

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8003070353 DOC. DATE: 80/02/29 NOTARIZED: NO DOCKET #
 FACIL: 50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moho 05000410
 AUTH. NAME AUTHOR AFFILIATION
 RHODE, G. K. Niagara Mohawk Power Corp.
 RECIP. NAME RECIPIENT AFFILIATION
 DENTON, H. R. Office of Nuclear Reactor Regulation

SUBJECT: Forwards info re use of austenitic stainless steel in facility in response to NRC 780308 request. All ASME Class I pipe & fitting matl is of type & grade highly resistant to oxygen-assisted stress corrosion in as-installed condition.

DISTRIBUTION CODE: B012S COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 4
 TITLE: Austenitic Stainless Steel in BWR.

NOTES: -----

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	18 BC	LWR #4	1	1	LA	LWR #4	1	0
INTERNAL:	01	REG FILE	1	1	02	NRC PDR	1	1
	06	I&E	2	2	08	OELD	1	1
	09	DIR DPM	1	1	10	DEPY DIR DPM	1	1
	11	WILLIAMS, F.	1	1	12	AD FOR ENGR	1	1
	13	MATL ENGR BR	1	1	14	CONRAD, H.	1	1
	15	CROCKER, L.	1	1	16	AD ENGR/PROJ	1	1
	6	BC	5	5	S	HANAUER	1	1
EXTERNAL:	03	LPDR	1	1	04	NSIC	1	1
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February 29, 1980

Mr. H. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

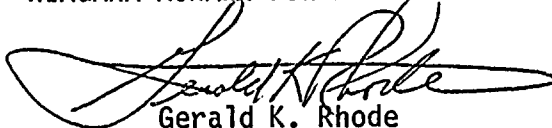
Dear Mr. Denton:

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

Mr. S. A. Varga's letter of March 8, 1978 requested forty (40) copies of information on the use of austenitic stainless steel in Nine Mile Point Unit 2 as outlined in NUREG-0313 and Branch Technical Position MTEB 5-7. The attached information addresses this request.

Very truly yours,

NIAGARA MOHAWK POWER CORPORATION



Gerald K. Rhode
Vice President
System Project Management

PEF/kmb
Attachment

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ATTACHMENT

II. SUMMARY OF ACCEPTABLE METHODS TO MINIMIZE CRACK SUSCEPTIBILITY

1. Corrosion-Resistant Materials

With one exception, all ASME Class I pipe and fitting material, including weld metal, in the Nine Mile Point Unit 2 reactor coolant pressure boundary piping is of a type and grade that has been shown to be highly resistant to oxygen-assisted stress corrosion in the as-installed condition (see Tables 1 and 2). The one exception is the inlet fitting in the Standby Liquid Control System explosive valve which will be 304 or 316 stainless steel. However, since periodic testing of the explosive valve will require the fitting to be replaced every other operating cycle, there is adequate assurance that the integrity of the fitting will be maintained. These fittings are not subject to in-service inspections under Section XI of the ASME Code.

2. Corrosion-Resistant "Safe Ends"

Since there will be no unstabilized wrought austenitic stainless steel piping with carbon contents 0.035 percent, no corrosion-resistant safe ends are required.

3. No other methods are necessary to protect against stress corrosion cracking.

III. IN-SERVICE INSPECTION AND LEAK DETECTION REQUIREMENTS FOR BWR's WITH VARYING CONFORMANCE TO MATERIAL SELECTION AND PROCESSING GUIDELINES

1. Since all ASME Code Class I reactor coolant pressure boundary piping subject to in-service inspections under Section XI meets the guidelines stated in Part II above, no augmented in-service inspection or leakage detection is necessary.

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Table 1
ASME Class I
Non-Service Sensitive

<u>System</u>	<u>Material</u>
Reactor Recirculation System Piping Valves	Stainless Steel 316L Nuclear Grade* Stainless Steel SA-351 Grade CF8M
Cleanup System Piping Valves	Carbon Steel SA-106 Grade B Carbon Steel SA-105
Reactor Drain Piping	Carbon Steel SA-106 Grade B

*Similar to 316L with 0.02 percent maximum carbon content and 0.06 to 0.10 percent nitrogen.

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Table 2
ASME Class I
Service Sensitive Lines

<u>System</u>	<u>Material</u>
1. Recirculation Bypass and Warmup Lines	Deleted
2. CRD Hydraulic Return Line	Deleted
3. Standby Liquid Control System	Stainless Steel 304L or 316L
4. Low Pressure Core Spray	Carbon Steel SA-106 Grade B
5. Low Pressure Coolant Injection	Carbon Steel SA-106 Grade B
6. High Pressure Core Spray	Carbon Steel SA-106 Grade B
7. Residual Heat Removal System (Return and Supply Connections to Reactor Recirculation System)	Stainless Steel 304L or 316L

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Date	Description	Amount
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