

January 31, 2001

Mr. John H. Mueller  
Chief Nuclear Officer  
Niagara Mohawk Power Corporation  
Nine Mile Point Nuclear Station  
Operations Building, Second Floor  
Lycoming, NY 13093

SUBJECT: NINE MILE POINT NUCLEAR STATION, UNIT NO. 1 - SUPPLEMENTAL  
SAFETY EVALUATION ON USE OF AMERICAN SOCIETY OF MECHANICAL  
ENGINEERS BOILER AND PRESSURE VESSEL CODE (ASME CODE)  
SECTION III APPENDIX F (TAC NO. MA0068)

Dear Mr. Mueller:

By letter dated June 26, 2000, the NRC staff transmitted a safety evaluation to Niagara Mohawk Power Corporation (NMPC), stating that the licensee had acceptably resolved all issues covered by Generic Letter (GL) 96-06, "Assurance of Equipment Operability and Containment Integrity During Design-Basis Accident Conditions." Neither the staff's safety evaluation (SE), nor the licensee's submittals referenced by the safety evaluation, address the permanent resolution of the thermal overpressurization issue.

By letter dated September 18, 2000, NMPC requested NRC approval of the use of Appendix F criteria of Section III of the ASME Code for evaluating thermally induced overpressurization of isolated water-filled piping sections on a generic and permanent basis. The staff has reviewed NMPC's submittal and finds the use of Appendix F acceptable in this context. The enclosed supplemental SE sets forth details of the staff's review.

Sincerely,

*/RA/*

Peter S. Tam, Senior Project Manager, Section 1  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-220

Enclosure: Supplemental Safety Evaluation

cc w/encl: See next page

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Lycoming, NY 13093

January 31, 2001

SUBJECT: NINE MILE POINT NUCLEAR STATION, UNIT NO. 1 - SUPPLEMENTAL SAFETY EVALUATION ON USE OF AMERICAN SOCIETY OF MECHANICAL ENGINEERS BOILER AND PRESSURE VESSEL CODE (ASME CODE) SECTION III APPENDIX F (TAC NO. MA0068)

Dear Mr. Mueller:

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Office of Nuclear Reactor Regulation

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Accession Number: ML010170530 \*SE dated 12/28/00 was provided and no major changes were made

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DATE	1/25/01	1/25/01	12/28/00	1/31/01

OFFICIAL RECORD COPY

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DATED: January 31, 2001

SUPPLEMENTAL SAFETY EVALUATION FOR NINE MILE POINT UNIT NO. 1

PUBLIC

PDI Reading

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cc: Plant Service list

SUPPLEMENTAL SAFETY EVALUATION  
BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
NIAGARA MOHAWK POWER CORPORATION  
NINE MILE POINT NUCLEAR STATION, UNIT NO. 1  
DOCKET NO. 50-220  
AMERICAN SOCIETY OF MECHANICAL ENGINEERS BOILER AND PRESSURE VESSEL  
CODE (ASME CODE) SECTION III,  
APPENDIX F CRITERIA FOR CONTAINMENT PENETRATIONS

1.0 INTRODUCTION

By letter dated June 26, 2000, the NRC staff transmitted a safety evaluation (SE) to Niagara Mohawk Power Corporation (NMPC, the licensee), stating that the licensee had acceptably resolved all issues covered by Generic Letter (GL) 96-06, "Assurance of Equipment Operability and Containment Integrity During Design-Basis Accident Conditions." Neither the staff's SE, nor the licensee's submittals referenced by the SE, address the permanent resolution of the thermal overpressurization issue.

By letter dated September 18, 2000, the licensee requested NRC approval of the use of Appendix F criteria of Section III of the ASME Code at Nine Mile Point, Unit No. 1 (NMP-1), for evaluating thermally induced overpressurization of isolated water-filled piping sections on a generic and permanent basis. The staff has reviewed the licensee's submittal; this supplemental SE documents the staff's review. (Note: In a number of GL 96-06 SEs, such as those issued to Surry and North Anna, the staff had reviewed and approved the use of Appendix F as a generic and permanent fix.)

2.0 EVALUATION

In the September 18, 2000, letter, the licensee summarized the final results of the evaluation performed for Nine Mile Point, Unit No. 1 (NMP1) in response to GL 96-06. The licensee identified ten containment penetrations as being susceptible to thermal overpressurization under post-loss-of-coolant accident conditions. A structural analysis using ASME Code Section III, Appendix F, was performed by the licensee for the identified penetrations except penetration X-139. Penetration X-139, along with penetrations X-7 and X-8, were modified during Refueling (RF) 14 to provide overpressure protection capability so that an Appendix F

Enclosure

analysis is not required. However, NMPC performed the Appendix F analysis for X-7 and X-8 anyway in order to provide a basis for exempting the installed relief valves from future maintenance testing.

Supplement 1 of GL 96-06 states that the use of Appendix F is acceptable for interim operability determinations until permanent actions have been identified and approved by the NRC for resolving GL 96-06 issues, and a licensee may request to use Appendix F criteria for a permanent resolution of the thermally induced overpressure issue by submitting a proposed Final Safety Analysis Report (FSAR) amendment for NRC review. Accordingly, NMPC proposed changes to the NMP-I FSAR by incorporating the methodology of Appendix F for use in analysis of isolated piping sections in containment under post-accident conditions.

The NRC staff reviewed the licensee's proposed FSAR changes which state that piping system segments considered susceptible to thermally induced overpressurization are analyzed in accordance with the criteria of Appendix F. Thus, the staff confirmed that the licensee's proposed use of Appendix F is consistent with the staff's position used in resolution of GL 96-06, and therefore, is acceptable.

### 3.0 CONCLUSION

As delineated above, the staff reviewed the licensee's proposed use of Appendix F of ASME Code Section III criteria for evaluating thermally induced overpressurization of isolated water-filled piping sections on a generic and permanent basis. The staff finds the licensee's proposal acceptable.

Principal Contributors: J. Huang, C. G. Hammer, B. P. Jain

Date: January 31, 2001