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 MANGAN, C. V. Niagara Mohawk Power Corp.
 RECIP. NAME RECIPIENT AFFILIATION
 Document Control Branch (Document Control Desk)

SUBJECT: Forwards response to info requested in NRC Bulletin 87-01,
 "Thinning of Pipe Walls in Nuclear Power Plants." Facility
 nuclear safety-related piping designed & fabricated in
 accordance w/ASME Boiler & Pressure Vessel Code, Section III.

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September 14, 1987
(NMP2L 1077)

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

Re: Nine Mile Point Unit 2
Docket No. 50-410
NPF-69

Gentlemen:

Please find attached the information on Nine Mile Point Unit 2 as requested in "NRC Bulletin No. 87-01: Thinning of Pipe Walls In Nuclear Power Plants."

Very truly yours,

NIAGARA MOHAWK POWER CORPORATION

C. V. Mangan

C. V. Mangan
Senior Vice President

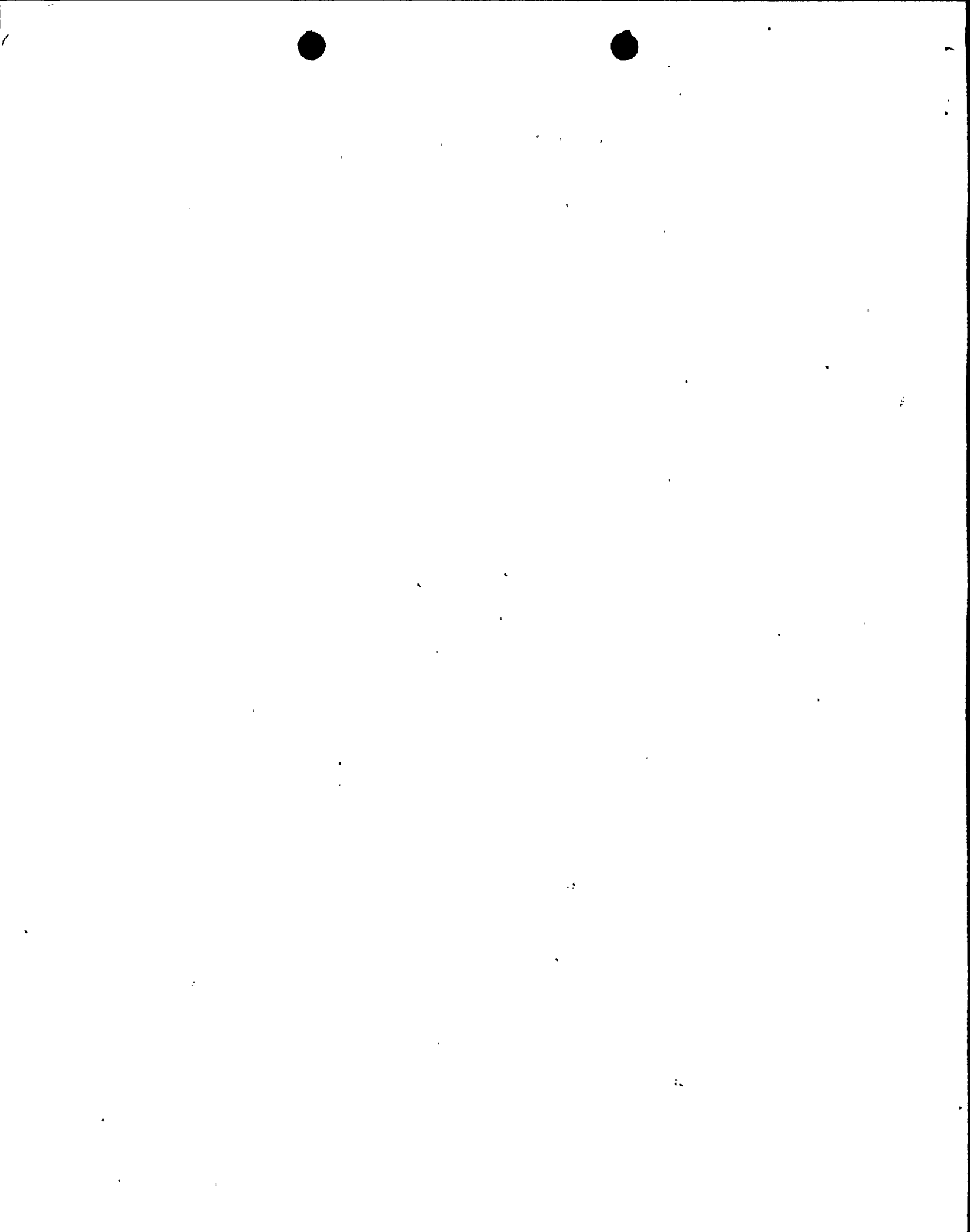
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cc: Regional Administrator, Region I
Mr. R. A. Capra, Director
Ms. M. F. Haughey, Project Manager
Mr. W. A. Cook, Resident Inspector

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of]
Niagara Mohawk Power Corporation] Docket No. 50-410
(Nine Mile Point Unit 2)]

AFFIDAVIT

C. V. Mangan, 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.

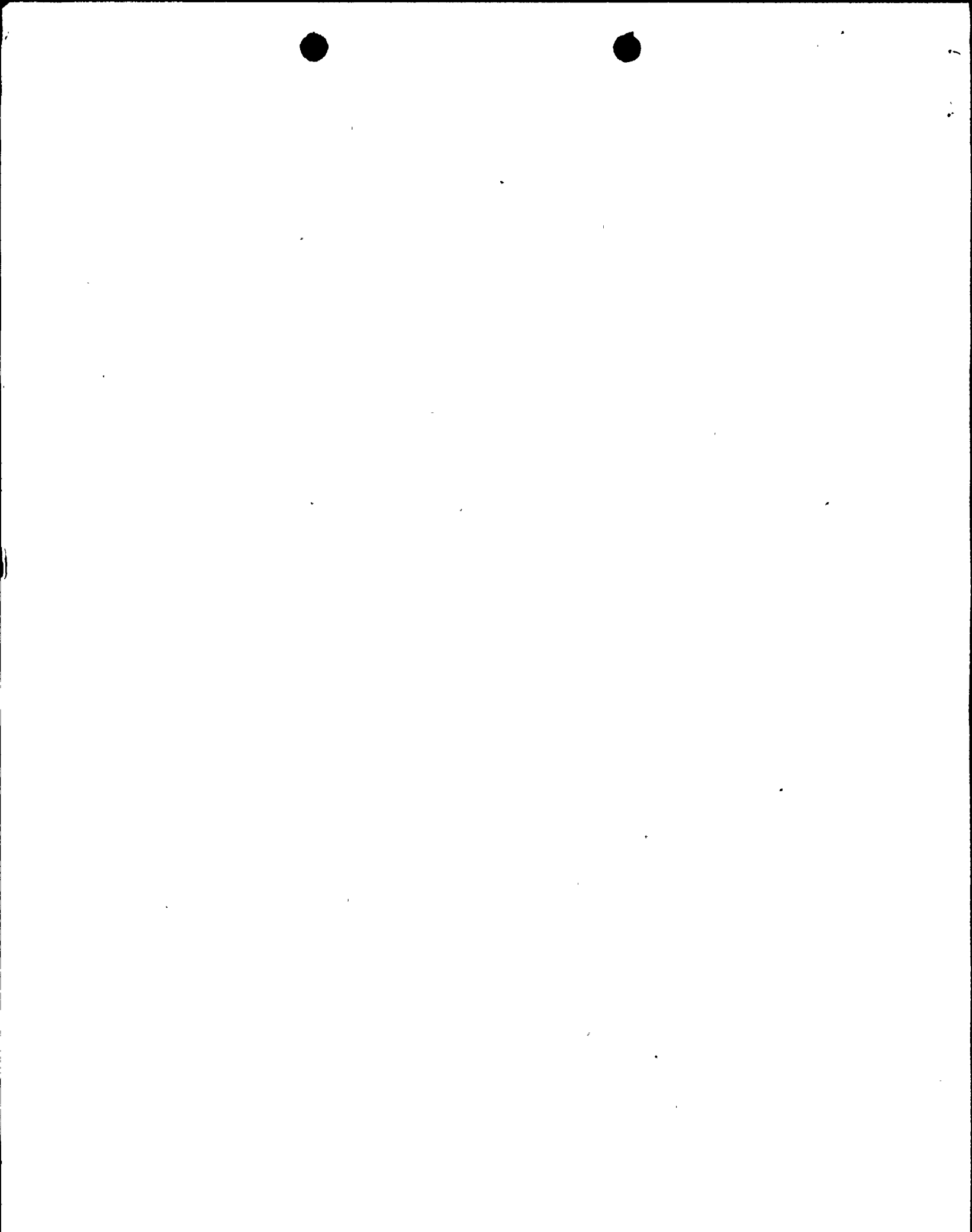
C. V. Mangan

Subscribed and sworn to before me, a Notary Public in and for the State of New York and County of Onondaga, this 19th day of September, 1987.

Mary Frateschi
Notary Public in and for
Onondaga County, New York

My Commission expires:

MARY FRATESCHI
Notary Public in the State of New York
Qualified in Onondaga County No. 4797560
My Commission Expires June 30, 1988



NINE MILE POINT UNIT TWO

1. Identify the codes or standards to which the piping was designed and fabricated.

The Nine Mile Point Nuclear Plant Unit Two has nuclear safety related piping designed and fabricated in accordance with ASME's Boiler and Pressure Vessel Code, Section III, Nuclear Power Plant Components (no addenda), July 1974 edition. The use of the Code Cases for the ASME Section III piping was restricted to those listed in the Regulatory Guides 1.84 and 1.85, March 1978 issues.

All of the remaining power piping systems not designed and fabricated in accordance with the ASME, Section III Code, are designed and fabricated in accordance with the ANSI Code for Pressure Piping, Power Piping ANSI B31.1-1973 including winter addenda 1973 or later editions as applicable. The use of any published Code Case at the time of the fabrication was also permissible.

Portions of the Main Steam, Auxiliary Steam, Turbine Gland Steam and Exhaust Steam Systems though designed and fabricated in accordance with the ANSI B31.1 Code, have special NDE, Testing and Quality Assurance requirements specified to ensure high quality piping.

Subsequent piping modifications (repairs, replacements and additions) are done in accordance with the ASME Boiler and Pressure Vessel Code, Sections III and XI and the ANSI B31.1 Power Piping Code. The governing editions of the codes are the editions in force at the time of original piping fabrication.

2. Describe the scope and extent of your programs for ensuring that pipe wall thicknesses are not reduced below the minimum allowable thickness. Include in the description the criteria that you have established.

The Nine Mile Point Unit Two Erosion-Corrosion Review Program contains single and two-phase fluid flow erosion-corrosion reviews within the program. Its purpose is to review both the single and two-phase fluid flow conditions in carbon steel piping for the deterioration of materials cause by erosion-corrosion.

The program reviews include piping system designs, as-built installations, testing and construction/operating histories.

The NUMARC Summary Report on Piping Erosion-Corrosion dated June 11, 1987 and other creditable publications (e.g. EPRI-CHECK, ANSI/ASME CODES, UTILITY REPORTS, UNIVERSITY RESEARCH REPORTS) are used as guidance documents in establishing sample selection, selection points, sample expansion, inspection techniques, measurement frequency and repair replacement decisions.

The guidance criteria being used are:

- (a) Measurement Locations - The six attributes listed in Action Request Number 3 plus the additional attribute of steam quality for two-phase flow is considered in selecting review locations.



- (b) Inspection Frequency - Inspection frequency is dependent upon material conditions, erosion-corrosion rates established and estimated meantime to minimum wall condition.
- (c) Measurement Methods - Measurement methods are dependent upon the location and field conditions. R.T. or U.T. (internal/external) may be employed where an initial review is planned, while UT (external) may be employed where evidence or potential evidence of erosion-corrosion is present. Disassembly and actual measurements of wall thickness is also an available option.
- (d) Repair/Replacement - Codes/standards compliance establishes the action taken. Our policy is to repair or replace piping which is below the Code/Standard minimum wall thickness allowable.

3. For liquid phase systems, state specifically whether the following factors have been considered in establishing your criteria for selecting points at which to monitor piping thickness.

Factors 3(a) through 3(f) stated in the Commission action items list are included in our program.

4. Chronologically list and summarize the results of all inspections that have been performed, which were specifically conducted for the purpose of identifying pipe wall thinning, whether or not pipe wall thinning was discovered, and any other inspections where pipe wall thinning was discovered even though that was not the purpose of that inspection.
- 4a. Briefly describe the inspection program and indicate whether it was specifically intended to measure wall thickness or whether wall thickness measurements were an incidental determination.

Nine Mile Two wall thickness inspections were performed in the course of hardware construction, installation, disassembly and testing when it was determined to be desirable. No additional material thickness reviews have been performed.

- 4b. Describe what piping was examined (e.g. describe the inspection instruments test method, reference thickness, locations examined, means for locating measurement points in subsequent inspections).

New plant; no formal Erosion-Corrosion Program implemented during the plant construction period. Currently, the plant is in power ascension testing.

- 4c. Report thickness measurement results and note those that were identified as unacceptable and why.

No unacceptable material wall thicknesses have been identified at Nine Mile Point Unit Two plant.

- 4d. Describe actions already taken or planned for piping that has been found to have a nonconforming wall thickness.



No evidence of nonconforming wall thicknesses has been found.

5. Describe any plans either for reviewing the present or for developing new or additional programs for monitoring pipe wall thickness.

During the first planned refueling outage, baseline data will be obtained in single and two-phase flow areas for the purposes of confirming satisfactory design and as control monitoring locations necessary to establish erosion-corrosion wear rates. Future refueling outages will include single and two-phase carbon steel piping wall thickness measurement. Additional plans will be dependent upon the results of the data obtained during the refueling outage.

