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ACCESSION NBR: 8605090084 DOC. DATE: 86/05/06 NOTARIZED: YES DOCKET # FACIL: 50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moha 05000410 AUTHOR AFFILIATION AUTH. NAME Niagara Mohawk Power Corp. MANGNA, C. V. RECIP. NAME RECIPIENT AFFILIATION BWR Project Directorate 3 ADENSAM, E. G.

SUBJECT: Forwards info demonstrating that requests for exclusion of certain thermal relief valves from Type C testing requirements contained in Section III.C of App J present no undué risk to health & safety of public.

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NIAGARA MOHAWK POWER CORPORATION/300 ERIE BOULEVARD WEST, SYRACUSE, N.Y. 13202/TELEPHONE (315) 474-1511

May 6, 1986 (NMP2L 0701)

Ms. Elinor G. Adensam, Director BWR Project Directorate No. 3 U.S. Nuclear Regulatory Commission 7920 Norfolk Avenue Washington, DC 20555

Dear Ms. Adensam:

8605070084 860506 PDR ADDCK 050004

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Re: Nine Mile Point Unit 2 Docket No. 50-410

This letter supersedes my letter to you of March 5, 1986 (NMP2L 0649) relating to an exemption pursuant to 10 CFR 50.12(a) from Type C test requirements of 10 CFR Part 50, Appendix J. Specifically, as discussed in this letter and attachment, Niagara Mohawk Power Corporation ("Niagara Mohawk") requests the exclusion of certain thermal relief valves from Type C testing requirements contained in Section III.C of Appendix J.

The exemption has been reviewed and found to be authorized by law and consistent with the common defense and security. The attachment to this letter demonstrates that the requested exemption presents no undue risk to the health and safety of the public and that special circumstances are present that justify granting the exemption.

With regard to the "common defense and security" standard, the grant of the requested exemption is consistent with the common defense and security of the United States. The Commission's Statement of Considerations in support of the exemption rule note with approval the explanation of this standard as set forth in Long Island Lighting Company (Shoreham Nuclear Power Station, Unit 1), LBP-84-45, 20 NRC 1343, 1400 (October 29, 1984). There, the term "common defense and security" refers principally to the safeguarding of special nuclear material, the absence of foreign control over the applicant, the protection of Restricted Data, and the availability of special nuclear material for defense needs. The granting of the requested exemption will not affect any of these matters and thus such grant is consistent with the common defense and security.

The proposed exemption has been analyzed and determined not to cause additional construction or operational activities which may significantly affect the environment. The exemption does not result in a significant increase in any adverse environmental impact previously evaluated in the Final Environmental Impact Statement-Operating License Stage, a significant change in effluents or power levels or a matter not previously reviewed by the Nuclear Regulatory Commission which may have a significant adverse environmental impact.

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Ms. Elinor G. Adensam Page 2

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Niagara Mohawk is ready to meet with the cognizant Nuclear Regulatory Commission personnel to review these matters should you require additional information.

Very truly yours,

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C. V. Mangan Senior Vice President

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xc: R. A. Gramm, NRC Resident Inspector Project File (2)



UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

In the Matter of > > Niagara Mohawk Power Corporation >

(Nine Mile Point Unit 2)

)

Docket No. 50-410

AFFIDAVIT

<u>C. V. Mangan</u>, being duly sworn, states that he is Senior Vice President of Niagara Mohawk Power Corporation; that he is authorized on the part of said Corporation to sign and file with the Nuclear Regulatory Commission the documents attached hereto; and that all such documents are true and correct to the best of his knowledge, information and belief.

Contarjon

Subscribed and sworn to before me, a Notary Public in and for the State of New York and County of $\underline{Ourdaga}$, this $\underline{6^{\pm 1}}$ day of \underline{May} , 1986.

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Notary Public in and for <u>Anondaga</u> County, New York

My Commission expires: CHRISTINE AUSTIN Notary Public in the State of New York Qualified in Onondaga Co. No. 4787687 My Commission Expires March 30, 1957

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ATTACHMENT

EXEMPTION REQUEST

RELIEF VALVES TYPE C TESTING

It is requested that an exemption be issued to exclude certain relief valves from the testing requirements of Section III.C of 10 C.F.R. Part 50, Appendix J. These valves either are located inside the primary containment or discharge to the suppression pool from outside the primary containment. They are contained in the Residual Heat Removal System (RHS), Low Pressure Core Spray System (CSL), High Pressure Core Spray System (CSH) and Reactor Building Closed Loop Cooling Water System (CCP). The table below lists the valve number by system, its location inside primary containment (IPC) or outside primary containment (OPC), the valve size, and the FSAR Figure showing its physical arrangement, and the condition under which the valve provides an overpressure protection function.

VALVE NUMBER	LOCATION	SIZE	FSAR FIGURE	FUNCTION
2RHS*RV2OA, B	OPC	3/4x1"	6.2-70, sheet 38	Note 1
2RHS*RV20C	OPC	3/4x1"	6.2-70, sheet 33	Note 1
2RHS*RV61A, B, C	OPC	3/4x1"	6.2-70, sheet 38	Note 1
2RHS*RV108	OPC	3x4"	6.2-70, sheet 33	Note 2
2RHS*RV110	OPC	3/4x1"	6.2-70, sheet 38	Note 1
2RHS*RV139	OPC	3/4x1"	6.2-70, sheet 38	Note 1
2RHS*RV152	IPC	3/4x1"	6.2-70, sheet 14	Note 3
2CSL*RV105	OPC	1.5x2"	6.2-70, sheet 38	Note 1
2CSL*RV123	OPC	3/4x1"	6.2-70, sheet 38	Note 1
2CSH*RV113	OPC	3/4x1"	6.2-70, sheet 38	Note 1
2CSH*RV114	OPC	3/4x1"	6.2-70, sheet 38	Note 1
2CCP*RV170	IPC	3/4x1"	6.2-70. sheet 20	Note 3
2CCP*RV171	IPC	3/4x1"	6.2-70, sheet 21	Note 3

Note 1 - High/Low pressure interface leakage Note 2 - Upstream level control valve failure Note 3 - Thermal expansion of fluid

The relief valves and associated containment penetration piping are all Seismic Category I, Safety Class 2 components. The containment isolation function is in the reverse direction of flow from their overpressure protection function. Thus, the valve springs assist containment pressure in seating the valve. The pressure setpoint to open these valves is much higher than containment design pressure. These features minimize outward leakage through these valves.

The grant of the requested exemption will not present an undue risk to the public health and safety. These valves are all included in the Type A primary containment integrated leak test. The discharge piping of the valves is exposed to either drywell or wetwell pressure during such test.

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This exemption would waive the requirement for Type C testing of these valves which would otherwise be required by 10 C.F.R. 50, Appendix J. As noted, the valves will still be included in the Type A test required by Appendix J. Any external leakage would be identified by the Type A test required by Appendix J. As discussed below, ALARA (As Low As Reasonably Achievable Occupational Radiation Exposure) and design considerations related to the conduct of the Type C test for these valves render such tests extremely difficult to perform, outweighing any possible benefit.

The valves for which an exemption is sought are located in potentially high radiation areas. Dismantling of discharge piping to perform in-place Type C tests would be required since, by design, there are no maintenance valves to provide a test boundary. The relief valves were designed without surrounding block valves to comply with subsection NC7000 of the ASME Code, section III, which is referenced in 10CFR Section 50.55a. To add additional valves on the discharge piping would defeat the purpose for which the relief valves were installed and also decrease the probability that the valves would function properly when required. Preparation for and performance of Type C testing of these valves could result in excessive radiation exposure to plant personnel. This is contrary to ALARA requirements, considering that the purpose of the required testing can be accomplished as part of the Type A test.

In addition to ALARA, other considerations support the exemption of these valves from Type C test requirements. All the valves located in the secondary containment (13 out of 16 valves) discharge into common headers which penetrate the primary containment wall and then turn down into the suppression pool. To provide an in place test boundary for these individual valves would require the addition of blank flanges in each valve discharge line. These flange connections would themselves represent additional leakage paths from the primary containment especially since these connections would be disturbed every testing period. Also, flange connections would require Type B testing, thereby exasperating the ALARA concerns. It should be noted that LOCA pressure and valve spring pressure tend to seat the valves against leakage should they be called upon to function as a containment isolation valve.

For the three valves located inside the drywell, <u>i.e.</u>, CCP*RV170, 171 and RHS*RV152, there is little likelihood of any leakage to the secondary containment. The only leakage path through these valves is across the valve seat. LOCA pressure opposes the normal valve opening, and the valve springs, set for relief pressures of 145 psig to 1240 psig, assist in seating the valves. Furthermore, any leakage that might occur would be detected during normal system operation. System operating pressures are higher than LOCA pressure and tend to open the valves. Thus, any valve seat degradation would be evident during system operation prior to reaching a condition that would permit significant post-LOCA leakage. Leakage through these valves would be detected early by several means, <u>e.g.</u>, loss of expansion tank level (CCP), a loss of reactor level (RHS), and an increase in drywell floor drain tank level.

Based on the above considerations, exclusion of the safety relief valves from the Type C testing would not present an undue risk to the public health and safety.

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<u>Special Circumstances are Present Which Warrant</u> <u>Issuance of the Requested Exemptions</u>

Special circumstances are present which warrant issuance of the requested exemption. These special circumstances are discussed in accordance with the classification contained in the rule.

(i) Application of the regulation in the particular circumstances conflicts with other rules or requirements of the Commission; or

As previously discussed, the application of Appendix J requirements in this case would be in conflict with other NRC rules or requirements. The requirement to conduct Type C tests for the valves for which an exemption is sought would unnecessarily increase occupational doses contrary to the Commission's requirements regarding ALARA inasmuch as dismantling of discharge piping would be necessary. The relief valves were designed, in accordance with NRC requirements, without surrounding block valves to comply with Subsection NC7000 of the ASME Boiler and Pressure Vessel Code, Section III which is established as a requirement in 10 C.F.R. 50.55a. Thus, application of the regulation in the particular circumstances conflicts with other . Commission rules and requirements. Thus, special circumstances are present which warrant granting the exemption.

(ii) Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule ...

As previously discussed, to provide an in-place test boundary for 13 of the 16 valves covered by the exemption request would require blank flanges in each valve discharge line. These flange connections would themselves present additional leakage paths from the primary containment. Thus, containment leakage potential might be unnecessarily increased. Thus, special circumstances are present which warrant granting the exemption.

(ii) Application of the regulation in the particular circumstances . . . is not necessary to achieve the underlying purpose of the rule; or

The underlying purpose of the rule is to assure a low leakage containment with the ultimate objective of keeping accident doses low. These valves are all included in the Type A primary containment integrated leak test which is sufficient to assure containment performance. The discharge piping of the valves is exposed to either drywell or wetwell pressure during the test. Thus, special circumstances are present which warrant granting the exemptions.

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