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NORTHERN STATES POWER COMPANY

MINNEAPOLIS, MINNESOTA 55401

August 4, 1975

Mr. D. L. Ziemann, Chief
Operating Reactors Branch # 2
Division of Reactor Licensing
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Ziemann:

MONTICELLO NUCLEAR GENERATING PLANT
Docket No. 50-263 License No. DPR-22

License Amendment Request Dated August 4, 1975

This letter is to supplement our July 9, 1975 response to your letters concerning ECCS analyses. On December 27, 1974, you sent to us an Order for Modification of License for the Monticello Nuclear Generating Plant, which requested reanalyses of the Monticello ECCS performance and submittal of appropriate proposed Technical Specification changes by July 9, 1975, using revised criteria. On April 24, 1975, you expanded the above analyses to include certain considerations for manually controlled, electrically operated valves. Your June 18, 1975 letter identified additional required information for ECCS analyses.

Our July 9, 1975 letter provided the ECCS analyses as received from our reactor vendor without our review. We have now had the opportunity to review the analyses, evaluate conformance to the above documents and prepare the appropriate Technical Specification change request. The ECCS analyses which are the bases for the Technical Specification change are attached as Exhibit C of this submittal. It is essentially the same as that submitted on July 9, 1975, with the exception of minor corrections throughout the report and insertion of non-proprietary versions of the proprietary figures. We believe that we have complied with your April 24, 1975 letter in full. We have reviewed the ECCS analyses submitted July 9, 1975, and have communicated with General Electric, who performed the analyses, to determine the extent to which that evaluation complies with the "required information" identified by your June 18, 1975 letter. Five areas warranting further discussion are as follows (Item numbers correspond to those in the June 18, 1975 letter):

Item III The analyses only investigate a loss of coolant accident initiated during operation with both recirculation pumps; single loop flow is not specifically analyzed. We are presently discussing with General Electric their capabilities and scheduling for providing this aspect of the analyses. It should be noted that partial loop operation is provided primarily for times of forced maintenance. The likelihood of the LOCA event simultaneous with partial loop operation is very remote.

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Item IV.A The Thermal Power vs Time Plot is not included in the Monticello lead plant analysis (Quad-Cities) and is therefore included with this letter as Attachment A.

Item IV.B Curves of Hot Pin Internal Pressure, Hot Spot Pellet Average Temperature, and Core Outlet Flow vs Time have not been submitted. We understand that General Electric will supply these curves for BWR/4 and 6 lead plants by October 17, 1975 and that they have your concurrence that completion of the analyses by that date will not delay the review and action on the Appendix K Analyses for any plant.

Item IV.D The identifying run dates etc., are not on curves and tabulations in the Monticello ECCS analyses. Attachment B is a tabulation of log numbers which provides traceability of the model used for each plot provided in the July 9, 1975 Monticello ECCS analyses.

Item IV.E The Time to Rupture is not included with other requested identification marks on figures and tabulations. General Electric contends that this information is not meaningful by itself and that 8 x 8 fuel does not perforate.

The analytical results using the ECCS model modified in accordance with the December 27, 1974 Order are somewhat different than reported in the past. One such result, the maximum average planar linear heat generation rate (MAPLHGR) curves are part of Technical Specification and are, therefore, the subject matter of this License Amendment Request. This otherwise simple change is complicated by the fact that it affects previously requested changes which have not been acted on so far. Exhibit A, explains how the current Technical Specifications and previously requested Technical Specification changes are affected. Exhibit B provides printed pages having been corrected to include the proposed changes.

You will find that the proposed Technical Specification changes include a MAPLHGR curve for the 8D219 fuel type which is not currently used in the Monticello reactor. As discussed in our July 24, 1975 letter to Mr. K. R. Goller, we plan to insert that fuel type during a refueling outage scheduled to commence September 12, 1975. The 8D219 fuel type is a standard BWR fuel assembly which is of essentially the same mechanical and nuclear design as fuel currently in use at Monticello with the exception that it has lower enrichment than the other fuel types. The ECCS model handles each fuel type in the same manner but because of fuel parameters (such as enrichment) the resulting MAPLHGR curves are unique to each fuel type. This change merely implements the calculated results for all fuel types. This is the only Technical Specification change required for insertion of the 8D219 fuel type.

We wish to emphasize the need for prompt action on these changes. The evaluation of transients for the reload core is being done based on the GETAB concept. We request that in addition to the attached proposed Technical Specification changes, our GETAB License Amendment Request (Dated March 12, 1975) be implemented prior to our September 12, 1975 outage. We also request that action be taken on the

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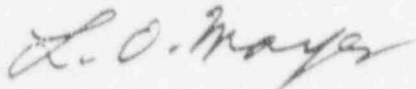
Mr. D. L. Ziemann

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parts of our License Amendment Request (Dated August 20, 1974) which are still applicable. At the present time we are restricted by the legal operating limits identified in your December 27, 1974 Order which do not appear in the Monticello Technical Specification. We believe it is imprudent to operate for an extended period of time under this arrangement. We request that a single set of MAPLHGR curves be issued for Technical Specifications and that other peripheral requirements be eliminated as soon as possible. We stand ready to be of assistance to you in this effort.

Yours very truly,



L. O. Mayer, PE
Manager, Nuclear Support Services

LOM/MHV/deb

cc: J. G. Keppler
G. Charnoff
MPCA
Attn: J. W. Ferman
MECCA
Attn: H. J. Vogel
City of St. Paul
Attn: D. L. Ficker
S. J. Gadler

ATTACHMENT A

Normalized Core Power Vs. Time

<u>Time, Sec</u>	<u>Normalized power</u>
0.	1.00000
0.10	0.98351
0.20	0.92606
0.40	0.74519
0.60	0.59272
0.80	0.49796
1.00	0.34641
2.00	0.16634
3.00	0.10617
4.00	0.08676
5.00	0.07811
6.00	0.07462
7.00	0.07254
8.00	0.06996
9.00	0.06796
10.00	0.06604
20.00	0.05820
30.00	0.05459
40.00	0.05098
50.00	0.04902
60.00	0.04705
70.00	0.04564
80.00	0.04449
90.00	0.04358
100.00	0.04267
150.00	0.03928
200.00	0.03588
250.00	0.03465
300.00	0.03342
350.00	0.03218
400.00	0.03095
450.00	0.03020
500.00	0.02945
600.00	0.02795
700.00	0.02700
800.00	0.02604
900.00	0.02533
1000.00	0.02463
2000.00	0.02089
3000.00	0.01893

Attachment B
ECCS Figure Log Numbers

<u>Figure</u>	<u>Log Number</u>	<u>Date</u>
A-1a	5L055	6/13/75
A-1d	5L056	6/20/75
A-2a	5L055	6/13/75
A-2d	5L056	6/20/75
A-3a	5L055	6/13/75
A-3d	5L056	6/20/75
B-1a-1	5T054	6/13/75
B-1a-2	5T055	6/9/75
B-1d	5T096	6/20/75
B-2a	5C203	6/17/75
B-2d	5C203	6/24/75
C-1a-1	5H087, 5S066	6/17/75
C-1a-2	5H087, 5S066	6/17/75
C-1d-1	5H087, 5S066	6/20/75
C-1d-2	5H087, 5S066	6/20/75
C-2a-1	5H087, 5S066	6/17/75
C-2a-2	5H087	6/17/75
C-2b-1	5H088, 5S065	6/17/75
C-2b-2	5H088,	6/17/75
D-1a	5C203	6/17/75
D-1d	5C203	6/24/75
D-2a	5H087	6/17/75
D-2b	5H088	6/17/75
D-3	5H087, 5H088	6/17/75
D-4A/5A	5C205	6/19/75
D-4B/5B	5C204	6/19/75
D-4C/5C	5C203	6/19/75
D-4D/5D	5C202	6/19/75
D-4E/5E	5C201	6/19/75