

50-220



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

May 29, 1998

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: REQUEST FOR ADDITIONAL INFORMATION REGARDING REACTOR
PRESSURE VESSEL STRUCTURAL INTEGRITY AT NINE MILE POINT
NUCLEAR STATION UNIT 1 (TAC NO. MA1200)

Dear Mr. Mueller:

In May 1995, the NRC issued Generic Letter (GL) 92-01, Revision 1, Supplement 1 (GL 92-01, Rev.1, Supp. 1), "Reactor Vessel Structural Integrity." This GL requested licensees to perform a review of their reactor pressure vessel (RPV) structural integrity assessments in order to identify, collect, and report any new data pertinent to the analysis of the structural integrity of their RPVs and to assess the impact of those data on 1) their RPV integrity analyses relative to the requirements of Section 50.60 of Title 10 of the Code of Federal Regulations (10 CFR Part 50.60), 10 CFR 50.61, Appendices G and H to 10 CFR Part 50 (which encompass pressurized thermal shock (PTS) and upper shelf energy (USE) evaluations), and 2) any potential impact on low temperature overpressure (LTOP) limits or pressure-temperature (P-T) limits.

After reviewing your response, the NRC issued a letter dated August 26, 1996, for Nine Mile Point Nuclear Station. In this letter we acknowledged receipt of your response, noted that additional RPV information may become available as a result of Owners Group efforts and requested that you provide us with the results of the Owners Groups' programs relative to your plant. We further indicated that a plant specific TAC Number may be opened to review this material. Following issuance of these letters, the BWR Vessel and Internals Project (BWRVIP) submitted the report "Update of Bounding Assessment of BWR/2-6 Reactor Pressure Vessel Integrity Issues (BWRVIP-46)." This report included bounding assessments of new data from 1) the Combustion Engineering Owners Group's (CEOG) database released in July 1997 which contains all known data for CE fabricated welds in PWR and BWR vessels; 2) Framatome Technologies Incorporated's (FTI) analyses of Linde 80 welds which are documented in NRC Inspection Report 99901300/97-01 dated January 28, 1998; 3) FTI's analysis of electro-slag welds which was referenced in a submittal dated September 20, 1996, regarding Dresden and Quad Cities P-T limits; and 4) Chicago Bridge and Iron's quality assurance records. New data for one vessel fabricated by Hitachi was also included in the BWRVIP report.

The NRC staff requests that you re-evaluate the RPV weld chemistry values that you have previously submitted as part of your licensing basis in light of the information presented in the CEOG, FTI and BWRVIP reports. The NRC staff expects that you will assess this new information to determine whether any values of RPV weld chemistry need to be revised for your plant.

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J. H. Mueller

- 2 -

In order that we may maintain our existing schedule for completing review of responses to items 2, 3 and 4 of the GL, the NRC staff requests that you respond to the enclosed request for additional information within 90 days of receipt of this letter. If a request does not apply to your situation, please indicate this in your response along with your technical basis and, per GL 92-01, Rev. 1, Supp. 1, certify that previously submitted evaluations remain valid.

The NRC staff will use your response to update the Reactor Vessel Integrity Database. Also, the NRC staff acknowledges your letter dated May 28, 1998, stating that an application for license amendment to update the P-T curves in the Unit 1 Technical Specifications will be submitted by June 19, 1998.

If you should have any questions regarding this request or are unable to meet the requested response schedule, please contact me by phone at (301) 415-3049 or by electronic mail at dsh@nrc.gov.

Sincerely,



Darl S. Hood, Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-220

Enclosure: Request for Additional
Information

cc w/encl: See next page



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- 2 -

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Original Signed by:

Darl S. Hood, Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

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May 29, 1998

J. H. Mueller

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John H. Mueller
Niagara Mohawk Power Corporation

Nine Mile Point Nuclear Station
Unit No. 1

cc:

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REQUEST FOR ADDITIONAL INFORMATION
REGARDING REACTOR PRESSURE VESSEL STRUCTURAL INTEGRITY
NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT NUCLEAR STATION UNIT NO. 1
OPERATING LICENSE NUMBER DPR-63
DOCKET NOS. 50-220

The NRC staff recently received the Boiling Water Reactors Vessel and Internals Project (BWRVIP) report "Update of Bounding Assessment of BWR/2-6 Reactor Pressure Vessel Integrity Issues (BWRVIP-46)." In accordance with the provisions of Generic Letter 92-01, Revision 1, Supplement 1, the NRC requests an evaluation of the bounding assessment in BWRVIP-46 and its applicability to the determination of the best-estimate chemistry for all of your Unit 1 RPV bellline welds. Based upon this reevaluation, supply the information necessary to completely fill out the data requested in Table 1 for each Unit 1 RPV bellline weld material. If the limiting material for the Unit 1 vessel's P-T limits evaluation is not a weld, include the information requested in Table 1 for the limiting material also.

During a public meeting on November 12, 1997, between the NRC staff, Nuclear Energy Institute (NEI), and industry representatives, the NRC staff discussed some of the issues regarding the evaluation of the data. The summary of this meeting (see memorandum dated November 19, 1997, from Keith R. Wichman to Edmund J. Sullivan, "Meeting Summary for November 12, 1997 Meeting with Owners Group Representatives and NEI Regarding Review of Responses to Generic Letter 92-01, Revision 1, Supplement 1") should be considered in your response.

In addition to the issues discussed in the public meeting, you should also consider the method used to group sets of chemistry data (in particular, those from weld qualification tests) as being from "one weld" or from multiple welds. This is an important consideration when a mean-of-the-means or coil-weighted average approach is determined to be the appropriate method for determining the best-estimate chemistry. If a weld (or welds) were fabricated as weld qualification specimens by the same manufacturer, within a short time span, using similar welding input parameters, and using the same coil (or coils in the case of tandem arc welds) of weld consumables, then it may be appropriate to consider all chemistry samples from that weld (or welds) as samples from "one weld" for the purposes of best-estimate chemistry determination. If information is not available to confirm these details, but sufficient evidence exists to reasonably assume the details are the same, then the best-estimate chemistry should be evaluated both by assuming the data came from "one weld" and by assuming that the data came from an appropriate number of "multiple welds." A justification should then be provided as to which assumption was chosen when the best-estimate chemistry was determined.

Attachment: Table 1

Enclosure

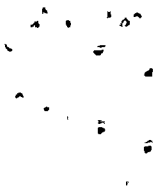


TABLE 1

Facility: _____
 Vessel Manufacturer: _____

Information requested on RPV Weld and/or Limiting Materials

RPV Weld Wire Heat ⁽¹⁾	Best-Estimate Copper	Best-Estimate Nickel	EOL ID Fluence (x 10 ¹⁹)	Assigned Material Chemistry Factor (CF)	Method of Determining CF ⁽²⁾	Initial RT _{NDT} (RT _{NDT(U)})	σ_I	σ_Δ	Margin	ART or RTndt at EOL

(1) or the material identification of the limiting material as requested in the first paragraph of the RAI

(2) determined from tables or from surveillance data

Discussion of the Analysis Method and Data Used for Each Weld Wire Heat

Weld Wire Heat

Discussion

