Florida Power & Light Company, 6501 S. Ocean Drive, Jensen Beach, FL 34957

March 31, 2012

Proprietary Information – Withhold From Public Disclosure Under 10 CFR 2.390
The balance of this letter may be considered non-proprietary upon removal of Attachment 4.

L-2012-121
10 CFR 50.90
10 CFR 2.390

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Re: St. Lucie Plant Unit 2
Docket No. 50-389
Renewed Facility Operating License No. NPF-16

Information Regarding Fuel Thermal Conductivity Degradation Provided in Support of the Extended Power Uprate License Amendment Request

References:

(1) R. L. Anderson (FPL) to U.S. Nuclear Regulatory Commission (L-2011-021), "License Amendment Request for Extended Power Uprate," February 25, 2011, Accession No. ML110730116.

(2) Email from T. Orf (NRC) to C. Wasik (FPL), Subject: "St. Lucie 2 EPU Draft RAIs – Nuclear Performance & Code Review Branch (SNPB)," January 27, 2012.

By letter L-2011-021 dated February 25, 2011 [Reference 1], Florida Power & Light Company (FPL) requested to amend Renewed Facility Operating License No. NPF-16 and revise the St. Lucie Unit 2 Technical Specifications (TS). The proposed amendment will increase the unit's licensed core thermal power level from 2700 megawatts thermal (MWt) to 3020 MWt and revise the Renewed Facility Operating License and TS to support operation at this increased core thermal power level. This represents an approximate increase of 11.85% and is therefore considered an Extended Power Uprate (EPU).

ADD1
NRR

During their review of the EPU LAR, NRC staff requested information on the use of the generic FATES3B fuel evaluation model [Reference 2]. The FATES3B model evaluates steady state fuel performance, fuel temperatures, and rod internal pressure response of fuel rods at high burnup where thermal conductivity degradation (TCD) could occur. Increasing regulatory concern associated with TCD has resulted in the NRC requesting that FPL propose a Condition of License regarding the use of the FATES3B model, which is the model used in the EPU analyses.

The proposed Condition of License and related information are provided in Attachments 1, 2, 3, and 4 to this letter. Attachment 4 contains information that is proprietary to Westinghouse Electric Company (Westinghouse).

Attachment 5 contains the Proprietary Information Affidavit. The purpose of this attachment is to withhold the proprietary information contained in Attachment 4 from public disclosure. The Affidavit, signed by Westinghouse as the owner of the information, sets forth the basis for which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of § 2.390 of the Commission's regulations. Accordingly, it is respectfully requested that the information proprietary to Westinghouse be withheld from public disclosure in accordance with 10 CFR 2.390.

The proposed Condition of License has been evaluated in accordance with 10 CFR 50.91(a)(1), using the criteria in 10 CFR 50.92(c). FPL has determined that the proposed Condition of License does not involve a significant hazards consideration. Therefore, the proposed Condition of License does not alter the significant hazards consideration or environmental assessment previously submitted by FPL letter L-2011-021 [Reference 1].

This submittal contains no new commitments and no revisions to existing commitments, but does contain a new Condition of License involving the continued use of FATES3B after NRC approval of a fuel evaluation model, applicable to the St. Lucie Unit 2 design, that addresses TCD.

In accordance with 10 CFR 50.91(b)(1), a copy of this letter is being forwarded to the designated State of Florida official.

Should you have any questions regarding this submittal, please contact Mr. Christopher Wasik, St. Lucie Extended Power Uprate LAR Project Manager, at 772-467-7138.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Executed on 31 - March - 2012

Very truly yours,

Richard L. Anderson
Site Vice President
St. Lucie Plant

Attachments (5)

cc: Mr. William Passetti, Florida Department of Health

Proposed Condition of License

The following information is provided by Florida Power and Light Company (FPL) in response to the U. S. Nuclear Regulatory Commission's (NRC) request made during the NRC's review of the St. Lucie Unit 2 License Amendment Request (LAR) for Extended Power Uprate (EPU) [Reference 1].

FPL was requested by the NRC to demonstrate that the impact of fuel thermal conductivity degradation (TCD) has been adequately considered in the St. Lucie Unit 2 EPU safety analyses, which utilizes the FATES3B model. During the NRC review, FPL agreed to maintain restrictive radial power fall-off curve limits as specified in Attachment 4 to this letter and that upon NRC-approval of a new long-term fuel evaluation model applicable to the St. Lucie Unit 2 design, FPL with either demonstrate the conservatism of the existing analysis or provide a schedule for adopting the new fuel evaluation model. Accordingly, FPL proposes a Condition of License regarding the continued use of the FATES3B model.

Proposed Operating License Change

License Condition 3.N is proposed to Renewed Facility Operating License No. NPF-16, consistent with discussions held with the NRC Project Manager and NRC staff during their review of the EPU LAR:

3.N FATES3B Safety Analyses

FATES3B has been specifically approved for use for St. Lucie Unit 2 licensing basis analyses based on FPL maintaining the more restrictive operational/design radial power fall-off curve limits as specified in Attachment 4 to FPL Letter L-2012-121, dated March 31, 2012 as compared to the FATES3B analysis radial power fall-off curve limits. The radial power fall-off curve limits shall be verified each cycle as part of the Reload Safety Analysis Checklist (RSAC) process.

Upon NRC approval of a new long-term fuel evaluation model and associated methods that explicitly account for thermal conductivity degradation (TCD) that is applicable to the St. Lucie Unit 2 design, FPL will, within 6 months:

a. Demonstrate that the St. Lucie Unit 2 safety analyses remain conservatively bounded in licensing basis analyses when compared to the NRC-approved new long-term fuel evaluation model that is applicable to the St. Lucie Unit 2 design, or

b. Provide a schedule for re-analysis using the NRC-approved new long-term fuel evaluation model that is applicable to the St. Lucie Unit 2 design for any affected licensing basis analyses.

Basis for the Change:

The language in the condition of license will assure that the results of the St. Lucie Unit 2 safety analyses remain conservative and within regulatory limits. More restrictive operational/design limits are invoked via the RSAC process to assure that the effects of TCD at higher fuel burnup levels are accounted for. Per the condition of license, FPL must implement the NRC-approved new long-term fuel evaluation model that is applicable to the St. Lucie Unit 2 design in the event that it is more conservative than the FATES3B licensing basis analysis.

See Attachment 2 Marked-up Pages and Attachment 3 Clean Pages of the Renewed Facility Operating License (NPF-16). Attachment 4 provides a table of Normalized Radial Fall-Off Curves with Allowances for St. Lucie Unit 2 Fuel Rod Types to be applied in the RSAC process.

NO SIGNIFICANT HAZARDS CONSIDERATION

The Commission has provided standards in 10 CFR 50.92(c) for determining whether a significant hazards consideration exists. A proposed amendment to an operating license for a facility involves no significant hazard if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

FPL proposes to add a new condition of license (3.N) to renewed Facility Operating License NPF-16. The proposed condition of license will require that within six months of NRC approval of a new long-term fuel evaluation model and associated methods that explicitly accounts for thermal conductivity degradation and that is applicable to St. Lucie Unit 2, FPL will demonstrate that the safety analyses remain conservatively bounding when compared to the new fuel evaluation model, or FPL will provide a schedule for re-analysis using the NRC-approved long-term fuel evaluation model. This will assure that the results of the safety analyses remain conservative and within regulatory limits.

FPL has reviewed this proposed license amendment for St. Lucie Unit 2 and has determined that its adoption would not involve a significant hazards consideration.

The proposed amendment does not involve a significant hazards consideration for the following reasons:

1. **The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.**

   The proposed condition of license will require that within six months of NRC approval of a new long-term fuel evaluation model and associated methods that explicitly accounts for thermal conductivity degradation and that is applicable to St. Lucie Unit 2, FPL will demonstrate that the safety analyses remain conservatively bounding when compared to the new fuel evaluation model, or FPL will provide a schedule for re-analysis using the NRC-approved long-term fuel evaluation model. This will assure FPL implementation of the NRC-approved long-term fuel evaluation model in the event that the new evaluation model results are more conservative, i.e., restrictive.

   The proposed condition of license has no effect on the probability of an accident previously evaluated as it does not affect the configuration or operation of systems that could initiate an accident previously evaluated. The proposed condition of license has no direct effect on the consequences of an accident previously evaluated as it only assures that the results of the safety analyses remain conservative and within regulatory limits.

   Therefore, the proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. **The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.**

   The proposed condition of license will not affect the design or operation of any plant equipment that could initiate or contribute to the initiation of an accident. The proposed condition of license only assures the results of the safety analyses remain conservative and within regulatory limits.

   Therefore, the proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. **The proposed amendment does not involve a significant reduction in the margin of safety.**

   The proposed condition of license only assures FPL's implementation of the NRC-approved long-term fuel evaluation model once it becomes available in the event that the results are more conservative, i.e., restrictive. The proposed condition of license only assures that the results of the safety analyses remain conservative and within regulatory limits. As such, they cannot reduce any margin of safety.

   Thus, the proposed amendment does not involve a significant reduction in the margin of safety.

Based on the above discussion, FPL has determined that the proposed condition of license does not involve a significant hazards consideration.

ATTACHMENT 2

PROPOSED CONDITION OF LICENSE TO ST. LUCIE UNIT 2 RENEWED FACILITY OPERATING LICENSE (NPF-16) REGARDING FUEL THERMAL CONDUCTIVITY DEGRADATION

Renewed Facility Operating License
Marked-Up Pages

Florida Power & Light
St. Lucie Unit 2

NRC dated December 9, 2003, and October 29, 2004, in response to Generic Letter 2003-01, or within the next 9 months if the time period since the most recent successful tracer gas test is greater than 3 years.

(c) The first performance of the periodic measurement of CRE pressure, Specification 6.15.d, shall be within 36 months in a staggered test basis, plus the 138 days allowed by SR 4.0.2, as measured from November 13, 2006, which is the date of the most recent successful pressure measurement test, or within 138 days if not performed previously.

4. This renewed license is effective as of the date of issuance, and shall expire at midnight April 6, 2043.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by

J. E. Dyer, Director
Office of Nuclear Reactor Regulation

Attachments:
1. Appendix A, Technical Specifications
2. Appendix B, Environmental Protection Plan
3. Appendix C, Antitrust Conditions
4. Appendix D, Antitrust Conditions

Date of Issuance: October 2, 2003

INSERT

N. FATES3B Safety Analyses

FATES3B has been specifically approved for use for St. Lucie Unit 2 licensing basis analyses based on FPL maintaining the more restrictive operational/design radial power fall-off curve limits as specified in Attachment 4 to FPL letter L-2012-121, dated March 31, 2012 as compared to the FATES3B analysis radial power fall-off curve limits. The radial power fall-off curve limits shall be verified each cycle as part of the Reload Safety Analysis Checklist (RSAC) process.

Upon NRC approval of a new long-term fuel evaluation model and associated methods that explicitly account for thermal conductivity degradation (TCD) that is applicable to the St. Lucie Unit 2 design, FPL will, within 6 months:

(a) Demonstrate that the St. Lucie Unit 2 safety analyses remain conservatively bounded in licensing basis analyses when compared to the NRC-approved new long-term fuel evaluation model that is applicable to the St. Lucie Unit 2 design, or

(b) Provide a schedule for re-analysis using the NRC-approved new long-term fuel evaluation model that is applicable to the St. Lucie Unit 2 design for any affected licensing basis analyses.

ATTACHMENT 3

PROPOSED CONDITION OF LICENSE TO ST. LUCIE UNIT 2 RENEWED FACILITY OPERATING LICENSE (NPF-16) REGARDING FUEL THERMAL CONDUCTIVITY DEGRADATION

Renewed Facility Operating License
Clean Pages

Florida Power & Light
St. Lucie Unit 2

This coversheet plus 1 page

NRC dated December 9, 2003, and October 29, 2004, in response to Generic Letter 2003-01, or within the next 9 months if the time period since the most recent successful tracer gas test is greater than 3 years.

(c) The first performance of the periodic measurement of CRE pressure, Specification 6.15.d, shall be within 36 months in a staggered test basis, plus the 138 days allowed by SR 4.0.2, as measured from November 13, 2006, which is the date of the most recent successful pressure measurement test, or within 138 days if not performed previously.

N. FATES3B Safety Analyses

FATES3B has been specifically approved for use for St. Lucie Unit 2 licensing basis analyses based on FPL maintaining the more restrictive operational/design radial power fall-off curve limits as specified in Attachment 4 to FPL letter L-2012-121, dated March 31, 2012 as compared to the FATES3B analysis radial power fall-off curve limits. The radial power fall-off curve limits shall be verified each cycle as part of the Reload Safety Analysis Checklist (RSAC) process.

Upon NRC approval of a new long-term fuel evaluation model and associated methods that explicitly account for thermal conductivity degradation (TCD) that is applicable to the St. Lucie Unit 2 design, FPL will, within 6 months:

(a) Demonstrate that the St. Lucie Unit 2 safety analyses remain conservatively bounded in licensing basis analyses when compared to the NRC-approved new long term fuel evaluation model that is applicable to the St. Lucie Unit 2 design, or

(b) Provide a schedule for re-analysis using the NRC-approved new long-term fuel evaluation model that is applicable to the St. Lucie Unit 2 design for any affected licensing basis analyses.

4. This renewed license is effective as of the date of issuance, and shall expire at midnight April 6, 2043.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by

J. E. Dyer, Director

Office of Nuclear Reactor Regulation

Attachments:
1. Appendix A, Technical Specifications
2. Appendix B, Environmental Protection Plan
3. Appendix C, Antitrust Conditions
4. Appendix D, Antitrust Conditions

Date of Issuance: October 2, 2003

ATTACHMENT 5

PROPOSED CONDITION OF LICENSE TO ST. LUCIE UNIT 2 RENEWED FACILITY OPERATING LICENSE (NPF-16) REGARDING FUEL THERMAL CONDUCTIVITY DEGRADATION

Westinghouse Electric Company Affidavit for Withhold Proprietary Information from Public Disclosure

Florida Power & Light St. Lucie Unit 2

This coversheet plus 7 pages

Westinghouse Electric Company
Nuclear Services
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USA

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e-mail: greshaja@westinghouse.com
Project letter: FPL-12-95

CAW-12-3445

March 26, 2012

APPLICATION FOR WITHHOLDING PROPRIETARY INFORMATION FROM PUBLIC DISCLOSURE

Subject: Table 7.0-2, "Normalized Radial Fall Off Curves with Allowances for SL2 Fuel Types" (Proprietary)

The proprietary material for which withholding is being requested in the above-referenced report is further identified in Affidavit CAW-12-3445 signed by the owner of the proprietary information, Westinghouse Electric Company LLC. The affidavit, which accompanies this letter, sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of 10 CFR Section 2.390 of the Commission's regulations.

The subject document was prepared and classified as Westinghouse Proprietary Class 2. Westinghouse requests that the document be considered proprietary in its entirety. As such, a non-proprietary version will not be issued.

Accordingly, this letter authorizes the utilization of the accompanying affidavit by Florida Power & Light (FPL).

Correspondence with respect to the proprietary aspects of this application for withholding or the Westinghouse affidavit should reference CAW-12-3445 and should be addressed to J. A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company, Suite 428, 1000 Westinghouse Drive, Cranberry Township, Pennsylvania 16066.

Very truly yours,

J. A. Gresham, Manager
Regulatory Compliance

Enclosures

AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

ss

COUNTY OF BUTLER:

Before me, the undersigned authority, personally appeared J. A. Gresham, who, being by me duly sworn according to law, deposes and says that he is authorized to execute this Affidavit on behalf of Westinghouse Electric Company LLC (Westinghouse), and that the averments of fact set forth in this Affidavit are true and correct to the best of his knowledge, information, and belief:

J. A. Gresham, Manager
Regulatory Compliance

Sworn to and subscribed before me
this 26th day of March 2012

Notary Public

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Cynthia Olesky, Notary Public
Manor Boro, Westmoreland County
My Commission Expires July 16, 2014
Member, Pennsylvania Association of Notaries

(1) I am Manager, Regulatory Compliance, in Nuclear Services, Westinghouse Electric Company LLC (Westinghouse), and as such, I have been specifically delegated the function of reviewing the proprietary information sought to be withheld from public disclosure in connection with nuclear power plant licensing and rule making proceedings, and am authorized to apply for its withholding on behalf of Westinghouse.

(2) I am making this Affidavit in conformance with the provisions of 10 CFR Section 2.390 of the Commission's regulations and in conjunction with the Westinghouse Application for Withholding Proprietary Information from Public Disclosure accompanying this Affidavit.

(3) I have personal knowledge of the criteria and procedures utilized by Westinghouse in designating information as a trade secret, privileged or as confidential commercial or financial information.

(4) Pursuant to the provisions of paragraph (b)(4) of Section 2.390 of the Commission's regulations, the following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld.

(i) The information sought to be withheld from public disclosure is owned and has been held in confidence by Westinghouse.

(ii) The information is of a type customarily held in confidence by Westinghouse and not customarily disclosed to the public. Westinghouse has a rational basis for determining the types of information customarily held in confidence by it and, in that connection, utilizes a system to determine when and whether to hold certain types of information in confidence. The application of that system and the substance of that system constitutes Westinghouse policy and provides the rational basis required.

Under that system, information is held in confidence if it falls in one or more of several types, the release of which might result in the loss of an existing or potential competitive advantage, as follows:

(a) The information reveals the distinguishing aspects of a process (or component, structure, tool, method, etc.) where prevention of its use by any of

Westinghouse's competitors without license from Westinghouse constitutes a competitive economic advantage over other companies.

(b) It consists of supporting data, including test data, relative to a process (or component, structure, tool, method, etc.), the application of which data secures a competitive economic advantage, e.g., by optimization or improved marketability.

(c) Its use by a competitor would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing a similar product.

(d) It reveals cost or price information, production capacities, budget levels, or commercial strategies of Westinghouse, its customers or suppliers.

(e) It reveals aspects of past, present, or future Westinghouse or customer funded development plans and programs of potential commercial value to Westinghouse.

(f) It contains patentable ideas, for which patent protection may be desirable.

There are sound policy reasons behind the Westinghouse system which include the following:

(a) The use of such information by Westinghouse gives Westinghouse a competitive advantage over its competitors. It is, therefore, withheld from disclosure to protect the Westinghouse competitive position.

(b) It is information that is marketable in many ways. The extent to which such information is available to competitors diminishes the Westinghouse ability to sell products and services involving the use of the information.

(c) Use by our competitor would put Westinghouse at a competitive disadvantage by reducing his expenditure of resources at our expense.

(d) Each component of proprietary information pertinent to a particular competitive advantage is potentially as valuable as the total competitive advantage. If competitors acquire components of proprietary information, any one component may be the key to the entire puzzle, thereby depriving Westinghouse of a competitive advantage.

(e) Unrestricted disclosure would jeopardize the position of prominence of Westinghouse in the world market, and thereby give a market advantage to the competition of those countries.

(f) The Westinghouse capacity to invest corporate assets in research and development depends upon the success in obtaining and maintaining a competitive advantage.

(iii) The information is being transmitted to the Commission in confidence and, under the provisions of 10 CFR Section 2.390; it is to be received in confidence by the Commission.

(iv) The information sought to be protected is not available in public sources or available information has not been previously employed in the same original manner or method to the best of our knowledge and belief.

(v) The proprietary information sought to be withheld in this submittal is that which is contained in Table 7.0-2, "Normalized Radial Fall Off Curves with Allowances for SL2 Fuel Types" (Proprietary) for submittal to the Commission, being transmitted by Florida Power & Light (FPL) letter and Application for Withholding Proprietary Information from Public Disclosure, to the Document Control Desk. The proprietary information as submitted by Westinghouse is associated with Westinghouse's Fuel Performance Codes.

This information is part of that which will enable Westinghouse to:

(a) Assist customers in obtaining NRC review of the Westinghouse fuel performance codes as applied to St. Lucie Unit 2.

Further this information has substantial commercial value as follows:

(a) Assist customer to obtain license changes.

(b) The information requested to be withheld reveals the distinguishing aspects of a methodology which was developed by Westinghouse.

Public disclosure of this proprietary information is likely to cause substantial harm to the competitive position of Westinghouse because it would enhance the ability of competitors to provide similar fuel design and licensing defense services for commercial power reactors without commensurate expenses. Also, public disclosure of the information would enable others to use the information to meet NRC requirements for licensing documentation without purchasing the right to use the information.

The development of the technology described in part by the information is the result of applying the results of many years of experience in an intensive Westinghouse effort and the expenditure of a considerable sum of money.

In order for competitors of Westinghouse to duplicate this information, similar technical programs would have to be performed and a significant manpower effort, having the requisite talent and experience, would have to be expended.

Further the deponent sayeth not.

PROPRIETARY INFORMATION NOTICE

Transmitted herewith is the proprietary version of a document furnished to the NRC in connection with requests for approval of the St. Lucie Unit 2 EPU LAR. The document is considered to be proprietary in its entirety.

COPYRIGHT NOTICE