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NINE MILE POINT
NUCLEAR STATION

P.O. Box 63
Lycoming, New York 13093

January 31, 2013

U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Attention: Document Control Desk

Subject: Nine Mile Point Nuclear Station, LLC
Unit Nos. 1 and 2; Docket Nos. 50-220 and 50-410

10 CFR 50.46 ECCS Evaluation Model Annual Reports for 2012

Pursuant to the reporting requirements of 10 CFR 50.46(a)(3)(ii), Nine Mile Point Nuclear Station, LLC (NMPNS) is submitting the Emergency Core Cooling System (ECCS) evaluation model annual reports for Nine Mile Point Unit 1 (NMP1) and Nine Mile Point Unit 2 (NMP2).

These annual reports, provided in Attachments 1 and 2, summarize the nature of and estimated effect of any changes or errors in the ECCS models for NMP1 and NMP2 for the period January 1, 2012 through December 31, 2012.

Should you have any questions regarding this submittal, please contact John J. Dosa, Licensing Director, at (315) 349-5219.

Very truly yours,

Paul M. Swift
Manager, Engineering Services

PMS/MHS

A002
NRR

Attachments:
1. Nine Mile Point Unit 1 10 CFR 50.46 ECCS Evaluation Model Annual Report for 2012
2. Nine Mile Point Unit 2 10 CFR 50.46 ECCS Evaluation Model Annual Report for 2012

cc: NRC Regional Administrator, Region I
NRC Resident Inspector
NRC Project Manager

ATTACHMENT 1

NINE MILE POINT UNIT 1

10 CFR 50.46 ECCS EVALUATION MODEL ANNUAL REPORT FOR 2012

Nine Mile Point Nuclear Station, LLC
January 31, 2013

ATTACHMENT 1
NINE MILE POINT UNIT 1
10 CFR 50.46 ECCS EVALUATION MODEL ANNUAL REPORT FOR 2012

BACKGROUND

In accordance with 10 CFR 50.46(a)(3)(ii), this annual report summarizes the nature of and estimated effect of any changes or errors in the Emergency Core Cooling System (ECCS) model for the period January 1, 2012 through December 31, 2012 for Nine Mile Point Unit 1 (NMP1).

DISCUSSION

No changes or errors to the ECCS evaluation model were identified in 2012 for NMP1.

IMPACT

Not applicable.

CONCLUSION

As documented in Table 1, the NMP1 Loss of Coolant Accident analysis Peak Clad Temperature (PCT) remains in compliance with 10 CFR 50.46(b)(1), which requires that the PCT shall not exceed 2200°F.

Table 1

LOCA Margin Summary Sheet
Nine Mile Point Nuclear Station, LLC
Nine Mile Point Unit 1

Evaluation Model: General Electric SAFER / CORCL / GESTR methodology

	Net PCT Effect	Absolute PCT Effect
A. Prior 10 CFR 50.46 Changes or Error Corrections - Previous Years	ΔPCT = 0 °F	0 °F
B. Prior 10 CFR 50.46 Changes or Error Corrections - This Year	ΔPCT = 0 °F	0 °F
Absolute Sum of 10 CFR 50.46 Changes	ΔPCT =	0 °F

The sum of the PCT from the most recent analysis using an acceptable evaluation model and the estimates of PCT impact for changes and errors identified since this analysis is less than 2200°F.

ATTACHMENT 2

NINE MILE POINT UNIT 2

10 CFR 50.46 ECCS EVALUATION MODEL ANNUAL REPORT FOR 2012

Nine Mile Point Nuclear Station, LLC
January 31, 2013

ATTACHMENT 2
NINE MILE POINT UNIT 2
10 CFR 50.46 ECCS EVALUATION MODEL ANNUAL REPORT FOR 2012

BACKGROUND

In accordance with 10 CFR 50.46(a)(3)(ii), this annual report summarizes the nature of and estimated effect of any changes or errors in the Emergency Core Cooling System (ECCS) model for the period January 1, 2012 through December 31, 2012 for Nine Mile Point Unit 2 (NMP2).

DISCUSSION

On November 29, 2012, Nine Mile Point Nuclear Station, LLC (NMPNS) was informed by its fuel vendor (GE Hitachi (GEH)) of an error in its Emergency Core Cooling System (ECCS) evaluation model peak clad temperature (PCT) calculation that could affect NMP2. Based on the information provided by GEH, NMPNS determined that correction of the identified errors resulted in a less than 50°F increase in calculated PCT. Therefore, the errors did not meet the 30-day reporting requirements delineated in 10 CFR 50.46(a)(3)(ii). A description of the notification regarding the ECCS evaluation model, as detailed by the vendor, is as follows:

> *GEH Notification Letter 2012-01, PRIME Fuel Properties Implementation for Fuel Rod T/M Performance, Replacing GESTR Fuel Properties*:
>
> GESTR-LOCA was considered to be an integral part of the approved GEH ECCS Evaluation Model, with SAFER, for compliance to 10 CFR 50.46. NRC Information Notice (IN) 2011-21 addressed inaccuracies in fuel pellet thermal conductivity as a function of exposure. PRIME fuel rod thermal-mechanical (T-M) performance addresses these concerns. This 10 CFR 50.46 notification estimates the magnitude of the change in PCT due to the change in fuel properties from GESTR to PRIME. Applying this estimated change in Licensing Basis PCT constitutes interim implementation of the PRIME fuel properties as it pertains to the analysis basis Evaluation Model for the plant, pending a plant ECCS-LOCA re-analysis explicitly using PRIME.

IMPACT

There is no impact to PCT as a result of the 2012-01 error notification. As such, no Maximum Average Planar Linear Heat Generation Rate adjustments were required to maintain the desired PCT margin with the error in the accepted evaluation model.

CONCLUSION

As documented in Table 1, the NMP2 Loss of Coolant Accident analysis PCT remains in compliance with 10 CFR 50.46(b)(1), which requires that the PCT shall not exceed 2200°F.

Table 1

LOCA Margin Summary Sheet
Nine Mile Point Nuclear Station
Nine Mile Point Unit 2

Evaluation Model: General Electric SAFER / GESTR - LOCA methodology

	Net PCT Effect	Absolute PCT Effect
A. Prior 10 CFR 50.46 Changes or Error Corrections - Previous Years		
1. Notification 2011-02 (GE14)	ΔPCT = 30 °F	30 °F
2. Notification 2011-03 (GE14)	ΔPCT = -5 °F	5 °F
B. Prior 10 CFR 50.46 Changes or Error Corrections - This Year		
1. Notification 2012-01 (GE14)	ΔPCT = 0 °F	0 °F
Absolute Sum of 10 CFR 50.46 Changes	ΔPCT =	35 °F

The sum of the PCT from the most recent analysis using an acceptable evaluation model and the estimates of PCT impact for changes and errors identified since this analysis is less than 2200°F.