

DO NOT REMOVE

Docket Nos. 50-250  
and 50-251

Posted

Amdt. 121 to DPR-41

(See Correction letter of 5-4-88)

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Dear Mr. Conway:

SUBJECT: TURKEY POINT UNITS 3 AND 4 - ISSUANCE OF AMENDMENTS TO UPGRADE  
TECHNICAL SPECIFICATIONS FOR DC POWER SOURCES  
(TAC NOS. 67074 AND 67075)

The Commission has issued the enclosed Amendment No. 127 to Facility Operating License No. DPR-31 and Amendment No. 121 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 December 22, 1987, as supplemented March 17, 1988.

These amendments revise the Technical Specifications for D.C. Power Sources to upgrade them towards Standard Technical Specifications. Specifically, the surveillance and test requirements for station batteries and battery chargers are revised.

A copy of the Safety Evaluation and the Notice of Issuance are enclosed.

Sincerely,

Original signed by

Gordon E. Edison, Sr. Project Manager  
Project Directorate II-2  
Division of Reactor Projects-I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 127 to DPR-31
2. Amendment No. 121 to DPR-41
3. Safety Evaluation
4. Notice of Issuance

cc w/enclosures:  
See next page

LA:PDII-2  
DAN:ter  
03/26/88

PM:PDII-2  
GEdison:bd  
03/26/88

D:PDII-2  
HBernow  
03/28/88

OGC-WF  
03/188

Received  
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HEE

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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. 127  
License No. DPR-31

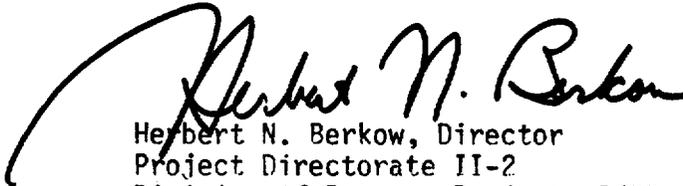
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Florida Power and Light Company (the licensee) dated December 22, 1987, as supplemented March 17, 1988, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (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

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 127, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of issuance and shall be implemented within 60 days.

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: April 18, 1988



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. 121  
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 December 22, 1987, as supplemented March 17, 1988, 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

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 121, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of issuance and shall be implemented within 60 days.

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: April 18, 1988

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 127 FACILITY OPERATING LICENSE NO. DPR-31

AMENDMENT NO. 121 FACILITY OPERATING LICENSE NO. DPR-41

DOCKET NOS. 50-250 AND 50-251

Revise Appendix A as follows:

Remove Pages

Insert Pages

v	v
4.8-3	4.8-3
--	4.8-4
--	4.8-5
--	Table 4.8-2
B4.8-1	B4.8-1
--	B4.8-2

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3.5-3	Instrument Operating Conditions for Isolation Functions
3.5-4	Engineered Safety Feature Set Points
3.5-5	Accident Monitoring Instrumentation
3.9-1	Radioactive Liquid Waste Sampling and Analysis Program
3.9-2	Radioactive Liquid Effluent Monitoring Instrumentation
3.9-3	Radioactive Gaseous Waste Sampling and Analysis Program
3.9-4	Radioactive Gaseous Effluent Monitoring Instrumentation
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3.14-1	Fire Detection System
3.14-2	Fire Hose Stations
3.16-1	Primary Coolant System Pressure Isolation Valves
3.17-1	Spent Fuel Burnup Requirements for Storage in Region II of the Spent Fuel Pit
3.18-1	Auxiliary Feedwater System Operability
4.1-1	Minimum Frequencies for Checks, Calibrations and Test of Instrument Channels
4.1-2	Minimum Frequencies for Equipment and Sampling Tests
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4.8-1	Diesel Generator Test Schedule
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6.2-1	Minimum Shift Crew Composition

- (a) Synchronize the diesel generator with offsite power while the generator is supplying emergency loads;
  - (b) Transfer the emergency load to offsite power;
  - (c) Isolate the diesel generator; and
  - (d) Return the diesel generator to standby status.
7. Verifying that auto-connected loads to each diesel generator do not exceed 2750 kw.
- e. At least once per 10 years or after any modification that could affect diesel generator independence, start both diesel generators simultaneously at a time when both reactors are shutdown and verify that both diesel generators provide  $60 \pm 1.2$  Hz frequency and  $4160 \pm 624$  volts in less than 15 seconds.

## **4.8.2 STATION BATTERIES**

**4.8.2.1 Each 125-volt battery bank and charger shall be demonstrated OPERABLE:**

- a. At least once per 24 hours read and record the pilot cell specific gravity. The specific gravity shall be within limits of Table 4.8-2 Category A.
- b. At least once per 7 days by verifying that:
  - 1) The pilot cell parameters (except specific gravity) in Table 4.8-2 meet the Category A limits, and
  - 2) The total battery terminal voltage is greater than or equal to 129 volts on float charge.
- c. At least once per 31 days by performing the following:
  - 1) Rotate the pilot cell, and
  - 2) Check water level and restore as necessary recording amount of water added.

## STATION BATTERIES

- d. At least once per 92 days and within 7 days after a battery discharge with battery terminal voltage below 105 volts, or battery overcharge with battery terminal voltage above 143 volts, verify that:
- 1) The parameters in Table 4.8-2 meet the Category B limits,
  - 2) There is no visible corrosion at either terminals or connectors, or the connection resistance of these items is less than  $150 \times 10^{-6}$  ohm, and
  - 3) The average electrolyte temperature of every sixth cell is above 60 F.
- e. At least once per 92 days perform a detailed visual inspection of the battery chargers.
- f. At least once per 12 months by verifying that:
- 1) The cells, and battery racks show no visual indication of physical damage or abnormal deterioration,
  - 2) The cell-to-cell and terminal connections are clean, tight, and coated with anticorrosion material.
  - 3) The resistance of each cell-to-cell and terminal connection is less than or equal to  $150 \times 10^{-6}$  ohm, and
  - 4) Each 50 kw battery charger will supply at least  $390 \pm 10$  amperes at 125 volts for at least 8 hours and each 37.5 kw battery charger will supply at least  $290 \pm 10$  amperes at 125 volts for at least 8 hours.
- g. At least once per 12 months by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status all of the actual or simulated emergency loads for the design duty cycle when the battery is subjected to a battery service test.

**TABLE 4.8-2****BATTERY SURVEILLANCE REQUIREMENTS**

PARAMETER	CATEGORY A (1)		CATEGORY B (2)	
	LIMITS FOR EACH designated pilot cell	LIMITS FOR EACH connected cell	ALLOWABLE (3) value for connected cell	
Electrolyte Level	Greater than minimum level indication mark, and less than $\frac{1}{4}$ inch above maximum level indication mark	Greater than minimum level indication mark, and less than $\frac{1}{4}$ inch above maximum level indication mark	Above top of plates and not overflowing	
Float Voltage	Greater than or equal to 2.13 volts	Greater than or equal to 2.13 volts (6)	Greater than or equal to 2.07 volts	
Specific Gravity (4)	Greater than or equal to 1.200 (5)	Greater than or equal to 1.195	Not more than 0.020 below the average of all connected cells	
		Average of all connected cells greater than 1.205	Average of all connected cells greater than or equal to 1.195 (5)	

**TABLE NOTATIONS**

- (1) For any Category A parameter(s) outside the limit(s) shown, the battery may be considered OPERABLE provided that within 24 hours all the Category B measurements are taken and found to be within their allowable values, and equalizing charge is started. All Category A and B parameter(s) must be restored to within limits within the next 6 days.
- (2) For any Category B parameter(s) outside the limit(s) shown, the battery may be considered OPERABLE provided that the Category B parameters are within their allowable values, and equalizing charge is started. All Category B parameter(s) must be restored to within limits within 7 days.
- (3) Any Category B parameter not within its allowable value indicates an inoperable battery.
- (4) Corrected for electrolyte temperature and level.
- (5) Or battery charging current is less than 2 amps when on charge.
- (6) Corrected for average electrolyte temperature.

## **B4.8 BASES FOR EMERGENCY POWER SYSTEM PERIODIC TESTS**

The tests specified are designed to demonstrate that the diesel generators will provide power for operation of equipment. They also assure that the emergency generator system controls and the control systems for the safeguards equipment will function automatically in the event of a loss of normal power.

The testing frequency specified is often enough to identify and correct any mechanical or electrical deficiency before it can result in a system failure. The fuel supply and starting circuits and controls are continuously monitored. Any faults are annunciated. An abnormal condition in these systems would be signaled without having to place the diesel generators themselves on test.

Each unit, as a backup to the normal standby AC power supply, is capable of sequentially starting and supplying the power requirement of the required safety feature equipment. Each will assume full load within 60 seconds after the initial starting signal. (1)(2)(3)

The specified fuel supply will ensure power requirements for at least a week.

### **Reference:**

- (1) FSAR, Section 6.4.3
- (2) FSAR, Section 8.2
- (3) FSAR, Section 14.3.2

**STATION BATTERIES**

Verifying average electrolyte temperature above the minimum for which the battery was sized, total battery terminal voltage on float charge, connection resistance values, and the performance of battery service discharge test ensures the effectiveness of the charging system, the ability to handle high discharge rates, and verifies the battery capability to supply its required load.

Table 4.8-2 specifies the normal limits for each designated pilot cell and each connected cell for electrolyte level, float voltage, and specific gravity. The limits for the designated pilot cells float voltage and specific gravity, greater than 2.13 volts and not more than 0.015 below the manufacturer's full charge specific gravity or a battery charger current that had stabilized at a low value, is characteristic of a charged cell with adequate capacity. The normal limits for each connected cell for float voltage and specific gravity, greater than 2.13 volts and not more than 0.020 below the manufacturer's full charge specific gravity with an average specific gravity of all the connected cells not more than 0.010 below the manufacturer's full charge specific gravity, ensures the OPERABILITY and capability of the battery.

Operation with a battery cells parameter outside the normal limit but within the allowable value specified in Table 4.8-2 is permitted for a period. During this period: (1) the allowable values for electrolyte level ensures no physical damage to the plates with an adequate electron transfer capability; (2) the allowable value for the average specific gravity of all the cells, not more than 0.010 below the manufacturer's recommended full charge specific gravity, ensure that the decrease in rating will be less than the safety margin provided in sizing; (3) the allowable value for an individual cells specific gravity, ensures that an individual cell's specific gravity will not be more than 0.030 below the manufacturer's full charge specific gravity and that the overall capability of the battery will be maintained within an acceptable limit; and (4) the allowable value for an individual cells float voltage, greater than 2.07 volts, ensures the battery's capability to perform its design function.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 127 TO FACILITY OPERATING LICENSE NO. DPR-31  
AND AMENDMENT NO. 121 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

INTRODUCTION

By letter dated December 22, 1987, as supplemented March 17, 1988, Florida Power and Light Company (the licensee) submitted proposed Technical Specifications related to the station batteries (Section 4.8.2) for the Turkey Point plant. The proposed changes are part of the licensee's effort to upgrade their Technical Specifications to make them consistent with the Westinghouse Pressurized Water Reactor Standard Technical Specifications and to reflect the manufacturer's recommendations pertaining to recently replaced station batteries.

EVALUATION

The proposed Technical Specification changes would add a Table 4.8-2 (Battery Surveillance Requirements) which designates electrolyte level, float voltage and specific gravity limits on the pilot cell, and each connected cell. The pilot cell specific gravity is checked at least once per 24 hours to see that it is equal or greater than 1.200, or if the battery is on charge, that the charging current is less than 2 amps. In addition, the pilot cell electrolyte level and float voltage is checked at least once per 7 days to see that they fall within specific limits. If these conditions are not met, within 24 hours an equalizing charge is started and the electrolyte level, float voltage and specific gravity of each connected cell is checked to assure that their values are within specified limits. In addition, each connected cell is checked at least once per 92 days and within 7 days after a battery discharge or battery overcharge to see that the cell parameters are within the specified limits. If not, they must be restored to acceptable limits within 7 days, or the battery is declared inoperable. In addition, Table 4.8-2 specifies "allowable" values which are less conservative (indicate a greater likelihood of a problem) than the specified "limits". If the allowable values are not met, the battery is immediately declared inoperable.

We have reviewed the limits, allowable values and action requirements of Table 4.8-2 and find they are consistent with the Westinghouse Standard Technical Specifications (STS) and the requirements of Regulatory Guide 1.129 and IEEE Standard 450. Therefore, we find the Table to be acceptable, and conclude that inclusion

of the Table in the Technical Specifications will improve battery reliability as compared to the present Technical Specifications which contain no specific limits on the electrolyte level, float voltage or specific gravity.

The pilot cell surveillance is more conservative than for the existing Technical Specifications in that it now requires meeting the electrolyte level, float voltage and specific gravity criteria; however, the surveillance interval for the connected cells is less conservative (less frequent) if the pilot cell readings are satisfactory. On balance, we conclude that reliability would not be significantly affected by the changes in surveillance. Also, the proposed surveillance requirements and intervals are consistent with the Westinghouse STS and IEEE Standard 450. We therefore find them to be acceptable.

The proposed Technical Specifications would require periodic surveillance or inspection of the battery terminal voltage, water level, electrolyte temperature, terminal conditions, battery cells, battery racks, and battery chargers. At least once per 92 days, the battery chargers would be tested as to their ability to supply the rated battery capacity for at least 8 hours. In addition, the battery would be subjected to a battery service test at least once per 12 months to verify its adequacy to supply and maintain all of the emergency loads for the design duty cycle.

The proposed periodic surveillance requirements are more extensive than required by the present Technical Specifications. This should result in considerable improvement in battery reliability. Also, the proposed surveillance requirements are consistent with (although more conservative in some instances) than the Westinghouse Standard Technical Specifications. Therefore, we find them to be acceptable.

The proposed Technical Specification changes would also expand the Bases section of the surveillance requirements for the station batteries (B4.8.2). We find this description correct and helpful toward understanding the associated Technical Specifications.

#### SUMMARY

The licensee has submitted proposed Technical Specification changes pertaining to their 125 volt D.C. station batteries and battery chargers for the Turkey Point plant. We have reviewed these proposed changes and find them to be consistent with the Westinghouse Standard Technical Specifications for PWRs. We also find that the proposed changes would significantly improve the thoroughness of the battery surveillance and thereby increase the reliability of the batteries. Therefore, we find the proposed changes to be acceptable.

#### ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.32, an environmental assessment was published (April 13, 1988, 53 FR 12203). Accordingly, the Commission has determined that the issuance of these amendments will not result in any environmental impacts other than those evaluated in the Final Environmental Statement.

CONCLUSION

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: April 18, 1988

Principal Contributor:

A. Toalston

UNITED STATES NUCLEAR REGULATORY COMMISSIONFLORIDA POWER AND LIGHT COMPANYDOCKET NOS. 50-250 AND 50-251NOTICE OF ISSUANCE OF AMENDMENTS TOFACILITY OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 127 to Facility Operating License No. DRP-31 and Amendment No. 121 to Facility Operating License No. DPR-41, issued to the Florida Power and Light Company (the licensee), which revised the Technical Specifications for operation of the Turkey Point Plant, Units 3 and 4 (the facilities), located in Dade County, Florida. The amendment was effective as of the date of its issuance.

The amendments revised the Technical Specifications for D. C. Power Sources to upgrade them towards Standard Technical Specifications. Specifically, the surveillance and test requirements for station batteries and battery chargers were revised.

The application for amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments.

Notice of Consideration of Issuance of Amendments and Opportunity for Hearing in connection with this action was published in the FEDERAL REGISTER on March 15, 1988 (53 FR 8527).

Also in connection with this action, the Commission prepared an Environmental Assessment and Finding of No Significant Impact, which was published in the FEDERAL REGISTER on April 13, 1988 (53 FR 12203).

For further details with respect to the action, see (1) the application for amendments dated December 22, 1987, as supplemented March 17, 1988, (2) Amendment No.127 to License No. DPR-31, and Amendment No.121 to License No. DPR-41, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C., and at the Environmental and Urban Affairs Library, Florida International University, Miami, Florida 33199.

Dated at Rockville, Maryland this 18th day of April , 1988.

FOR THE NUCLEAR REGULATORY COMMISSION



Gordon E. Edison, Sr. Project Manager  
Project Directorate II-2  
Division of Reactor Projects-I/II  
Office of Nuclear Reactor Regulation