

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8210010033      DOC. DATE: 82/09/27      NOTARIZED: NO      DOCKET #  
 FACIL: 50-220 Nine Mile Point Nuclear Station, Unit 1, Niagara Powe      05000220  
 AUTH. NAME      AUTHOR AFFILIATION  
 MANGAN, C.V.      Niagara Mohawk Power Corp.  
 RECIP. NAME      RECIPIENT AFFILIATION  
 EISENHUT, D.G.      Division of Licensing

SUBJECT: Submits info re removal & replacement of reactor  
 recirculation sys piping, per 820922 request. Combined  
 man-rem exposure estimates bounded by original estimate of  
 2906 man-rem.

DISTRIBUTION CODE: A001S      COPIES RECEIVED: LTR   1   ENCL   1   SIZE:   2    
 TITLE: OR Submittal: General Distribution

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTR ENCL
	NRR ORB2 BC 01	7 7		
INTERNAL:	ELD/HDS3	1 0	NRR/DHFS DEPY08	1 1
	NRR/DL DIR	1 1	NRR/DL/ORAB	1 0
	NRR/DSI/RAB	1 1	<del>REG ETL</del> 04	1 1
	RGN1	1 1		
EXTERNAL:	ACRS 09	6 6	LPDR 03	1 1
	NRC PDR 02	1 1	NSIC 05	1 1
	NTIS	1 1		

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE BY THE DATE AND TIME INDICATED BELOW  
DATE: 05/18/2011  
BY: 60322 UCBAW/STP

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE BY THE DATE AND TIME INDICATED BELOW  
DATE: 05/18/2011  
BY: 60322 UCBAW/STP

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE BY THE DATE AND TIME INDICATED BELOW  
DATE: 05/18/2011  
BY: 60322 UCBAW/STP

Page 2

CLASSIFICATION	DATE	BY	REASON		DATE	BY
			EXEMPTION	REVISION		
CONFIDENTIAL	11/19/81	[REDACTED]	1	1	11/19/81	[REDACTED]
CONFIDENTIAL	11/19/81	[REDACTED]	1	1	11/19/81	[REDACTED]
CONFIDENTIAL	11/19/81	[REDACTED]	1	1	11/19/81	[REDACTED]
CONFIDENTIAL	11/19/81	[REDACTED]	1	1	11/19/81	[REDACTED]
CONFIDENTIAL	11/19/81	[REDACTED]	1	1	11/19/81	[REDACTED]
CONFIDENTIAL	11/19/81	[REDACTED]	1	1	11/19/81	[REDACTED]
CONFIDENTIAL	11/19/81	[REDACTED]	1	1	11/19/81	[REDACTED]

September 27, 1982

Mr. Darrell G. Eisenhut, Director  
 Division of Licensing  
 Office of Nuclear Reactor Regulation  
 U.S. Nuclear Regulatory Commission  
 Washington, D.C. 20555

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

Dear Mr. Eisenhut:

Our letters of August 6, 1982, August 16, 1982 and August 26, 1982 provided information regarding our plans for removal and replacement of the reactor recirculation system piping. During a meeting on September 22, 1982 members of your staff requested additional information regarding the replacement program. The requested information is provided herein.

Man-Rem Exposure Estimate

Our letter of August 26, 1982 provided a man-rem exposure estimate which addressed safe-end replacement and disassembly of the five reactor recirculation loops. At that time, the man-rem exposure was estimated to be approximately 2036 man-rem, excluding exposure associated with recirculation pipe replacement. That estimate has been revised based on actual dose rate, man-hours and exposure incurred to date. The current estimate is provided below:

<u>Item</u>	<u>Man Rem</u>	<u>Man-Hours</u>
August 26, 1982 Estimate (less recirculation pipe replacement)	2,036	43,475
Current Estimate (less recirculation pipe replacement)	1,565	56,921
28" Recirculation Pipe Replacement	258	11,042
12" & 14" Branch Pipe Replacement	45	1,145
6" Branch Pipe Replacement	40	1,610
Total current estimate	1,908	70,718

A001

8210010033 820907  
 PDR ADOCK 05000220  
 PDR



*[The text in this section is extremely faint and illegible. It appears to be a list or a series of entries, possibly containing names and dates, but the characters are too light to transcribe accurately.]*

As shown above, the combined man-rem exposure estimates for the recirculation piping replacement as well as the safe-end replacement are bounded by the original estimate of 2906 man-rem.

### Replacement Program

Our letter of August 6, 1982 provided general design criteria related to the replacement program. At that time it was indicated that the fit up requirements would be in accordance with ANSI B31.1-1977 (with addenda through winter 79) Code for pressure piping. Our current plans are to follow the fit up requirements of the 1980 Edition of the ASME B&PV Code, Section III through winter 1980 addenda.

In addition, it was indicated that the stress analysis would not be redone since the new system configuration would be the same as the original design. However, our current plans are to redo the stress analysis using the as-built configuration. This reanalysis will be consistent with the requirements of the 1955 Edition of the ASA B31.1 Power Piping Code as stated in our FSAR.

The reanalysis will be performed using the equations presented in the 1977 Edition of the ASME B&PV Code, Section III, subsection NC, subsubarticle NC-3650 for sustained loads, occasional loads, thermal loads and stress range. However, the allowable stress values, "S", will be extracted from the 1955 Edition of ASA B31.1 for comparable materials and will be consistent with FSAR allowable stresses. The seismic response spectra, will be that originally submitted in our FSAR.

This method of analysis is consistent with the approach used for the analysis required in IEB 79-07.

Our letter of August 6, 1982 provided the basis for our decision to replace the reactor recirculation piping. Namely, ultrasonic examination using increased gain techniques of a large number of welds indicated the presence of cracking. Analysis using a replication process, and evaluation of boat samples confirmed the presence of intergranular stress corrosion cracking at several weld locations. The original material utilized in the reactor recirculation system is now classified as non-conforming material within the contents of NUREG-0313, Rev. 1 dated October 1979. The non-conforming material is attributed to be the principal cause of the presence of the observed cracking.

Very truly yours,

NIAGARA MOHAWK POWER CORPORATION



C. V. Mangan

Vice President Nuclear Engineering & Licensing



Faint, illegible text or markings at the top right of the page.

Main body of the page containing very faint, illegible text or markings scattered across the page.