Florida Power & Light, 9760 S.W. 344 St. Homestead, FL 33035

FPL.

DEC 22 2011

L-2011-541
10 CFR 50.90
10 CFR 2.390

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555-0001

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Response to NRC Reactor Systems Branch Request for Additional Information
Regarding Extended Power Uprate License Amendment Request No. 205

References:

(1) M. Kiley (FPL) to U.S. Nuclear Regulatory Commission (L-2010-113), "License Amendment Request for Extended Power Uprate (LAR 205)," Accession No. ML103560169, October 21, 2010.

(2) J. Paige (U. S. Nuclear Regulatory Commission) to M. Nazar (FPL), "Turkey Point Nuclear Plant, Units 3 and 4 – Issuance of Amendments Regarding Fuel Criticality Analysis (TAC Nos. ME4470 and ME4471), Accession No. ML11216A057, October 31, 2011.

(3) M. Kiley (FPL) to U.S. Nuclear Regulatory Commission (L-2011-390), "Supplement 2 to the Extended Power Uprate License Amendment Request No. 205 Regarding New and Spent Fuel Storage Requirements," Accession No. ML11318A284, November 9, 2011.

By letter L-2010-113 dated October 21, 2010 [Reference 1], Florida Power and Light Company (FPL) requested to amend Renewed Facility Operating Licenses DPR-31 and DPR-41 and revise the Turkey Point Units 3 and 4 (PTN) Technical Specifications (TS). The proposed amendment will increase each unit's licensed core power level from 2300 megawatts thermal (MWt) to 2644 MWt and revise the Renewed Facility Operating Licenses and TS to support operation at this increased core thermal power level. This represents an approximate increase of 15% and is therefore considered an extended power uprate (EPU).

On October 31, 2011, the U.S. Nuclear Regulatory Commission (NRC) issued Amendments 246 and 242 to Renewed Facility Operating Licenses DPR-31 and DPR-41 for Turkey Point Units 3 and 4, respectively, addressing both new and spent fuel storage requirements [Reference 2].

By letter L-2011-390 dated November 9, 2011 [Reference 3], FPL revised the originally proposed EPU changes to Technical Specification 5.5.1 Fuel Storage – Criticality to account for the NRC's issuance of Amendments 246 and 242 for Turkey Point Units 3 and 4. This reduced the scope of the remaining TS changes to only TS 5.5.1.1d that revises the maximum fuel enrichment loading to 5.0 wt% U-235 and TS 5.5.1.2b that revises the existing new fuel storage requirements.

On November 18, 2011, the NRC Project Manager (PM) informed FPL that the Reactor Systems Branch (SRXB) Technical Reviewer questioned the language used in the proposed change to TS 5.5.1.2b. Specifically, the reviewer questioned the inclusion of the parenthetical statement *"or an equivalent amount of other burnable absorber."*

On November 22, 2011, FPL informed the NRC PM during the weekly telephone call that it intended to keep the parenthetical statement as written and indicated that further documentation to would be provided to support the technical basis for the change. This issue and proposed FPL

ADD1
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action was presented at the Advisory Committee on Reactor Safeguards (ACRS) subcommittee meeting on December 14, 2011. The supporting documentation is provided in Attachments 1 & 2.

Attachment 3 contains the application for withholding the proprietary information contained in Attachment 2 from public disclosure. As Attachment 2 contains information proprietary to Westinghouse Electric Company, LLC (Westinghouse), it is supported by an affidavit signed by Westinghouse, the owner of the information. The affidavit 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 information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10 CFR 2.390 of the Commission's regulations.

Correspondence with respect to the copyright or proprietary aspects of items in the response to the RAI questions in Attachment 2 of this letter or the supporting Westinghouse affidavit should reference CAW-11-3339 and should be addressed to J. A. Gresham, Manager, Regulatory Compliance and Plant Licensing, Westinghouse Electric Company LLC, Suite 428, 1000 Westinghouse Drive, Cranberry Township, PA 16066.

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

This submittal does not alter the significant hazards consideration or environmental assessment previously submitted by FPL letter L-2010-113 [Reference 1].

This submittal contains no new commitments and no revisions to existing commitments.

Should you have any questions regarding this submittal, please contact Mr. Robert J. Tomonto, Licensing Manager, at (305) 246-7327.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on December 22, 2011.

Very truly yours,

Eric McCrary for M. Kiley

Michael Kiley
Site Vice President
Turkey Point Nuclear Plant

Attachments (3)

cc: USNRC Regional Administrator, Region II
USNRC Project Manager, Turkey Point Nuclear Plant
USNRC Resident Inspector, Turkey Point Nuclear Plant
Mr. W. A. Passetti, Florida Department of Health (Without Attachment 2)

Turkey Point Units 3 and 4

RESPONSE TO NRC REACTOR SYSTEMS BRANCH REQUEST FOR ADDITIONAL INFORMATION REGARDING EXTENDED POWER UPRATE LICENSE AMENDMENT REQUEST NO. 205

ATTACHMENT 3

Westinghouse Affidavit CAW-11-3339 for Attachment 2
December 22, 2011

This coversheet plus 7 pages

Westinghouse Electric Company
Nuclear Services
1000 Westinghouse Drive
Cranberry Township, Pennsylvania 16066
USA

U.S. Nuclear Regulatory Commission
Document Control Desk
11555 Rockville Pike
Rockville, MD 20852

Direct tel: (412) 374-4643
Direct fax: (724) 720-0754
e-mail: greshaja@westinghouse.com
Proj letter: NF-FP-11-241

CAW-11-3339
December 21, 2011

APPLICATION FOR WITHHOLDING PROPRIETARY INFORMATION FROM PUBLIC DISCLOSURE

Subject: NF-FP-11-241 P-Enclosure, "10 CFR 50.59 Method for Burnable Absorber Credit for Turkey Point Units 3 & 4 Fuel Storage" (Proprietary)

The proprietary information for which withholding is being requested in the above-referenced report is further identified in Affidavit CAW-11-3339 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.

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

Correspondence with respect to the proprietary aspects of the application for withholding or the Westinghouse affidavit should reference this letter, CAW-11-3339, and should be addressed to J. A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company LLC, Suite 428, 1000 Westinghouse Drive, Cranberry Township, Pennsylvania 16066.

Very truly yours,

T. Rodack, Director
Licensing and Engineering Programs

Enclosures

CAW-11-3339

AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

ss

COUNTY OF BUTLER:

Before me, the undersigned authority, personally appeared T. Rodack, 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:

T. Rodack, Director
Licensing and Engineering Programs

Sworn to and subscribed before me
this 21st day of December 2011

Notary Public

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Joyce A. Szepesey, Notary Public
Parks Twp., Armstrong County
My Commission Expires April 15, 2013
Member, Pennsylvania Association of Notaries

(1) I am Director, Licensing and Engineering Programs, in Nuclear Fuels, 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 appropriately marked in NF-FP-11-241 P-Enclosure, "10 CFR 50.59 Method for Burnable Absorber Credit for Turkey Point Units 3 & 4 Fuel Storage" (Proprietary), for submittal to the Commission, being transmitted by Florida Power & Light letter and Application for Withholding Proprietary Information from Public Disclosure, to the Document Control Desk. The proprietary information as submitted by Westinghouse is that associated with Westinghouse's request for NRC approval of WCAP-17094, Revision 3, "Turkey Point Units 3 and 4 New Fuel Storage Rack and Spent Fuel Pool Criticality Analysis," and may be used only for that purpose.

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

(a) Obtain NRC approval of increasing the enrichment in the New Fuel Storage Area and Spent Fuel Pool for Turkey Point Units 3 & 4.

(b) Provide results of customer specific calculations.

(c) Provide licensing support for customer submittals.

Further this information has substantial commercial value as follows:

(a) Westinghouse plans to sell the use of this information to its customers for purposes of meeting NRC requirements for licensing documentation associated with Spent Fuel Criticality submittals supporting EPU.

(b) Westinghouse can sell support and defense of the use of the technology to its customer in licensing process.

(c) 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 calculations 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 are proprietary and/or non-proprietary versions of documents furnished to the NRC in connection with requests for generic and/or plant-specific review and approval.

In order to conform to the requirements of 10 CFR 2.390 of the Commission's regulations concerning the protection of proprietary information so submitted to the NRC, the information which is proprietary in the proprietary versions is contained within brackets, and where the proprietary information has been deleted in the non-proprietary versions, only the brackets remain (the information that was contained within the brackets in the proprietary versions having been deleted). The justification for claiming the information so designated as proprietary is indicated in both versions by means of lower case letters (a) through (f) located as a superscript immediately following the brackets enclosing each item of information being identified as proprietary or in the margin opposite such information. These lower case letters refer to the types of information Westinghouse customarily holds in confidence identified in Sections (4)(ii)(a) through (4)(ii)(f) of the affidavit accompanying this transmittal pursuant to 10 CFR 2.390(b)(1).

Copyright Notice

Turkey Point Units 3 and 4

RESPONSE TO NRC REACTOR SYSTEMS BRANCH REQUEST FOR ADDITIONAL INFORMATION REGARDING EXTENDED POWER UPRATE LICENSE AMENDMENT REQUEST NO. 205

ATTACHMENT 1

(Non-Proprietary)

Response to Request for Additional Information

The following information is provided by Florida Power and Light Company (FPL) in response to the U. S. Nuclear Regulatory Commission's (NRC) Request for Additional Information (RAI). This information was requested to support License Amendment Request (LAR) 205, Extended Power Uprate (EPU), for Turkey Point Nuclear Plant (PTN) Units 3 and 4 that was submitted to the NRC by FPL via letter (L-2010-113) dated October 21, 2010 (Reference 1).

On October 31, 2011, the U.S. Nuclear Regulatory Commission (NRC) issued Amendments 246 and 242 to Renewed Facility Operating Licenses DPR-31 and DPR-41 for Turkey Point Units 3 and 4, respectively, addressing both new and spent fuel storage requirements (Reference 2).

By letter L-2011-390 dated November 9, 2011 (Reference 3), FPL revised the originally proposed EPU changes to Technical Specification 5.5.1 Fuel Storage – Criticality to account for the NRC's issuance of Amendments 246 and 242 for Turkey Point Units 3 and 4. This reduced the scope of the remaining TS changes to only TS 5.5.1.1d that revises the maximum fuel enrichment loading to 5.0 wt% U-235 and TS 5.5.1.2b that revises the existing new fuel storage requirements.

On November 18, 2011, the NRC Project Manager (PM) informed FPL that during review of the supplemental submittal the Reactor Systems Branch (SRXB) Technical Reviewer questioned the language used in the proposed change to TS 5.5.1.2b. Specifically, the reviewer questioned the basis for the inclusion of the parenthetical statement *"or an equivalent amount of other burnable absorber"* and requested that the parenthetical statement be deleted. The basis for the NRC's request was apparently that the criticality analysis provided in WCAP-17094-P, Revision 3, "Turkey Point Units 3 and 4 New Fuel Storage Rack and Spent Fuel Pool Criticality Analysis," dated February 2011 (Reference 4) did not discuss how an equivalent amount of another burnable absorber would be determined. Also, there was nothing in the analysis about how a different absorber would affect the criticality analysis for both fresh and depleted fuel.

On November 22, 2011, FPL informed the NRC PM during the weekly telephone call that it intended to keep the parenthetical statement as written and indicated that further documentation would be provided to support the technical basis for the change. This issue and proposed FPL action were presented at the Advisory Committee on Reactor Safeguards (ACRS) subcommittee meeting on December 14, 2011. The supporting documentation is provided in this non-proprietary attachment (Attachment 1) and in the following proprietary attachment (Attachment 2). The affidavit that sets forth the basis for which the information may be withheld from public disclosure by the NRC in accordance with 10 CFR 2.390 is contained in Attachment 3. Proprietary information is contained within brackets and the basis for claiming the information as proprietary is indicated by means of lower case letters (a) - (f) located as a superscript immediately following the brackets enclosing each item of information identified as proprietary. These lower case letters refer to the types of information Westinghouse customarily holds in confidence identified in Sections (4)(ii)(a) - (4)(ii)(f) of the affidavit accompanying this submittal pursuant to 10 CFR 2.390(b)(1). In this attachment, the proprietary information has been deleted and only the brackets remain.

Response

The NRC RAI, as restated by FPL: **The EPU application proposed revision to TS 5.5.1.2.b included a statement "or an equivalent amount of other burnable absorber." Describe how an equivalent amount of another burnable absorber would be determined. Also, describe how a different absorber would affect the criticality analysis for both fresh and depleted fuel.**

Any change in burnable absorber needed for use in the reactor core to control power peaking would be evaluated as a change to the Turkey Point nuclear facility in accordance with 10 CFR 50.59, "Changes, Tests and Experiments". This evaluation would include all affected aspects of the facility, including fresh and spent fuel storage. The proposed change to Technical Specification (TS) 5.5.1.2.b was structured to allow for the efficient utilization of the 10 CFR 50.59 process for changes in the burnable absorber type.

FPL letter L-2011-390 dated November 9, 2011 (Reference 3) supplemented the EPU application by a proposed revision to TS 5.5.1 of the TS Amendments 246 and 242, which were approved on October 31, 2011 (Reference 2). Specifically, the supplement proposes a revision to TS 5.5.1.1.d and 5.5.1.2.b to increase the maximum allowable enrichment in the Spent Fuel Pool (SFP) storage racks and the New Fuel Storage Area (NFSA) from 4.5 wt% ^{235}U to 5.0 wt% ^{235}U. The proposed change to TS 5.5.1.2.b requires that storage of fuel assemblies in the NFSA with nominal enrichments greater than 4.5 wt% ^{235}U have 16 or more Integral Fuel Burnable Absorber (IFBA) rods or an equivalent amount of other burnable absorber.

The proposed change for TS 5.5.1.1.d for storage did not necessitate a revision to require IFBA "or an equivalent burnable absorber" rods for storage of fuel assemblies in the spent fuel storage racks since this requirement had been previously reviewed and approved in Amendments 246 and 242 (Reference 2).

The discussion below provides the general process that would be used to evaluate implementation of an alternate burnable absorber in accordance with 10 CFR 50.59. With respect to the proposed TS change to TS 5.5.1.2.b, a specific example is provided to demonstrate how an equivalent amount of burnable absorber would be determined regarding storage in the NFSA. A discussion of the impact of the alternate burnable absorber on the storage of spent fuel is also provided.

General Approach

Any proposed change to an alternative burnable absorber type would require a 10 CFR 50.59 assessment. It should be noted that the evaluation of fuel storage in the NFSA and the spent fuel storage racks would be only a small part of the required plant-wide assessment. Fuel performance evaluations, along with core physics and safety analysis assessments would also be required prior to implementation of a change in burnable absorbers at the facility.

The criticality analysis would be performed with the proposed alternative burnable absorber type to demonstrate that all criteria satisfied by the original analysis are still met. All results would have to be evaluated in accordance with the requirements of 10 CFR 50.59 to determine if the change to an alternate absorber could be implemented without NRC prior review and approval.

Basis of the Proposed TS Allowance for Crediting Alternate Absorbers

The Amendments 246 and 242 approved licensing basis criticality analysis (WCAP-17094-P, Revision 3) (Reference 4) evaluated only the use of IFBA burnable absorber rods for credit in the storage of fresh fuel since that is the only type of absorber rod currently in use at Turkey Point. However, to better control power peaking in the reactor core the use of alternative burnable absorbers such as WABA, Erbium, or Gadolinium may be necessary. The purpose of the proposed wording was to provide flexibility if an alternative to IFBA rods were determined to more effectively satisfy reactor safety limits in future Turkey Point cycles

NFSA Evaluation

The criticality analysis to evaluate an equivalent amount of an alternative burnable absorber for the NFSA is straightforward. 10 CFR 50.59 requires that the evaluation be consistent with the methodology of the criticality licensing basis (WCAP-17094-P, Revision 3). [

]^{a,c}

NFSA Example

In order to illustrate the application of the method described above an example of the evaluation process for an alternative burnable absorber in the NFSA criticality analysis is provided here.
[

]^{a,c}

Table 1 – [ ]^{a,c} **a,c**

[

]a,c

Table 2 – [ ]a,c a,c

[

]a,c

Fully Flooded Calculations

[

]a,c

Table 3 – Example Calculations for the Fully Flooded Condition a,c

Optimum Moderation Calculations

In order to determine the density that results in the highest $k_{(calc)}$ a range of moderator densities sufficient to capture the low density reactivity peak were examined. The results of the calculations are presented in Table 4.

Table 4 – Example Determination of the Peak Reactivity Moderator Density a,c

Based on the calculations in Table 4 it is shown that a moderator density of 0.11 g/cm^3 produces the highest value of $k_{(calc)}$ so those values are carried forward for determination of the maximum $k_{eff(95/95)}$, which is presented in Table 5. Based on the calculations presented in Table 5 it is shown the highest maximum $k_{eff(95/95)}$ is less than 0.98, thus satisfying the acceptance criteria for the optimum moderation condition. Again the results of the design basis analysis are shown for comparative purposes.

Table 5 – Example Determination of the Max $k_{eff(95/95)}$ for Peak Reactivity Moderator Density a,c

NFSA Conclusion

An example of the type of calculation that can be used for evaluating an alternative burnable absorber type has been demonstrated. [

]^{a,c}

A full 10 CFR 50.59 assessment of an alternative burnable absorber would perform a complete review of the change as required by regulations and FPL procedures. This would include the impacts on the NFSA criticality analysis as well as all other relevant analysis. Only if all aspects of the change meet criteria could the change be made without prior NRC approval.

SFP Discussion

As documented above, the use of an alternative burnable absorber would require a complete evaluation under 10 CFR 50.59 to be implemented. Included in that 10 CFR 50.59 would be the impact of the alternative burnable absorber on the SFP criticality analysis. A short review of the process that would be followed for the SFP is provided below.

Background

Turkey Point currently uses blanketed fuel with IFBA integral absorber rods. [

]^{a,c}

[

]^{a,c}

For the SFP, credit was taken for the fresh IFBA rods only in one fuel category. This fuel category (designated as I-2) is defined as fresh fuel which at enrichments above 4.3 wt% ^{235}U requires IFBA rods as shown in Table 6 below (a copy of Table 5.5-4 from the Reference 2 TS).

Table 6 - IFBA Requirements for Fuel Category I-2

Nominal Enrichment (wt% U-235)	Minimum Required Number of IFBA Pins
Enr. $\leq$ 4.3	0
4.3 < Enr. $\leq$ 4.4	32
4.4 < Enr. $\leq$ 4.7	64
4.7 < Enr. $\leq$ 5.0	80

[

]^{a,c}

Determining Equivalent Amount of Alternative Burnable Absorber

[

]^{a,c}

Determining the Impact of an Alternative Burnable Absorber on Depletion

The effects on the fuel depletion for an alternative burnable absorber would be fully evaluated as part of the 10 CFR 50.59 process. However, for the available integral burnable absorber replacements for IFBA, it should be noted that NUREG/CR-6760, "Study of the Effect of Integral Burnable Absorbers for PWR Burnup Credit", has previously documented that both Erbium and Gadolinium always show a residual poison effect that outweighs the reactivity increase from the hardening of the neutron spectrum during depletion. Therefore, crediting the absorber in the depletion would be a benefit rather than a penalty. [

]^{a,c}

SFP Conclusion

A 10 CFR 50.59 assessment of an alternative burnable absorber would perform a complete review of the change as required by regulations and FPL procedures. This would include the impacts on the SFP criticality analysis as well as all other relevant analysis in the SFP as well as in the core and the NFSA. Only if all aspects of the change meet criteria could the change be made without prior NRC approval.

Summary

Implementation of alternate burnable absorbers in accordance with 10 CFR 50.59 provides sufficient assurance that the evaluation is performed conservatively and consistent with the current licensing basis methodology described in WCAP-17094-P, Revision 3 and previously reviewed and approved by the NRC (Reference 2). The proposed TS 5.5.1.2.b phrase "or an equivalent amount of other burnable absorber" permits the implementation of alternative burnable absorbers to effectively control power peaking within the reactor core while allowing credit for these burnable absorbers in the storage of fuel in the New Fuel Storage Area and spent fuel racks in accordance with 10 CFR 50.59.

References

1. M. Kiley (FPL) to U.S. Nuclear Regulatory Commission (L-2010-113), "License Amendment Request for Extended Power Uprate (LAR 205)," Accession No. ML103560169, October 21, 2010.
2. J. Paige (U. S. Nuclear Regulatory Commission) to M. Nazar (FPL), "Turkey Point Nuclear Plant, Units 3 and 4 – Issuance of Amendments Regarding Fuel Criticality Analysis (TAC Nos. ME4470 and ME4471)," Accession No. ML11216A057, October 31, 2011.
3. M. Kiley (FPL) to U.S. Nuclear Regulatory Commission (L-2011-390), "Supplement 2 to the Extended Power Uprate License Amendment Request No. 205 Regarding New and Spent Fuel Storage Requirements," Accession No. ML11318A284, November 9, 2011.
4. WCAP-17094-P, Revision 3, "Turkey Point Units 3 and 4 New Fuel Storage Rack and Spent Fuel Pool Criticality Analysis," February 2011.