ACTION:

With any of the above required electrical busses not energized in the required manner, immediately suspend all operations involving CORE ALTERATIONS, positive reactivity changes, or movement of irradiated fuel, initiate corrective action to energize the required electrical busses in the specified manner as soon as possible, and within 8 hours, depressurize and vent the RCS through at least a 2.2 square inch vent.

SURVEILLANCE REQUIREMENTS

4.8.3.2 The specified busses shall be determined energized in the required manner at least once per 7 days by verifying correct breaker alignment and indicated voltage on the busses.

*With the opposite unit in MODE 1, 2, 3, or 4, the 480-volt load centers can only be cross-tied upon issuance of an engineering evaluation to prevent exceeding required electrical components maximum design ratings and to ensure availability of the minimum required equipment.

**A backup inverter may be used to replace the normal inverter provided the normal inverter on the same DC bus for the opposite unit is not replaced at the same time.

***CAUTION - If the opposite unit is in MODES 1, 2, 3, or 4, see the corresponding Limiting Condition for Operation 3.8.3.1.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 145 TO FACILITY OPERATING LICENSE NO. DPR-31
AND AMENDMENT NO. 140 TO FACILITY OPERATING LICENSE NO. DPR-41

FLORIDA POWER AND LIGHT COMPANY

TURKEY POINT UNIT NOS. 3 AND 4

DOCKET NOS. 50-250 AND 50-251

1.0 INTRODUCTION

By letter dated April 4, 1991, as supplemented June 12, 1991, Florida Power and Light Company (FPL or the licensee) requested amendments to Facility Operating Licenses DPR-31 and DPR-41 for Turkey Point Units 3 and 4, respectively. The proposed changes would (1) revise the setpoint values of the 480V load center undervoltage relays, (2) incorporate the additional fire detection and manual fire fighting features installed as part of the Emergency Power System (EPS) Enhancement Project, and (3) incorporate miscellaneous administrative changes. The June 12, 1991 letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

2.1 Undervoltage Relay Setpoints

By letter L-90-68 dated July 2, 1990, FPL proposed the EPS Enhancement Project for Turkey Point Units 3 and 4 consisting of modifications to the ac electrical system and the addition of two new Class 1E emergency diesel generators (EDGs). FPL has revised the electrical design calculations performed in support of the above EPS Enhancement Project and has requested approval of TS changes to Section 3.3.2 to reflect the above electrical system modifications. Under this request, the licensee proposes to revise each of the 480V load center undervoltage relay setpoint values for instantaneous degraded voltage and inverse time degraded voltage as specified in Table 3.3-3 (Items 7.b and 7.c), Section 3.3.2, "Engineered Safety Features Actuation System Instrumentation." The purpose of the specified undervoltage relay trip settings is to isolate the safety buses from the offsite power during degraded conditions and to reenergize the same fuses from the onsite power system. The licensee states that the revision to the relay setpoints was necessary due to replacement of the motor-operated valve (MOV) motors as a result of NRC Generic Letter 89-10, and the availability of final vendor data on some safety-related heating, ventilation and air conditioning (HVAC) equipment added during the EPS modification.

However, the licensee's April 4, 1991 submittal did not include the setpoint calculation which establishes the trip setpoint values proposed in the table. Upon the staff's request, by letter dated June 12, 1991, the licensee submitted the calculation entitled "PSB-1 Voltage Analysis for Electrical Auxiliary System; EBASCO Calculation EC-145, Revision 4, dated March 1991."

The staff has reviewed the above document to determine how the licensee selected the setpoints as shown in Items 7.b and 7.c in Table 3.3-3 for the instantaneous and inverse time undervoltage relays. The staff finds that the voltage and time delay trip settings will protect the Class 1E equipment from sustained degraded voltages under accident and non-accident conditions. Since the computer code used for this analysis has been changed from an in-house computer program to EBASCO (AUXSYS 4078), the staff requires that the new software's analytical techniques and assumptions be verified by actual test. During a conference call on July 1, 1991, the licensee committed to perform the verification test and submit the result for NRC staff review prior to the next refueling outage.

Based on the evaluation of these calculations, the staff concludes that the proposed 480V load centers undervoltage relay setpoints for instantaneous degraded voltage and inverse time degraded voltage shown in Table 3.3-3, Items 7.b and 7.c are acceptable.

2.2 Fire Detection and Fire Fighting Features

The licensee proposes to revise TS Section 3.3.3.4, Table 3.3-6, Fire Detection Instruments for Essential Equipment, to include the fire detection devices added as part of the EPS Enhancement Project. Fire Zone 25A is the unique fire zone identifier assigned to the spare battery room and would be added to Table 3.3-6. The two Function A heat detectors shown for Fire Zone 25 are now associated with Fire Zone 25A. In addition, the number of Function A smoke detectors identified for Fire Zone 25 would be updated from five detectors to six.

The staff finds that the addition of Fire Zone 25A (spare battery room) to TS Section 3.3.3.4, Table 3.3-6 is appropriate and reflects the current plant configuration resulting from the modifications associated with the EPS Enhancement Project. Originally, Fire Zone 25 was the auxiliary building machine shop. The EPS Enhancement Project converted the shop into an electrical equipment room (Fire Zone 25) and a spare battery room. This conversion resulted in a thermal detection application in the battery room and ionization smoke detection application in the electrical equipment room. In addition, as part of the EPS Enhancement Project, the modifications associated with Fire Zone 25 required installation of additional HVAC ducts and changed the geometry of the area. This necessitated the installation of an additional smoke detector in the electrical equipment room. The staff finds the detection types for the hazards associated with Fire Zones 25 and 25A and the addition of an additional smoke detector in the electrical equipment room to be appropriate.

The licensee also proposes to revise TS Section 3/4.7.8.3, Table 3.7-4, Fire Hose Stations, to include the manual fire hose station installed at the entrance of the new Unit 4 emergency diesel generator building. This additional fire hose station was installed as part of the EPS Enhancement Project. The installation of this hose station was required in order to facilitate manual fire fighting operations within the new diesel generator structure. The staff reviewed the proposed changes to TS Section 3/4.7.8.3, Table 3.7-4, Fire Hose Stations and determined that this change to the TS is necessary in order to incorporate the new fire hose station installation.

2.3 Administrative Changes

The staff has reviewed the changes proposed for TS Section 3.3.3.4, Action Statement b. The action statement refers to Table 3.3-11, which is in error. The proposed change corrects this administrative error and appropriately references Table 3.3.6, and is therefore acceptable.

TS Section 3.3.3.4, Table 3.3-6 is revised for Fire Zone 106, Control Room and Fire Zone 132, Control Room Electrical Chase to correct the Function A smoke detectors provided in each zone. In Fire Zone 106, 17 ionization smoke detection devices are installed in lieu of 16 and in Fire Zone 132, 3 ionization smoke detection devices are installed in lieu of 1. The staff reviewed the proposed changes and determined that these changes reflect the actual plant configuration. Therefore, the staff finds the proposed changes acceptable.

The licensee proposes to replace the specified EDG loading (i.e., 2500 KW for Unit 3 and 2874 KW for Unit 4) with acceptable EDG loading bands (between 2300-2500 KW for Unit 3 and between 2650-2850 KW for Unit 4) associated with surveillance requirement (S/R) 4.1.1.2.g.7 shown in the double asterisk (**) footnote on the bottom of page 3/4 8-8. The licensee states that the purpose of EDG testing for specified loading bands instead of a single specific value is to reduce excessive wear and stress of the diesel engines resulting from too frequent EDG testing performed at near continuous and overloaded ratings during normal EDG surveillance activities. The licensee also states that the proposed changes enhance consistency with the rest of Turkey Point EDGs' S/Rs (e.g., 4.8.1.1.2.a.5 and g.7).

The staff has reviewed the proposed EDG loading bands shown in the footnote. For the EDG operability test, the standard TS requires loading of the EDG to greater than or equal to the continuous rating. However, to avoid frequent overloading of the EDGs, the staff has been allowing EDG testing to be performed at 100 KW to 200 KW below the continuous rating. The staff finds that the proposed loading bands of EDGs for Units 3 and 4 are consistent with what the staff has approved at other plants and, therefore, provide a sufficient confidence level that the EDGs will perform as designed. On this basis, the staff concludes that the proposed change to S/R 4.8.1.1.2 is acceptable.

The licensee proposes to delete the word "if" from the phrase, "... the out-of-service time if is not applicable ..." from the single asterisk footnote (*) in Table 3.8-2 of TS page 3/4 8-22. In addition, the licensee has proposed to add "(hours)" to indicate that the Allowable Outage Times in the column header of Tables 3.8-1 and 3.8-2, Section 3.8.3.1, are specified in hours. The licensee explains that deletion of the word "if" is editorial in nature and has no impact on plant operating requirements or Final Safety Analysis Report (FSAR) analyzed accidents, while the addition of "(hours)" is provided for clarity.

The staff has reviewed the proposed changes and finds that they are administrative changes with no impact on plant operating requirements or FSAR analyzed accidents. The staff agrees with the licensee that the above deletion and addition to the Tables 3.8-1 and 3.8-2, Section 3.8.3.1 are acceptable.

The licensee proposes to delete the word "in" and insert the phrase "on the same DC bus for" in the double asterisk (**) footnote of Section 3.8.3.2 of TS page 3/4 8-23. The licensee explains that the proposed editorial change would enhance consistency within Turkey Point's TS and the addition of the clarification phrase provides better understanding for the operator regarding the configuration and usage of a backup inverter.

The staff has reviewed the proposed change in the footnote and finds that the proposed change introduces no basic changes in operation or new modes of operation. Therefore, the staff concludes that the proposed administrative change to TS is acceptable.

The licensee proposes to revise TS Section 3.5.2, Action statement c from "... restore the pump to OPERABLE within 30 days ..." to "... restore the pump to OPERABLE status within 30 days ..." The licensee also proposes to delete the word "OPERABLE" in Action statement f of TS 3.5.2. These changes are editorial in nature and make the TS more consistent. They do not change the operation of the system or introduce any new modes of operation. The staff, therefore, finds these editorial changes acceptable.

3.0 SUMMARY

The staff has completed its review of the licensee proposals related to the EPS Enhancement Project and administrative changes as described in the licensee's submittals. Based on the evaluation provided above, the licensee's proposed changes are acceptable.

4.0 STATE CONSULTATION

Based upon the written notice of the proposed amendments, the Florida State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

These amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration and there has been no public comment on such finding (56 FR 24209). Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of these amendments.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

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Date: August 16, 1991

DATED: August 16, 1991

AMENDMENT NO.145 TO FACILITY OPERATING LICENSE NO. DPR-31-TURKEY POINT UNIT 3
AMENDMENT NO.140 TO FACILITY OPERATING LICENSE NO. DPR-41-TURKEY POINT UNIT 4

Docket File

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