

**Enclosure 2 Contains Sensitive Proprietary Information**



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

November 18, 2009

Mr. Samuel L. Belcher  
Vice President Nine Mile Point  
Nine Mile Point Nuclear Station, LLC  
P.O. Box 63  
Lycoming, NY 13093

**SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING NINE MILE POINT  
NUCLEAR STATION, UNIT NO. 2 – RE: THE LICENSE AMENDMENT REQUEST  
FOR EXTENDED POWER UPRATE OPERATION (TAC NO. ME1476)**

Dear Mr. Belcher:

By letter dated May 27, 2009, as supplemented on August 28, 2009, Nine Mile Point Nuclear Station, LLC, submitted for Nuclear Regulatory Commission (NRC) staff review and approval, a proposed license amendment requesting an increase in the maximum steady-state power level from 3467 megawatts thermal (MWt) to 3988 MWt for Nine Mile Point Unit No. 2 extended power uprate operation.

The NRC staff is reviewing the information provided in that letter and has determined that additional information is needed to support its review. Enclosed is the NRC staff's request for additional information (RAI). The RAI was discussed with your staff on November 3, 2009, and it was agreed that your response would be provided within 45 days from the date of this letter.

Pursuant to 10 CFR 2.390, we have determined that the enclosed RAI contains proprietary information. We have prepared a non-proprietary version of the RAI (Enclosure 1) that does not contain proprietary information. The proprietary information is indicated in brackets and underlined in Enclosure 2.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard V. Guzman".

Richard V. Guzman, Senior Project Manager  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-410

Enclosure:

1. Request for Additional Information (Non-Proprietary)
2. Request for Additional Information (Proprietary)

cc w/o Enclosure 2: Distribution via Listserv

**Enclosure 2 Contains Sensitive Proprietary Information**

REQUEST FOR ADDITIONAL INFORMATION (RAI)  
NINE MILE POINT NUCLEAR STATION, UNIT NO. 2 (NMP2)  
LICENSE AMENDMENT REQUEST (LAR) REGARDING  
EXTENDED POWER UPRATE  
DOCKET NO. 50-410

The Nuclear Regulatory Commission (NRC) staff is reviewing the Nine Mile Point Nuclear Station (NMPNS) license amendment request (LAR) application dated May 27, 2009, as supplemented on August 28, 2009. The NRC staff has determined that additional information requested below will be needed to support its review.

It has come to the NRC staff's attention that there is an error in the linear heat generation rate (LHGR) uncertainty analysis provided in the approved interim methods licensing topical report (IMLTR), NEDC-33173P, "Applicability of GE Methods to Expanded Operating Domains." The LHGR uncertainty analysis includes the local power range monitor (LPRM) update uncertainty of [[ ]] percent. However, the basis for this value is the bundle power, whereas the LHGR is monitored on a nodal level with uncertainties that take into account the peak pin power uncertainty.

Appendix B of NEDC-32694P-A, "Power Distribution Uncertainties for Safety Limiting MCPR Evaluations," provides a revised LPRM update uncertainty for the LHGR evaluation of [[ ]] percent. Appendix B of NEDC-32694P-A provides a calculation of the LHGR uncertainties and calculates this value as [[ ]] percent. When certain parameters are updated to account for [[ ]], the LHGR uncertainty is [[ ]] percent.

When this update uncertainty is corrected in the IMLTR LHGR uncertainty calculation (see Table 2-11 from the IMLTR), the resultant LHGR uncertainty is [[ ]] percent. This value remains below the value assumed in the thermal-mechanical (T-M) analysis.

However, the value of the LPRM update uncertainty is a function of the exposure interval between LPRM calibrations. As the exposure interval increases, the uncertainty associated with the nodal power attributed to the update uncertainty component is expected to increase. The proposed NMP2 LPRM calibration interval is defined as 1000 effective full-power hours. Since the LAR requests an increase in the licensed thermal power, the calibration interval in terms of accumulated exposure would increase. The increased interval (in terms of exposure) may exceed the interval assumed in the development of the [[ ]] percent generic value.

1. Please quantify the LPRM exposure interval proposed for NMP2 in the units of megawatt-days per metric ton.
2. Please determine the LPRM update uncertainty for the nodal power consistent with, or conservatively larger than, the exposure interval between LPRM calibrations.
3. Please combine the update uncertainty with the other component uncertainties in Table 2-11 of the IMLTR and compare this value to the value assumed in the T-M analysis.
4. If the LHGR uncertainty exceeds the value assumed in the T-M analysis, please justify.

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*/RA/*

Richard V. Guzman, Senior Project Manager  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

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Accession Number: ML093190003

\*Concurrence by memo

NRR-058

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DATE	11/17/09	11/16/09	10/7/09, memo dtd	11/18/09

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