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SUBJECT: Forwards response to NRC 940906 RAI re util 930722 proposed license amend,allowing facility to operate at uprated power & changes to Sections 2.2.2,2.3 & 9.4.4 of GE licensing evaluation rept NEDC-31994P,Rev 1.Changes to rept withheld.

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B. Ralph Sylvia
Executive Vice President
Nuclear

October 6, 1994
NMP2L 1500

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

RE: Nine Mile Point Unit 2
Docket No. 50-410
NPF-69

Subject: ***Proposed License Amendment - Uprated Operation, Response to Request for Additional Information***

Gentlemen:

In a letter to the Nuclear Regulatory Commission (NRC) dated July 22, 1993 (NMP2L 1397), Niagara Mohawk Power Corporation (NMPC) proposed a license amendment to allow Nine Mile Point Unit 2 (NMP2) to operate at an uprated power of 3467 megawatts thermal. During the course of the Staff's review of this proposed license amendment, the NRC has determined that additional information, as identified in its September 6, 1994 letter to NMPC, is required to complete its review of this matter. Attached to this letter is the requested additional information and changes to Enclosure 3 of NMPC's letter to the Staff dated July 22, 1993.

As indicated by Enclosure 4 of the July 22, 1993 letter, the changes to Enclosure 3 contain proprietary information pursuant to 10 CFR 2.790.

Niagara Mohawk has provided a copy of this response to the appropriate state representative.

Very truly yours,

B. R. Sylvia
Exec. Vice President - Nuclear

Attachment
xc: Regional Administrator, Region I
Mr. B. S. Norris, Senior Resident Inspector
Mr. M. J. Case, Acting Director, Project Directorate I-1, NRR
Mr. D. S. Brinkman, Senior Project Manager, NRR
Ms. Donna Ross
Division of Policy Analysis and Planning
New York State Energy Office
Agency Building 2
Empire State Plaza
Albany, NY 12223
Records Management

ATTACHMENT

REQUEST FOR ADDITIONAL INFORMATION

Please provide a commitment to perform recirculation pump vibration tests prior to operating at uprate conditions. This was in the generic report.

RESPONSE

During normal plant operations, the vibration levels at each recirculation pump and motor are recorded once per shift and evaluated. These vibration levels are sensed by shaft proximity probes and motor top accelerometers which provide continuous remote indication at a panel located in the reactor building. In addition, if the shaft vibration exceeds 13.5 mils or the motor vibration exceeds 3 mils, an alarm in the control room is annunciated.

Several sections of the generic power uprate reports document the evaluations that were performed for the recirculation system and related piping. They include:

- Sections 5.5.2 and 5.6.2 of LTR1,
- Section 4.5 of LTR2 (Volume 1 of NEDC-31984P), and
- Section 4.8 (Supplement 2 to LTR2).

In all the above evaluations, the performance of the recirculation system and related piping (including vibration) is shown to have minor changes for the generic power uprate path being followed by NMP2. For uprated power conditions, the NMP2 recirculation pumps remain within their previously licensed operating core flow range. Therefore, no additional recirculation system vibration monitoring (i.e., testing) is required because the NMP2 approach is consistent with Appendix L.2 (Guidelines for Uprate Testing) of LTR1 (Generic Guidelines for GE BWR Power Uprate, NEDC-31897P, Rev. 1).

Accordingly, no vibration testing beyond that discussed above need be performed prior to operating at the uprate conditions. However, NMPC will perform more frequent monitoring of vibrations during the initial power ascension for the uprated power conditions such that vibration levels will be recorded and evaluated prior to and during operation at uprate conditions.

REQUEST FOR ADDITIONAL INFORMATION

The single loop operation (SLO) peak cladding temperatures (PCTs) are greater than the two loop PCTs. Please provide the statistical upper bound PCT analysis for the SLO. This upper bound temperature must be below 1600°F to be acceptable. If not, a maximum average planar linear heat-generation rate multiplier must be applied for SLO.

RESPONSE

It is recognized that the SLO results documented in Table B-1 of the NMP2 SAFER/GESTR LOCA Analysis (Enclosure 5 of the NMP2 power uprate submittal, NEDC-31830P, Rev. 1) show PCTs that are higher than the 2-loop LOCA cases. They were calculated without any SLO APLHGR restrictions. The results are higher because immediate dryout is assumed for the SLO cases, while full power is still assumed (well above the planned SLO operating conditions). These results were included because they are expected to meet all the licensing requirements even though they are higher than the 2-loop cases. However, NMPC has chosen an alternate approach for NMP2 by employing an APLHGR multiplier for SLO to justify the power uprate submittal. This alternate approach is discussed below.

The NMP2 Power Uprate submittal has chosen to maintain the practice of employing APLHGR multipliers for SLO. The licensing evaluation report (NEDC-31994P, Rev. 1) focuses on 2-loop operation for most of the document, including those portions related to LOCA and APLHGR (e.g., Sections 2.2.2 and 4.3). SLO is addressed briefly in Section 9.4.4. By not changing the related Technical Specification Section, 3.2.1, the submittal intended to continue the current practice of applying APLHGR multipliers for SLO. The applicable multipliers are in the Core Operating Limits Report (COLR) for all fuel types.

NMP2 is currently employing three fuel types. APLHGR multipliers have been defined for each fuel type (listed below) in such a way that the calculated PCTs remain lower than the power uprate 2-loop DBA analysis.

Fuel Type	SLO Multiplier	SLO PCTs (Nom/App K)
BP8x8R	0.81	less than 850°F/1250°F
GE8x8NB	0.79	less than 850°F/1250°F
GE11	0.79	less than 990°F/1270°F

The submittal for power uprate is based on applying these multipliers if NMP2 were to utilize SLO. Changes to Sections 2.2.2 and 9.4.4 of the licensing evaluation report are provided which state that these APLHGR multipliers will be applied for SLO so that the calculated PCTs for all fuel types remain below the 2-loop DBA. This approach is consistent with the current Technical Specifications.

CHANGES TO THE NMP2 POWER UPRATE LICENSING EVALUATION

Replace existing pages 2-2 and 9-8 of Enclosure 3 of NMPC's letter to the NRC dated July 22, 1993 (NMP2L 1397) entitled "Proposed License Amendment - Uprated Operation" with the attached revised pages. These pages are provided with double bar marginal markings to indicate the changes to Revision 1 of Enclosure 3 to NMPC's letter. Proprietary information is marked by a single line in the margin.

In addition to the above changes to Enclosure 3, a minor editorial change is made to Section 2.3 which appears on page 2-2.

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