Niagara Mohawk®

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April 19, 2001
NMP2L 2019

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

RE: Nine Mile Point Unit 2
Docket No. 50-410
NPF-69
(TAC No. MB0301)

***Subject:*** ***Nine Mile Point Unit 2 Application for Amendment Regarding Excess Flow Check Valve Test Frequency Relaxation***

Gentlemen:

Niagara Mohawk Power Corporation (NMPC) hereby transmits supplemental information requested by the NRC in support of a previously submitted application for amendment to Nine Mile Point Unit 2 (NMP2) Operating License NPF-69. By letter dated February 5, 2001 (NMP2L 1996), NMPC submitted a proposed change to NMP2 Technical Specification 3.6.1.3. The change will relax the frequency of testing excess flow check valves (EFCV) by allowing a representative sample of reactor instrumentation line EFCVs to be tested every 24 months, such that each reactor instrumentation line EFCV is tested once every 10 years (nominal). Attachment 1 to this letter provides NMPC's response to each of two (2) requests for additional information contained in the NRC's letter dated March 27, 2001.

Pursuant to 10CFR50.91(b)(1), NMPC has provided a copy of this supplemental information to the appropriate state representative.

Very truly yours,

John H. Mueller
Senior Vice President and
Chief Nuclear Officer

JHM/DEV/mlg
Attachment 1 (2 pages)

A001

xc: Mr. H. J. Miller, NRC Regional Administrator, Region I
Ms. M. K. Gamberoni, Section Chief PD-I, Section 1, NRR
Mr. G. K. Hunegs, NRC Senior Resident Inspector
Mr. P. S. Tam, Senior Project Manager, NRR
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**ATTACHMENT 1**

**NIAGARA MOHAWK POWER CORPORATION**

**LICENSE NO. NPF-69**
**DOCKET NO. 50-410**

**RESPONSES TO NRC REQUEST FOR ADDITIONAL INFORMATION (RAI)**
**DOCUMENTED IN LETTER DATED MARCH 27, 2001**

***RAI No. 1***

*GE Topical Report NEDO-32977-A, "Excess Flow Check Valve Testing Relaxation," and the staff's associated safety evaluation state that the magnitude of the release through an instrument line would be within the pressure control capability of the reactor building ventilation systems and the functional performance of the secondary containment following an instrument line break. However, for NMP2, Section 15.6.2.4.2 of the Updated Safety Analysis Report states that "The energy released by this coolant loss would cause the reactor building siding pressure to be exceeded. No benefit from the secondary containment or the standby gas treatment system is to be assumed." Please reconcile or justify this apparent contradiction.*

**Response**

A flow-restricting orifice is installed upstream of the excess flow check valve (EFCV) on each of the reactor instrumentation lines in accordance with Regulatory Guide (RG) 1.11, "Instrument Lines Penetrating Primary Containment." Nine Mile Point Unit 2 (NMP2) conformance with RG 1.11 is addressed in Updated Safety Analysis Report (USAR) Section 1.8, Section 6.2.4, and Table 6.2-56. In the unlikely event that an EFCV fails to function properly concurrent with a postulated instrument line break outside primary containment, the orifice limits the magnitude of the steam release such that it is within the pressure control capability of the normal reactor building ventilation system; thus, the instrument line break would not result in overpressurizing the secondary containment. The nominal capacity of the reactor building ventilation system is 140,000 cfm, as described in USAR Section 9.4.2.

USAR Section 15.6.2.4.2 states that the energy released by the coolant loss from an instrument line break would cause the reactor building's siding pressure to be exceeded. This statement is based on a worst-case calculation of the reactor building pressure/temperature response to an instrument line break that made very conservative assumptions, including:

- Treating the reactor building as a closed volume,
- No credit for the pressure control function of the normal reactor building ventilation system,
- No credit for energy removal by the reactor building general area or emergency recirculating unit coolers (safety-related, redundant), and
- No credit for operation of the standby gas treatment system (safety-related, redundant).

Without the overly conservative assumptions cited above, reactor building pressure would remain negative, and thus would not exceed the siding positive design pressure.

As noted in USAR Section 15.6.2.5, no credit is taken for standby gas treatment system operation when calculating the radiological consequences of the instrument line break, and the results are acceptable. This approach is consistent with that described in NEDO-32977-A.

***RAI No. 2***

*The operational/environmental impact of an EFCV failure to close with respect to equipment located on or near the instrument racks is not discussed in your submittal. Please provide this information.*

**Response**

As noted in NEDO-32977-A, the operational impact of an EFCV failure to close concurrent with a reactor instrumentation line break is based on the environmental effects of a steam release in the vicinity of the instrument racks. We have evaluated the operational/environmental impacts of a reactor instrumentation line break for NMP2 and have determined that the conclusions stated in NEDO-32977-A, Section 3.2, are applicable to NMP2; i.e.:

1. The reactor building bulk airspace temperature is not significantly impacted, due to the large building volume and the presence of heat sinks (both passive and active).

2. Separation of divisional safety-related equipment in the reactor building will minimize the impact of an instrument line break on other equipment due to such factors as jet impingement.

As noted in USAR Section 15.6.2.2, operator action would be required to shutdown and depressurize the reactor vessel to terminate the instrument line break event. The operator would be alerted to the event by increased radiation, temperature, humidity, or noise levels in the secondary containment, or by abnormal indications or actuations caused by the instrument connected to the broken instrument line.