March 1, 2013

NRC 2013-0026
10 CFR 50.46(a)(3)(ii)

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

Point Beach Nuclear Plant, Units 1 and 2
Dockets 50-266 and 50-301
Renewed License Nos. DPR-24 and DPR-27

Thermal Conductivity Degradation Impact on Large Break Loss of Coolant Accident Analyses with ASTRUM
Response to Request for Additional Information

References:
(1) NextEra Energy Point Beach, LLC letter to NRC, dated May 30, 2012, ECCS 30-Day Report for the Thermal Conductivity Degradation Impact on Point Beach Nuclear Plant Units 1 and 2 Large Break Loss of Coolant Accident Analyses with ASTRUM (ML12152A101)
(2) NRC electronic mail to NextEra Energy Point Beach, LLC, dated February 01, 2013, Point Beach Nuclear Plant, Units 1 and 2 – Request for Additional Information re: Review of 10 CFR 50.46 30-Day Report TCD Impact on ASTRUM ECCS Evaluation (TAC Nos. ME8792 and ME8793) (ML13036A298)

NextEra Energy Point Beach, LLC (NextEra) submitted a 30-day report for Point Beach Nuclear Plant, Units 1 and 2 (PBNP), in accordance with 10 CFR 50.46(a)(3)(ii) in Reference (1) regarding an error for thermal conductivity degradation in the Westinghouse ASTRUM evaluation model used for analyses of large break loss of coolant accidents at PBNP.

Via Reference 2, the NRC determined that additional information is required for the NRC staff to complete its evaluation of this 30-day report. Enclosure 1 contains NextEra's response to the NRC staff's request for additional information.

This letter contains one new Regulatory Commitment and no revisions to existing Regulatory Commitments. The new Regulatory Commitment is as follows:

> NextEra Energy Point Beach, LLC will perform a Large Break Loss of Coolant Accident (LBLOCA) re-analysis for Point Beach Nuclear Plant, Units 1 and 2, that applies NRC approved methods that include the effects of fuel thermal conductivity degradation (TCD) within 24 months of the completion of NRC approval of

Westinghouse revised fuel performance analysis methodology and the revised ASTRUM LBLOCA evaluation model methodology that include the effects of TCD.

In accordance with 10 CFR 50.91, a copy of this letter is being provided to the designated Wisconsin Official.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on March 1, 2013.

Very truly yours,

NextEra Energy Point Beach, LLC

FOR
Larry Meyer
Site Vice President

Enclosure

cc: Administrator, Region III, USNRC
Project Manager, Point Beach Nuclear Plant, USNRC
Resident Inspector, Point Beach Nuclear Plant, USNRC
PSCW

ENCLOSURE 1

NEXTERA ENERGY POINT BEACH, LLC
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

THERMAL CONDUCTIVITY DEGRADATION IMPACT ON LARGE BREAK LOSS OF COOLANT ACCIDENT ANALYSES WITH ASTRUM RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

The NRC staff determined that additional information was required (Reference 2) to enable the continued review of the error reported in Reference 1 associated with thermal conductivity degradation (TCD) in the Westinghouse ASTRUM emergency core cooling system evaluation for large break loss of coolant accidents at PBNP. The following information is provided by NextEra Energy Point Beach, LLC (NextEra) in response to the NRC staff's request.

RAI

Background

In the letter, the licensee stated as follows:

> *In accordance with 10 CFR 50.46, NextEra will conduct a re-analysis following approval by the NRC of a revised LBLOCA evaluation model, with explicit treatment of thermal conductivity degradation (TCD), if the model used for the impact of TCD in this 30-day report is determined to be non-conservative with respect to the new approved model.*

Regulatory Basis

The regulations in 10 CFR 50.46(a)(3)(ii) state that licensees shall include, with an error report pursuant to 10 CFR 50.46(a)(3)(ii), "a proposed schedule for providing a re-analysis or taking other action as may be needed to show compliance with [10 CFR 50.46] requirements."

In the Statements of Consideration accompanying the 1988 revision to 10 CFR 50.46, the reporting requirements are explained in greater detail (53 Federal Register 35996): "…the final rule revision also allows the NRC to determine the schedule for re-analysis based on the important to safety relative to other applicant or licensee requirements."

Issue

The NRC staff is unable to determine that the above re-analysis statement provided by the licensee satisfies the statement in 10 CFR 50.46. Although the staff notes that the estimate has been based on rigorous analysis using calculational tools that incorporate the effects of TCD, the staff also notes that the estimate is based on re-execution of a very limited (about 25-percent) subset of cases from the original ASTRUM run set. Based on the high predicted

PCTs and on the apparent limitations of the current analysis, the staff determined that additional information is necessary to determine whether this report satisfies the re-analysis requirement.

Request for Additional Information

Please supplement the May 30, 2012, report pursuant to 10 CFR 50.46(a)(3)(ii) for the Point Beach Nuclear Plant, with a proposed schedule for either providing a re-analysis or taking other action as may be needed to show compliance with 10 CFR 50.46 requirements.

NextEra Response

Point Beach Nuclear Plant (PBNP) will perform a LBLOCA re-analysis for PBNP Unit 1 and Unit 2 that applies Nuclear Regulatory Commission (NRC) approved methods that include the effects of fuel thermal conductivity degradation (TCD), within 24 months of the completion of the following 3 milestones:

1) Submittal by Westinghouse to the NRC for review and approval, of revised fuel performance and LBLOCA evaluation model methodologies that include the effects of TCD.
2) NRC approval of the revised fuel performance analysis methodology that includes the effects of TCD. [The new methodology would replace the current licensing basis methodology for PBNP Units 1 & 2 that is described in WCAP-16009-P-A, "Realistic Large Break LOCA Evaluation Methodology Using the Automated Statistical Treatment of Uncertainty Method (ASTRUM)" to develop inputs to the LBLOCA evaluation model.]
3) NRC approval of the revised LBLOCA evaluation model methodology that includes the effects of TCD. The new methodology would replace the current licensing basis methodology for PBNP Units 1 & 2, WCAP-16009-P-A.

This information supplements the May 30, 2012 report, pursuant to 10 CFR 50.46(a)(3)(ii), with a proposed schedule for re-analysis to show compliance with 10 CFR 50.46 requirements.

References

1. NextEra Energy Point Beach, LLC letter to NRC, dated May 30, 2012, ECCS 30-Day Report for the Thermal Conductivity Degradation Impact on Point Beach Nuclear Plant Units 1 and 2 Large Break Loss of Coolant Accident Analyses with ASTRUM (ML12152A101)

2. NRC electronic mail to NextEra Energy Point Beach, LLC, dated February 01, 2013, Point Beach Nuclear Plant, Units 1 and 2 – Request for Additional Information re: Review of 10 CFR 50.46 30-Day Report TCD Impact on ASTRUM ECCS Evaluation (TAC Nos. ME8792 and ME8793) (ML13036A298)