

December 28, 1994

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

SUBJECT: TURKEY POINT UNITS 3 AND 4 - ISSUANCE OF AMENDMENTS RE:  
DIESEL FUEL OIL TESTING PROGRAM (TAC NOS. M89936 AND M89937)

Dear Mr. Goldberg:

The Commission has issued the enclosed Amendment No. 169 to Facility Operating License No. DPR-31 and Amendment No. 163 to Facility Operating License No. DPR-41 for the Turkey Point Plant, Unit Nos. 3 and 4, respectively. The amendments consist of changes to the Technical Specifications (TS) in response to your application dated July 19, 1994, and resubmitted with changes on October 20, 1994, relating to relocating the diesel fuel oil testing program requirements to TS Section 6 and to the Bases section of the TS. Also added were action statements to address diesel fuel oil which does not meet the program limits.

Please note that action statement 3.8.1.1.g was clarified by stating that certain new fuel oil properties must be confirmed to be within limits prior to addition to the storage tanks. This clarification was discussed with your staff on December 5, 1994.

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)  
Richard P. Croteau, Project Manager  
Project Directorate II-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 169 to DPR-31
2. Amendment No. 163 to DPR-41
3. Safety Evaluation

cc w/enclosures: See next page

FILENAME - G:\TP89936.AMD

OFFICE	LA:PDII-2	PM:PDII-2	AD:PDII-2	OGC <i>RAMM</i>	EMCB *	OTSB *
NAME	Dunnington *	RCroteau <i>RC</i>	<i>DMATTHEWS</i> MThadani	<i>No legal objection - 4 comments</i> RWEISMAN	Strosnider	CGRIMES
DATE	10/31/94	12/6/94	12/28/94	12/15/94	11/9/94	11/9/94
COPY	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Y/N

OFFICIAL RECORD COPY \* see previous concurrence

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*111*  
*CP-1*

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

Turkey Point Plant  
Units 3 and 4

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DATED: December 28, 1994

AMENDMENT NO. 169 TO FACILITY OPERATING LICENSE NO. DPR-31-TURKEY POINT UNIT 3  
AMENDMENT NO. 163 TO FACILITY OPERATING LICENSE NO. DPR-41-TURKEY POINT UNIT 4

Distribution

Docket File

PUBLIC

PDII-2 Reading

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G. Hill (2), TWFN, 5/C/3

C. Grimes, 11/F/23

ACRS (10)

OPA

OTSB

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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. 169  
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 July 19, 1994, and resubmitted on October 20, 1994, 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.

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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. 169, 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 its date of issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



David B. Matthews, 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: December 28, 1994



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. 163  
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 July 19, 1994, and resubmitted on October 20, 1994, 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. 163, 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 its date of issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



David B. Matthews, 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: December 28, 1994

**ATTACHMENT TO LICENSE AMENDMENT**  
**AMENDMENT NO. 169 FACILITY OPERATING LICENSE NO. DPR-31**  
**AMENDMENT NO. 163 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 8-4	3/4 8-4
3/4 8-5	3/4 8-5
3/4 8-6	3/4 8-6
6-7	6-7
6-10	6-10
6-13	6-13
6-15	6-15
-----	6-15a
B 3/4 8-4	B 3/4 8-4
-----	B 3/4 8-4a

## ELECTRICAL POWER SYSTEMS

### LIMITING CONDITION FOR OPERATION (Continued)

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#### ACTION (Continued)

**SHUTDOWN** within the following 30 hours. This **ACTION** applies to both units simultaneously. With only one startup transformer and associated circuits restored, perform Surveillance Requirement 4.8.1.1.1a on the **OPERABLE** Startup transformer at least once per 8 hours, and restore the other startup transformer and its associated circuits to **OPERABLE** status or shutdown in accordance with the provisions of Action Statement 3.8.1.1a with time requirements of that Action Statement based on the time of initial loss of a startup transformer. This **ACTION** applies to both units simultaneously.

- f. With two of the above required diesel generators inoperable, demonstrate the **OPERABILITY** of two startup transformers and their associated circuits by performing the requirements of Specification 4.8.1.1.1a. within 1 hour and at least once per 8 hours thereafter; restore at least one of the inoperable diesel generators to **OPERABLE** status within 2 hours or be in at least **HOT STANDBY** within the next 6 hours and in **COLD SHUTDOWN** within the following 30 hours. Restore all required diesel generators to **OPERABLE** status within 72 hours from time of initial loss or be in at least **HOT STANDBY** within the next 6 hours and in **COLD SHUTDOWN** within the following 30 hours.
- g. Following the addition of the new fuel oil\* to the Diesel Fuel Oil Storage Tanks, with one or more diesel generators with new fuel oil properties outside the required Diesel Fuel Oil Testing Program limits, restore the stored fuel oil properties to within the required limits within 30 days.
- h. With one or more diesel generators with stored fuel oil total particulates outside the required Diesel Fuel Oil Testing Program limits, restore the fuel oil total particulates to within the required limits within 7 days.

#### SURVEILLANCE REQUIREMENTS

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4.8.1.1.1 Each of the above required startup transformers and their associated circuits shall be:

- a. **Determined OPERABLE** at least once per 7 days by verifying correct breaker alignments, indicated power availability, and
- b. **Demonstrated OPERABLE** at least once per 18 months while shutting down, by transferring manually unit power supply from the auxiliary transformer to the startup transformer.

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\* The properties of API Gravity, specific gravity or an absolute specific gravity; kinematic viscosity; clear and bright appearance; and flash point shall be confirmed to be within the Diesel Fuel Oil Testing Program limits, prior to the addition of the new fuel oil to the Diesel Fuel Oil Storage Tanks.

## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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4.8.1.1.2 Each diesel generator shall be demonstrated OPERABLE\*:

- a. In accordance with the frequency specified in Table 4.8-1 with diesel generator surveillances performed nonconcurrently by:
  - 1) Verifying the fuel volume in the day and skid-mounted fuel tanks (Unit 4-day tank only),
  - 2) Verifying the fuel volume in the fuel storage tank,
  - 3) Verifying the lubricating oil inventory in storage,
  - 4) Verifying the diesel starts and accelerates to reach a generator voltage and frequency of 4160  $\pm$ 420 volts and 60  $\pm$ 1.2 Hz. Once per 184 days, these conditions shall be reached within 15 seconds after the start signal from normal conditions. For all other starts, warmup procedures, such as idling and gradual acceleration as recommended by the manufacturer may be used. The diesel generator shall be started for this test by using one of the following signals:
    - a) Manual, or
    - b) Simulated loss-of-offsite power by itself, or
    - c) Simulated loss-of-offsite power in conjunction with an ESF Actuation test signal, or
    - d) An ESF Actuation test signal by itself.
  - 5) Verifying the generator is synchronized, loaded\*\* to 2300 - 2500 kW (Unit 3), 2650-2850 kW (Unit 4)\*\*\*, operates at this loaded condition for at least 60 minutes and for Unit 3 until automatic transfer of fuel from the day tank to the skid mounted tank is demonstrated, and the cooling system is demonstrated OPERABLE.
  - 6) Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.

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\*All diesel generator starts for the purpose of these surveillances may be proceeded by a prelube period as recommended by the manufacturer.

\*\*May include gradual loading as recommended by the manufacturer so that the mechanical stress and wear on the diesel engine is minimized.

\*\*\*Momentary transients outside these load bands do not invalidate this test.

## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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- b. Demonstrating at least once per 92 days that a fuel transfer pump starts automatically and transfers fuel from the storage system to the day tank,
- c. At least once per 31 days and after each operation of the diesel where the period of operation was greater than or equal to 1 hour by checking for and removing accumulated water from the day and skid-mounted fuel tanks (Unit 4-day tank only);
- d. At least once per 31 days by checking for and removing accumulated water from the fuel oil storage tanks;
- e. By verifying fuel oil properties of new fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.
- f. By verifying fuel oil properties of stored fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.
- g. At least once per 18 months, during shutdown (applicable to only the two diesel generators associated with the unit):
  - 1) Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service;
  - 2)\* Verifying the generator capability to reject a load of greater than or equal to 380 kW while maintaining voltage at  $4160 \pm 420$  volts and frequency at  $60 \pm 1.2$  Hz;
  - 3)\* Verifying the generator capability to reject a load of greater than or equal to 2500 kW (Unit 3), 2874 kW (Unit 4) without tripping. The generator voltage shall return to less than or equal to 4784 volts within 2 seconds following the load rejection;
  - 4) Simulating a loss-of-offsite power by itself, and:
    - a) Verifying deenergization of the emergency busses and load shedding from the emergency busses, and
    - b) Verifying the diesel starts on the auto-start signal, energizes the emergency busses with any permanently

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\*For the purpose of this test, warmup procedures, such as idling, gradual acceleration, and gradual loading as recommended by the manufacturer may be used.

## ADMINISTRATIVE CONTROLS

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### RESPONSIBILITIES (Continued)

- e. Investigation of all violations of the Technical Specifications, including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence, to the President-Nuclear Division and to the Chairman of the Company Nuclear Review Board;
  - f. Review of all REPORTABLE EVENTS;
  - g. Review of reports of significant operating abnormalities or deviations from normal and expected performance of plant equipment or systems that affect nuclear safety.
  - h. Performance of special reviews, investigations, or analyses and reports thereon as requested by the Plant General Manager or the Chairman of the Company Nuclear Review Board;
  - i. Review of changes to the PROCESS CONTROL PROGRAM and the OFFSITE DOSE CALCULATION MANUAL;
  - j. Review of any accidental, unplanned, or uncontrolled radioactive release including the preparation of reports covering evaluation, recommendations, and disposition of the corrective action to prevent recurrence and the forwarding of these reports to the President-Nuclear Division and to the Chairman of the Company Nuclear Review Board.
  - k. Review of the Fire Protection Program and implementing procedures and the submittal of recommended changes to the Company Nuclear Review Board.
  - l. Review of the Diesel Fuel Oil Testing Program and implementing procedures.
- 6.5.1.7 The PNSC shall:
- a. Recommend in writing to the Plant General Manager approval or disapproval of items considered under Specification 6.5.1.6a. through d. prior to their implementation and items considered under Specification 6.5.1.6i through k.
  - b. Provide written notification within 24 hours to the Plant General Manager, President-Nuclear Division and the Company Nuclear Review Board of disagreement between the PNSC and the Plant General Manager; however, the Plant General Manager shall have responsibility for resolution of such disagreements pursuant to Specification 6.1.1.

## **ADMINISTRATIVE CONTROLS**

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### **AUDITS**

**6.5.2.8 Audits of unit activities shall be performed under the cognizance of the CNRB. These audits shall encompass:**

- a. The conformance of facility operation to provisions contained within the Technical Specifications and applicable license conditions;
- b. The performance, training, and qualifications of the entire facility staff;
- c. The results of actions taken to correct deficiencies occurring in facility equipment, structures, systems, or method of operation that affect nuclear safety;
- d. The performance of activities required by the Quality Assurance Program to meet the criteria of Appendix B, 10 CFR Part 50;
- e. The fire protection programmatic controls including the implementing procedures at least once per 24 months by qualified licensee QA personnel;
- f. The fire protection equipment and program implementation at least once per 12 months utilizing either a qualified offsite licensee fire protection engineer or an outside independent fire protection consultant. An outside independent fire protection consultant shall be used at least every third year;
- g. The Radiological Environmental Monitoring Program and the results thereof;
- h. The OFFSITE DOSE CALCULATION MANUAL and implementing procedures;
- i. The PROCESS CONTROL PROGRAM and implementing procedures for processing and packaging of radioactive wastes;
- j. The performance of activities required by the Quality Assurance Program for effluent and environmental monitoring;
- k. The Diesel Fuel Oil Testing Program and implementing procedures; and
- l. Any other area of unit operation considered appropriate by the CNRB or the President-Nuclear Division.

## ADMINISTRATIVE CONTROLS

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### SAFETY LIMIT VIOLATION (Continued)

- b. A Licensee Event Report shall be prepared in accordance with 10 CFR 50.73.
- c. The License Event Report shall be submitted to the Commission in accordance with 10 CFR 50.73, and to the CNRB, and the President-Nuclear Division within 30 days after discovery of the event.
- d. Critical operation of the unit shall not be resumed until authorized by the Nuclear Regulatory Commission.

### 6.8 PROCEDURES AND PROGRAMS

6.8.1 Written procedures shall be established, implemented, and maintained covering the activities referenced below:

- a. The applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978, Sections 5.1 and 5.3 of ANSI N18.7-1972;
- b. The emergency operating procedures required to implement the requirements of NUREG-0737 and Supplement 1 to NUREG-0737 as stated in Generic Letter No. 82-33;
- c. PROCESS CONTROL PROGRAM implementation;
- d. OFFSITE DOSE CALCULATION MANUAL implementation;
- e. Quality Control Program for effluent monitoring using the guidance in Regulatory Guide 1.21, Revision 1, June 1974;
- f. Facility Fire Protection Program;
- g. Quality Control Program for environmental monitoring using the guidance in Regulatory Guide 4.1, Revision 1, April 1975; and
- h. Diesel Fuel Oil Testing Program implementation.

6.8.2 Each procedure of Specification 6.8.1 (a through f), and changes thereto, shall be reviewed and approved prior to implementation and reviewed periodically as set forth in Specification 6.5.3 and administrative procedures.

6.8.3 Temporary changes to procedures of Specification 6.8.1 (a through g) may be made provided:

- a. The intent of the original procedure is not altered;

## ADMINISTRATIVE CONTROLS

### PROCEDURES AND PROGRAMS (Continued)

- (3) Identification of process sampling points, which shall include monitoring the discharge of the condensate pumps for evidence of condenser in-leakage,
- (4) Procedures for the recording and management of data,
- (5) Procedures defining corrective actions for all off-control point chemistry conditions, and
- (6) A procedure identifying: (a) the authority responsible for the interpretation of the data, and (b) the sequence and timing of administrative events required to initiate corrective action.

#### d. Post-Accident Sampling

A program which will ensure the capability to obtain and analyze reactor coolant, radioactive iodines and particulates in plant gaseous effluents, and containment atmosphere samples under accident conditions. The program shall include the following:

- (1) Training of personnel,
- (2) Procedures for sampling and analysis, and
- (3) Provisions for maintenance of sampling and analysis equipment.

#### e. Diesel Fuel Oil Testing Program

A diesel fuel oil testing program to implement required testing of both new fuel oil and stored fuel oil shall be established. The program shall include sampling and testing requirements, and acceptance criteria, all in accordance with applicable ASTM Standards. The purpose of the program is to establish the following:

- a. Acceptability of new fuel oil for use prior to addition to storage tanks by determining that the fuel oil has:
  1. an API Gravity or an absolute specific gravity within limits,
  2. a flash point and kinematic viscosity within limits for Grade No. 2-D fuel oil per ASTM D975, and
  3. a clear and bright appearance with proper color;
- b. Other properties for Grade No. 2-D fuel oil per ASTM D975 are within limits within 30 days following sampling and addition to storage tanks; and
- c. Total particulate concentration of the fuel oil is  $\leq 10$  mg/liter when tested every 31 days in accordance with either ASTM D-2276 or ASTM D-5452.

## ADMINISTRATIVE CONTROLS

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### 6.9 REPORTING REQUIREMENTS

#### ROUTINE REPORTS

6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following reports shall be submitted to the U.S. Nuclear Regulatory Commission, Document Control Desk, Washington, DC pursuant to 10 CFR 50.4.

#### STARTUP REPORT

6.9.1.1 A summary report of plant startup and power escalation testing shall be submitted following: (1) receipt of an Operating License, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier, and (4) modifications that may have significantly altered the nuclear, thermal, or hydraulic performance of the unit.

## ELECTRICAL POWER SYSTEMS

### BASES (Continued)

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With both startup transformers inoperable, the unit(s) are required to be shutdown consecutively, after 24 hours. A consecutive shutdown is used because a unit without its associated transformer must perform a natural circulation cooldown. By placing one unit in COLD SHUTDOWN before starting shutdown of the second unit, a dual unit natural circulation cooldown is avoided.

The term verify means to administratively check by examining logs or other information to determine if required components are out-of-service for maintenance or other reasons. It does not mean to perform the surveillance requirements needed to demonstrate the OPERABILITY of the component.

The EDG Surveillance testing requires that each EDG be started from normal conditions only once per 184 days with no additional warmup procedures. Normal conditions in this instance are defined as the pre-start temperature and lube oil conditions each EDG normally experiences with the continuous use of prelube systems and immersion heaters.

The fuel supply specified for the Unit 3 EDG's is based on the original criteria and design bases used to license the plant. The specified fuel supply will ensure sufficient fuel for either EDG associated with Unit 3 for at least a week. The fuel supply specified for the Unit 4 EDG's is based on the criteria provided in ANSI N195-1976 as endorsed by Regulatory Guide 1.137. The specified fuel supply will ensure sufficient fuel for each EDG associated with Unit 4 for at least a week.

### DIESEL FUEL OIL TESTING PROGRAM

In accordance with TS 6.8.4, a diesel fuel oil testing program to implement required testing of both new fuel oil and stored fuel oil shall be established. For the intent of this specification, new fuel oil shall represent diesel fuel oil that has not been added to the Diesel Fuel Oil Storage Tanks. Once the fuel oil is added to the Diesel Fuel Oil Storage Tanks, the diesel fuel oil is considered stored fuel oil, and shall meet the Technical Specification requirements for stored diesel fuel oil.

The tests listed below are a means of determining whether new fuel oil is of the appropriate grade and has not been contaminated with substances that would have an immediate detrimental impact on diesel engine combustion. If results from these tests are within acceptable limits, the new fuel oil may be added to the storage tanks without concern for contaminating the entire volume of fuel oil in the storage tanks. These tests are to be conducted prior to adding the new fuel to the storage tanks, but in no case is the time between receipt of the new fuel oil and conducting the tests of Surveillance Requirement 4.8.1.1.2e. to exceed 30 days. The tests, limits, and applicable ASTM standards being used to evaluate the condition of new fuel oil are:

1. By obtaining a composite sample of new fuel oil in accordance with ASTM-D4057 prior to addition of new fuel oil to the diesel fuel oil storage tanks and:

## ELECTRICAL POWER SYSTEMS

### BASES (Continued)

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2. By verifying in accordance with the tests specified in ASTM-D975-81 prior to addition to the diesel fuel oil storage tanks that the sample has:
  - a) An API Gravity of within 0.3 degrees at 60°F, or a specific gravity of within 0.0016 at 60/60°F, when compared to the supplier's certificate, or an absolute specific gravity at 60/60°F of greater than or equal to 0.83 but less than or equal to 0.89, or an API gravity of greater than or equal to 27 degrees but less than or equal to 39 degrees, when tested in accordance with ASTM-D1298-80;
  - b) A kinematic viscosity at 40°C of greater than or equal to 1.9 centistokes, but less than or equal to 4.1 centistokes (alternatively, Saybolt viscosity, SUS at 100°F of greater than or equal to 32.6, but less than or equal to 40.1), if gravity was not determined by comparison with the supplier's certification;
  - c) A flash point equal to or greater than 125°F; and
  - d) A clear and bright appearance with proper color when tested in accordance with ASTM-D4176-82.

Failure to meet any of the above limits is cause for rejecting the new fuel oil, but does not represent a failure to meet the Limiting Condition for Operation of TS 3.8.1.1, since the new fuel oil has not been added to the diesel fuel oil storage tanks.

Within 30 days following the initial new fuel oil sample, the fuel oil is analyzed to establish that the other properties specified in Table 1 of ASTM-D975-81 are met when tested in accordance with ASTM-D975-81 except that the analysis for sulfur may be performed in accordance with ASTM-D1552-79 or ASTM-D2622-82. The 30 day period is acceptable because the fuel oil properties of interest, even if they are not within limits, would not have an immediate effect on EDG operation. The diesel fuel oil surveillance in accordance with the Diesel Fuel Oil Testing Program will ensure the availability of high quality diesel fuel oil for the EDGs.

At least once every 31 days, a sample of fuel oil is obtained from the storage tanks in accordance with ASTM-D2276-78. The particulate contamination is verified to be less than 10 mg/liter when checked in accordance with ASTM-D2276-78, Method A. It is acceptable to obtain a field sample for subsequent laboratory testing in lieu of field testing.

Fuel oil degradation during long term storage shows up as an increase in particulate, due mostly to oxidation. The presence of particulate does not mean the fuel oil will not burn properly in a diesel engine. The particulate can cause fouling of filters and fuel oil injection equipment, however, which can cause engine failure.

The frequency for performing surveillance on stored fuel oil is based on stored fuel oil degradation trends which indicate that particulate concentration is unlikely to change significantly between surveillances.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 169 TO FACILITY OPERATING LICENSE NO. DPR-31  
AND AMENDMENT NO. 163 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 July 19, 1994, Florida Power and Light Company (FPL or the licensee) requested a revision to the Turkey Point Units 3 and 4 Technical Specifications (TS) to relocate the program requirements for Emergency Diesel Generator (EDG) fuel oil testing to the Bases section of TS. FPL also proposed the addition of ACTION statements to address the required action in the event the diesel fuel oil does not meet the program limits. Based on discussions with the staff, the request was modified and resubmitted by letter dated October 20, 1994, primarily to add the testing program to Section 6, Administrative Controls, of the TS.

The clarification to action statement 3.8.1.1.g requested by the licensee and discussed below did not affect the intent of the specifications. Therefore, the change is within the scope of the action described in the Federal Register (59 FR 55870) on November 9, 1994.

2.0 DESCRIPTION AND EVALUATION

The EDGs are designed to provide sufficient capacity, capability, redundancy, and reliability to ensure the availability of necessary power to ESF systems so that fuel, Reactor Coolant System and containment design limits are not exceeded.

For proper operation of the EDGs, it is necessary to ensure the proper quality of the fuel oil. Regulatory Guide 1.137 addresses the recommended fuel oil practices as supplemented by ANSI N195. The fuel oil properties of concern are the water and sediment content, the kinematic viscosity, specific gravity (or API gravity), and impurity level.

Since diesel fuel oil subsystem supports the operation of the standby AC power sources, it satisfies Criterion 3 of the NRC "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" (58 FR 39132) for inclusion in TS.

## 2.1 Addition of TS Action Statements

### 2.1.1 New Fuel Oil Properties

FPL proposed the addition of ACTION statement g. of TS 3.8.1.1 to address the required action in the event the new fuel oil properties do not meet the Diesel Fuel Oil (DFO) Testing Program limits following addition of the new fuel oil to the fuel oil storage tanks. The staff found it necessary to clarify the action statement by noting that the properties of API Gravity, specific gravity or an absolute specific gravity; kinematic viscosity; clear and bright appearance; and flash point shall be confirmed to be within limits prior to addition to the storage tanks. This clarification was discussed with the licensee by telephone on December 5, 1994, and the licensee requested that the clarification be added as a footnote to TS 3.8.1.1.

In the event the new fuel oil properties other than those specified previously are not met, ACTION statement g. of TS 3.8.1.1 provides an additional 30 days to meet the DFO Testing Program limits. This additional 30-day period is acceptable because the fuel oil properties of interest, even if they are not within limits, would not have an immediate effect on EDG operation. This period provides sufficient time to test the stored fuel oil to determine that the new fuel oil, when mixed with previously stored fuel oil, remains acceptable, or to restore the stored fuel oil properties. This restoration may involve feed and bleed procedures, filtering, or combinations of these procedures. Even if a DG start and load were required during this time interval and the fuel oil properties were outside limits for these properties, there is a very high likelihood that the DG would still be capable of performing its intended function since the DFO properties of concern do not impact DFO combustion and will only have an impact on EDG reliability over many thousands of hours of operation. The proposed change is therefore acceptable.

We find this change acceptable since there is a very high likelihood that the DG would be capable of performing its intended function during the proposed time interval under the conditions specified. In addition, the staff notes that the proposed change is consistent with the improved standard TS.

### 2.1.2 Stored Fuel Oil

FPL also proposed the addition of ACTION statement h. to TS 3.8.1.1, to address the required action in the event the stored fuel oil total particulates do not meet the DFO Testing Program limits. Fuel oil degradation during long-term storage shows up as an increase in particulate, due mostly to oxidation. This action statement requires the restoration of the fuel oil total particulates to program limits (10 mg/l) within seven days.

Normally, trending of particulate levels allows sufficient time to correct high particulate levels prior to reaching the limit of acceptability. Poor sample procedures (bottom sampling), contaminated sampling equipment, and errors in laboratory analysis can produce failures that do not follow a trend. Since the presence of particulates does not mean failure of the fuel oil to burn properly in the diesel engine, and particulate concentration is unlikely

to change significantly between surveillance frequency intervals, it is prudent to allow a brief period prior to declaring the associated DG inoperable. The particulate can cause fouling of filters and fuel oil injection equipment, however, which can cause engine failure. The trigger value of 10mg/liter of particulate is very conservative with respect to what an EDG can actually tolerate without adversely affecting filters and attendant EDG operation. Also, the possibility that particulate contamination will increase from 10 mg/liter to some unacceptable value in seven days is not credible. The 7-day Completion Time allows for further evaluation, resampling and re-analysis of the DG fuel oil.

We find this change acceptable since there is a very high likelihood that the DG would be capable of performing its intended function during the proposed time interval under the conditions specified. In addition, the staff notes that the proposed change is consistent with the improved standard TS.

## 2.2 Surveillance Requirements

FPL proposed relocating the previous surveillance requirements contained in TS 4.8.1.1.2.e and f to Section 6, Administrative Requirements, and the TS BASES. The proposed new surveillance requirements for 4.8.1.1.2.e and f would state that the new fuel oil and stored fuel oil are tested and maintained within the limits of the DFO Testing Program.

This is acceptable since it simply refers to another location of TS which will specify the surveillance frequencies. The surveillance frequencies and limits are evaluated in the following section.

## 2.3 Relocation of EDG Fuel Oil Testing Description to TS Section 6

The licensee proposed including a general description of the DFO Testing Program in Section 6 including the surveillance frequencies. For new fuel oil only, the tests listed below are a means of determining whether new fuel oil is of the appropriate grade and has not been contaminated with substances that would have an immediate, detrimental impact on diesel engine combustion. If results from these tests are within acceptable limits, the fuel oil may be added to the storage tanks without concern for contaminating the entire volume of fuel oil in the storage tanks. These tests are to be conducted prior to adding the new fuel to the storage tank(s), but in no case is the time between receipt of new fuel and conducting the tests to exceed 30 days. The tests are as follows:

1. an API Gravity or an absolute specific gravity within limits,
2. a flash point and kinematic viscosity within limits for Grade No. 2-D fuel oil per ASTM D975, and
3. a clear and bright appearance with proper color.

Failure to meet any of the above limits is cause for rejecting the new fuel oil, but does not represent a failure to meet the LCO 3.8.1.1 since the fuel oil is not added to the storage tanks.

The proposed TS also requires that, following the above satisfactory testing of the new fuel oil, the other properties for Grade No. 2-D fuel oil per ASTM D975 are determined to be within limits within 30 days following sampling and addition to storage tanks. The 30-day period is acceptable because the fuel oil properties of interest, even if they were not within stated limits, would not have an immediate effect on EDG operation (see section 2.1.1). This surveillance ensures the availability of high quality fuel oil for the EDGs.

Regarding stored fuel oil, the licensee proposed that the total particulate concentration of the fuel oil be verified to be  $\leq 10$  mg/liter when tested every 31 days in accordance with either ASTM D-2276 or ASTM D-5452. As previously discussed, the presence of particulate does not mean the fuel oil will not burn properly in a diesel engine. The particulate can cause fouling of filters and fuel oil injection equipment, however, which can cause engine failure.

It is acceptable to obtain a field sample for subsequent laboratory testing in lieu of field testing. The frequency of this test takes into consideration fuel oil degradation trends that indicate that particulate concentration is unlikely to change significantly between tests.

Inclusion of both ASTM D-2276 and D-5452 makes the proposed amendment consistent with the latest ASTM approach to particulate testing. D-2276(93) covers testing in the field (method A2 of D-2276(89)). D-5452 covers testing in the lab and is essentially identical to method A3 of D-2276(89). Both are acceptable. Inclusion of both standards gives the licensee acceptable latitude with respect to conducting the test. This is also acceptable.

We find this change acceptable since the testing intervals have not changed and there is a high likelihood that the DG would be capable of performing its intended function with the proposed DFO testing specified. In addition, the staff notes that the proposed relocation to the Administrative Controls section of TS is consistent with the improved standard TS.

The licensee also proposed revising TS Section 6 to include the programmatic responsibilities of the Plant Nuclear Safety Committee and Company Nuclear Review Board to review the DFO Testing Program and implementing procedures, as well as the requirement that written procedures be established, implemented and maintained for implementation of the DFO Testing Program. This is consistent with other programs described in the TS, is more restrictive than the current TS, and is, therefore, acceptable.

#### 2.4 Relocation of EDG Fuel Oil Testing Details to TS Bases

FPL proposed placing the specific details of the EDG fuel oil surveillance requirements from TS 4.8.1.1.2e and 4.8.1.1.2f to the TS Bases. The proposal included listing the surveillance requirements' periodicity, American Society for Testing and Materials (ASTM) testing standards, and acceptance criteria in both the Bases for the TS and the plant procedures used to test the EDG fuel oil. In effect, this relocates the current requirements from TS to the Bases.

The licensee stated that the proposed amendments will improve flexibility in

accomplishing the surveillance requirements. This flexibility is required, for example, as a result of recent difficulties encountered in obtaining laboratory analyses as required by the TS, in that the specific testing standard has become outdated and generally fallen into disuse. While these difficulties can, and have been, overcome in the short term, the continued requirement to meet outdated standards is economically expensive and provides no safety benefit in the case of contemporary testing methods.

The staff's review of the proposed change determined that the relocation of the details of the DFO Testing Program does not eliminate the requirements for the licensee to ensure that the EDG system is capable of performing its safety function. Future changes to the DFO Testing Program not included in TS 6.8.4.e would be accomplished pursuant to 10 CFR §50.59, "Changes, tests, and experiments." Changes to the testing program involving aspects specified in the Administrative Controls section 6.8.4.e described previously would require a TS Amendment.

By deleting the specific reference to the testing standards being used to meet TS testing requirements, FPL could change an ASTM standard not listed in TS 6.8.4.e, or standard edition, without prior NRC approval, provided an unreviewed safety question did not exist. As stated in the proposed TS 6.8.4.e, the source of the sampling and testing requirements, and acceptance criteria will continue to be the ASTM standards. NRC inspection and enforcement programs also enable the staff to monitor facility changes and licensee adherence to commitments and to take any remedial actions that may be appropriate. The staff's review concluded that 10 CFR 50.36 does not require the specifics of the DFO Testing Program, relocated to the BASES section, to be retained in TS. Requirements related to the operability, applicability, and surveillance requirements are retained due to the EDG (and fuel oil) importance in mitigating the consequences of an accident. However, the staff determined that the inclusion of the testing specifics described above are an operational detail related to the licensee's safety analyses which are adequately controlled by the requirements of 10 CFR 50.59. Therefore, the continued processing of license amendments related to revisions of the DFO program, where the revisions to those requirements do not involve an unresolved safety question, would afford no significant benefit with regard to protecting the public health and safety.

Therefore, we find this change acceptable since the details of the program do not need to be controlled by TS, sufficient regulatory controls exist with respect to the Bases of the TS and changes to the requirements are controlled by means acceptable to the staff (10 CFR 50.59). In addition, the staff notes that the proposed relocation is consistent with the improved standard TS.

### 3.0 CONCLUSION

We find the requested changes acceptable since sufficient regulatory controls exist with respect to the Bases of the TS, details of the program do not need to be controlled by TS, and there is a high likelihood that the DG would be capable of performing its intended function during the proposed time interval under the conditions specified. The requirements that are being relocated from TS will exist outside of TS and changes to the requirements are

controlled by means acceptable to the staff. 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 these amendments will not be inimical to the common defense and security or the health and safety of the public.

#### 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 relate to changes surveillance requirements in addition to recordkeeping, reporting, or administrative procedures or 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 (59 FR 55870). Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and (10). 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.

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