

October 5, 2000

Mr. John H. Mueller  
Chief Nuclear Officer  
Niagara Mohawk Power Corporation  
Nine Mile Point Nuclear Station  
Operations Building, Second Floor  
P. O. Box 63  
Lycoming, NY 13093

SUBJECT: NINE MILE POINT NUCLEAR STATION, UNIT NO. 1 -- RELIEFS FOR THE  
THIRD 10-YEAR INSERVICE INSPECTION PROGRAM PLAN, REVISION 1  
(TAC NO. MA7129)

Dear Mr. Mueller:

By letter dated October 30, 1999, as supplemented by letter dated May 12, 2000, Niagara Mohawk Power Corporation (NMPC) requested relief for Nine Mile Point Nuclear Station, Unit No. 1, from the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) Section XI, 1989 Edition, Article IWF-5000, for the third 10-year inservice inspection (ISI) interval. The NRC staff, with technical assistance from the contractor, Idaho National Engineering and Environmental Laboratory (INEEL), has reviewed and evaluated the information provided by NMPC. Request for Relief RR-ISI-12 will be evaluated by separate correspondence.

The staff's evaluation and conclusions are contained in the enclosed safety evaluation. The appendix to the safety evaluation is the INEEL Technical Letter Report, which provides details to Section 2.1 of the safety evaluation.

The staff concluded that for Requests for Relief RR-ISI-2, ISI-3, ISI-5, Rev. 1, and ISI-6, Rev. 1, the Code requirements are impractical and NMPC's proposed alternatives provide reasonable assurance of structural integrity of the subject components in its requests for relief. Therefore, relief is granted pursuant to 10 CFR 50.55a(g)(6)(i). The staff has determined that granting relief pursuant to 10 CFR 50.55a(g)(6)(i) is authorized by law and will not endanger life or property, or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that would result if the requirements were imposed on the facility.

The alternatives contained in Requests for Relief ISI-4, ISI-8, ISI-10 and ISI-11 provide an acceptable level of quality and safety and are authorized pursuant to 10 CFR 50.55a(a)(3)(i) for the third 10-year ISI interval or until such time Code Cases N-536, N-532, and N-537 are referenced in a future revision of 10 CFR 50.55a. At that time, if NMPC intends to continue to implement Code Cases N-536, N-532, and N-537, NMPC should follow all provisions in the subject code cases with limitations (if any) specified by 10 CFR 50.55a.

The alternative contained in Request for Relief ISI-9 provides an acceptable level of quality and safety and is authorized pursuant to 10 CFR 50.55a(a)(3)(i).

For Request for Relief ISI-7, the imposition of the Code requirements would result in a significant hardship without a compensating increase in the level of quality and safety. NMPC's alternative provides reasonable assurance of structural integrity of the subject components. Therefore NMPC's alternative is authorized pursuant to 10 CFR 50.55a(a)(3)(ii) for the third 10-year ISI interval.

This completes all the staff's actions under the subject TAC number. The remaining Request for Relief ISI-12 is covered by TAC No. MA9662, and will be addressed by separate correspondence. Please contact the project manager, Mr. Peter Tam (301-415-1451, electronic mail at [pst@nrc.gov](mailto:pst@nrc.gov)) if you have any questions.

Sincerely,

**/RA/**

Marsha Gamberoni, Chief, Section 1  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-220

Enclosure: Safety Evaluation

cc w/encl: See next page

Mr. John H. Mueller

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\*Memo of 8/16/00 used essentially as-is.    \*\*See previous concurrence

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

THIRD 10-YEAR INTERVAL INSERVICE INSPECTION

REQUESTS FOR RELIEF

NINE MILE POINT, UNIT 1

NIAGARA MOHAWK POWER CORPORATION

DOCKET NUMBER 50-220

1.0 INTRODUCTION

Inservice inspection of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) Code Class 1, 2, and 3 components is performed in accordance with Section XI of the ASME Code and applicable addenda as required by 10 CFR 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50.55a(g)(6)(i). Also, 10 CFR 50.55a(a)(3) states that alternatives to the requirements of paragraph (g) may be used, when authorized by the NRC, if (i) the proposed alternatives would provide an acceptable level of quality and safety, or (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Pursuant to 10 CFR 50.55a(g)(4), ASME Code Class 1, 2, and 3 components (including supports) shall meet the requirements, except the design and access provisions and the pre-service examination requirements, set forth in the ASME Code, Section XI, "Rules for Inservice Inspection [ISI] of Nuclear Power Plant Components," to the extent practical within the limitations of design, geometry, and materials of construction of the components. The regulations require that inservice examination of components and system pressure tests conducted during the first 10-year interval and subsequent intervals comply with the requirements in the latest edition and addenda of Section XI of the ASME Code incorporated by reference in 10 CFR 50.55a(b) twelve months prior to the start of the 120-month interval, subject to the limitations and modifications listed therein. The Code of record for the Nine Mile Point, Unit 1 (NMP1), third 10-year ISI interval is the 1989 Edition of the ASME Code.

Pursuant to 10 CFR 50.55a(g)(5), if a licensee determines that conformance with an examination requirement of Section XI of the ASME Code is not practical for its facility, information will be submitted to the Commission in support of that determination and a request must be made for relief from the ASME Code requirement. After evaluation of the determination, pursuant to 10 CFR 50.55a(g)(6)(i), the Commission may grant relief and/or may

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impose alternative requirements that are determined to be authorized by law, will not endanger life, property, or the common defense and security, and are otherwise in the public interest, giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

By letter dated October 30, 1999, Niagara Mohawk Power Corporation (NMPC) submitted requests for relief from certain requirements of the ASME B&PV Code for the third 10-year interval. As the result of a telephone conference (see publicly available memorandum, P. Tam to M. Gamberoni, dated April 14, 2000), NMPC provided supplemental/revised information by a letter dated May 12, 2000. The staff, with technical assistance from Idaho National Engineering and Environmental Laboratory (INEEL), has reviewed NMPC's requests for relief. Details of the staff's review follow.

## 2.0 EVALUATION

### 2.1 Relief Requests RR-ISI-1 Thru RR-ISI-8, RR-ISI-10 and RR-ISI-11

The staff reviewed the information concerning ISI program Requests for Relief RR-ISI-1 through RR-ISI-8, RR-ISI-10 and RR-ISI-11. Request for Relief ISI-1 was previously authorized pursuant to 10 CFR 50.55a(a)(3)(i) by the NRC in a letter dated April 7, 1999; this authorization is effective from the date of the Safety Evaluation (April 7, 1999) until the expiration date of the operating license (August 22, 2009). Request for Relief RR-ISI-12 will be evaluated by separate correspondence. The staff adopts the evaluation and recommendations for granting relief or authorizing alternatives contained in the INEEL Technical Letter Report (TLR), included as Attachment 2 to this safety evaluation. The table at the end of this safety evaluation lists each relief request and the status of approval (Attachment 1).

For NMP1, relief is granted from the inspection requirements which have been determined to be impractical to perform. Alternatives are authorized where it provides an acceptable level of quality and safety, or where compliance would result in a hardship or unusual difficulty without a compensating increase in quality or safety.

### 2.2 Relief Request RR-ISI-9

NMPC requested relief from performance of visual inspections of snubbers at 18-month intervals and the associated schedule changes if unacceptable snubbers are revealed, as required by Article IWF-5000, ASME Code Section XI, 1989 Edition. Article IWF-5000 references the first addenda to ASME/ANSI OM-1987, Part 4 (OMa-4) for such snubber activity. NMPC requested the use of the plant Technical Specifications (TS), instead of ASME Code Section XI, for the required snubber visual examination, pursuant to 10 CFR 50.55a(a)(3)(i).

NMPC stated in its October 30, 1999, letter that the 18-month snubber inspection schedule, as it appears in OMa-4, Section 2.3.2.2, assumes that refueling intervals will not exceed 18 months, and is based only on the number of unacceptable snubbers found during the previous visual inspection, irrespective of the size of the snubber population. The 18-month inspection interval is incompatible with the current operating cycle length of 24 months. NMPC further stated that due to the large number of snubbers in use at NMP1, the OMa-4 schedule is excessively restrictive and resource-intensive. Performance of this inspection during power

operation, as would be necessary under the OMa-4 18-month inspection interval, would result in significant expenditure of resources and would subject plant personnel to unnecessary radiological exposure with no commensurate increase in quality or safety. In lieu of using Article IWF-5000 (which references OMa-4), NMPC therefore proposed an alternative snubber visual examination schedule, in accordance with the guidance of Generic Letter (GL) 90-09, "Alternative Requirements for Snubber Visual Inspection Intervals and Corrective Actions," December 11, 1990.

NMPC proposed that all inservice inspection (VT-3 examination) of snubbers shall be performed in accordance with Section 3.6.4/4.6.4 of the NMP1 TS together with GL 90-09. NMPC stated that such alternative snubber program provides the necessary assurance for snubber operability and visual examination requirements to fulfill the ASME Code Section XI requirements without duplicating the inspections. The proposed alternative is compatible with the current 24-month operating cycle and generally will allow inspections to be performed during plant outages, thereby reducing radiological exposure of plant personnel. The staff finds the alternative program to be acceptable.

Based on the information provided by NMPC, the staff determined that NMPC has presented an adequate justification for relief from the requirements of ASME Code 1989 Edition, Section XI, Article IWF-5000 (which references OMa-4), with regard to visual examination of the snubbers. The staff determined that the proposed alternative use of the NMP1 TS together with GL 90-09 for the snubber inspection would provide an acceptable level of quality and safety. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), NMPC's proposed alternative for the third 10-year interval of the NMP1 ISI program is authorized.

### 3.0 CONCLUSION

The staff concludes that for Requests for Relief RR-ISI-2, ISI-3, ISI-5, Rev. 1, and ISI-6, Rev. 1, the Code requirements are impractical and NMPC's proposed alternatives provide reasonable assurance of structural integrity of the subject components in its requests for relief. Therefore, relief is granted pursuant to 10 CFR 50.55a(g)(6)(i). The staff has determined that granting relief pursuant to 10 CFR 50.55a(g)(6)(i) is authorized by law and will not endanger life or property, or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that would result if the requirements were imposed on the facility.

The alternatives contained in Requests for Relief ISI-4, ISI-8, ISI-10 and ISI-11 provide an acceptable level of quality and safety and are authorized pursuant to 10 CFR 50.55a(a)(3)(i) for the third 10-year ISI interval or until such time Code Cases N-536, N-532, and N-537 are referenced in a future revision of 10 CFR 50.55a. At that time, if NMPC intends to continue to implement Code Cases N-536, N-532, and N-537, the licensee should follow all provisions in the subject code cases with limitations (if any) specified by 10 CFR 50.55a.

The alternative contained in Requests for Relief ISI-9 (for snubbers) provides an acceptable level of quality and safety and are authorized pursuant to 10 CFR 50.55a(a)(3)(i).

For Request for Relief ISI-7, the imposition of the Code requirements would result in a significant hardship without a compensating increase in the level of quality and safety. The staff concludes that NMPC's alternative provides reasonable assurance of structural integrity of the subject components. Therefore NMPC's alternative is authorized pursuant to 10 CFR 50.55a(a)(3)(ii) for the third 10-year inservice inspection interval.

Attachments: (1) Table: Summary of Relief Requests Addressed in Section 2.1  
(2) Technical Letter Report

Principal Contributor: Tom McLellan and Arnold J. Lee

Date: October 5, 2000



SUMMARY OF RELIEF REQUESTS ADDRESSED IN SECTION 2.1

Relief Request Number	INEEL TLR Sec.	System or Component	Exam Category	Item No.	Volume or Area to be Examined	Required Method	Licensee Proposed Alternative	Relief Request Disposition
ISI-1	2.1	Reactor Pressure Vessel	B-A	B1.11 B1.12	RPV Circumferential Welds	Volumetric	See USNRC SER dated April 7, 1999	Authorized In USNRC SER dated April 7, 1999
ISI-2	2.2	Reactor Pressure Vessel	B-A	B1.21 B1.22 B1.30 B1.40	Circumferential/Meridional Head Welds Shell-to-Flange Weld Head-to-Flange Weld	Volumetric	Perform partial volumetric examinations.	Granted 10 CFR50.55a(g)(6)(i)
ISI-3	2.3	Reactor Pressure Vessel	B-D	B3.90 B3.100	RPV Nozzle-to-Vessel Weld RPV Nozzle Inside Radius	Volumetric	Perform partial volumetric examinations.	Granted 10 CFR50.55a(g)(6)(i)
ISI-4	2.4	Reactor Pressure Vessel	B-A	B1.12	RPV Longitudinal Shell Welds	Volumetric	Use of Code Case N-526, <i>Alternative Requirements for Successive Inspections of Class 1 and 2 Vessels</i>	Authorized 10 CFR50.55a(a)(3)(i)
ISI-5 Revision 1	2.5	Class 1 Vessels	B-K	B10.10	Integrally Welded Support Attachments	Volumetric or Surface as applicable	Perform partial surface examinations.	Granted 10 CFR50.55a(g)(6)(i)
ISI-6 Revision 1	2.6	Reactor Pressure Vessel	B-O	B14.10	CRD Housings	Volumetric or Surface	Perform partial surface examinations on 20% of CRD housings in lieu of 100% surface examinations on 10% of CRD housings.	Granted 10 CFR50.55a(g)(6)(i)
ISI-7	2.7	Class 2 Pumps	C-G	C6.10	Pump Casing Welds	Surface	Perform surface examinations to maximum extent possible.	Authorized 10 CFR50.55a(a)(3)(ii)
ISI-8	2.8	Records and Reports	IWA -6000	N/A	N/A	Prepare & submit Owners Report for Inspection, Form NIS-1, & Owner's Report for Repair or Replacements, Form NIS-2.	Use of Code Case N-532, <i>Alternative Requirements to Repair and Replacement Documentation Requirements and Inservice Summary Report Preparation and Submission as Required by IWA-4000 and IWA-6000.</i>	Authorized 10 CFR50.55a(a)(3)(i)
ISI-10 Revision 1	2.9	N/A	IWA -4400(a)	N/A	Transfer of Procedure Qualification Records	Welding/brazing to be performed IWA welding procedure specifications (WPS) qualified by owner or repair organization IWA requirements of codes specified in repair program IWA para. IWA-4120.	Use of Code Case N-573, <i>Transfer of Procedure Qualification Records Between Owners, Section XI.</i>	Authorized 10 CFR50.55a(a)(3)(i)
ISI-11	2.10	Reactor Pressure Vessel	B-G-1	B6.10	RPV Closure Head Nuts	Surface	Perform VT-1 examination in lieu of surface examination.	Authorized 10 CFR50.55a(a)(3)(i)