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LEMPGES,T.E. Niagara Mohawk Power Corp.
RECIP.NAME RECIPIENT AFFILIATION
IPPOLITO,T.A. Operating Reactors Branch 2

SUBJECT: Describes rationale for not installing diverse level instrumentation outlined in Safety Criterion 3 of generic SER.Review of operating experience shows no evidence that level instrumentation damage has occurred.

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U.S. NUCLEAR REGULATORY COMMISSION

May 14, 1981

Mr. Thomas A. Ippolito, Chief
Operating Reactors Branch, No. 2
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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

Dear Mr. Ippolito:

Your April 30, 1981 letter requested Niagara Mohawk to commit to compliance with the staff's position on diverse level instrumentation as outlined in Safety Criterion 3 of the Generic SER on the BWR scram discharge system (dated December 1, 1980).

As discussed below the redundant level detecting instrumentation currently installed on the scram discharge system provides an adequate degree of reliability and protection from the common cause failures presented in the above mentioned SER.

1. Protection from hydrodynamic forces is provided by the design of the instrument lines and floats. A review of operating experience shows no evidence that hydrodynamic forces sufficient to cause damage to the level instrumentation have occurred. Modifications have been made in accordance with Design Criterion 3 which will further reduce the likelihood of large hydrodynamic forces occurring as a result of adverse flow conditions. Tests conducted on vent and drain valves indicate closure times of less than 10 seconds, reducing water hammer effects. The floats installed at Nine Mile Point Unit 1 have been designed for a working pressure of 1668 psig. This is considerably above any expected pressure conditions.

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2. The configuration used to connect the instrument lines to the scram discharge piping reduces the possibility of crud buildup causing a common cause failure of the level instrumentation. The upper instrument taps are connected to the top of the 10 inch pipe connecting the scram discharge headers to the instrument volume, making it unlikely that any crud would be carried into the instrument lines during fill or drainage conditions. Additionally, surveillance testing (instrument channel calibration) currently performed on the level instrumentation provide assurance that this type of common cause failure will not occur.

3. Manufacturing errors would undoubtedly have been detected during the past 11 years of operation, if such defects were present.

4. Human error, particulary during testing, is also identified in the generic SER on Scram Discharge Systems as a possible common mode failure. Niagara Mohawk believes that the methods used to perform the tests minimize the possibility of human error. Calibration procedures for the level instrumentation do not subject the floats to excessive forces which could cause damage. These procedures require that instrumentation be tested in place for operability following any maintenance.

Based on the above information, Niagara Mohawk does not believe the installation of diverse level instrumentation is necessary.

Sincerely,

NIAGARA MOHAWK POWER CORPORATION

T.E. Lempges

T.E. Lempges
Vice President
Nuclear Generation

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