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 TERRY, C.D.    Niagara Mohawk Power Corp.    *586 Rpt*  
 RECIP. NAME    RECIPIENT AFFILIATION  
                  Document Control Branch, (Document Control Desk)

SUBJECT: Forwards Rev 1 to Technical Rept TR-7353-1, "Nine Mile Point Unit 1 Reduction in Mark I Torus Program Condensation Oscillation Load Definition & Resulting Effect on Max Shell Thickness Requirements."

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IN WITNESS WHEREOF, I have hereunto set my hand and the seal of said County, this 1st day of January, 1902.

May 14, 1991  
NMP1L 0583

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

Re: Nine Mile Point Unit 1  
Docket No. 50-220  
DPR-63

Gentlemen:

Niagara Mohawk's letter of November 22, 1989 (NMP1L-0458), indicated that various options to address torus shell stress increases resulting from wall thinning were being investigated. Niagara Mohawk's current plan is to begin installation of stiffening rings during 1992 and complete modifications by the end of 1994 at a cost of 12.5 million dollars.

However, recent analysis have determined two factors which can significantly reduce condensation oscillation loading. They are 1) random phasing of condensation pressures at downcomer exits and 2) differences in configuration of the downcomers between bays.

Re-analysis based on the above two factors allows for delay of any torus modifications until at least 2007 and most likely 2010, which is beyond the current license expiration and the pending license extension. This approach was presented at an April 24, 1991 meeting with NRC Staff. At this meeting we committed to provide a detailed report by May 15, 1991. The attachments to this letter provide that report and additional information requested by the Staff. Attachment 1 is a copy of the Teledyne Engineering Services report, TR 7353-1, Revision 1, entitled "Nine Mile Point Unit 1 Reduction in Mark I Torus Program Condensation Oscillation Load Definition and Resulting Effect on Minimum Shell Thickness Requirements". This report provides the technical justification for re-definition of the condensation oscillation load. Attachment 2 is a brief history of the Mark I Program as applicable to Nine Mile Point Unit 1. Attachment 3 is information requested at the meeting.

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It was requested at the meeting that Staff's review and concurrence with the proposed condensation oscillation loading re-definition be completed by the end of 1991 to avoid significant expenditures of capital beginning in early 1992. This is based on 250 thousand dollars per month design effort with labor and material contract commitments of approximately 3.6 million dollars anticipated in March 1992.

As discussed above, Staff acceptance of our analysis would allow work on all torus bays to be deferred. As an alternative, we believe there is adequate justification to modify only the 10 bays with eight downcomers, thereby deferring an expenditure of 5 million dollars. This justification is based on the fact that significant differences in loadings exist between the eight downcomer and four downcomer bays. This loading is independent of harmonic phasing of condensation oscillation and is a result of the Full Scale Test Facility configuraton.

If Staff agrees that our revised analysis has merit, but complete review cannot be completed by December, 1991, Niagara Mohawk requests that you alternatively approve deferral of the modification until the 1994 refueling outage. Niagara Mohawk believes sufficient justification exists for this short deferral based on the corrosion rate, conservatism in the condensation oscillation load, margins in mil certifications and the high cost of this modification. As an alternative, we propose implementating the stiffening ring modification in the one bay that exhibits the potential to go below minimum wall thickness before the 1994 outage. This would reduce 1992 expenditure by 3.4 million dollars but still require an expenditure of 1.7 million dollars and would increase the overall cost of the modification.

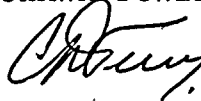
Pending the results of Staff's review, Niagara Mohawk will continue the design of a structural modification to be implemented during 1992. Avoided costs of 12.5 million dollars would be realized if Staff concurs with our analysis. Accordingly, Staff attention to this matter would be greatly appreciated.



We would like to suggest a meeting with Staff within the next 60 days to discuss the specifics of the attachments to this letter. Niagara Mohawk believes that such a meeting would greatly assist the Staff in its review of this request.

Very truly yours,

NIAGARA MOHAWK POWER CORPORATION



C. D. Terry  
Vice President - Nuclear Engineering

MGM/mes  
Attachments

xc: Regional Administrator, Region I  
Mr. R. A. Capra, Project Directorate No. I-1, NRR  
Mr. D. S. Brinkman, Project Manager, NRR  
Mr. W. A. Cook, Senior Resident Inspector  
Records Management





**ATTACHMENT 1**

**Nine Mile Point Unit 1 Reduction in Mark I  
Torus Program Condensation Oscillation Load Definition  
and Resulting Effect of Minimum Shell Thickness Requirements**

