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SUBJECT: Responds to GL 96-05, "Periodic Verification of Design-Basis Capability of Safety-Related Motor-Operated Valves."

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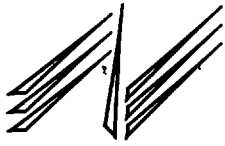
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March 17, 1997  
NMP2L 1695

MARTIN J. McCORMICK JR. P.E.  
Vice President  
Nuclear Engineering

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: NRC Generic Letter 96-05, "Periodic Verification of Design-Basis Capability of Safety-Related Motor-Operated Valves"

Gentlemen:

The Commission issued Generic Letter (GL) 96-05, "Periodic Verification of Design Basis Capability of Safety-Related Motor-Operated Valves," on September 18, 1996 to: 1) discuss the periodic verification of the capability of safety-related motor-operated valves (MOV) to perform their safety functions consistent with the current licensing bases of nuclear power plants; 2) request that addressees implement actions described, and 3) require that addressees provide to the NRC a written response to this GL relating to implementation of the requested actions. GL 96-05 requests that within 180 days the addressee submit a written summary description of its MOV periodic verification program established in accordance with the Requested Actions paragraph or the alternative course of action established by the addressee. The attachment to this letter contains NMPC's response to GL 96-05 for Nine Mile Point Unit 2 (NMP2).

Very truly yours,

Martin J. McCormick Jr.  
Vice President Nuclear Engineering

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Enclosure

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## ATTACHMENT A

### NIAGARA MOHAWK POWER CORPORATION

### NINE MILE POINT NUCLEAR STATION UNIT NO. 2

#### *Requested Actions*

*Each addressee of this generic letter is requested to establish a program, or to ensure the effectiveness of its current program, to verify on a periodic basis that safety-related MOVs continue to be capable of performing their safety functions within the current licensing bases of the facility. The program should ensure that changes in required performance resulting from degradation (such as those caused by age) can be properly identified and accounted for. Addressees that have developed periodic verification programs in response to GL 89-10 should review those programs to determine whether any changes are appropriate in light of the information in this GL.*

#### **NMP2 Response**

In accordance with GL 89-10, NMP2 has established a periodic verification program (NER-2M-009), that assures that safety-related MOVs within the scope of our GL 89-10 MOV Program are capable of performing their safety functions within the NMP2 current license basis. The GL 89-10 program includes safety-related MOVs which are required to change position to support the operability of a safety system. NMP2 has reviewed its periodic verification program to determine if changes are appropriate in light of the information in GL 96-05. Based on that review, NMP2's periodic verification program for GL 89-10 MOVs is being revised and expanded to encompass additional considerations. A summary description of the NMP2 revised program is as follows:

- The scope of the MOV Periodic Verification Program includes 177 MOVs that were included in the GL 89-10 MOV program.
- The NMP2 MOV Periodic Verification Program incorporates risk insights to prioritize MOV periodic testing activities such as frequency of individual valve tests and selection of valves to be tested. Based upon current 18-month refueling cycles, high risk MOVs are tested statically at a maximum test interval once per three fuel cycles, while low risk valves are tested statically at a maximum test interval of once per six fuel cycles (ten-year maximum). More frequent testing is mandated for low margin valves (i.e. as-left thrust output compared to required thrust output) and may be performed for plant-specific or valve-specific concerns.



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- The Periodic Verification Program includes differential pressure (DP) testing of three high risk MOVs and one low risk MOV per cycle for the first two cycles after GL 89-10 completion to establish degradation rates and evaluate the need for additional DP testing. Based on concerns arising during the NRC's closure inspection for GL 89-10, (Inspection Report 96-15) additional DP baseline testing is being performed to support the valve factor basis for selected valve groups. In addition, NMP2 is participating in the BWROG/WOG/CEOG (JOG) Periodic Verification Program (i.e., GE NEDC-32719 March 1997) and will dynamically test the specified MOVs as part of JOG program participation. Longer-term periodic differential pressure testing needs will be based on the results of the JOG program and feedback from plant-specific testing.
- NMP2 is not planning to adopt ASME OM-8 code case OMN-1 for initial periodic verification of MOVs. However, initial increased frequency of diagnostic testing is being planned to support adoption of the code case in the future. Until the code case is adopted, the applicable IST program MOVs will continue to be stroke-time tested in accordance with NMP2's approved IST program plan.
- Review of testing results from periodic verification activities will be procedurally controlled including provisions for identification of adverse (or improving) trends. A biennial (every two years) summary review of test results will be performed. Program adjustments will be made based upon these reviews. In addition, NMP2 will incorporate periodic verification program adjustments as appropriate based upon feedback from the JOG periodic verification program and as industry information becomes available.
- Diagnostic equipment utilized for periodic testing may include motor power diagnostic testing in lieu of stem thrust (or yoke) measurements. Appropriate adjustments will be incorporated for the accuracy and limitations of this alternate diagnostic method. Stem thrust (or yoke) measurements are used for setup of MOVs after actuator overhaul or major valve maintenance, in accordance with Generation Administration Procedures.
- The present stem lubrication frequency is once every two years. As such, maintenance activities, including stem lubrication, may occur between periodic verification tests. Sufficient as-found and as-left testing will be performed to evaluate the affect of such activities on valve performance.

The NMP2 MOV Periodic Verification program is intended to address potential degradation that can result in an increase in thrust or torque requirements to operate valves or a potential decrease in output capability of the motor actuator. Static diagnostic testing is normally adequate for addressing potential increasing thrust or torque requirements, since additional margin and enveloping valve factors have been incorporated to account for potential degradation such as progressive guide and seat damage or rising disk friction. In addition, static testing can detect a number of other internal valve problems. The static testing confirms the capability of the motor actuator to provide the required torque. The added margin allowance for potential increases in thrust requirements due to internal valve degradation



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provide assurance that MOVs can function properly over periodic verification periods. The dynamic differential pressure testing discussed above and that performed through the JOG periodic verification program is expected to confirm the necessary margin required to support periodic static diagnostic testing as the method for periodic verification of design capability for the balance of plant life.

NMP2 is committed to test valves under the JOG periodic verification program and in accordance with the JOG testing methodology. Necessary adjustments will be performed to address any NRC issues on the JOG Periodic Verification program when issued. As industry developments occur, new technology becomes available, and future developments dictate, NMP2's periodic verification program will be revised and maintained such that it will remain capable of assuring proper periodic verification of MOV capability for the remaining plant operating life.

