Niagara Mohawk®

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May 12, 2000
NMP1L 1515

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

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

Subject: ***Inservice Inspection Relief Requests ISI-5, ISI-6, and ISI-10***

Gentlemen:

By letter dated October 30, 1999, Niagara Mohawk Power Corporation (NMPC) submitted the Third Ten-Year Interval Inservice Inspection Program Plan for Nine Mile Point (NMP) Unit 1, including requests for relief from certain ASME Code requirements determined by NMPC to be impractical. The NRC staff requested additional information to complete their review of three relief requests: ISI-5, ISI-6, and ISI-10. The additional information requested for each relief request was documented in a memorandum from the NRC Project Manager, P. S. Tam, to the NRC File Center, dated April 14, 2000, and was discussed between the NRC and NMPC in a telephone conference on April 25, 2000. As agreed in that telephone conference, NMPC has incorporated the additional information in the relief requests, which are attached to this letter. The attached relief requests also include minor editorial corrections and they replace the October 30, 1999, relief requests.

Sincerely,

Richard B. Abbott
Vice President Nuclear Engineering

RBA/IAA/tmk
Attachment

xc: Mr. H. J. Miller, NRC Regional Administrator, Region I
Ms. M. K. Gamberoni, Acting Section Chief PD-I, Section 1, NRR
Mr. G. K. Hunegs, NRC Senior Resident Inspector
Mr. P. S. Tam, Senior Project Manager, NRR
Records Management

RGN-001

A047

ATTACHMENT

RELIEF REQUESTS ISI-5, ISI-6, AND ISI-10

NINE MILE POINT UNIT 1
THIRD INSERVICE INSPECTION INTERVAL
RELIEF REQUEST ISI-5

A. **COMPONENT IDENTIFICATION**

System: Reactor Pressure Vessel

Class: Quality Group A, ASME Code Class 1

Component Description: Integral Attachments For Class 1 Vessels, Piping, Pumps and Valves

B. **ASME SECTION XI CODE CASE N-509 INSPECTION REQUIREMENTS**

Code Case N-509, Table 2500-1, Examination Category B-K requires:

Code Item No.	Parts Examined	Exam Requirements	Extent and Frequency
B10.10	Reactor Vessel Integrally Welded Attachments	IWB-2500-13, 14 and 15	100% of required areas of each welded attachment

Note: Per Regulatory Guide 1.147, Revision 12, dated May 1999, ASME Code Case N-509 is acceptable to the USNRC provided that in addition to those conditions specified in the Code Case: A minimum 10% sample of integrally welded attachments for each item in each code class per interval should be examined.

C. **RELIEF REQUESTED**

Pursuant to 10 CFR 50.55a(a)(3)(i), relief is requested from performing 100% of the length of the attachment weld at each attachment subject to examination.

D. **BASIS FOR RELIEF**

NMP1, a BWR/2, has a Reactor Pressure Vessel (RPV) that was designed and fabricated to the rules of ASME Sections I and VIII, including Nuclear Code Case 1270N and 1273N (See Figure 1 for RPV drawing). Early vintage plants of this type were designed, fabricated and erected prior to examination requirements of ASME Section XI.

Of the six (6) integral attachments subject to examination, four (4) are the earthquake stabilizer brackets (Figure 2) and two (2) are the reactor pressure vessel support skirt integral attachment (Figures 3 and 4), which is broken down into inside surface and outside surface.

EARTHQUAKE STABILIZER BRACKET ATTACHMENTS

The four (4) alloy steel Reactor Vessel earthquake stabilizer attachments brackets are located at 22.5, 112.5, 202.5 and 292.5 degree (Figure 1) axis points around the outer circumference of the vessel approximately eleven (11) feet and eight (8) inches below the vessel flange. (See Figures 1 and 2 for locations). Access for examination purposes only allows a maximum of 50% of the attachment weld length to be examined on the top surface of all four (4) stabilizer bracket integral attachments.

REACTOR VESSEL SUPPORT SKIRT

The Reactor Vessel support skirt is divided within the examination plan into two (2) separate items(Figure 3), these being the inside surface of the attachment weld and the outside surface of the attachment weld. Access to the support skirt is limited to the outside surface geometry of the attachment weld only (Figure 4). The inside surface of the attachment weld is inaccessible (Figure 3).

EXAMINATION REQUIREMENTS

The Code Case requires that a surface examination be performed in accordance with Figures IWB-2500-13 and IWB-2500-15.

The earthquake stabilizer bracket (Figure IWB-2500-15) attachments require the weld plus 0.50" on each side of the weld and essentially 100% of the weld length to be examined by the surface (Magnetic Particle or Liquid Penetrant Method).

The reactor vessel skirt weld (Figure IWB-2500-13) attachment requires the weld plus 0.50" on each side of the weld and essentially 100% of the weld length to be examined by the surface (Magnetic Particle or Liquid Penetrant Method).

The use of the ultrasonic examination method in lieu of the surface exam is not appropriate due to the access provision would be the same as that for the surface examination. In addition the ultrasonic examination of the outside surface of the vessel skirt (Figure 4) from one side would be inappropriate due to the design and geometry of the skirt being non-parallel surfaces on the forging knuckle. The additional areas achieved would be negligible.

The 10% sample requirements for the six (6) Code Item Number B10.10 integral attachments would require as a minimum one (1) integral attachment required to be examined over the interval.

Compliance with the ASME Code Case examination requirements would require a redesign of the Reactor Vessel integral attachments, which would impose an undue hardship on NMPC without a compensating increase in the quality and safety of the unit.

E. **ALTERNATIVE EXAMINATIONS**

NMPC proposes to perform the following examinations:

Schedule two of the four Earthquake stabilizer brackets for surface examination to the extent practical. The anticipated Code Required Area to be achieved will be 50% on each integral attachment, which would be equivalent to completing essentially one bracket.

In addition to the stabilizer attachment, NMPC proposes to perform to the extent practical a surface examination on the outside surface of the Reactor Vessel Support skirt only.

The extent of examination performed on the Reactor Pressure Vessel Integral Attachment will assure an acceptable level of quality and safety.

F. **IMPLEMENTATION SCHEDULE**

Third Inservice Inspection Interval

NINE MILE POINT UNIT 1
THIRD INSERVICE INSPECTION INTERVAL
RELIEF REQUEST ISI-5

Component Identification	Component Description	Percent (%) of CRA to be achieved	Selection
RV-SB1-IA-371/372	Earth Quake Stabilizer Integral Attachment	50%	Selected
RV-SB2-IA-373/374	Earth Quake Stabilizer Integral Attachment	50%	Selected
RV-SB3-IA-375/376	Earth Quake Stabilizer Integral Attachment	50%	Not Selected
RV-SB4-IA-377/378	Earth Quake Stabilizer Integral Attachment	50%	Not Selected
RV-WD-356-ID	Support Skirt Integral Attachment	50%	Not Selected
RV-WD-356-OD	Support Skirt Integral Attachment	50%	Selected

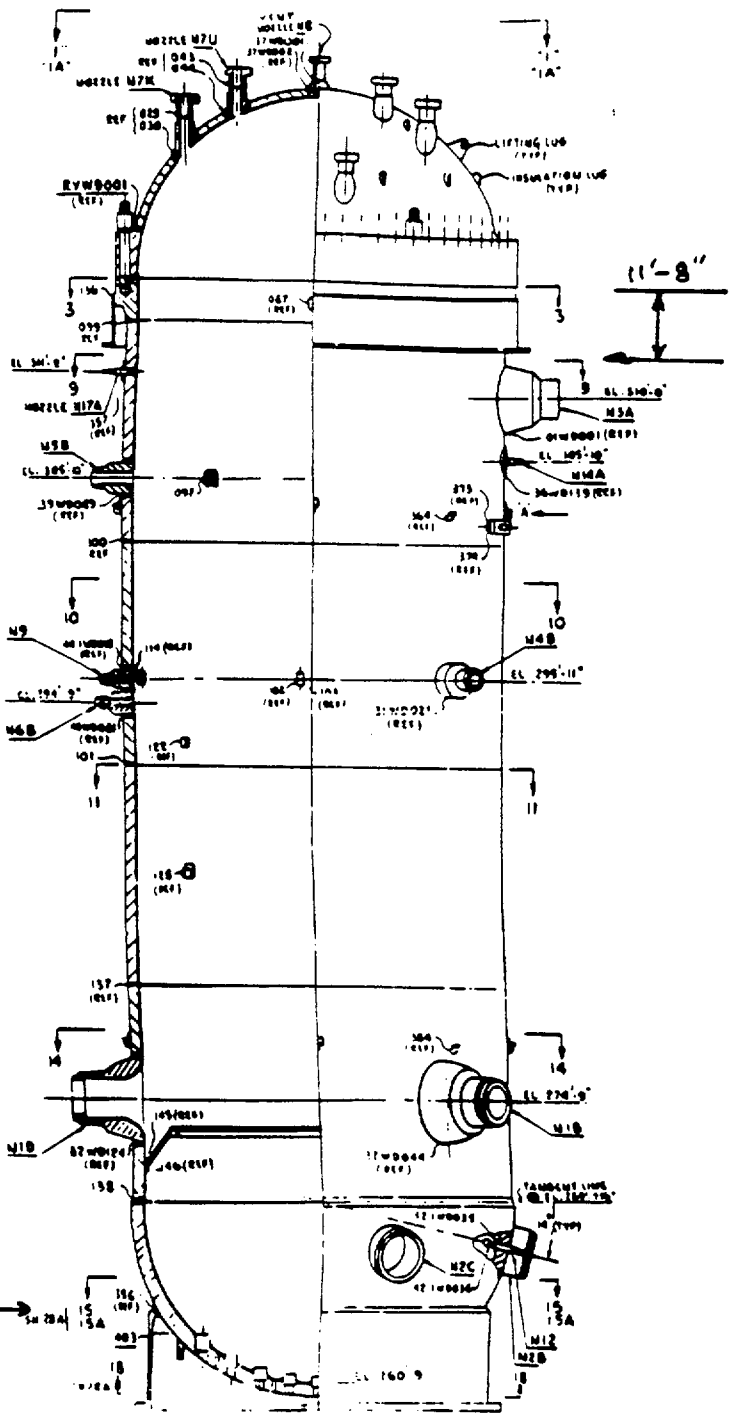


FIG. 1
REACTOR VESSEL

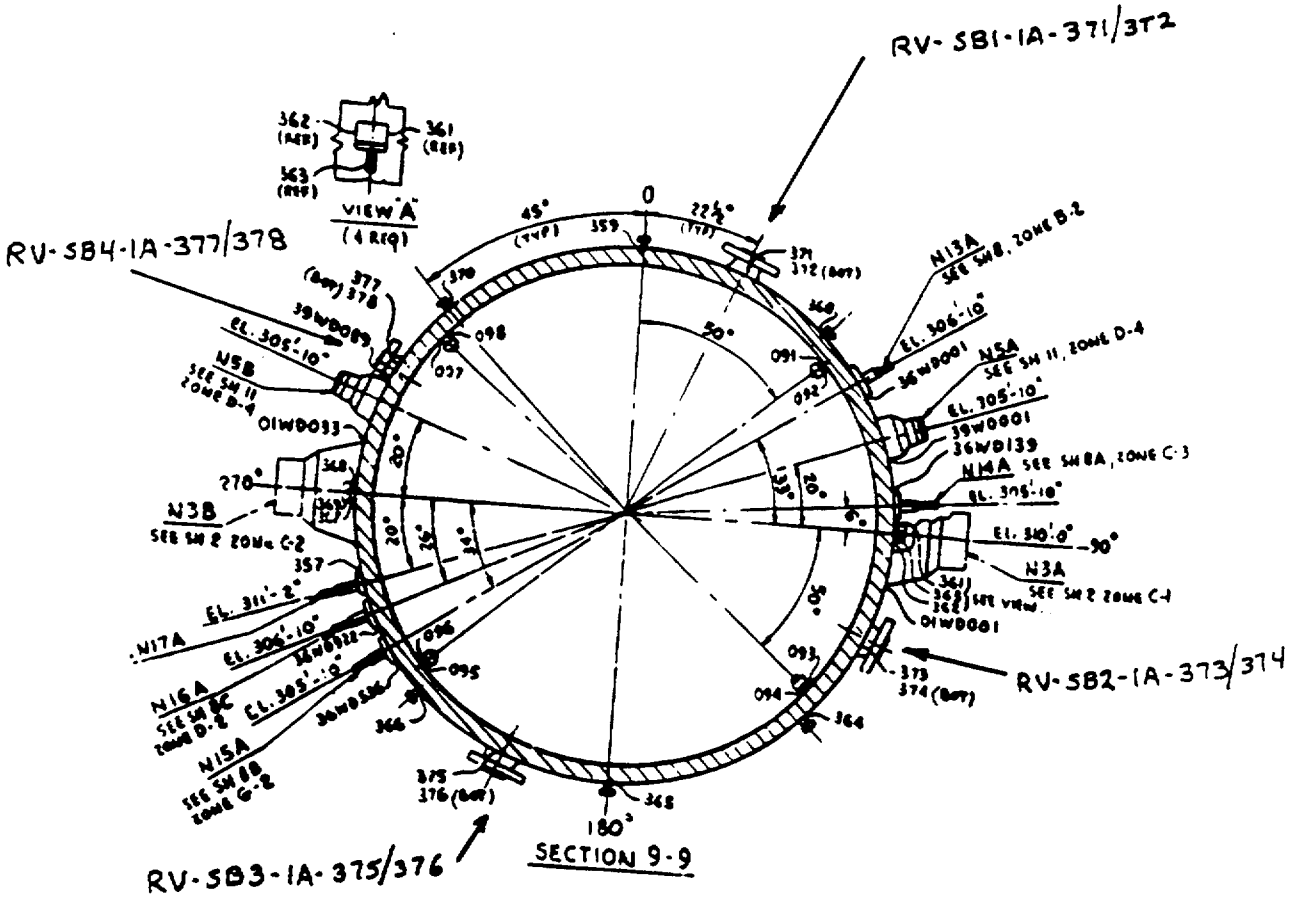


FIG. 2

EARTHQUAKE STABILIZER

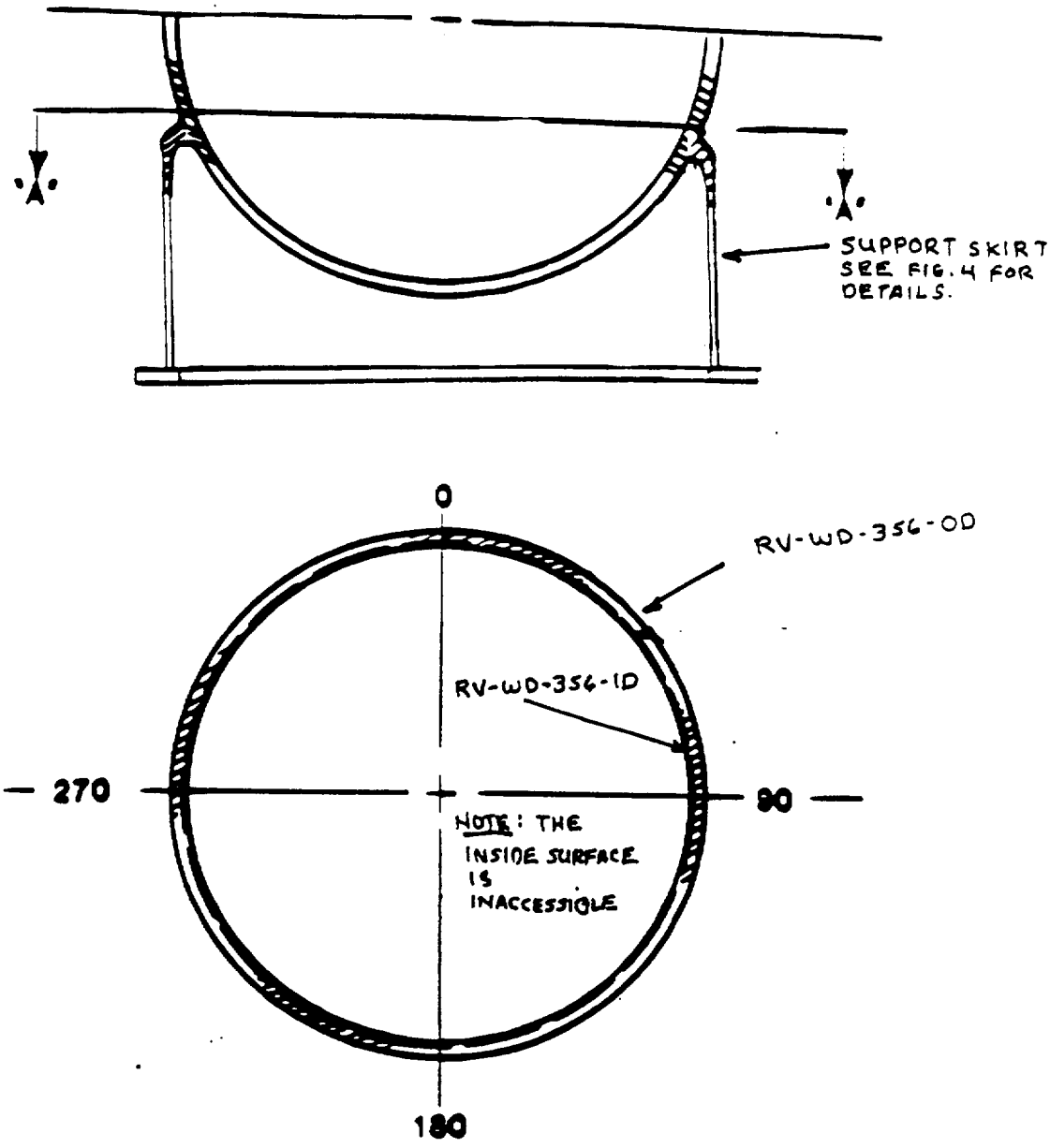
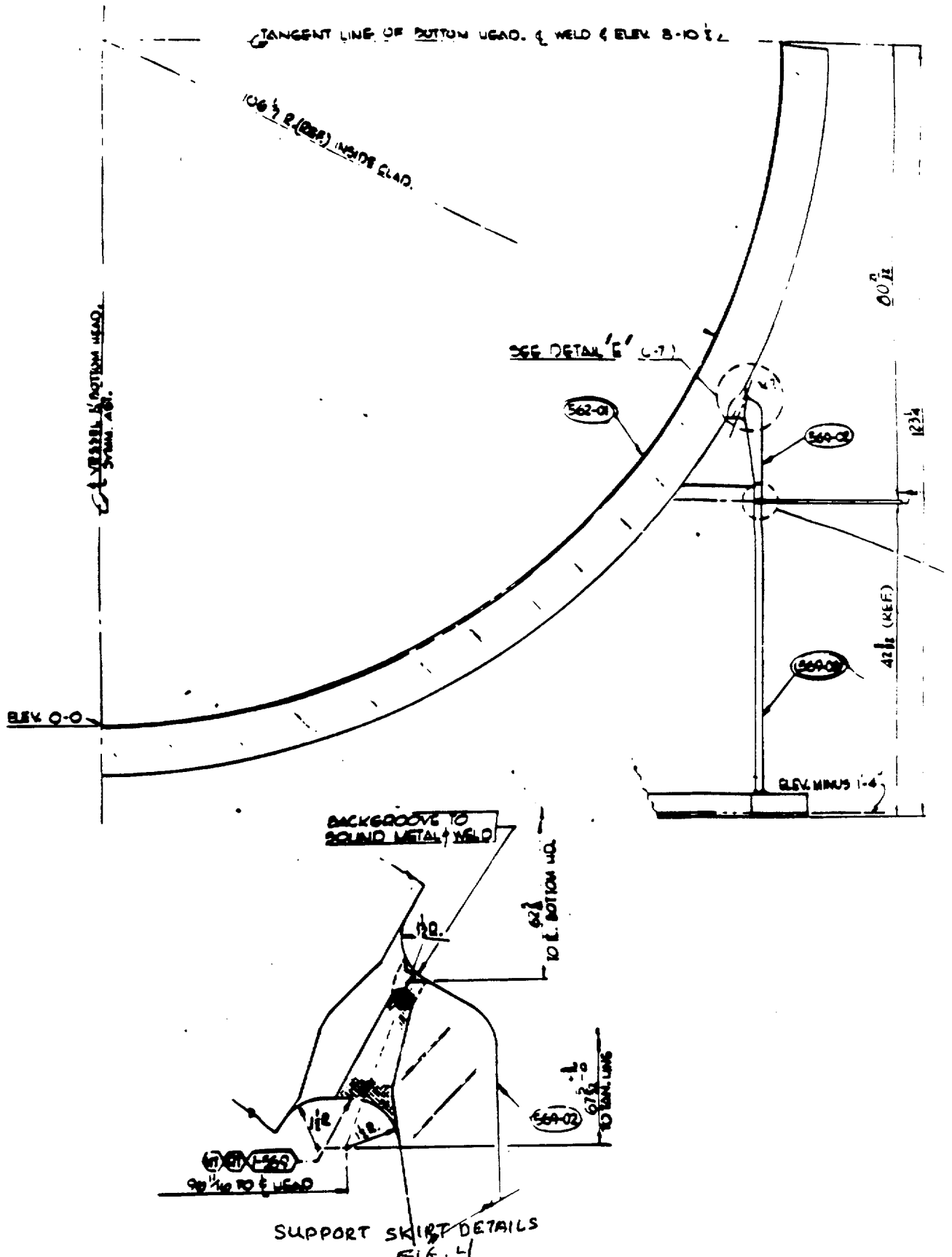


FIG. 3
SUPPORT SKIRT


TANGENT LINE OF BOTTOM HEAD & WELD @ ELEV. 8-10 1/2
SEE DETAIL 'B' (4-7)
562-02
560-02
569-02
ELEV. 0-0
ELEV. MINUS 1-4
BACKGOUGE TO SOUND METAL & WELD
SUPPORT SKIRT DETAILS
FIG. 4

NINE MILE POINT UNIT 1
THIRD INSERVICE INSPECTION INTERVAL
RELIEF REQUEST ISI-6

A. **COMPONENT IDENTIFICATION**

System: Reactor Pressure Vessel

Class: Quality Group A, ASME Code Class 1

Component Description: Pressure Retaining Welds In Control Rod Drive (crd) Housing

B. **ASME SECTION XI INSPECTION REQUIREMENTS**

Section XI, Table IWB-2500-1, Examination Category B-O requires:

Code Item No.	Parts Examined	Exam Requirements	Extent and Frequency
B14.10	Reactor Vessel Welds in CRD Housing	IWB-2500-18	10% of the Peripheral CRD Housings required

C. **RELIEF REQUESTED**

Pursuant to 10 CFR 50.55a(g)(6)(i) NMPC requests relief from performing 100% of the Code Required Volume of 10% of the peripheral CRD Housing welds length as defined in Figure IWB-2500-18.

D. **BASIS FOR RELIEF**

NMP1, a BWR/2, has a Reactor Pressure Vessel (RPV) that was designed and fabricated to the rules of ASME Sections I and VIII, including Nuclear Code Case 1270N and 1273N. Early vintage plants of this type were designed, fabricated and erected prior to examination requirements of ASME Section XI.

There are one hundred twenty-nine (129) Control Rod Drive Housings located on the bottom head. Thirty-two (32) are peripheral CRD Housing of which 10% or a minimum of 4 are required to be examined during the interval.

A sector of approximately 180 degrees of each CRD peripheral housing circumference is obstructed by the adjacent CRD housings and their hydraulic lines. See attached drawing.

E. **ALTERNATIVE EXAMINATIONS**

NMPC proposes to perform surface examinations on eight (8) of the peripheral control rod drive housing in lieu of the minimum of 4 required. The additional 4 housing examinations will result in the same weld length being examined, thereby meeting the intent of the Code requirement.

This approach was previously granted per USNRC Safety Evaluation, TAC No. M83099, dated April 6, 1994.

The extent of examination performed on the Control Rod Drive Housings will assure an acceptable level of quality and safety.

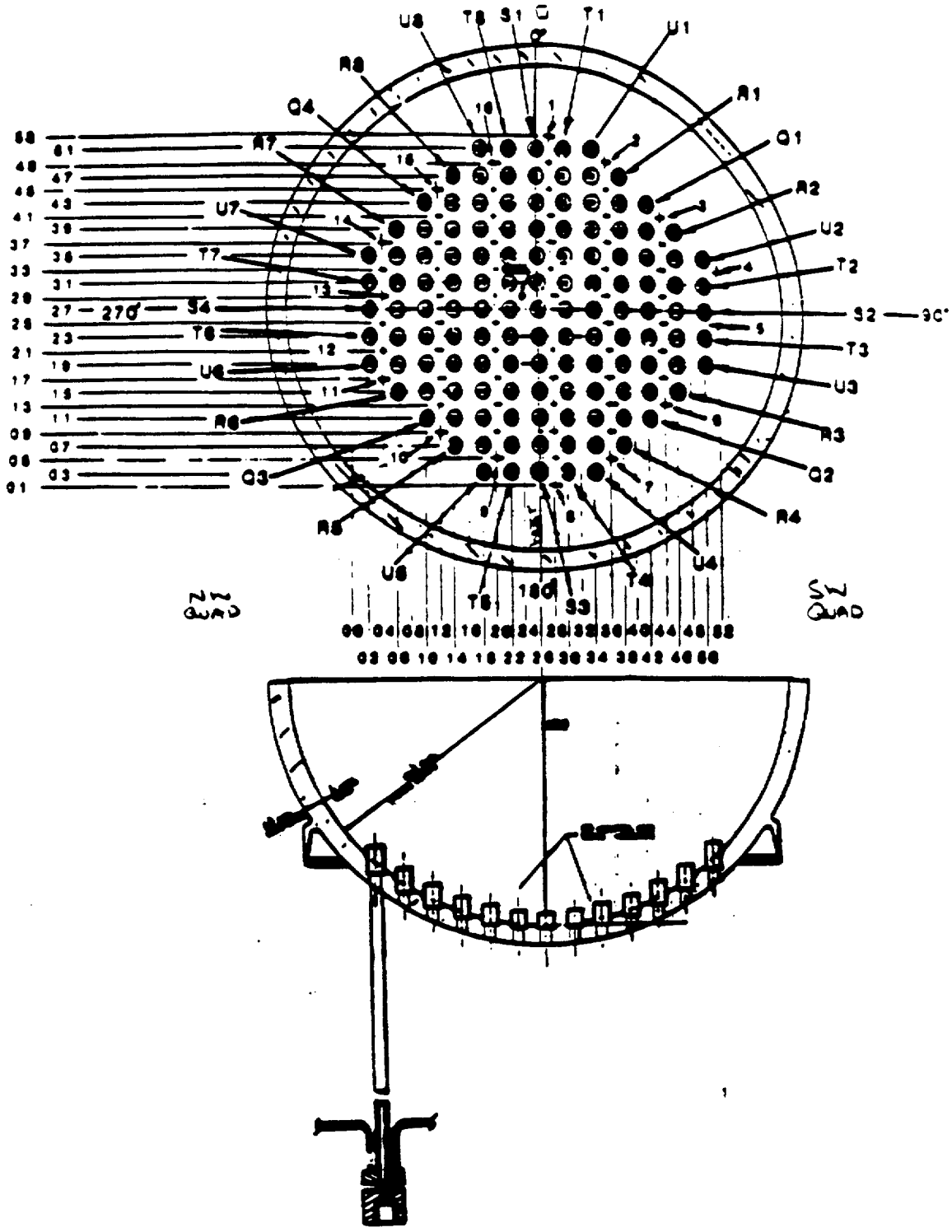
F. **IMPLEMENTATION SCHEDULE**

Third Inservice Inspection Interval

NINE MILE POINT UNIT 1
THIRD INSERVICE INSPECTION INTERVAL
RELIEF REQUEST ISI-6

Component Identification	Component Description	Percent (%) of CRA to be achieved	Selection
RV-CRD-S1	CRD Housing Weld	50%	Selected
RV-CRD-S3	CRD Housing Weld	50%	Selected
RV-CRD-R1	CRD Housing Weld	50%	Selected
RV-CRD-R5	CRD Housing Weld	50%	Selected
RV-CRD-T3	CRD Housing Weld	50%	Selected
RV-CRD-T7	CRD Housing Weld	50%	Selected
RV-CRD-U2	CRD Housing Weld	50%	Selected
RV-CRD- U6	CRD Housing Weld	50%	Selected

NINE MILE POINT UNIT 1
THIRD INSERVICE INSPECTION INTERVAL
RELIEF REQUEST ISI-6



NINE MILE POINT UNIT 1
THIRD INSERVICE INSPECTION INTERVAL
RELIEF REQUEST ISI-10

A. COMPONENT IDENTIFICATION:

Class: All
Identification of System: All

B. CODE REQUIREMENTS:

Article IWA-4000 welding and brazing procedure qualification requirements.

(a) All welding shall be performed in accordance with Welding Procedures Specifications that have been qualified by the Owner or repair organization in accordance with the requirements of the codes specified in the Repair Program in accordance with IWA-4120.

C. RELIEF REQUESTED:

Pursuant to 10 CFR 50.55a(a)(3)(ii), NMPC requests Relief from the requirements of ASME Section XI, Article IWA-4000, IWA-4400.

D. BASIS FOR RELIEF:

The basis for this relief is to implement ASME Code Case N-573, which eliminates the redundancy currently required by the Code for each organization to independently qualify all welding procedures even though they have met the qualification process at another facility. Code Case N-573 recognizes and addresses this fact and proposes an alternative which maintains an acceptable level of quality and safety.

E. ALTERNATIVE EXAMINATIONS OR TESTS:

The following alternative testing requirements will be implemented as defined by ASME Section XI Code Case N-573, Transfer of Procedure Qualification Records Between Owners, Section XI, Division 1.

(a) The Owner that performed the procedure qualification test shall certify, by signing the PQR, that testing was performed in accordance with Section IX.

(b) The Owner that performed the procedure qualification test shall certify, in writing, that the procedure qualification was conducted in accordance with a Quality Assurance Program that satisfies the requirements of IWA-1400.

(c) The Owner accepting the completed PQR shall accept responsibility for obtaining any additional supporting information needed for WPS development.

(d) The Owner accepting the completed PQR shall document, on each resulting WPS, the parameters applicable to welding. Each WPS shall be supported by all necessary PQR's.

(e) The Owner accepting the completed PQR shall accept responsibility for the PQR. Acceptance shall be documented by the Owner's approval of each WPS that references the PQR.

(f) The Owner accepting the completed PQR shall demonstrate technical competence in application of the received PQR by completing a performance qualification test using the parameters of a resulting WPS.

(g) The Owner may accept and use a PQR only when it is received directly from the Owner that certified the PQR.

(h) Use of this Case shall be shown on the NIS-2 form documenting welding or brazing.

F. **IMPLEMENTATION SCHEDULE:**

The Alternate requirements of ASME Code Case N-573 will be incorporated into the NMPC Inservice Inspection Program during the 3rd Ten-Year Interval, or until Code Case N-573 is approved for general use by reference in Regulatory Guide 1.147. After that time, NMPC will follow the conditions, if any, specified in the regulatory guide.

G. **ATTACHMENTS TO THE RELIEF:**

ASME Code Case N-573, Transfer of Procedure Qualification Records Between Owners, Section XI, Division 1.

CASE
N-573

CASES OF ASME BOILER AND PRESSURE VESSEL CODE

Approval Date: March 12, 1987

See Numerical Index for expiration and any reaffirmation dates.

Case N-573
Transfer of Procedure Qualification Records Between Owners
Section XI, Division 1

Inquiry: What alternatives to the welding and brazing procedure qualification requirements of IWA-4000 may be used?

Reply: It is the opinion of the Committee that as an alternative to the welding and brazing procedure qualification requirements of IWA-4000, a procedure qualification record (PQR) qualified by one Owner may be used by another Owner. When this alternative is used, the following requirements shall be met:

(a) The Owner that performed the procedure qualification test shall certify, by signing the PQR, that testing was performed in accordance with Section IX.

(b) The Owner that performed the procedure qualification test shall certify, in writing, that the procedure qualification was conducted in accordance with a Quality Assurance Program that satisfies the requirements of IWA-1400.

(c) The Owner accepting the completed PQR shall accept responsibility for obtaining any additional supporting information needed for WPS development.

(d) The Owner accepting the completed PQR shall document, on each resulting WPS, the parameters applicable to welding. Each WPS shall be supported by all necessary PQR's.

(e) The Owner accepting the completed PQR shall accept responsibility for the PQR. Acceptance shall be documented by the Owner's approval of each WPS that references the PQR.

(f) The Owner accepting the completed PQR shall demonstrate technical competence in application of the received PQR by completing a performance qualification test using the parameters of a resulting WPS.

(g) The Owner may accept and use a PQR only when it is received directly from the Owner that certified the PQR.

(h) Use of this Case shall be shown on the NIS-2 form documenting welding or brazing.