



10 CFR 50.71(e)
10 CFR 54.37(b)
10 CFR 50.59(d)

NMP2L 2565
December 3, 2014

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

Nine Mile Point Nuclear Station, Unit 2
Renewed Facility Operating License No. NPF-69
NRC Docket No. 50-410

Subject: Supplement to Submittal of Revision 21 to the Updated Safety Analysis Report, 10 CFR 50.59 Evaluation Summary Report, Technical Requirements Manual Changes, and Technical Specifications Bases Changes

References: (1) Letter from P. Orphanos (NMPNS) to Document Control Desk (NRC), dated October 24, 2014, Submittal of Revision 21 to the Updated Safety Analysis Report, 10 CFR 50.59 Evaluation Summary Report, Technical Requirements Manual Changes, and Technical Specifications Bases Changes

Nine Mile Point Nuclear Station, LLC (NMPNS) hereby transmits supplemental information in support of a previous submission pursuant to the requirements of 10 CFR 50.71(e), 10 CFR 50.59(d)(2), and the Nine Mile Point Unit 2 (NMP2) Technical Specifications Bases Control Program (TS 5.5.10). The initial submittal, dated October 24, 2014, submitted Revision 21 to the NMP2 Updated Safety Analysis Report (USAR), the NMP2 10 CFR 50.59 Evaluation Summary Report, and NMP2 Technical Specifications Bases Changes.

In an email from B. Vaidya (NRC) to Exelon dated November 12, 2014, the NRC notified Exelon that the NRC Document Control Desk could not process the CD-ROMs included in Enclosures 1 and 2 of Reference 1. Exelon has resolved the issues that prevented the Document Control Desk from processing the CD-ROMs sent as part of Reference 1. Enclosures 1 and 2 to this letter contain copies of the Unit 2 USAR electronically on CD-ROM that conform to the NRC's document submittal guidance. Enclosures 1 and 2 to this letter are intended to replace Enclosures 1 and 2 to Reference 1. Enclosure 1 contains proprietary and sensitive information. Enclosure 2 contains a non-proprietary version of the USAR.

Furthermore, following submission of Reference 1, NMPNS noted an error in the NMP2 10 CFR 50.59 Evaluation Summary Report included in the letter. One of the 50.59 evaluation

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summaries included in the report was related to a Unit 1 modification (replacement of control room chillers). The summary was mistakenly labeled as a Unit 2 evaluation and included in the report. Attachment 1 to this letter provides an updated NMP2 10 CFR 50.59 Evaluation Summary Report, which removes the aforementioned summary. Attachment 1 to this letter is intended to replace Attachment 1 of Reference 1 in its entirety.

As discussed in Reference 1, proprietary status per 10 CFR 2.790 was granted by the Nuclear Regulatory Commission for USAR Appendix 6D in your letter dated May 11, 1994 (Ascension No. ML9405170218). For the reasons stated in letters from Niagara Mohawk, to the NRC, dated October 29, 1993, and April 28, 1994, NMPNS requests that the material contained in the NMP2 USAR Appendix 6D continue to be withheld from public disclosure pursuant to 10 CFR 2.390. The NMP2 USAR Appendix 6D has not been changed, but is included in the submittal of the full USAR.

As required by 10 CFR 50.71 (e)(2)(i), I certify that to the best of my knowledge, the information contained in the Attachments and Enclosures to this letter accurately reflect information and analyses submitted to the NRC, or prepared pursuant to NRC requirements as described above.

Should you have any questions regarding the information contained in this submittal, please contact Mr. Terry Syrell, Regulatory Assurance Manager, at (315) 349-5243.

Sincerely,



Peter M. Orphanos
Plant Manager, Nine Mile Point Nuclear Station

Attachment: (1) 10 CFR 50.59 Evaluation Summary Report

Enclosures: (1) Updated Safety Analysis Report CD – Proprietary
(2) Updated Safety Analysis Report CD – Non-Proprietary

Cc: (w/o Enclosures)
NRC Regional Administrator, Region 1
NRC Resident Inspector
NRC Project Manager

Attachment 1

10 CFR 50.59 Evaluation Summary Report

Nine Mile Point Nuclear Station Unit 2

Facility Operating License No. NPF-69

Nine Mile Point Nuclear Power Station, Unit 2
Renewed Facility Operating License No. NPF-69
NRC Docket No. 50-410

This report is issued pursuant to reporting requirements of 10 CFR 50.59(d)(2)

Title: Upgrade NMP2 Power Range Neutron Monitoring System (PRNM) for MELLLA PLUS

Units Affected: Unit 2

Brief Description: The purpose of this activity is to upgrade the NUMAC Power Range Neutron Monitoring (PRNM) system hardware, firmware, and wiring to support future implementation of the DSS-CD (Detect and Suppress Solution – Confirmation Density) stability solution at NMP2 (reference licensing topical report NEDC-33075, Rev. 7, “GE Hitachi Boiling Water Reactor Detect and Suppress Solution - Confirmation Density”).

The existing Oscillation Power Range Monitor (OPRM) trip algorithms are Period Based Detection Algorithm (PBDA), Amplitude Based Algorithm (ABA), and Growth Rate Based Algorithm (GRBA). These are the Option III trip algorithms used to detect reactor thermal/hydraulic instability. This PRNM upgrade will maintain and group the existing Option III OPRM trip algorithms as Defense-in-Depth Algorithm (DIDA). A spare output on the 2/4 logic module will be utilized for the new OPRM Confirmation Density Algorithm (CDA) trip. Wiring changes internal to Panel 2CEC*PNL608 will be made, with temporary jumpers installed to bypass the CDA trip output from the 2/4 logic module.

The NMP2 PRNM system will be upgraded for MELLLA+ operation with the Detect and Suppress Solution – Confirmation Density described in NEDC-33075P, Revision 7, “GE Hitachi Boiling Water Reactor Detect and Suppress Solution – Confirmation Density.” The upgrade will occur prior to MELLLA+ implementation. During the intervening time before MELLLA+ implementation, the new CDA trip output to RPS will be jumpered out and the existing Option III stability protection algorithms, Period Based Detection Algorithm (PBDA), Amplitude Based Algorithm (ABA), and the Growth Rate Based Algorithm (GRBA), will provide stability protection. The base period definition (average of all successively confirmed periods) used in the calculations performed by the OPRM are defined in NEDO-31960-A, “BWR Owners’ Group Long-Term Stability Solutions Licensing Methodology,” Supplement 1 and NEDC-32410P-A, “Nuclear Measurement Analysis and Control Power Range Neutron Monitor (NUMAC-PRNM) Retrofit Plus Option III Stability Trip Function,” Supplement 1. The base period definition for the DSS-CD as

defined in NEDC-33075P, Rev. 7, is equal to the previous period that is within the minimum and maximum time limits of the algorithm. The change to the Option III base period definition is conservative relative to the Option III licensing basis. Therefore, no licensing amendment is required.

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Title: Change of the Method of Evaluation used to calculate NMP2 Spent Fuel Pool decay heat from NRC Branch Technical Position (BTP) ASB 9-2 to ORIGEN-ARP.

Units Affected: Unit 2

Brief Description: NMP2 Updated Safety Analysis Report (USAR) Section 9.1.3, "Spent Fuel Pool Cooling and Cleanup System," discusses the NMP2 Spent Fuel Pool cooling portion of the system. The Spent Fuel Pool Cooling System is designed to remove the decay heat loads for three scenarios: normal refueling associated with a core shuffle, emergency full core offload and normal full core offload. The decay heat loads used in the USAR evaluation are determined in accordance with NRC Branch Technical Position (BTP) ASB 9-2. The current decay heat analysis was produced using conservative assumptions that bounded all future reloads performed under the previous licensed thermal power condition (3467 MWth). In Cycle 14, NMP2 was licensed to operate under the extended power uprate (EPU) operating domain. The increase in licensed core power (3988 MWth) results in a higher decay heat load from the fuel. As fuel burned at EPU conditions will be discharged to the Spent Fuel Pool in refueling outage N2R14, the USAR Section 9.1.3 requires updating to incorporate changes in decay heat based on EPU operating conditions. In order to ensure that operating procedures could cover an emergency core offload in cycle 14 (prior to the planned offloading of EPU fuel to the Spent Fuel Pool), the emergency core offload case was previously evaluated using bounding EPU decay heat values as discussed in the USAR.

The proposed activity is to change the USAR described Method of Evaluation used in establishing the Design Basis NMP2 Spent Fuel Pool decay heat from NRC BTP ASB 9-2 to ORIGEN-ARP. ORIGEN-ARP was previously approved by the NRC for use in calculating Spent Fuel Pool decay heat loads for Energy Northwest, Columbia Generating Station (date February 8, 2007).

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Title: Use of TRACG-AOO

Units Affected: Unit 2

Brief Description: The proposed activity uses methods of evaluation that have been approved by the NRC in a Safety Evaluation (SE). The subject methods of evaluation are appropriate for the intended application and the limitations and conditions for their use as specified in the NRC SE have been satisfied. By definition (a)(2) of the 50.59 rule, the new methods of evaluation are not considered a departure from methods described in the USAR. Therefore, from a criterion (viii) review, the use of TRACG-AOO for the above applications for NMP2 does not require prior NRC review.

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