

May 6, 2004

Mr. J. A. Stall
Senior Vice President, Nuclear and
Chief Nuclear Officer
Florida Power and Light Company
P.O. Box 14000
Juno Beach, Florida 33408-0420

SUBJECT: ST. LUCIE UNIT 1 - ISSUANCE OF AMENDMENT REGARDING UPDATED
CORE OPERATING LIMITS REPORT (COLR) METHODOLOGIES
(TAC NO. MB5178)

Dear Mr. Stall:

The Commission has issued the enclosed Amendment No. 191 to Renewed Facility Operating License No. DPR-67 for the St. Lucie Plant, Unit No. 1. This amendment consists of changes to the Technical Specifications in response to your application dated May 22, 2002, as supplemented by letters dated December 5, 2002, and February 11, 2004.

This amendment revises Technical Specification (TS) 6.9.1.11.b to add two topical reports to the list of approved COLR methodologies and to delete several superseded topical reports. It also revises the method for referencing topical reports in the TS.

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,

/RA/

Brendan T. Moroney, Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-335

Enclosures:

1. Amendment No. 191 to DPR-67
2. Safety Evaluation

cc w/enclosures: See next page

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FLORIDA POWER & LIGHT COMPANY

DOCKET NO. 50-335

ST. LUCIE PLANT UNIT NO. 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 191

Renewed License No. DPR-67

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Florida Power & Light Company (the licensee), dated May 22, 2002, as supplemented by letters dated December 5, 2002, and February 11, 2004, 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, Renewed Facility Operating License No. DPR-67 is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and by amending paragraph 3.B to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 191, are hereby incorporated in the renewed license. FPL shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

William F. Burton, Acting Chief, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 6, 2004

ATTACHMENT TO LICENSE AMENDMENT NO. 191
TO RENEWED FACILITY OPERATING LICENSE NO. DPR-67
DOCKET NO. 50-335

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

Remove Pages

6-19

6-19a

6-19b

Insert Pages

6-19

6-19a

6-19b

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 191

TO RENEWED FACILITY OPERATING LICENSE NO. DPR-67

FLORIDA POWER AND LIGHT COMPANY

ST. LUCIE PLANT, UNIT NO. 1

DOCKET NO. 50-335

1.0 INTRODUCTION

By letter dated May 22, 2002 (Reference 1), as supplemented by letters dated December 5, 2002, and February 11, 2004 (References 2 and 3), Florida Power and Light Company (FPL, the licensee) submitted a request for changes to the St. Lucie Unit 1 Technical Specifications (TS). The proposed changes would update the list of documents describing the analytical methods used to determine the core operating limits specified in TS 6.9.1.11.b. Specifically, these changes would update the documents describing the analytical methods used to add two approved topical reports and to delete several topical reports that have been superseded by other listed reports. In addition, the referencing of documents listed in the TS would be changed to cite each report only with the report number and title, in a manner consistent with that approved by the U.S. Nuclear Regulatory Commission (NRC) in Standard TS Change Traveler (TSTF)-363, Revision 0.

The licensee's December 5, 2002, and February 11, 2004, letters provided clarifying information that did not change the scope of the proposed amendment as described in the original notice of proposed action published in the *Federal Register* and did not change the initial proposed no significant hazards consideration determination.

2.0 REGULATORY EVALUATION

The regulatory basis for the acceptance of the methodology applied to the loss of forced reactor coolant flow, including pump motor trip and flow controller malfunctions, is discussed in Standard Review Plan Section 15.3.1-15.3.2 (Reference 4).

In an effort to avoid TS changes for every fuel reload cycle that result in changes to the cycle-specific parameter limits, licensees have relocated the cycle-specific core operating parameters from the TS to the Core Operating Limits Report (COLR). This is done in accordance with the guidelines of NRC Generic Letter (GL) 88-16 (Reference 5). GL 88-16 also requires licensees to identify, in the "Reporting Requirements" section of the TS, the previously approved analytical methods used to determine the core operating limits by identifying the topical report number, title, and date (or identify the staff's safety evaluation report (SER) for a plant-specific methodology by NRC letter and date).

In December 1999 (Reference 6), the NRC staff accepted a method of referencing approved topical reports proposed by Siemens Power Corporation. The proposed method would allow licensees to use current topical reports to support limits in the COLR without having to submit an amendment request for the facility operating license each time a revision to the topical report is approved by the NRC. This method would allow the references to approved topical reports in the TS to be cited using only the report number and title. The citation in the COLR would include specific information for each of the TS references to topical reports used to prepare the COLR (i.e., report number, title, revision, date, and any supplements). This method of referencing was subsequently accepted generically by TSTF-363, Revision 0 (Reference 7).

In a letter dated November 22, 1999, Framatome ANP, Inc. (FANP) submitted Topical Report EMF-2310(P)(A) (Reference 8) to the NRC for review and approval of the use of the S-RELAP5-based thermal-hydraulic analysis code. FANP proposed using S-RELAP5 to replace the NRC-approved code ANF-RELAP because the new code was updated and modified to analyze both pressurized-water reactor (PWR) loss-of-coolant accident (LOCA) and non-LOCA transient occurrences. The code includes analyses of the thermal-hydraulic code RELAP/MOD2 (including some RELAP/MOD3 models), the fuel design code RODEX2, along with other codes necessary for use with LOCA analysis. All of these calculations were tied into a single system calculation that satisfied the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Appendix K. For the transient non-LOCA events, FANP proposed to continue the use of the XCOBRA-IIIC code in obtaining the final Minimum Departure from Nucleate Boiling Ratio. The NRC approved the use of Topical Report EMF-2310(P)(A) in a letter dated May 11, 2001 (Reference 9).

In a letter dated January 10, 2000, FANP also submitted Topical Report EMF-2328(P)(A) (Reference 10) for NRC review and approval. The report addressed the small-break LOCA in Westinghouse and Combustion Engineering PWRs. This Topical Report is related closely to EMF-2310(P)(A). FANP stated that they intended to apply one computer code to the analyses of LOCA and non-LOCA transient events. The ANF-RELAP code, previously approved by the NRC, was amended to include RELAP/MOD2 (with RELAP/MOD3 models), RODEX2, the containment model ICECON, and the hot rod model TOODEE2, all incorporated into a single system calculation. The requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix K, were satisfactorily met. The NRC approved the use of Topical Report EMF-2328(P)(A) in a letter dated March 15, 2001 (Reference 11).

The NRC staff's SERs for References 8 and 10 conditioned use of the FANP S-RELAP5-based methodologies on justification of application of the code to an individual application or plant. The NRC staff notes in its SERs that specific justification is expected to include, as a minimum, the nodalization, defense of chosen parameters, any needed sensitivity studies, justification of the conservative nature of the input parameters, and calculated results. The NRC staff further expects that the subject justification can be demonstrated through a specific example analysis for the target plant.

3.0 TECHNICAL EVALUATION

3.1 Adding and Deleting Topical Reports

The licensee proposes to add NRC-approved Topical Reports EMF-2310(P)(A) and EMF-2328(P)(A) to the list of COLR methodologies in the St. Lucie Unit 1 TS. The proposed changes will allow St. Lucie Unit 1 to use these codes for LOCA and non-LOCA transient events and analyses. The licensee also proposes to delete certain topical reports listed in the

TS that are superseded by other documents already listed. The methodologies to be deleted include ANF-84-93(P)(A), XN-NF-82-49(P)(A), XN-NF-82-20(P)(A), XN-NF-82-07(P)(A), XN-NF-81-58(P)(A), ANF-81-58(P)(A), XN-NF-85-16(P)(A), XN-NF-85-105(P)(A), and XN-NF-507(P)(A).

The licensee submitted (Reference 3) justification for the applicability of the Reference 8 and Reference 10 methods to St. Lucie Unit 1 through the analysis to the Loss of Forced Reactor Coolant Flow transient.

The St. Lucie Unit 1 loss of reactor coolant flow transient has been analyzed using the S-RELAP5 thermal hydraulic reactor analysis computer code described in Reference 8 and reviewed and approved by the staff in Reference 9. A nodalization diagram has been provided that represents the primary and secondary systems of a Combustion Engineering 2x4 loop nuclear power plant.

The licensee has discussed the conservative nature of the chosen input and plant parameters, the biasing and assumptions for the key input parameters, and the process for defining the biasing and assumptions for key input parameters. In addition, for the application of S-RELAP5 to the loss of reactor coolant flow, it is stated that additional sensitivity studies to those presented in Reference 8 are not necessary.

The NRC staff agrees with the licensee that the biasing of the key input parameters in accordance with the TS limits and setpoints ensures a conservative analysis. The NRC staff also agrees that additional sensitivity studies are not needed for the demonstration case submitted.

The results of the analysis provide the necessary information to perform the cycle-specific departure from nucleate boiling safety limit analysis described in Reference 8.

Based on the above discussion, the NRC staff concludes that the licensee's inclusion of Topical Reports EMF-2310(P)(A) and EMF-2328(P)(A) in TS 6.9.1.11.b, along with the deletion of the superseded reports, is acceptable.

3.2 Method of Referencing Topical Reports

The licensee proposes to revise TS 6.9.1.11.b such that topical reports would only be referenced by number and title. The specific information identifying each topical report, such as revision number, date, and supplements would be listed in the cycle-specific COLR.

Since every topical report identified in TS 6.9.1.11.b is approved by the NRC, as indicated by the "(A)" in the report number, there is an assurance that only the approved versions of the referenced topical reports will be used for the determination of the core operating limits. As previously stated, the COLR will provide specific information identifying the particular approved topical reports used to determine the core operating limits for the particular cycle. Adopting the TSTF-363, Revision 0, method of referencing topical reports would allow the licensee to use current topical reports to support limits in the COLR without having to submit an amendment to the facility operating license every time the topical report is revised. The COLR would provide specific information identifying the particular approved topical reports used to determine the core limits for the particular cycle in the COLR report. The NRC process for approval of topical reports along with an adequate change control process for changing the COLR continues to exist, thus adequate safety is maintained. Since the proposed changes are consistent with the

NRC's SER for TSTF-363, Revision 0, and will have no adverse effect on plant safety, the NRC staff finds the proposed changes to the method of identifying topical reports in TS 6.9.1.11.b to be acceptable.

The NRC staff concludes, based upon the above evaluation, that the proposed amendment to include Topical Reports EMF-2310(P)(A), Revision 0, and EMF-2328(P)(A), Revision 0, in St. Lucie 1 TS 6.9.1.11.b, to delete references to ANF-84-093(P)(A), XN-NF-82-49(P)(A), XN-NF-82-20(P)(A), XN-NF-82-07(P)(A), XN-NF-85-1(P)(A), XN-NF-85-105(P)(A), and XN-NF-507(P)(A) from St. Lucie Unit 1 TS 6.9.1.11.b, and to change the method for identifying topical reports in St. Lucie Unit 1 TS 6.9.1.11.b is acceptable.

4.0 STATE CONSULTATION

Based upon a letter dated May 2, 2003, from Michael N. Stephens of the Florida Department of Health, Bureau of Radiation Control, to Brenda L. Mozafari, Senior Project Manager, U.S. Nuclear Regulatory Commission, the State of Florida does not desire notification of issuance of license amendments.

5.0 ENVIRONMENTAL CONSIDERATION

This amendment relates to changes in recordkeeping, reporting, or administrative procedures or requirements. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (67 FR 42827, dated June 25, 2002). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

7.0 REFERENCES

1. Letter, D. E. Jernigan (FPL), *Updated COLR Methodologies in Technical Specification 6.9.1.11*, dated May 22, 2002.
2. Letter, D.E. Jernigan (FPL), *FPL Request for Additional Information Response for Core Operating Limits Report Methodologies*, dated December 5, 2002.
3. Letter, W. Jefferson, Jr., (FPL), *Proposed License Amendment - Core Operating Limits Report Methodologies - Supplement*, February 11, 2004.
4. NUREG-0800, Standard Review Plan Section 15.3.1, *Loss of Forced Reactor Coolant Flow Including Trip of Pump Motor and Flow Controller Malfunctions*, USNRC.

5. NRC GL 88-16, "Removal of Cycle-Specific Parameter Limits From Technical Specifications," October 4, 1988.
6. Letter, S.A. Richards (NRC) to J.F. Mallay, Siemens Power Corporation, "Acceptance for Siemens References to Approved Topical Reports in Technical Specifications (TAC No. MA6492)," December 15, 1999.
7. Industry/TSTF Standard Technical Specification Change Traveler TSTF-363, "Revise Topical Report References in ITS [Improved TS] 5.6.5, COLR," April 2000.
8. EMF-2310(P)(A), Revision 0, *SRP Chapter 15 Non-LOCA Methodology for Pressurized Water Reactors*, Framatome ANP (formerly Siemens Power Corporation), November 1999.
9. Letter, S. A. Richards (NRC) to J. F. Mallay (Framatome ANP), *Acceptance for Referencing of Licensing Topical Report EMF-2310(P), Revision 0, "SRP Chapter 15 Non-LOCA Methodology for Pressurized Water Reactors,"* dated May 11, 2001.
10. EMF-2328(P)(A), Revision 0, *PWR Small Break LOCA Evaluation Model, S-RELAP5 Based*, Framatome ANP, January 2000.
11. Letter, S. A. Richards (NRC) to J. F. Mallay (Framatome ANP), *Acceptance for Referencing of Licensing Topical Report EMF-2328(P), Revision 0, "PWR Small Break LOCA Evaluation Model, S-RELAP5 Based,"* dated May 15, 2001.
12. EMF-1961(P)(A), Revision 0, *Statistical Setpoint/Transient Methodology for Combustion Engineering Type Reactors*, Framatome ANP, July 2000.

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Date: May 6, 2004

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