Niagara Mohawk®

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April 23, 2001
NMP1L 1589

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

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

Subject: ***Inservice Inspection Relief Request ISI-12, Rev. 2 (TAC No. MA7129)***

Gentlemen:

By letter dated October 30, 1999 (NMP1L 1480), Niagara Mohawk Power Corporation submitted the Third Ten-Year Interval ASME Code Section XI Inservice Inspection (ISI) Program Plan (Document Number NMP1-ISI-003, Revision 0) for Nine Mile Point Unit 1 (NMP1). Relief Requests for the third interval, which began on December 26, 1999, were included in this Program Plan.

Relief Request ISI-12, which was included in the previous Program Plan submittal, was subsequently updated to address NRC staff comments and Appendix VIII considerations and resubmitted on September 28, 2000 (NMP1L 1542).

Further NRC staff comments and a reanalysis of the appropriate alternate examinations have led to the development of Revision 2 to Relief Request ISI-12. The relief request has been updated to specify the frequency of the partial ultrasonic examinations to be performed, to eliminate the previously proposed alternate surface examinations, and to incorporate editorial clarifications. The attached Revision 2 to Relief Request ISI-12 supercedes the version submitted on September 28, 2000. Changes to the relief request have been highlighted to assist in the staff's review.

Sincerely,

Richard B. Abbott
Vice President Nuclear Engineering

RBA/JJD/mlg
Attachment – Relief Request ISI-12, Rev. 2 - 3 pages

A047

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

ATTACHMENT

TO

NMP1L 1589

NINE MILE POINT UNIT 1
THIRD INSERVICE INSPECTION INTERVAL
RELIEF REQUEST ISI-12, Revision 2

A. **COMPONENT IDENTIFICATION**

System: Various

Class: Augmented Quality Group A, (ASME Code Class 1)

Component Description: Nonconforming Service Sensitive Piping Welds

B. **AUGMENTED INSERVICE INSPECTION GUIDELINES (USNRC GENERIC LETTER 88-01)**

Generic Letter 88-01, "NRC Position on Intergranular Stress Corrosion Cracking (IGSCC) in BWR Austenitic Stainless Steel Piping", requires augmented volumetric examination of nonconforming service-sensitive piping welds.

C. **RELIEF REQUESTED**

Relief is requested from performing full volumetric examination of nonconforming service sensitive piping welds. Relief is requested for twenty-one (21) of the augmented piping welds.

D. **BASIS FOR RELIEF**

The welds listed on the attached Table were not fully examined by the volumetric examination method during the second 10-year interval as required by Generic Letter 88-01, due to limitations of design, geometry, and material of construction.

Welds 37-WD-003, 39-09R-WD-001, and 39-10R-WD-001 are stainless steel welds which continue to be limited by configuration.

Welds 40-WD-005 and 40-WD-006 are obstructed by a permanent hanger attachment to the piping.

Welds 40-WD-050-A, 40-WD-010A, 40-WD-011, 40-WD-051, 39-WD-194, 39-WD-194A, 39-WD-226, 39-WD-226A, 38-WD-007, 38-WD-008, 38-WD-087, 38-WD-088, 33-WD-014, 33-WD-036, 33-WD-035, and 33-WD-015 are inaccessible (located inside containment penetrations).

The results of the previous ultrasonic examination volumes that were completed during the second interval are tabulated with the percentages achieved along with a summary of the obstructions on the attached Table.

The dendritic weld structure of the stainless steel material can result in both sound redirection and attenuation phenomena which limit ultrasonic interrogation. Thus, such welds necessitate examination from both sides in order to be fully examined. In particular, non-parallel surfaces and product form of the material of valves preclude meaningful ultrasonic examination from the valve side.

10 CFR 50.55a(g)(6)(ii)(C) requires accelerated implementation of the ASME Code Section XI, 1995 Edition with 1996 Addenda, Appendix VIII, "Performance Demonstration for Ultrasonic Examination Systems". 10 CFR 50.55a(b)(2)(xv)(A), 10 CFR 50.55a(b)(2)(xv)(G) and 10 CFR 50.55a(b)(2)(xvi) define new requirements for examination coverage and qualification demonstration. These requirements affect austenitic piping.

Current technology is not capable of reliably detecting or sizing flaws on the far side of an austenitic weld. Additionally, no qualified procedures for single side examinations on austenitic piping currently exist. As use of Appendix VIII will affect the percentage of volume that can be claimed, a column has been added to the attached Table that provides the approximate coverage that can be credited under the new requirements for this interval. Actual percentages will not be known until the completion of the volumetric examinations, at which time the actual Appendix VIII coverage will be incorporated in conjunction with the Performance Demonstration Initiative (PDI) single side requests for relief.

E. **ALTERNATE EXAMINATION**

Perform ultrasonic examinations to the extent practical on welds 40-WD-005, 40-WD-006, 40-WD-011, 40-WD-051, and 37-WD-003 as required by IGSCC Category "D", every other refueling outage.

Perform a Visual (VT-2) examination of the inaccessible intergranular stress corrosion cracking (IGSCC) Category welds each refueling outage for evidence of leakage per previous commitment contained in Niagara Mohawk Power Corporation (NMPC) submittals dated July 28, 1988 (NMP1L 0290) and September 4, 1990 (NMP1L 0523).

The extent of examinations proposed, together with the other Section XI required pressure tests (as applicable), will provide an acceptable level of assurance of nonconforming service sensitive piping weld integrity.

F. ATTACHMENTS

None

NINE MILE POINT UNIT 1
THIRD INSERVICE INSPECTION INTERVAL
RELIEF REQUEST ISI-12, Revision 2

COMPONENT IDENTIFICATION/DESCRIPTION	EXAM METHOD	IGSCC CAT	PREVIOUS EXTENT EXAM COVERAGE	ESTIMATED APPENDIX VIII COVERAGE	LIMITATION
Reactor Core Spray 40-WD-050-A VALVE 40-12 TO PIPE	UT	G	0% VOL	0% VOL	INACCESSIBLE INSIDE PENETRATION X-14
Reactor Core Spray 40-WD-010A VALVE 40-02 TO PIPE	UT	G	0% VOL	0% VOL	INACCESSIBLE INSIDE PENETRATION X-13A
Reactor Core Spray 40-WD-005 PIPE TO ELBOW	UT	D	79.3% VOL	50% VOL	PERMANENT HANGER OBSTRUCTION
Reactor Core Spray 40-WD-006 PIPE TO PIPE	UT	D	94.4% VOL	50% VOL	PERMANENT HANGER INTERFERENCE
Reactor Core Spray 40-WD-011 ELBOW TO PIPE	UT	D	100% VOL	50% VOL	INACCESSIBLE INSIDE PENETRATION X-13A
Reactor Core Spray 40-WD-051 PIPE TO ELBOW	UT	D	50% VOL	40% VOL	INACCESSIBLE INSIDE PENETRATION X-14
Reactor Drain Line 37-WD-003 REDUCER TO FLANGE	UT	D	100% VOL	50% VOL	FITTING CONFIGURATION
Emergency Condenser 39-09R-WD-001 VALVE 39-09R TO PENETRATION	UT	G	0% VOL	0% VOL	CONFIGURATION (Valve to Penetration)
Emergency Condenser 39-10R-WD-001 VALVE 39-10R TO PENETRATION	UT	G	0% VOL	0% VOL	CONFIGURATION (Valve to Penetration)
Emergency Condenser 39-WD-194 VALVE 39-05 TO PIPE	UT	G	0% VOL	0% VOL	INACCESSIBLE INSIDE PENETRATION X-5B
Emergency Condenser 39-WD-194A PIPE TO PIPE	UT	G	0% VOL	0% VOL	INACCESSIBLE INSIDE PENETRATION X-5B
Emergency Condenser 39-WD-226 VALVE 39-06 TO PIPE	UT	G	0% VOL	0% VOL	INACCESSIBLE INSIDE PENETRATION X-5A
Emergency Condenser 39-WD-226A PIPE TO PIPE	UT	G	0% VOL	0% VOL	INACCESSIBLE INSIDE PENETRATION X-5A
Shutdown Cooling 38-WD-007 PIPE TO PIPE	UT	G	0% VOL	0% VOL	INACCESSIBLE INSIDE PENETRATION X-8
Shutdown Cooling 38-WD-008 PIPE TO VALVE 38-02	UT	G	0% VOL	0% VOL	INACCESSIBLE INSIDE PENETRATION X-8
Shutdown Cooling 38-WD-087 VALVE 38-12 TO PIPE	UT	G	0% VOL	0% VOL	INACCESSIBLE INSIDE PENETRATION X-7
Shutdown Cooling 38-WD-088 PIPE TO PIPE	UT	G	0% VOL	0% VOL	INACCESSIBLE INSIDE PENETRATION X-7
Reactor Cleanup 33-WD-014 PIPE TO PIPE	UT	G	0% VOL	0% VOL	INACCESSIBLE INSIDE PENETRATION X-9
Reactor Cleanup 33-WD-036 PIPE TO ELBOW	UT	G	0% VOL	0% VOL	INACCESSIBLE INSIDE PENETRATION X-154
Reactor Cleanup 33-WD-035 VALVE 33-03 TO PIPE	UT	G	0% VOL	0% VOL	INACCESSIBLE INSIDE PENETRATION X-154
Reactor Cleanup 33-WD-015 VALVE 33-04 TO PIPE	UT	G	0% VOL	0% VOL	INACCESSIBLE INSIDE PENETRATION X-9