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

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

Subject: License Amendment Request Pursuant to 10 CFR 50.90: Maximum Extended Load Line Limit Analysis Plus – Response to RAI STSB-1 and RAI STSB-2

References:
(1) Letter from P. Swift (NMPNS) to Document Control Desk (USNRC), License Amendment Request Pursuant to 10 CFR 50.90: Maximum Extended Load Line Limit Analysis Plus, dated November 1, 2013

(2) Letter from B. Vaidya (USNRC) to C. Costanzo (NMPNS), Nine Mile Point Nuclear Station, Unit No. 2 – Second Round of Request for Additional Information Regarding License Amendment Request Pursuant to 10 CFR 50.90: Maximum Extended Load Line Limit Analysis Plus (MELLLA+) (TAC NO. MF3056), dated March 31, 2014

Nine Mile Point Nuclear Station, LLC (NMPNS) hereby transmits supplemental information requested by the USNRC in support of a previously submitted request for amendment to the Nine Mile Point Unit 2 (NMP2) Renewed Facility Operating License NPF-69. The initial request, dated November 1, 2013 (Reference 1), included a proposed expansion of the operating boundary to allow operation in the Maximum Extended Load Line Limit Analysis Plus (MELLLA Plus) domain and the use of the General Electric Hitachi Nuclear Energy (GEH) analysis code TRACG04.

The supplemental information, provided in the Attachment to this letter, responds to the request for additional information that was provided in a letter from the USNRC to NMPNS on March 31, 2014 (Reference 2). The revised Technical Specification (TS) and TS Bases pages included in the attachment to this letter replace the corresponding pages previously submitted in Reference (1).

This supplemental information does not affect the No Significant Hazards Determination analysis provided by NMPNS in Reference (1). Pursuant to 10 CFR 50.91(b)(1), NMPNS is providing a copy of this supplemental information to the appropriate state representative.

ADD1
NRR

This letter contains no new regulatory commitments.

Should you have any questions regarding the information in this submittal, please contact Everett (Chip) Perkins, Director Licensing, at (315) 349-5219.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 14th day of May, 2014.

Sincerely,

JJS/KJK

Attachment: Response to NRC Request for Additional Information, RAI STSB-1 and RAI STSB-2

cc: Regional Administrator, Region I, USNRC
Project Manager, USNRC
Resident Inspector, USNRC
A. L. Peterson, NYSERDA

ATTACHMENT

RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION,

RAI STSB-1 and RAI STSB-2

Nine Mile Point Nuclear Station, LLC
May 14, 2014

ATTACHMENT
RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION
RAI STSB-1 and RAI STSB-2

By letter dated November 1, 2013, Nine Mile Point Nuclear Station, LLC (NMPNS) proposed expansion of the operating boundary to allow operation in the Maximum Extended Load Line Limit Analysis Plus (MELLLA Plus) domain and the use of the General Electric Hitachi Nuclear Energy (GEH) analysis code TRACG04. This attachment provides supplemental information in response to the USNRC request for additional information that was provided to NMPNS on March 31, 2014; specifically, RAI STSB-1 and RAI STSB-2. Each individual NRC question is repeated (in italics), followed by the NMPNS response. The revised Technical Specification (TS) and TS Bases pages included in this attachment replace the corresponding pages previously submitted on November 1, 2013.

Basis for RAI STSB-1

On January 11, 2013, the NRC safety evaluation (ADAMS Accession No. ML 12320A415) approved Topical Report NEDC-33075P. In our safety evaluation we stated the following conclusion:

> *Section 8 of NEDC-33075P, Revision 7 [1] provides a description of required changes to Technical Specifications, and an example is provided in Appendix A. The proposed Technical Specifications are an acceptable implementation of DSS-CD. (See above note in Section 3.2.5.)*

However, if you reference the note in Section 3.2.5 of the safety evaluation, you will find that the note states:

> *The NRC staff agrees with the technical intent as provided in the example Technical Specifications; however, the example Technical Specifications, as provided, is not written consistent with the improved Standard Technical Specifications format. When applying for this Topical Report, licensees should submit Technical Specifications that are consistent with their current approved Technical Specifications and the improved Standard Technical Specification's use and application section.*

This note was placed into the safety evaluation because TS 3.3.1.1 Condition I was not found to be acceptable because its structure is not consistent with NUREG-1430 through NUREG-1434's use and application section. There are three specific problems with the TSs in NEDC-33075:

(1) The numbering of Condition I, "required actions." They should be numbered 1.1, 1.2, and 1.3. The 1.2.1 and 1.2.2 nomenclature is not used correctly.

(2) The completion time for required action 1.2.2 is not correctly stated; 90 days is an error in structure, it should state, "immediately." Licensees should immediately initiate action in accordance with specification 5.6.6. Specification 5.6.6 then tells them that they have within the following 90 days to submit the report.

(3) Specification 5.6.6 is incorrectly stated. It should not state, "Within 90 days of entering Condition 1," it should state, "within the following 90 days."

The proposed changes do not incorporate the correct usage and structure of TSs. The corrections stated above are consistent with the approved use and application section in NUREG-1434 and NMP2's current TSs. An example in NUREG-1434 that shows this structure

is TS 3.3.3.1, "Post Accident Monitoring Instrumentation," Conditions 8 and F, and TS 5.6.5, Post Accident Monitoring Report." An example in NMP2's TS is also TS 3.3.3.1, "Post Accident Monitoring (PAM) Instrumentation," Conditions 8 and F and TS 5.6.6, Post Accident Monitoring (PAM) Instrumentation Report."

RAI STSB -1

The proposed change to TS 3.3.1.1 Condition F, required actions, and TS 5.6.8 are not consistent with NMP2's current approved TSs and the improved Standard Technical Specification's (STS's) use and application section. In addition, the new proposed note (e) refers to required action F.2.1. The problems stated above are applicable to the proposed TSs for NMP2. Please provide TSs that are consistent with NMP2's current approved TSs and the improved STS's use and application section.

Response

Revisions to TS 3.3.1.1 Condition F, required actions, and TS 5.6.8 are included on the following pages. The revised numbering of the required actions for condition F is:

F.2.1 is now F.2
F.2.2 is now F.3

These changes apply to all references to TS 3.3.1.1 Condition F, required actions, throughout the original submittal.

The following revised pages replace those previously submitted on November 1, 2013 as part of Attachment1 to the Enclosure.

TS Insert 2a - Action F
TS Insert 3
TS Insert 6

Additionally, the changes have been applied to TS Bases Insert 2a previously submitted on November 1, 2013 as part of Attachment 2 to the Enclosure.

TS Insert 2a – Action F

F. As required by Required Action D.1 and referenced in Table 3.3.1.1-1.	F.1	Initiate action to implement the Manual BSP Regions defined in the COLR.	Immediately
	AND		
	~~F.2.1~~ F.2	Implement the Automated BSP Scram Region using the modified APRM Simulated Thermal Power - High scram setpoints defined in the COLR.	12 hours
	AND		Immediately
	~~F.2.2~~ F.3	Initiate action in accordance with Specification 5.6.8.	~~90 days~~

TS Insert 3

F.2

(e) With OPRM Upscale (function 2.e) inoperable, reset the APRM-STP High scram setpoint to the values defined by the COLR to implement the Automated BSP Scram Region in accordance with Action ~~F.2.1~~ of this Specification.

(f) Following DSS-CD implementation, DSS-CD is not required to be armed while in the DSS-CD Armed Region during the first reactor startup and during the first controlled shutdown that passes completely through the DSS-CD Armed Region. However, DSS-CD is considered OPERABLE and shall be maintained OPERABLE and capable of automatically arming for operation at recirculation drive flow rates above the DSS-CD Armed Region.

TS Insert 6

5.6.8 OPRM Report

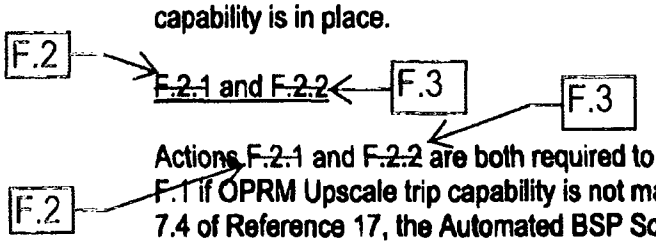
When a report is required by Required Action ~~F.2.2~~ F.3 of TS 3.3.1.1, "RPS Instrumentation," a report shall be submitted ~~within 90 days of entering CONDITION F.~~ the following 90 days. The report shall outline the preplanned means to provide backup stability protection, the cause of the inoperability, ~~and~~ and the plans ~~to schedule~~ for restoring the required instrumentation channels to OPERABLE status.

TS Bases Insert 2a

ACTIONS F.1

If OPRM Upscale trip capability is not maintained, then actions must be taken to establish Manual Backup Stability Protection (BSP). The Manual BSP Regions are described in Reference 17. The Manual BSP Regions are procedurally established consistent with the guidelines identified in Reference 17 and require specified manual operator actions if certain predefined operational conditions occur.

The Completion Time of immediate is based on the importance of limiting the period of time during which no automatic or alternate detect and suppress trip capability is in place.



Actions F.2.1 and F.2.2 are both required to be taken in conjunction with Action F.1 if OPRM Upscale trip capability is not maintained. As described in Section 7.4 of Reference 17, the Automated BSP Scram Region is designed to avoid reactor instability by automatically preventing entry into the region of the power and flow-operating map that is susceptible to reactor instability. The reactor trip would be initiated by the modified APRM Simulated Thermal Power – High scram setpoints for flow reduction events that would have terminated in the Manual BSP Region I. The Automated BSP Scram Region ensures an early scram and SLMCPR protection.

The Completion Time of 12 hours to complete the specified actions is reasonable, based on operational experience, and based on the importance of restoring an automatic reactor trip for thermal hydraulic instability events.

Backup Stability Protection is intended as a temporary means to protect against thermal-hydraulic instability events. The reporting requirements of Specification 5.6.8 document the corrective actions and schedule to restore the required channels to an OPERABLE status. The Completion Time of 90 days is adequate to allow time to evaluate the cause of the inoperability and to determine the appropriate corrective actions and schedule to restore the required channels to OPERABLE status.

Basis for RAI STSB-2

NMP2's TS Limiting Conditions for Operation (LCO) 3.4.1 states:

> *Two recirculation loops with matched flows shall be in operation,*
>
> *OR*
>
> *One recirculation loop shall be in operation with the following limits applied when the associated LCO is applicable:*
>
> *(a). LCO 3.2.1, "AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR)," single loop operation limits specified in the COLR;*
>
> *(b). LCO 3.2.2, "MINIMUM CRITICAL POWER RATIO (MCPR)," single loop operation limits specified in the COLR; and*
>
> *(c). LCO 3.3.1.1, "Reactor Protection System (RPS) Instrumentation," Function 2.b (Average Power Range Monitors Flow Biased Simulated Thermal Power Upscale), Allowable Value of Table 3.3.1.1-1 is reset for single loop operation.*

NMPNS proposes to add item (d) to the LCO for TS 3.4.1, "Recirculation Loops Operating." Item (d) would state:

> *(d). Intentional operation with only one recirculation loop in operation is prohibited while operating in the MELLLA domain or MELLLA+ domain as defined in the COLR.*

However, the LCO requires that limits be applied when using single recirculation loop operation. Proposed item d does not apply new limits to this LCO and therefore, its proposed placement is not appropriate in TS LCO 3.4.1. Proposed item d applies a restriction to single recirculation loop operation and should be appropriately incorporated directly into the LCO. For example:

> *One recirculation loop shall be in operation provided the plant is not operating in the MELLA or MELLLA+ domain defined in the COLR and provided the following limits are applied when the associated LCO is applicable: ...*

RAI STSB -2

The proposed change to TS LCO 3.4.1 is not incorporated correctly into NMP2's TSs. Please provide a TS change that incorporates the restriction into the LCO for TS 3.4.1.

Response

Revision to the LCO for TS 3.4.1 is included on the following page and replaces the version previously submitted on November 1, 2013 as part of Attachment1 to the Enclosure.

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.1 Recirculation Loops Operating

LCO 3.4.1 Two recirculation loops with matched flows shall be in operation,

OR

One recirculation loop shall be in operation provided the plant is not operating in the MELLLA or MELLLA+ domain defined in the COLR and provided ~~with~~ the following limits are applied when the associated LCO is applicable:

a. LCO 3.2.1, "AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR)," single loop operation limits specified in the COLR;

b. LCO 3.2.2, "MINIMUM CRITICAL POWER RATIO (MCPR)," single loop operation limits specified in the COLR; and

c. LCO 3.3.1.1, "Reactor Protection System (RPS) Instrumentation," Function 2.b (Average Power Range Monitors Flow Biased Simulated Thermal Power – Upscale), Allowable Value of Table 3.3.1.1-1 is reset for single loop operation.

APPLICABILITY: MODES 1 and 2.