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SUBJECT: Forwards "Secondary Containment Drawdown Analysis & LOCA Radiological Analysis," per NRC 880818 request.

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NIAGARA MOHAWK

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August 26, 1988
NMP2L 1159

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

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

Gentlemen:

Niagara Mohawk met with members of the Nuclear Regulatory Commission Staff in Bethesda, Maryland, on July 20, 1987 and August 18, 1987, to summarize several issues regarding the secondary containment draw-down analysis for the Nine Mile Point Unit 2. At these meetings, Niagara Mohawk discussed the relationship between the draw-down time, the reactor building and service water differential temperature, and the reactor building inleakage rate. In addition, Niagara Mohawk pointed out that the original draw-down analysis, as described in Section 6.2.3.3 of the Final Safety Analysis Report, did not represent the most conservative scenario.

The assumptions used in the analysis, the impact on plant operation due to the required differential temperature, and the possibility of an increased draw-down time were also discussed at these meetings. The effect of an extended draw-down time on the loss-of-coolant accident (LOCA) radiological analysis had been evaluated and the preliminary results were presented at the meeting. The operational impact of this revised draw-down analysis was addressed in Licensee Event Report 87-40 and its Supplement 1 dated July 31, 1987, and January 28, 1988, respectively.

As requested by the Nuclear Regulatory Commission staff at the August 18, 1987 meeting, this letter transmits the final results of the revised radiological analysis and the interim results of the secondary containment draw-down analysis, which are valid for the first plant operating cycle. These analyses were performed in accordance with the requirements and assumptions of the Nuclear Regulatory Commission Standard Review Plan Sections 6.2.3 and 15.6.5. Although the revised analysis has resulted in an increase in the exclusion area thyroid dose, these analyses are based on extremely conservative assumptions and are still within the guidelines of 10 CFR 100. Therefore, Niagara Mohawk does not consider the radiological dose increase to represent an undue risk to public health and safety.

The physical (hardware) changes to the plant and the changes in plant operation have been performed in accordance with the requirements of 10 CFR 50.59 and documented in safety evaluations which demonstrate that the changes described herein do not constitute an unreviewed safety question.

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Section 1.0 of the attachment discusses the secondary containment draw-down analysis. The deficiencies in the original analysis and the subsequent changes are addressed. To minimize impact on plant operations, the revised analysis uses a draw-down time of 6 minutes. For the first cycle, a 10°F to 18°F temperature differential, depending on the outdoor air temperatures, is required to be maintained between the reactor building air temperature and the service water pump discharge header temperature. The analysis does not include heat loads from the spent fuel pool. Final resolution of this issue, which will include consideration of heat loads from the spent fuel pool and any necessary plant modifications, is scheduled for completion prior to the first refueling outage.

Section 2.0 of the attachment discusses the results of the revised LOCA radiological analysis which incorporates the changes to the draw-down analysis. The revised analysis concludes that the radiological consequences remain within the dose guidelines of 10 CFR 100.11 for the offsite doses and 10 CFR 50, Appendix A, General Design Criterion 19 limits for the control room doses. The thyroid dose for the Exclusion Area Boundary is within 6% of the preliminary values presented at the August 18, 1987 meeting, while the Control Room thyroid dose is 38% less than its preliminary value. This revised analysis assumes the maximum Technical Specification allowable leakage rate of 6 standard cubic feet per hour for the main steam isolation valves.

The impact of a LOCA at Nine Mile Point Unit 2 on the Unit 1 control room has been evaluated. The results of this evaluation are that the thyroid, whole body gamma, and skin beta doses in the Unit 1 control room remain well within the limits specified in General Design Criterion 19.

Changes to Sections 6.2.3 and 15.6.5 of the Final Safety Analysis Report, as related to the revised LOCA radiological analysis, will be included in the first update. The revision to the draw-down analysis will also be incorporated.

Very truly yours,

NIAGARA MOHAWK POWER CORPORATION

C. D. Terry
Vice President
Nuclear Engineering and Licensing

TDF/pns
4784G
Attachment

cc: Regional Administrator, Region I
Mr. R. A. Capra, Director
Ms. M. F. Haughey, Project Manager
Mr. W. A. Cook, Resident Inspector
Records Management