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BUTLER,W. Licensing Branch 2

SEE RPT

SUBJECT: Forwards updated Vol 1 of "Preservice Insp Plan," including all NDE items required by ASME Section XI for nuclear piping sys & reactor pressure vessel.Second & third parts will be submitted by 851130 & 1220,respectively.

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NIAGARA MOHAWK

NIAGARA MOHAWK POWER CORPORATION/300 ERIE BOULEVARD WEST, SYRACUSE, N.Y. 13202/TELEPHONE (315) 474-1511

October 15, 1985
(NMP2L 0513)

Dr. Walter Butler, Chief
Licensing Branch No. 2
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Dr. Butler:

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

Enclosed is the first part of the updated Preservice Inspection Plan. The Preservice Inspection Plan is divided into three parts. This first part includes all non-destructive examination items required by ASME Section XI for nuclear piping systems and the reactor pressure vessel, its internals, and safe ends. Also included in this submittal are a listing of the PSI Ultrasonic Test Procedures and the PSI Isometric Drawings. The second part of the plan, the Inservice Testing Plan for pumps and valves, will be submitted by November 30, 1985, as requested by the staff on August 7, 1985. The third part, which includes the Preservice Inspection Plan for Nuclear Piping System and Component Supports as described by Article IWF of ASME Section XI, is being revised and will be submitted by December 20, 1985.

Very truly yours,

T. E. Lempges
Vice President
Nuclear Generation

TEL/NLR:rla
Enclosure
1020G

xc: R. A. Gramm, NRC Resident Inspector
Project File (2)

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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

T. E. Lempges, being duly sworn, states that he is 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.

T E Lempges

Subscribed and sworn to before me, a Notary Public in and for the State of New York and County of Onondaga, this 15 day of October, 1985.

Janis M. Macro
Notary Public in and for
Onondaga County, New York

My Commission expires:
JANIS M. MACRO
Notary Public in the State of New York
Qualified in Onondaga County No. 4784555
My Commission Expires March 30, 1987

Nine Mile Point Unit 2

INSERTION INSTRUCTIONS

The following instructions are for the insertion of the new Preservice Inspection Plan into the Nine Mile Point Unit 2 FSAR.

Remove pages, tables, and/or figures listed in the REMOVE column and replace them with the pages, tables, and/or figures listed in the INSERT column. Dashes (---) in either column indicate no action required.

VOLUME 1

REMOVE	INSERT
Remove all material. Retain only tabs for Sections 1 through 10.	
---	Volume 1 page
---	i/ii through v/-
---	TAB: SECTION 1
	1-1/1-2 through 1-11/-
---	Table 1-1 (1 through 10 of 10)
---	Table 1-2 (1 of 1)
---	Table 1-3 (1 of 1)
---	Table 1-4 (1 and 2 of 2)
---	TAB: SECTION 2
---	2-1/2-2
---	2-3/2-4
---	TAB: SECTION 3
---	3-1/3-2
---	3-3/-
---	TAB: SECTION 4
---	4-1/4-2
---	4-3/-
---	TAB: SECTION 5
---	5-1/-
---	TAB: SECTION 6
---	6-1/-
---	RR-IWC-1 (1 through 4 of 4)
---	ISI Sketch 004A
---	ISI Sketch 004B
---	ISI Sketch 004C
---	ISI Sketch 010A
---	ISI Sketch 010B
---	ISI Sketch 088A
---	ISI Sketch 088B
---	ISI Sketch 089A
---	ISI Sketch 089B
---	ISI Sketch 090A
---	ISI Sketch 090B
---	RR-IWC-2 (1 through 5 of 5)
---	RR-IWC-3 (1 through 3 of 3)
---	RR-IWC-4 (1 through 3 of 3)
---	RR-IWC-5 (1 through 3 of 3)

Nine Mile Point Unit 2

VOLUME 1 (Cont)

REMOVE	INSERT
---	RR-IWC-6 (1 through 5 of 5)
---	TAB: SECTION 7
---	7-1/7-2
---	TAB: SECTION 8
---	8-1/-
---	Table 8-1 (1 through 3 of 3)
---	ISI Drawings (109 sheets)
---	TAB: SECTION 9
---	9-1/-
---	Table 9-1 (1 though 7 of 7)
---	TAB: SECTION 10
---	10-1/10-2
---	Table 10-1 (1 through 113 of 113)

Nine Mile Point Unit 2

VOLUME 2

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---	Volume 2 page
---	i/ii through v/-
---	TAB (NEW): APPENDIX A, PSI PROGRAM PLAN TABLES
---	1 through 310
---	B-P-1
---	C-H-1 through C-H-6
---	D-1 through D-6

Nine Mile Point Unit 2

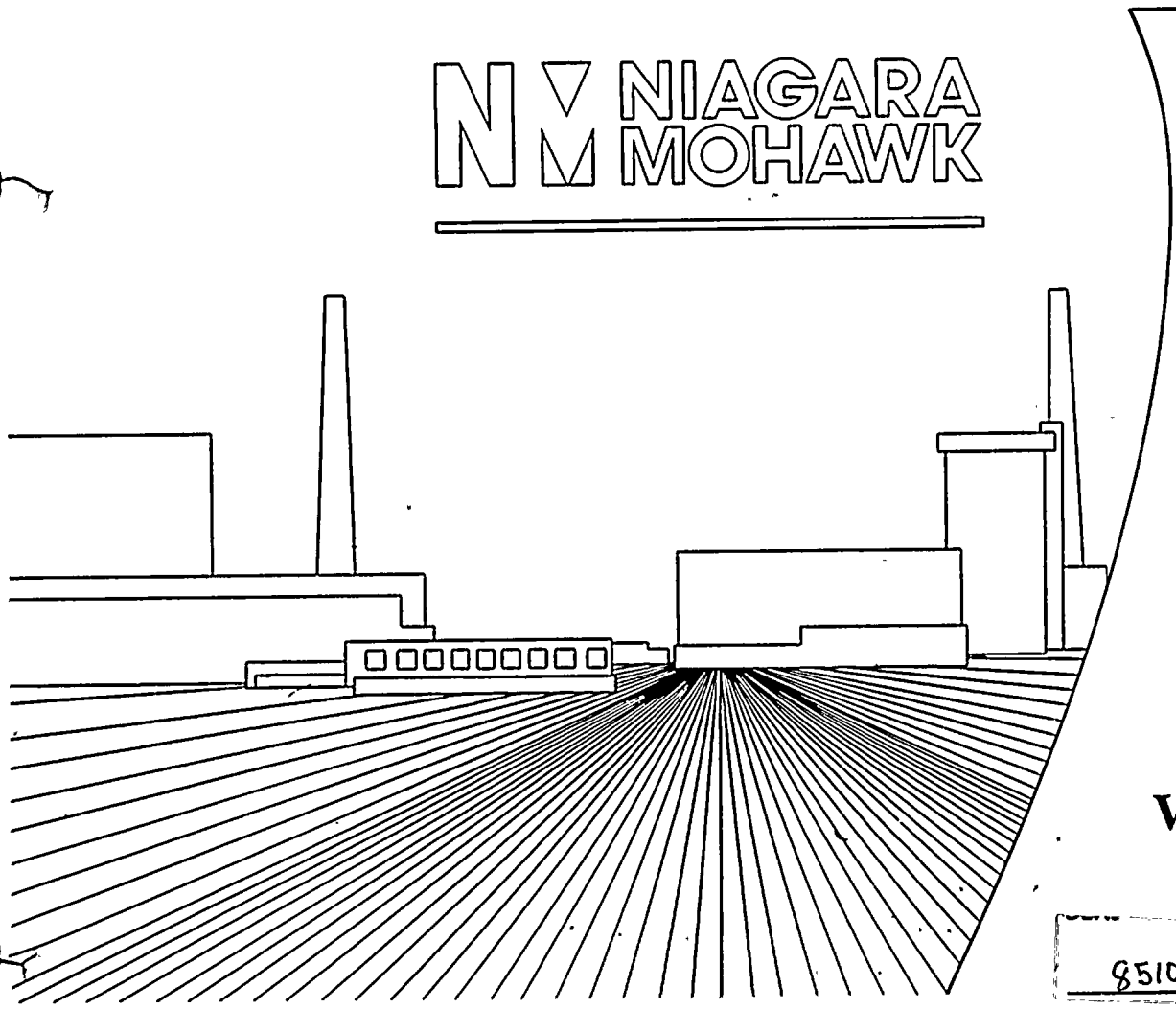
VOLUMES 3 THROUGH 8

REMOVE	INSERT
Remove all contents.	---
Retain binders for future revisions.	

PRESERVICE INSPECTION PLAN
FOR
NUCLEAR PIPING SYSTEMS
AND THE
REACTOR PRESSURE VESSEL

NINE MILE POINT
NUCLEAR STATION — UNIT 2

NIAGARA MOHAWK



VOL. 1

8510210138

Nine Mile Point Unit 2

PRESERVICE INSPECTION PLAN

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SECTION 1

INTRODUCTION AND GENERAL REQUIREMENTS

1.0 INTRODUCTION

The Preservice Inspection (PSI) Plan (Plan) for Niagara Mohawk Power Corporation's (NMPC) Nine Mile Point Nuclear Station Unit 2 (Unit 2) consists of three separate documents, as follows:

- Preservice Inspection Plan for Nuclear Piping Systems and the Reactor Pressure Vessel
- Inservice Testing Plan for Pumps and Valves
- Preservice Inspection Plan for Nuclear Piping System and Component Supports

This two-volume document is the Preservice Inspection Plan for Nuclear Piping Systems and the Reactor Pressure Vessel. It supersedes all previous submittals issued and is considered the base document for PSI of nuclear piping and the RPV.

This document shall be continually updated pending the completion of any modifications necessary to attain the plant as-built configuration. This Plan is considered essentially complete when:

- Construction achieves the as-built configuration
- All required examinations are complete and documented, including documentation of all limitations to examinations
- All Requests for Relief covered by the scope of this Plan are submitted for approval.

The aforementioned conditions shall be identified in the Final Summary Report for the Preservice Inspection. Pending the submittal of that document, updating and control of this plan shall be ongoing and under the direction of NMPC.

1.1 SCOPE AND RESPONSIBILITIES

This plan shall delineate the commitments and requirements for examination of the pressure-containing piping systems, components, and supports of the reactor coolant system, portions of the associated auxiliary systems, and the

emergency core cooling systems in order to provide an assessment of the general overall condition of the reactor coolant pressure boundary.

Title 10 of the Code of Federal Regulations, Part 50.55a(g) requires PSI to be performed in accordance with Section XI of the American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel Code, Rules for Inservice Inspection of Nuclear Power Plant Components, including applicable addenda.

The performance of the PSI shall be the responsibility of NMPC or its designated agents. This responsibility shall include the requirements contained in IWA-1400(a) through (o) of the Code.

1.1.1 Applicable Code for Preservice Inspection

The Preservice Inspection Plan for NMPC's Nine Mile Point Nuclear Station Unit 2 shall be in compliance with the rules and regulations of 10CFR50.55a and Section XI of the ASME Boiler and Pressure Vessel Code, 1980 Edition, including addenda through Winter 1980. When performing volumetric examination, 100 percent of the weld volume, as defined by the entire wall thickness, shall be examined.

In addition, appropriate Code Class 2 piping welds in the residual heat removal system, emergency core cooling system, and containment heat removal system shall be examined. The extent of the preservice examinations for these systems shall be determined using the requirements of paragraph IWC-1220, Table IWC-2520, Categories C-F and C-G, and paragraph IWC-2411 in the 1974 Edition and addenda through the Summer 1975 addenda of Section XI of the ASME Code.

1.1.2 Later Codes

As permitted by Paragraphs 10CFR50.55a(g)(2) and (g)(4), NMPC may elect, for certain components, to meet requirements set forth in later editions and addenda of the code than the editions and addenda specified in the approved Plan. The later Codes selected shall have been incorporated by reference in 10CFR50.55(b)(2). Additionally, use of the later Codes shall be subject to approval by the Nuclear Regulatory Commission. Later codes approved for use are listed below:

1. ASME Section XI, 1980 Edition, Winter 1981 Addendum, Subparagraph IWB-3112 is used when determining a component's acceptability for service.

1.1.3 Requests for Relief from Code Requirements

Under the provisions of 10CFR50.55a(g)(5)(iii), relief from Code examination and/or test requirements for components, supports, or support elements shall be requested in writing to the Nuclear Regulatory Commission. The request for relief shall become part of this plan and part of the component examination and test records and shall contain the following information:

1. Identification of the component or support, including its name and number as given in the FSAR, its function, and the ASME III Code Class.

2. The Code requirement for which relief is being requested.

3. The basis for the request for relief.

4. The inspection periods and intervals for which the requested relief is needed.

5. Alternate tests or examinations being proposed.

6. The schedule for implementing the alternate tests or examinations.

7. The impact on the overall level of plant quality and safety if it is impossible to perform an alternate examination.

8. The preservice inspection results, if any, for the components for which the relief is being requested.

When the requests for relief are due to radiation considerations, the following additional information shall be included:

1. Total estimated man-rem exposure involved in the examination.

2. Radiation levels at the test area.

3. Flushing or shielding capabilities that might reduce radiation levels.

The components for which relief from examination has been granted by the Nuclear Regulatory Commission will be exempted from the Code examination for which relief was requested.

1.1.4 Definitions of Terms

AUGMENTED - denotes those inspections or examinations which go beyond the requirements of ASME Section XI. These inspections/examinations are required by NUREGs, IE bulletins, and other agencies with control over the construction, testing, and operation of nuclear power plants.

1.2 EXAMINATION AND TEST REQUIREMENTS

Examinations and tests are required to be performed on non-exempt ASME Code Class 1, 2, and 3 pressure-containing components to ensure continued integrity and operational readiness of the plant throughout its lifetime. Based on Regulatory Guide 1.26, portions of Class 4 systems have been classified Quality Group B and therefore are examined under the requirements of ASME Section XI, Class 2 (IWC). The required examinations and tests for specific components are identified in Appendix A of this Plan.

1.2.1 Examination Selection Criteria

The selection of components for examination shall be in accordance with the rules of the ASME B&PV Code 1980 Edition through the Winter 1980 Addenda, except for ASME Code Class 2 pressure-retaining piping welds in the residual heat removal system, high pressure core spray system, and low pressure core spray system. The extent of examination for these systems is required by 10CFR50.a(2)(b)(iv) and is determined by the requirements of Paragraph IWC-1220, Table IWC-2520, Category C-F and C-G, and paragraph IWC-2411 of the 1974 ASME B&PV Code through the Summer 1975 Addenda.

In response to NRC Request for Information, Question F250.1, 7.5 percent of the welds in the residual heat removal system, high pressure core spray system, and low pressure core spray system have been selected for volumetric examination. The welds selected are normally excluded from preservice volumetric examination.

The selection criteria were applied to all ASME Section III, Class 1, 2, and 3 systems listed in Table 1-2. These criteria define the required examinations in order to comply with 10CFR50.55a and Section XI of the B&PV Code 1980/W80 Addenda, including those augmented examinations requested by NRC FSAR Question F250.1. Application of the selection criteria is described in Table 1-1 of this Plan.

All items selected for examination have the letter "Y" indicated in the "INSP" field of the PSI Program Plan Tables in Appendix A. Welds selected in response to NRC Question F250.1 have "FSAR F250.1" entered in the "Remarks" field of tables.

1.2.2 Methods of Examination

The methods of examination used on each component and system shall be in accordance with the requirements in Subarticle IWA-2000 of ASME XI. The examination methods for the specific components are identified in Appendix A of this Plan.

1.2.2.1 Volumetric Examination

Volumetric examination is defined as ultrasonics, radiography, and eddy current. Ultrasonic examination (UT) shall be used most commonly for weld examination, although radiograph (RT) may be used under certain conditions, and eddy current (ET) may be specified for heat exchanger tubes.

1.2.2.2 Surface Examination

Surface examination is defined as magnetic particle (MT) or liquid penetrant (PT) and shall be used for weld examinations.

1.2.2.3 Visual Examination

In this Plan, visual examination is defined as VT-1 through VT-3 and shall be used as follows:

VT-1 - Visual examination to determine general conditions of components, parts or surfaces for corrosion, cracks, erosion, wear, or physical damage.

VT-2 - Locate evidence of leakage from pressure-retaining systems and components during an inservice test, component functional test, or pressure test. Insulation need not be removed for performance of VT-2 visual examinations.

VT-3 - Determine general mechanical and structural condition of components and their supports. This may require measurement of clearances, checking bolt tightness, and other checks to determine structural integrity.

1.2.3 Pressure Tests

Per Subparagraph IWA-5215 of the referenced ASME XI code, a preservice inspection hydrostatic test is not required. Following a repair, replacement, or opening and reclosing of a system or portion of a system under the jurisdiction of ASME XI, the requirements of Article IWA-5000 shall be met.

Code Class 1, 2, and 3 components require system pressure tests each inspection period and hydrostatic tests each inspection interval to meet the requirements of ASME XI. The components which would require pressure tests are defined by the boundaries identified in Appendix A of this Plan.

1.3 PLANT DESIGN FEATURES TO PROVIDE INSPECTABILITY

ASME III design specifications of Code Class 1 and 2 equipment include the following requirements for inservice inspection:

1.3.1 Weld Contour, Access, and Surface Finish for Ultrasonic Examination

All Code Class 1 and 2 welds that require ultrasonic examination are finished and contoured to permit unbroken contact of the ultrasonic transducer with the weld through the couplant medium. The base metal is clean, free of weld spatter, slag, etc, and the weld has a surface smoothness of 250 rms or better and a minimum piping longitudinal clearance of 4t + 2 in (except for extraordinary cases) on both sides of the weld centerline on pipe welds, where t is the thickness of the base metal (in inches).

Code Class 1 and 2 welds that require manual volumetric examination can be reached by hand and have a minimum 6-in. (except in extraordinary cases) radial clearance around surfaces requiring examination. Welds that will be ultrasonically examined by automatic devices are provided with clearance to accommodate the devices that will be used. All areas that require ultrasonic examination are tested in an unpainted condition to enhance coupling between the transducer and surface.

1.3.2 Weld Access for Surface Examination

Code Class 1 and 2 welds that require surface examination have been provided with a minimum radial clearance of 6 in. to permit manual access with magnetic particle probes or dye penetrant brushes and sprays.

1.3.3 Weld Access for Visual Examination

Welds that require direct visual VT-1 or VT-3 examination can be seen either directly with the eye or indirectly by means of optical devices such as mirrors, periscopes, boroscopes, or fiberoptics. In addition, mechanical components such as snubbers, supports, spring loaded and constant weight hangers, pumps, and valves which may require disassembly to perform a visual examination are provided with access and clearance within practical limitations to permit required testing, removal, and disassembly of the component. Snubbers are removable to facilitate operability tests.

1.3.4 Removable Insulation

Insulated welds that require either volumetric or surface examination are provided with removable insulation over the full examination area and with storage space for the removed insulation.

1.3.5 Access Platforms

Permanent platforms for inservice inspection access have been provided in many areas, particularly in high radiation areas where personnel exposure must be minimized. In other areas, space has been provided for erection of temporary scaffolding.

1.4 EVALUATION OF EXAMINATION AND TEST RESULTS

The Owner or his agent shall be responsible for the evaluation of the results of each preservice examination. Evaluations shall be performed in accordance with Article IWA-3000 and other appropriate articles of ASME XI as follows:

Class 1 Components, IWB-3000
Class 2 Components, IWC-3000
Class 3 Components, IWD-3000

1.5 REPAIRS AND REPLACEMENTS

Repairs to components shall be made in accordance with Article IWA-4000 and other appropriate articles of ASME XI as follows:

Class 1 Components, IWB-4000
Class 2 Components, IWC-4000
Class 3 Components, IWD-4000

Replacements shall meet the requirements of the original Construction Code in accordance with Article IWA-7000 and other appropriate articles of ASME XI as follows:

Class 1 Components, IWB-7000
Class 2 Components, IWC-7000
Class 3 Components, IWD-7000

As provided for in IWA-7210(c), replacements may meet all or portions of the requirements of later editions of the Construction Code provided that the specific requirements of IWA-7210(c) are met.

1.6 RECORDS AND REPORTS

1.6.1 Responsibility

The Owner or its Agent shall develop and maintain, at Unit 2, a system of documentation to ensure the availability and storage of the following records:

1. Examination plans and schedules.

2. Reports of examination results.

3. Description of examinations and procedures.

4. Reports of evaluations of results.

5. Reports of corrective actions, repairs, and replacements.

1.6.2 Reports for Preservice Inspection of Class 1, 2, and 3 Components

The Owner shall prepare plans and schedules for preservice inspection that will meet the requirements of ASME XI. Plans and schedules shall be filed with the enforcement and regulatory authorities having jurisdiction at the plant site.

1.6.3 Records of Code Class 1, 2, and 3 Pressure Tests

The record of the visual examination conducted during a system leakage test or a system hydrostatic test shall consist of itemization of the number and location, and quantification (i.e., drops per minute per item) of leaks.

1.7 PRESERVICE INSPECTION SCHEDULE

Preservice examinations required by ASME XI, Articles IWB, IWC, IWD for Code Class 1, 2, and 3 components shall be performed prior to initial startup of the plant.

Required preservice examinations for specific Code Class 1, 2, and 3 components are described in the subsequent sections of this plan.

1.8 INSERVICE DIAGRAMS

Referenced within this Plan is a set of P&IDs that show all systems and portions of systems in Unit 2 that require examination or test.

1. Identification of Code Class 1, 2, and 3 boundaries.

2. Identification of Code Class 1, 2, and 3 components.

1.9 PSI PROGRAM PLAN TABLES FORMAT

The PSI Program Plan Tables have been prepared in the following format:

General Organization

Systems are printed out in alphabetical order. Within a system, items are printed out according to ASME Section XI Examination Category (i.e., B-A through D-C as applicable). Within each Examination Category, items are printed out in isometric drawing sequence and within the alphanumeric sequence assigned to each unique piping and/or component number. Line number lists for Examination Categories B-P, C-H, D-A, D-B, and D-C appear after the tables in Appendix A.

PSI Program Plan Tables Field Descriptions

The entry fields provided for these tables include the following information:

Weld Number - Unique number assigned by the piping installer for piping or unique number assigned to a component, such as for bolting, component weld, casing, body, or other component identification. Tables 1-3 and 1-4 provide appropriate nomenclature

and definitions to assist in the review of the Plan tables.

All entries in this field indicate a nonexempt classification in accordance with ASME Section XI or in response to NRC Question F250.1.

Component/Weld Name - Identifies unique weld or component assignment to the specific weld number.

Line Number - Identifies line number assignment of weld or component location within a system or isometric drawing.

Examination Category - Identifies the applicable Section XI category of classification of the weld or component.

Item No. - Identifies the applicable Section XI item within an Examination Category for a weld or component.

Calc Block Number - Identifies a unique calibration block used for volumetric examinations where required. This field will be completed in the submittal of the Final Summary Report.

Examination Requirements - Identifies the applicable examinations required by Tables IWB-2500-1 and IWC-2500-1 and the Item No. within them.

INSP - Identifies whether the item in the weld number field has been selected for examination.

Remarks - Are provided beneath the weld number field, indicates pertinent information (i.e., Relief Request Needed, FSAR F250.1, location, etc.)

1.10 WELD AND COMPONENT IDENTIFICATION DIAGRAMS

The Weld and Component Identification Diagrams (ISI isometric drawings) have been prepared from the piping contractor's large bore isometric drawings, piping installer's small bore ASME control isometric drawings, and piping installer's piping isometric drawings for the control rod drive hydraulic system.

The ISI isometric drawings reference each contractor's isometric drawings, as applicable. All nonexempt welds and

supports are identified on the piping with the following symbols:

- Welds (Shop or field)

- Pipe support

- Support location on piping

In addition, supports are tabulated by Item No., Support No., and Support (BZ) Detail Drawing in the upper right hand corner of each ISI isometric drawing.

All piping runs indicate the assigned line number designation with continuations to either ISI isometric drawings or piping contractor isometric drawings as indicated below:

ISI Isometric - Cont On ISI-01-19

Piping Contractor - Cont On ISO-01-19

Line number designations are identified below, based on the example (2-AAA-YYY-ZZZ-B):

2 - Unit 2
AAA - System Designation
YYY - Line Size
ZZZ - Unique Line Number
B - ASME Code Class (1, 2, or 3) or ANSI B31.1 Class (4)

Example: 2-RHS-016-153-2

For those supports which have piping integral attachment welds, the weld designation is provided adjacent to the hexagon support symbol as shown below:

5 FW300
FW301

In addition to the nomenclature above, flow direction is indicated in piping, along with datum reference dimensions to column lines and RPV centerline. Piping centerlines as indicated and wall/floor openings are shown for clarity:

TABLE 1-1

APPLICATION OF SELECTION CRITERIA

ASME Code Class 1 Systems

All components and piping defined within the ASME Code Class 1 system boundaries, as indicated on the system P&ID listed in Table 1-2 of the PSI Plan, have been reviewed to the Exemption Criteria of IWB-1220, 1980/W80 Addenda. Based on this review, nonexempt components and piping shall be selected for examination as indicated below:

ASME Section XI Examination Category	Selected Components
B-A	All pressure-retaining components in the reactor vessel shall be examined in accordance with the Examination Methods of Table IWB-2500-1, 1980/W80.
B-B	None. There are no other ASME Class 1 vessels other than the RPV.
B-D	Full penetration welds of nozzles in the RPV (Inspection Program B) shall be examined in accordance with the Examination Methods of Table IWB-2500-1, 1980/W80.
B-E	Pressure-retaining partial penetration welds in the RPV shall be examined in accordance with the Examination Method of Table IWB-2500-1, 1980/W80.
B-F	Pressure-retaining dissimilar metal welds shall be examined in accordance with the Examination Method of Table IWB-2500-1, 1980/W80. RPV safe-end dissimilar welds may be performed coincident with the requirements of Examination Category B-D.

TABLE 1-1 (Cont)

B-G-1	Pressure-retaining bolting >2 in. in diameter shall be examined in accordance with the Examination Method of Table IWB-2500-1, 1980/W80. 1. RPV closure head nuts, washers, bushings, and threads in the RPV flange shall be examined when connections are disassembled. Appendix A shall indicate closure studs may be examined either in place under tension or removed. The Final Summary Report shall indicate whether examinations were done in place or removed. 2. Pump and valve bolting shall be limited to bolts and studs on components selected under Examination Categories B-J, B-L-1, and B-M-1.
B-G-2	Pressure-retaining bolting 2 in. and less in diameter shall be examined in accordance with the Examination Method of Table IWB-2500-1, 1980/W80.
B-H	Integral attachments for the RPV shall be examined in accordance with the Examination Method of Table IWB-2500-1, 1980/W80.
B-J	Pressure-retaining welds in piping shall be examined in accordance with the Examination Method of Table IWB-2500-1, 1980/W80.
B-K-1	Integral attachments for piping, pumps, and valves shall be examined in accordance with the Examination Method of Table IWB-2500-1, 1980/W80.
B-L-1, B-M-1, B-L-2, B-M-2	Pressure-retaining welds in pump casings and valve bodies and pump casing and valve body surfaces shall be examined in accordance with the Examination Method of Table IWB-2500-1, 1980/W80.

TABLE 1-1 (Cont)

1. Valve body welds are defined as those welds indicated on manufacturer component drawings.

2. As necessary, supplemental surface examinations for pump welds and valve welds may be required in accordance with IWB-3518(d), 1980/W80.

3. As required by construction schedule, additional valve bodies may be examined, other than those selected for examination, as shown in Appendix A of this Plan. When the valve bodies are disassembled, they shall be examined to IWB-2500-1, Examination Category B-M-2 requirements.

B-N-1, B-N-2 B-N-3	Accessible surfaces, areas, and welds of those items listed in paragraph 2.2.1 of this Plan shall be examined in accordance with the Examination Method of Table IWB-2500-1, 1980/W80.
B-O	All of the accessible pressure-retaining welds in control rod drive housings shall be examined in accordance with the Examination Method of Table IWB-2500-1, 1980/W80. A surface examination shall be performed. When conditions permit a volumetric will additionally be performed.

1. For those inaccessible CRD housing pressure-retaining welds, ASME Section III examination results shall be reviewed and, if found acceptable, shall serve in lieu of performing the preservice examination.

TABLE 1-1 (Cont)

B-P	All pressure-retaining components within the ASME Code Class I system boundaries shall be examined in accordance with the Examination Method of Table IWB-2500-1, 1980/W80. 1. The Class I system boundaries are defined in P&IDs listed in Table 1-2 of the PSI Plan.
B-O	None. This category does not apply to Unit 2.

TABLE 1-1 (Cont)

ASME Code Class 2 Systems

All components and piping defined within the ASME Code Class 2 system boundaries, as indicated on the system P&IDs, listed in Table 1-2 of the PSI Plan, have been reviewed to the Exemption Criteria of IWC-1220, 1980/W80 Addenda; except that the piping for the residual heat removal, high pressure core spray, and low pressure core spray systems were reviewed to the Exemption Criteria of IWC-1220, 1974/S75 Addenda. Based on this review, nonexempt components and piping shall be selected for examination as indicated below:

ASME Section XI Examination Category	Selected Components
C-A	Pressure-retaining welds in pressure vessels shall be examined in accordance with the Examination Method of Table IWC-2500-1, 1980/W80. 1. An equivalent RHR system heat exchanger shall be examined.
C-B	Pressure-retaining nozzle welds in the RHR heat exchanger selected by Examination Category C-A shall be examined in accordance with the Examination Method of Table IWC-2500-1, 1980/W80.
C-C	Integral attachments for vessels, piping, pumps, and valves shall be examined in accordance with the Examination Method of Table IWC-2500-1, 1980/W80. 1. Integral attachments for all nonexempt piping shall be examined.

TABLE 1-1 (Cont)

2. Integral attachments for components are limited to those components selected under Examination Category C-G.

C-D Pressure-retaining bolting >2 in. in diameter shall be examined in accordance with the Examination Method of Table IWC-2500-1, 1980/W80.

1. Bolting in piping systems required to be examined is limited to flange connections in piping runs selected under Examination Category C-F.

2. Pressure vessel bolting is limited to the RHR heat exchanger selected in Examination Category C-A.

C-F Pressure-retaining welds in piping shall be examined in accordance with the Examination Method of Table IWC-2500-1, 1980/W80.

1. Welds in piping systems other than residual heat removal, high pressure core spray, and low pressure core spray are selected in the following manner:

A. All welds which meet the criteria of Notes 1a, 1b, and 1c shall be examined.

B. A minimum of 50 percent of the welds in the main steam system and 25 percent of the welds in all other systems shall be examined.

TABLE 1-1 (Cont)

C. ALARA considerations and the number of repairs (i.e., ≥2) may be used as additional criteria when selecting welds in 1.b above.

2. Welds in the residual heat removal, high pressure core spray, and low pressure core spray systems are selected in the following manner:

A. Previously determined nonexempt welds are categorized as C-F or C-G in accordance with Table IWC-2520, 1974/S75.

1) Fifty percent of the nonexempt Examination Category C-G welds located in systems which consist of a single stream shall be selected for examination in accordance with Table IWC-2520, 1974/S75.

a) Stress limits, ALARA considerations, and the number of repairs (≥2) may be used in the selection process in 2.A.1 above.

2) For systems which have C-F and/or C-G multiple streams, selection of welds shall be accomplished by using criteria of IWC-2411, 1974/S75 as follows:

a) A single stream shall be configured from the multiple streams. The total welds in a single stream is determined by taking an average of all

TABLE 1-1 (Cont)

the welds divided by the number of multiple streams. Conservatively, 110 percent of the average yields the total number selected for C-F systems. Configuration of the single stream shall be accomplished by using Table IWC-2520, 1974/S75. Stress limits, ALARA considerations, and number of repairs (≥2) may be used in the selection process.

b) For C-G multiple stream systems, the selection method is the same as that for C-F multiple stream systems, except that the total number of welds selected is 50 percent of the configured single stream.

B. In accordance with NRC Question F250.1 portions of systems exempted by exclusion criteria of IWC-1220, 1974/S75 shall not be completely exempted from volumetric examination. Therefore, a representative sample of welds in portions of the RHR, ECCS and containment heat removal systems, normally exempted from preservice examination shall be selected for volumetric inspection. Approximately 7.5 percent of these welds have been selected.

C-G Pressure-retaining welds in pump casings and valves shall be examined in accordance with the Examination Method of Table IWC-2500-1, 1980/W80.

TABLE 1-1 (Cont)

1. Valve welds are identified as those indicated on the manufacturer's component drawings.

C-H All pressure-retaining components within the ASME Code Class 2 system boundaries shall be examined in accordance with the Examination Method of Table IWC-2500-1, 1980/W80.

1. The ASME Code Class 2 system boundaries are defined in P&IDs listed in Table 1-2 of the PSI Plan.

TABLE 1-1 (Cont)

ASME Code Class 3 Systems

All components defined within the ASME Code Class 3 system boundaries, as indicated on the system P&IDs listed in Table 1-2 of the PSI Plan, have been reviewed to the Exemption Criteria of IWD-1220, 1980/W80 Addenda. Based on this review, pressure retaining components and nonexempt integral attachments shall be selected for examination as indicated below:

ASME Section XI Examination Category	Selected Components
D-A	Pressure-retaining components and integral attachments in systems which support reactor shutdown function shall be examined in accordance with the Examination Method in Table IWD-2500-1, 1980/W80.
D-B	Pressure-retaining components and integral attachments in systems which support emergency core cooling, containment heat removal, atmosphere cleanup, and reactor residual heat removal shall be examined in accordance with the Examination Method in Table IWD-2500-1, 1980/W80.
D-C	Pressure-retaining components and integral attachments in systems which support residual heat removal from the spent fuel pool shall be examined in accordance with the Examination Method in Table IWD-2500-1, 1980/W80.

Nine Mile Point Unit 2

TABLE 1-2

INSERVICE DIAGRAMS (P&ID)

UNIT 2 ASME SECTION III, CLASS 1, 2, AND 3 SYSTEMS

P&ID	System	System Designation	ASME/ANSI Class Designation
20	Breathing Air	AAS	2
1	Auxiliary Steam	ASS	4*
13	Reactor Building Closed-Loop Cooling Water	CCP	2,3
82	Containment Atmosphere Monitoring	CMS	2
61	Primary Containment Purge	CPS	2
33	High-Pressure Core Spray	CSH	1,2
32	Low-Pressure Core Spray	CSL	1,2
63	Reactor Building Equipment Drains	DER	1,2
63	Reactor Building Floor Drains	DFR	2
104	Air Startup-Standby Diesel Generator	EGA	3
104	Standby Diesel-Generator Fuel	EGF	3
43	Fire Protection-Water	FPW	2
6	Feedwater	FWS	1
106	N2 Inerting System	GSN	2,3
61	Standby Gas Treatment	GTS	2
62	DBA Hydrogen Recombiner	HCS	2
53	Control Building Air Conditioning	HVC	3
53	Control Building Chilled Water	HVK	3
19	Instrument Air	IAS	2,3
35	Reactor Core Isolation Cooling	ICS	1,2
28	Reactor Vessel Instrumentation	ISC	1,2
81	Containment Leakage Monitoring	LMS	2
1	Main Steam	MSS	1,2,3,4*
29	Reactor Coolant (Recirculation)	RCS	1,2,3
30	Control Rod Drive Hydraulic System	RDS	2
31	Residual Heat Removal System	RHS	1,2,3
19	Service Air	SAS	2
38	Spent Fuel Pool Cooling and Cleanup	SFC	2,3
36	Standby Liquid Control	SLS	1,2
1	Main Steam Safety Valves, Vents, and Drains	SVV	3
11	Service Water	SWP	3
1	Turbine Gland Seal and Exhaust	TME	4*
37	Reactor Water Cleanup	WCS	1,2,3

*Based on Regulatory Guide 1.26, portions of Class 4 systems have been classified as Quality Group B and therefore are examined under the requirements of ASME Section XI, Class 2 (IWC).

TABLE 1-3

PSI NOMENCLATURE

CLSWSHBSH	Closure Washers and Bushings
DLR	Dollar
DIFF	Diffuser
DR=1	Less than 100 mRem/hr
DR=2	100-500 mRem/hr
DR=3	Greater than 500 mRem/hr
ELB	Elbow
EXL	Extruded Outlet
FE	Flow Element
FLG	Flange
HW	Heat Exchanger Weld
INSD	Installed
IR	Inside Radius
LTR	Later
N	No
N/A	Not Applicable
NOZ	Nozzle
PB	Pipe Bolt
PC	Pump Casing
PPB	Pump Bolt
PW	Pump Weld
RDL	Radial
RED	Reducer/Reducing
RFBLBR	Refueling Bellows Bar
RMVD	Removed
RPV	Reactor Pressure Vessel
SFED	Safe End
SFEDX	Safe End Extension
SOL	Sockolet
STRT	Temporary Strainer
SWL	Sweepolet
THDD	Threaded
TRN	Trunion
V	Vessel
VB	Valve Bolt
VBY	Valve Body
VW	Valve Weld
WNF	Weld Neck Flange
WOL	Weldolet
Y	Yes
Z	Primary to Secondary Containment Penetration

Relief Request No.: RR-IWF-1

1. Identification of Components

The following physically inaccessible component supports located in the ASME Safety Class 3 service water system require full relief from ASME XI examination:

2SWP-PSR741A3 through 2SWP-PSR777A3
2SWP-PSR689A3 through 2SWP-PSR733A3
2SWP-PSSP848A3
2SWP-PSR697A3
2SWP-PSR740A3
2SWP-PSST728A3
2SWP-PSST771A3

2. ASME Section XI Requirements.

Visual VT-3 examination is required for these component supports in accordance with IWF examination Category F-B, Item No. F-2,3.

3. Basis for Relief

The visual examination required by the Unit 2 PSI Program Plan for Component Supports cannot be performed due to the inaccessibility of this portion of the service water tunnels. The low pressure, low temperature service water piping being supported is located beneath several feet of soil and sealed concrete caps. The structural integrity of these component supports has been previously verified during fabrication and erection under ASME Section III. The overall level of plant quality would not be increased by performing the excavating and structural work necessary to gain access to these supports.

4. Inspection Period for Relief Request

Preservice inspection.

Relief Request No.: RR-IWF-2

1. Identification of Components

The physically accessible component supports located in the ASME Safety Class 3 service water system require partial relief from ASME XI examination.

2. ASME Section XI Requirements

Visual VT-3 examination including verification of pipe to support gaps is required for these supports in accordance with IWF examination Category F-B, No. F-1,2,3.

3. Basis for Relief

The visual examination required by the Unit 2 PSI Program Plan for Component Supports can only be performed on a limited scope due to visual inaccessibility of pipe to support member gap. This attribute is not verifiable due to the anti-sweat coating applied to the low temperature, low pressure service water piping being supported. Gaps have been previously verified and accepted during erection under ASME Section III prior to the application of the "Mastic" coating. All remaining ASME XI visual examination attributes are verified. The overall level of plant quality will not be increased by removal and reapplication of this concrete-like coating required to gain access to these supports.

4. Inspection Period for Relief Request

Preservice inspection.

Relief Request No.: RR-IWF-3

1. Identification of Components

The following component supports are located in the suppression pool and require relief from ASME XI examination:

2RHS-PSR1069A2	2RHS-PSR1065A2
2RHS-PSR1062A2	2RHS-PSR1061A2
2RHS-PSR1064A2	2ICS-PSR273A2

2. ASME Section XI Requirements

Visual VT-3 examination is required for these component supports in accordance with IWF examination category F-B, Item No. F-2,1.

3. Basis for Relief

The visual examination required by the Unit 2 PSI Program Plan for Component Supports cannot be performed due to the inaccessibility of these supports located in the suppression pool. The structural integrity of these component supports has been previously verified during fabrication and erection under ASME Section III. The overall level of plant quality will not be increased by the installation and removal of temporary rigging that would be required to obtain visual access.

4. Inspection Period for Relief Request

Preservice inspection.

Relief Request No.: RR-IWF-4

1. Identification of Components

The following component supports require partial relief from ASME XI examination:

2ICS-PSSP307A1	2ICS-PSSP317A1
2ICS-PSSH327A1	2ICS-PSSP318A1
2ICS-PSSH308A1	2ICS-PSSH315A1
2ICS-PSSH313A1	2ICS-PSSP323A1
2ICS-PSSP309A1	2ICS-PSSP321A1
2ICS-PSSP310A1	2MSS-PSSH423A1
2ICS-PSSP312A1	2MSS-PSSP422A1
2ICS-PSSP314A1	2MSS-PSSP430A1
2ICS-PSSH319A1	2MSS-PSSP428A1
2ICS-PSSP316A1	2ICS-21PSSP03C1
2ICS-PSSP320A1	2ICS-101PSSP02C2

2. ASME Section XI Requirements

Visual VT-4 examination to verify the support of hot setting at rated temperature is required by Subsection IWF-2200(b), Category IWF 2500-1, F-C.

3. Basis for Relief

Due to environmental conditions, the preceding supports are inaccessible for examination at elevated temperatures. This area is located in the primary containment above the refueling bulkhead (reactor head area). For safety of personnel, these supports will not be examined at elevated temperatures. The following alternate testing has been performed:

a. Cold setpoint verification prior to and following heatup.

b. Pipe movements verified and found acceptable by NMPC Engineering.

c. Snubbers stroked manually prior to installation (freedom of movement).

4. Inspection Period for Relief Request

Preservice Inspection.

TABLE 1-4

WELD AND COMPONENT IDENTIFICATION

1. Large bore piping welds listed in the plan tables have been assigned unique numbers as follows:

   XX-XX-AAA-FWXXX
   -SWXXX
   -FWSWXXX

   Where:

XX-XX	ISI Isometric Drawing
AAA	System Designation
FWXXX	Field Weld Sequential Number
SWXXX	Shop Weld Sequential Number
FWSWXXX	Shop Weld Repaired in the Field as Identified by the Piping Contractor

   Example: 01-16-MSS-FW008, ISI Isometric 01-16, MSS - Main Steam, FW008 - the 8th field weld on the ISI isometric drawing.

2. Small bore piping welds in the plan tables have been assigned unique numbers as follows:

   AAA-XXXX-FWXXX

   Where:

AAA	System Designation
XXXX	ISI Isometric Drawing
FWXXX	Field Weld Sequential Number

   Example: MSS-047A-FW004, MSS - Main Steam, 047A, ISI Isometric Drawing, FW004 - the 4th field weld on the ISI isometric drawing.

3. Piping integral attachment welds listed in the Plan tables follow the format of large bore piping welds, except that the FWXXX follows a sequence of FW300, 301, etc.

4. Piping integral attachment welds listed in the Plan tables for CRD Piping have unique numbers assigned as follows:

TABLE 1-4 (Cont)

XX-YY-IAWAAA-X

Where

XX-YY	ISI Isometric Drawing
IAWAAA	Integral attachment weld related to a particular support
X	Attachment number on the support

Example: 65-00-IAW16B-1, 65-00 - ISI isometric drawing, IAW16B - integral attachment weld for support 16B, 1 - Attachment 1

5. Component identifications are provided in the Plan tables as follows:

VBXXX	- Valve bolting with a sequential number.
VBYXXX	- Valve body with a sequential number.
VWXXXX-X	- Valve weld with valve identification.
PBXXX	- Pipe bolt with sequential number.
PCXXX	- Pump casing with sequential number.
PPBXXX	- Pump bolt with sequential number.
PWXXX	- Pump weld with sequential number.
HWXXX	- Heat exchanger weld with sequential number.

6. All items identified for the RPV are prefixed RPV, followed by nomenclature in Table 1-3 or alphanumerical sequence assignments.

SECTION 2

CLASS 1 COMPONENTS

2.1 SCOPE AND RESPONSIBILITY

This section of the plan provides the rules and requirements for preservice inspection, acceptance standards for flaw indications, system pressure tests, and repairs and replacements for ASME Code Class 1 pressure-retaining components and their integral attachments.

2.1.1 Class 1 Components

The ASME Code Class 1 systems or portions of systems are listed in Table 1-2.

2.2 EXAMINATIONS AND INSPECTIONS

The examinations shall be witnessed or otherwise verified by an Inspector.

2.2.1 Preservice Inspection

The preservice examinations required by Article IWB-2000 of ASME Section XI shall be completed prior to initial plant startup. These preservice examinations shall be applied to the component parts identified in Table IWB-2500-1 and shall be extended to include essentially 100 percent of the pressure-retaining welds in all Class 1 components, except in those components exempted from examination by IWB-1220(a), (b), and (c) or by an approved request for relief.

In addition, in Examination Category B-O, pressure-retaining welds in control rod drive housings, essentially 100 percent of the welds in the installed peripheral control rod drive housings shall be examined.

VT-1 and VT-3 examinations as required by Examination Categories B-N-1, B-N-2, and B-N-3 on the RPV internals will be inspected subject to the limitations of accessibility. The following constitutes a list of potentially inspectable items, including, but not limited to:

- Feedwater sparger and support brackets.
- Core spray sparger and support brackets.

- Core plate.
- Core spray piping.
- Moisture separator.
- Steam dryer.
- Guide rod brackets.
- Steam dryer lugs.
- Upper guide rods.
- Jet pump beams.
- Jet pump piping.
- Fuel cells.
- Dry tubes.
- Stub tubes.
- Feedwater nozzle inner radius.
- CRD nozzle.
- Reactor vessel interior wall above core.
- Manways.
- Debris inspection below core.

Appendix A identifies the specific components and parts which require preservice examination.

A complete list of inspected items will be provided in the Final Summary Report.

2.3 ACCEPTANCE STANDARDS

Acceptance standards shall be in accordance with Article IWB-3000 of the Code.

2.3.1 Preservice Inspections

The preservice examinations shall be evaluated by comparing the examination results with the acceptance standards specified in Article IWB-3000.

2.4 SYSTEM PRESSURE TEST

Code Class 1 pressure-retaining components within each system boundary shall be subject to system pressure tests in accordance with the rules and requirements contained in Articles IWA-5000 and IWB-5000 of the ASME Code Section XI.

Final detailed procedures which meet these requirements and the requirements of Pressure Test Guidelines under Section 2.4.1 of this Plan shall be prepared by the Owner or its Agent, and submitted in the Final Summary Report.

Prior to use, all system pressure test and hydrostatic test procedures shall satisfy the authorized inspector that the procedures satisfy all requirements of ASME XI.

2.4.1 Pressure Test Guidelines

System pressure test procedures shall comply with the requirements of Article IWA-5000, and as applicable, Article IWB-5000 for Class 1 components.

The written procedures shall define whether the pressure test is a system leak test or hydrostatic test, and shall fully define the pressure test boundaries. The procedures shall include sufficient detail to identify applicability of the procedure to the component being tested, and shall provide technical adequacy to ensure that the test meets the requirements and intent of ASME XI.

2.5 REPAIRS AND REPLACEMENTS

2.5.1 Repairs

Repair procedures for pressure-retaining components and component supports shall meet the rules and requirements contained in Articles IWA-4000 and IWB-4000.

Repair operations shall be performed in accordance with a program delineating essential requirements of the complete repair cycle (IWA-4130).

2.5.2 Replacements

Articles IWA-7000 and IWB-7000 provide the rules and requirements for replacements. Replacements are defined as spare and renewal components, appurtenances, and subassemblies or parts of a component or system. Replacement also includes the addition of components, such as valves, and system changes, such as rerouting of piping.

2.5.3 Construction Code

Repairs and replacements should be in accordance with the Owners' design specification and construction code of the component or system. Later editions of the construction code or Section III of the Boiler and Pressure Vessel Code either in its entirety, or portions thereof, may be used provided they meet or exceed the original construction code requirements or an engineering evaluation is performed justifying use of the later codes. If the repair welding cannot be performed in accordance with these requirements, alternate rules are provided in IWB-4000.

SECTION 3

CLASS 2 COMPONENTS

3.1 SCOPE AND RESPONSIBILITY

This section of the Plan provides the rules and requirements for preservice inspection, acceptance standards for flaw indications, system pressure tests, and repairs and replacements for ASME III Code Class 2 pressure-retaining components and their integral attachments.

3.1.1 Class 2 Components Inservice Diagrams

The ASME Code Class 2 systems or portions of systems are listed in Table 1-2.

3.2 EXAMINATIONS AND INSPECTIONS

The examinations shall be witnessed or otherwise verified by an Inspector.

3.2.1 Preservice Inspection

The preservice examinations required by Article IWC-2000 of ASME Section XI shall be completed prior to initial plant startup. These preservice examinations shall be applied to the applicable component parts identified in Table IWC-2500-1. Appendix A identifies the specific components and parts which require preservice examination.

3.3 ACCEPTANCE STANDARDS

Acceptance standards shall be in accordance with Article IWC-3000 of the Code.

3.3.1 Preservice Inspections

The preservice examinations shall be evaluated by comparing the examination results with the acceptance standards specified in Article IWB-3000.

3.4 SYSTEM PRESSURE TEST

Code Class 2 pressure-retaining components within each system boundary shall be subject to system pressure tests in accordance with the rules and requirements contained in Article IWA-5000 and IWC-5000 of the ASME Code, Section XI.

Final detailed procedures which meet these requirements and the requirements of Pressure Test Guidelines under Section 3.4.1 of this Plan shall be prepared by the Owner, or its Agent, and submitted in the Final Summary Report.

Prior to use, all system pressure test and hydrostatic test procedures shall satisfy the authorized inspector that the procedures satisfy all requirements of ASME XI.

3.4.1 Pressure Test Guidelines

System pressure test procedures shall comply with the requirements of Article IWA-5000, and as applicable, Article IWC-5000 for Class 2 components.

The written procedures shall define whether the pressure test is a system leak test or hydrostatic test, and shall fully define the pressure test boundaries. The procedures shall include sufficient detail to identify applicability of the procedure to the component being tested, and shall provide technical adequacy to ensure that the test meets the requirements and intent of ASME XI.

3.5 REPAIRS AND REPLACEMENTS

3.5.1 Repairs

Repair procedures for Class 2 pressure-retaining components shall meet the rules and requirements contained in Articles IWA-4000 and IWC-4000.

Repair operations shall be performed in accordance with a program delineating essential requirements of the complete repair cycle (IWA-4130).

3.5.2 Replacements

Articles IWA-7000 and IWC-7000 provide the rules and requirements for replacements. Replacements are defined as spare and renewal components, appurtenances, and subassemblies or parts of a component or system. Replacement also includes the addition of components, such as valves, and system changes, such as rerouting of piping.

3.5.3 Construction Code

Repairs should be in accordance with the Owners' design specification and construction code of the component or system. Later editions of the construction code or Section III of the Boiler and Pressure Vessel Code either in

its entirety or portions thereof may be used provided they meet or exceed the original construction code requirements or an engineering evaluation is performed justifying use of the later codes. If the repair welding can not be performed in accordance with these requirements, alternate rules are provided in IWC-4000.

SECTION 4

CLASS 3 COMPONENTS

4.1 SCOPE AND RESPONSIBILITY

This section of the plan provides the rules and requirements for preservice inspection, acceptance standards for flaw indications, system pressure tests, and repairs and replacements for ASME Code Class 3 pressure-retaining components and their integral attachments.

4.1.1 Class 3 Components

The ASME Code Class 3 systems or portions of systems are listed in Table 1-2.

4.2 EXAMINATION REQUIREMENTS

The examinations shall be witnessed or otherwise verified by an Inspector.

4.2.1 Preservice Inspection

The preservice examinations required by Article IWD-2000 of ASME Section XI shall be completed prior to initial plant startup. These preservice examinations shall be applied to the applicable component parts identified in Table IWC-2500-1. Appendix A identifies the specific components and parts which require preservice examination.

4.3 ACCEPTANCE STANDARDS

Acceptance standards shall be in accordance with Article IWD-3000 of the Code.

4.3.1 Preservice Inspections

The preservice examinations shall be evaluated by comparing the examination results with the acceptance standards specified in Article IWD-3000.

4.4 SYSTEM PRESSURE TEST

Code Class 3 pressure-retaining components within each system boundary shall be subject to system pressure tests in accordance with the rules and requirements contained in Articles IWA-5000 and IWD-5000 of the ASME Code, Section XI.

Final detailed procedures which meet these requirements and the requirements of Pressure Test Guidelines under Section 4.4.1 of this ISI Plan shall be prepared by the Owner, or its Agent, shall be submitted in the Final Summary Report.

Prior to use, all system pressure test and hydrostatic test procedures shall satisfy the authorized inspector that the procedures satisfy all requirements of ASME XI.

4.4.1 Pressure Test Guidelines

System pressure test procedures shall comply with the requirements of Article IWA-5000, and as applicable, Article IWD-5000 for Class 3 components.

The written procedures shall define whether the pressure test is a system leak test or hydrostatic test, and shall fully define the pressure test boundaries. The procedures shall include sufficient detail to identify applicability of the procedure to the component being tested, and shall provide technical adequacy to ensure that the test meets the requirements and intent of ASME XI.

4.5 REPAIRS AND REPLACEMENTS

4.5.1 Repairs

Repair procedures for Class 3 pressure-retaining components shall meet the rules and requirements contained in Article IWA-4000 and IWD-4000.

Repair operations shall be performed in accordance with a program delineating essential requirements of the complete repair cycle (IWA-4130).

4.5.2 Replacements

Articles IWA-7000 and IWD-7000 provide the rules and requirements for replacements. Replacements are defined as spare and renewal components, appurtenances, and subassemblies or parts of a component or system. Replacement also includes the addition of components, such as valves, and system changes, such as rerouting of piping.

4.5.3 Construction Code

Repairs should be in accordance with the Owners' design specification and construction code of the component or system. Later editions of the construction code or

Section III of the Boiler and Pressure Vessel Code either in its entirety or portions thereof may be used provided they meet or exceed the original construction code requirements or an engineering evaluation is performed justifying use of the later codes. If the repair welding cannot be performed in accordance with these requirements, alternate rules are provided in IWD-4000.

SECTION 5

CODE CASES

NMPC reserves the right to use any Code Cases applicable to the Edition and Addenda in use and which have been referenced by Regulatory Guide 1.147, and whose use may be necessary or desirable due to conditions found during the course of examinations. It should be noted that all examinations of stainless steel piping systems shall be performed using procedures, techniques, and personnel which have been qualified to the requirements of the EPRI NDE Center for Detection of IGSCC.

A list of all Code Cases referenced in Regulatory Guide 1.147 actually used during the Preservice Inspection shall be provided as part of the Final Summary Report for the Preservice Inspection of Unit 2.

SECTION 6

REQUESTS FOR RELIEF

During the course of the Preservice Inspection it may become necessary to seek approval from the NRC for Requests for Relief under IWA, B, C, and D for Unit 2. At such time that Requests for Relief under IWA, B, C, and D are identified, they will be processed and evaluated and submitted to the NRC for approval.

Relief Requests are assigned unique sequential numbers based on Examination Category and shall be submitted in the Final Summary Report.

Relief Request No.: RR-IWB-1

1. Identification of Components

   Pages 3 through 4 of 4 identify those CRD housing welds for which relief from partial or total ASME XI examination is required.

2. ASME Section XI Requirements

   Volumetric or surface examinations are required for CRD housing welds in accordance with Table IWB-2500-1, Category B-O, Item No. B14.10.

3. Basis for Relief

   The examinations of the CRD housing welds as identified in the Unit 2 PSI Program Plan can only be performed on a limited scope due to the inherent obstructions caused by the surrounding cables, tubing, and foundations which are integral parts of the CRD assembly. The approximate extent of the best effort surface and volumetric ASME XI preservice exams and the limiting permanent obstructions are indicated on pages 3 through 4 of 4. It is not practical to remove or replace these obstructions due to the congestion in the CRD assembly area. The integrity of the CRD housings has also been previously verified by nondestructive examination during fabrication and erection under ASME Section III.

4. Inspection Period for Relief Request

   Preservice inspection.

5. Alternate Tests or Examinations

   ASME Section XI volumetric and surface exams are performed. ASME Section III liquid penetrant and radiography exam results will also be used.

6. Schedule for Implementing Alternate Test

   During preservice inspection.

7. Impact to Overall Plant Level of Quality

   Overall plant quality is not impacted.

8. Preservice Examination Results

ASME XI volumetric and surface examination results and ASME III liquid penetrant and radiography examination results will be included in the Final Summary Report.

9. Radiation Considerations

None.

RR-IWB-1 (Cont)

Weld	Extent of Exam	Obstructions
RPV-CRDH-001A	170°	Cables, Tubing
RPV-CRDH-001B	270°	Foundation
RPV-CRDH-002A	90°	Cables, Tubing
RPV-CRDH-002B	270°	Foundation
RPV-CRDH-003A	170°	Cables, Tubing
RPV-CRDH-003B	270°	Foundation
RPV-CRDH-004A	170°	Cables, Tubing
RPV-CRDH-004B	270°	Foundation
RPV-CRDH-005A	170°	Cables, Tubing
RPV-CRDH-005B	270°	Foundation
RPV-CRDH-006A	170°	Cables, Tubing
RPV-CRDH-006B	270°	Foundation
RPV-CRDH-007A	170°	Cables, Tubing
RPV-CRDH-007B	270°	Foundation
RPV-CRDH-008A	Inaccessible	Foundation, Tubing
RPV-CRDH-008B	Inaccessible	Foundation, Tubing
RPV-CRDH-009A	Inaccessible	Foundation, Tubing
RPV-CRDH-009B	Inaccessible	Foundation, Tubing
RPV-CRDH-010A	Inaccessible	Foundation, Tubing
RPV-CRDH-010B	Inaccessible	Foundation, Tubing
RPV-CRDH-011A	Inaccessible	foundation, Tubing
RPV-CRDH-011B	Inaccessible	Foundation, Tubing
RPV-CRDH-012A	Inaccessible	Foundation, Tubing
RPV-CRDH-012B	Inaccessible	Foundation, Tubing
RPV-CRDH-013A	170°	Tubing
RPV-CRDH-013B	Inaccessible	Foundation, Tubing
RPV-CRDH-014A	170°	Tubing
RPV-CRDH-014B	Inaccessible	Foundation, Tubing
RPV-CRDH-015A	170°	Tubing
RPV-CRDH-015B	Inaccessible	Foundation, Tubing
RPV-CRDH-016A	170°	Tubing
RPV-CRDH-016B	Inaccessible	Foundation, Tubing
RPV-CRDH-017A	170°	Tubing
RPV-CRDH-017B	Inaccessible	Foundation, Tubing
RPV-CRDH-018A	170°	Tubing
RPV-CRDH-018B	Inaccessible	Foundation, Tubing
RPV-CRDH-019A	170°	Tubing
RPV-CRDH-019B	Inaccessible	Foundation, Tubing
RPV-CRDH-020A	170°	Tubing
RPV-CRDH-020B	Inaccessible	Foundation, Tubing
RPV-CRDH-021A	170°	Tubing
RPV-CRDH-021B	Inaccessible	Foundation, Tubing
RPV-CRDH-022A	170°	Tubing
RPV-CRDH-022B	Inaccessible	Foundation, Tubing
RPV-CRDH-023A	170°	Tubing

RR-IWB-1 (Cont)

Weld	Extent of Exam	Obstructions
RPV-CRDH-023B	Inaccessible	Foundation, Tubing
RPV-CRDH-024A	170°	Tubing
RPV-CRDH-024B	Inaccessible	Foundation, Tubing
RPV-CRDH-025A	170°	Tubing
RPV-CRDH-025B	Inaccessible	Foundation, Tubing
RPV-CRDH-026A	170°	Tubing
RPV-CRDH-026B	Inaccessible	Foundation, Tubing
RPV-CRDH-027A	Inaccessible	Foundation, Tubing
RPV-CRDH-027B	Inaccessible	Foundaiton, Tubing
RPV-CRDH-028A	Inaccessible	Foundation, Tubing
RPV-CRDH-028B	Inaccessible	Foundaiton, Tubing
RPV-CRDH-029A	Inaccessible	Foundation, Tubing
RPV-CRDH-029B	Inaccessible	Foundation, Tubing
RPV-CRDH-030A	Inaccessible	Foundation, Tubing
RPV-CRDH-030B	Inaccessible	Foundation, Tubing
RPV-CRDH-031A	Inaccessible	Foundation, Tubing
RPV-CRDH-031B	Inaccessible	Foundation, Tubing
RPV-CRDH-032A	Inaccessible	Foundation, Tubing
RPV-CRDH-032B	Inaccessible	Foundation, Tubing
RPV-CRDH-033A	Inaccessible	Foundation, Tubing
RPV-CRDH-033B	90°	Foundation
RPV-CRDH-034A	Inaccessible	Cables
RPV-CRDH-034B	270°	Foundation
RPV-CRDH-035A	100°	Cables, Tubing
RPV-CRDH-035B	270°	Foundation
RPV-CRDH-036A	170°	Cables, Tubing
RPV-CRDH-036B	270°	Foundation
RPV-CRDH-037A	170°	Cables, Tubing
RPV-CRDH-037B	270°	Foundation
RPV-CRDH-038A	170°	Cables, Tubing
RPV-CRDH-038B	270°	Foundation
RPV-CRDH-039A	170°	Cables, Tubing
RPV-CRDH-039B	90°	Foundation
RPV-CRDH-040A	170°	Cables, Tubing
RPV-CRDH-040B	90°	Foundation

Nine Mile Point Unit 2

Relief Request No.: RR-IWB-2

1. Identification of Components

   Page 3 of 8 identifies the RPV nozzle to shell welds for which partial relief from ASME XI examination is required.

2. ASME Section XI Requirements

   Volumetric examinations are required for RPV nozzle to shell welds in accordance with Table IWB-2500-1, Category B-D, Item No. B3.90.

3. Basis for Relief

   The automated examination of the RPV nozzle to shell welds as identified in the Unit 2 PSI Program Plan can only be performed on a limited scope due to the nozzle to shell blend, vessel scanner tracks, other nozzles, and mechanical limitations. The extent of the worst case limitations including description and sketches is shown on pages 3 through 8 of 8. The integrity of the subject welds has also been previously verified by nondestructive examination during fabrication and erection under ASME Section III.

4. Inspection Period for Relief Request

   Preservice inspection.

5. Alternate Tests or Examinations

   Ultrasonic inspections performed in the vessel fabrication shop will also be used.

6. Schedule for Implementing Alternate Test

   Previously performed in shop.

7. Impact to Overall Plant Level of Quality

   Overall plant quality is not impacted.

8. Preservice Examination Results

   ASME XI volumetric examination results and shop UT data will be included in the Final Summary Report.

9. Radiation Considerations

None.

RR-IWB-2 (Cont)

Nozzle	Weld and/or Raster	Extent of Limitation: One-Sided Perpendicular Direction	Extent of Limitation: Parallel Direction	Limitation Caused By	Typical Sketch Shown on Page
N1	KA01, KA02	0°-360°, 19"-26"	0°-360°, 19"-26"	Nozzle Blend	4
N2	KA03 through KA12	0°-360°, 10"-20" 215°-325°	0°-360°, 10"-20" 215°-325°	1) Nozzle Blend 2) Vessel Scanner tracks - welds KA03, 04, 05, 06 07, 10, 12. 3) N9 Nozzle Welds KA05, 10, 11	5
N4	KA17 through KA22	0°-360°, 11"-19"	0°-360°, 11"-19"	Nozzle Blend	6
N5 N16	KA23, 32	0°-360°, 11"-21" 215°-325°, 30°-140°	0°-360°, 11"-21" 215°-325°, 30°-140°	1) Nozzle Blend 2) Vessel Scanner Tracks	7
N6	KA24, 25, 26	0°-360°, 10"-21"	0°-360°, 10"-21"	Nozzle Blend	8

EXAMINATION LIMITATION REPORT SHEET

Site/Unit NMP2

Page 3 of 5

Raster No. A01C1*

Package No. 1749633

Weld No. RPV-KA01

Procedure No. 83A1749

*SEE A01C2 FOR COMPLETION OF RASTER.

Rev. 0 F.C. No. 001,002

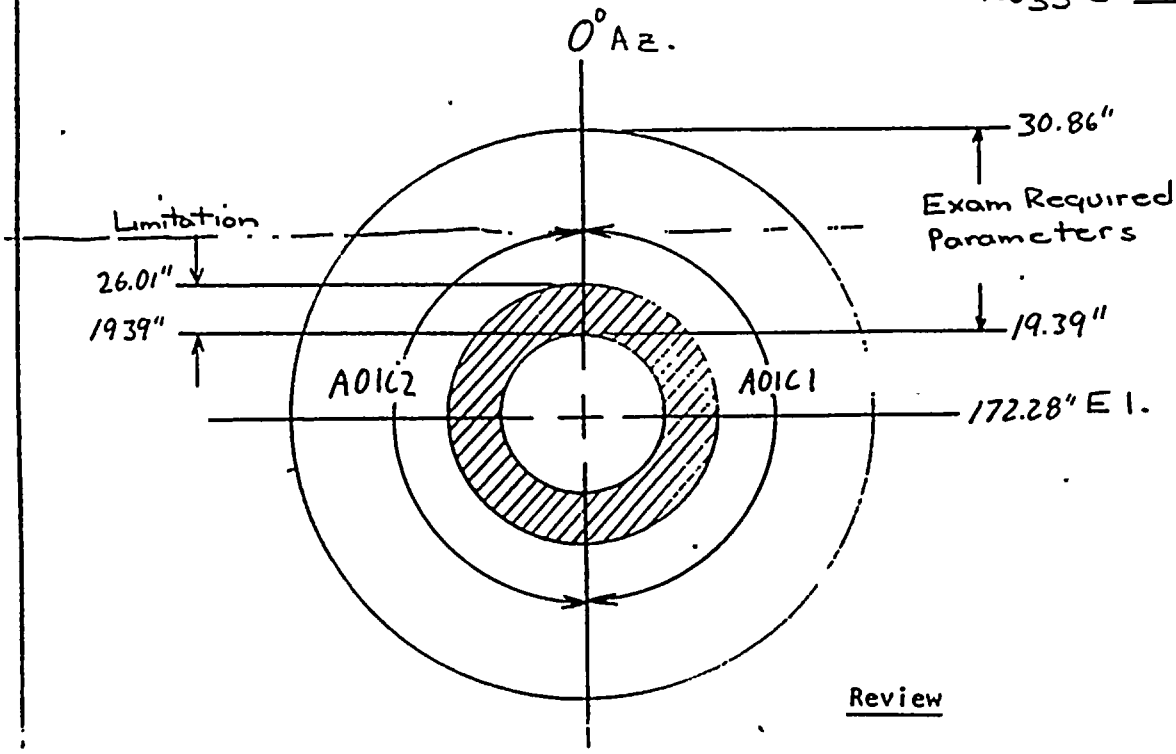
Limitation caused by NOZZLE BLEND

Area not scanned due to limitation

X - 0° to 360° Y - 19.39" to 26.01"

Comments (use sketch to provide clarity) REF DWG-NES 80E3536 REV 3

No 33 lc N/A



Review

Date

Date

Date

Prepared By Date 21FEB86

FORM NES 028-114/1 8/85 REF: Automated

EXAMINATION LIMITATION REPORT SHEET

Site/Unit NMP2

Page 4 of 5

Raster No. A05I1

Package No. 1749C18

Weld No. RPV-KA05

Procedure No. 83A1749

Rev. 0 F.C. No. 001,002

Limitation caused by INSTRUMENTATION NOZZLE, ~~AND~~ TRACK #5 AND NOZZLE BLEND

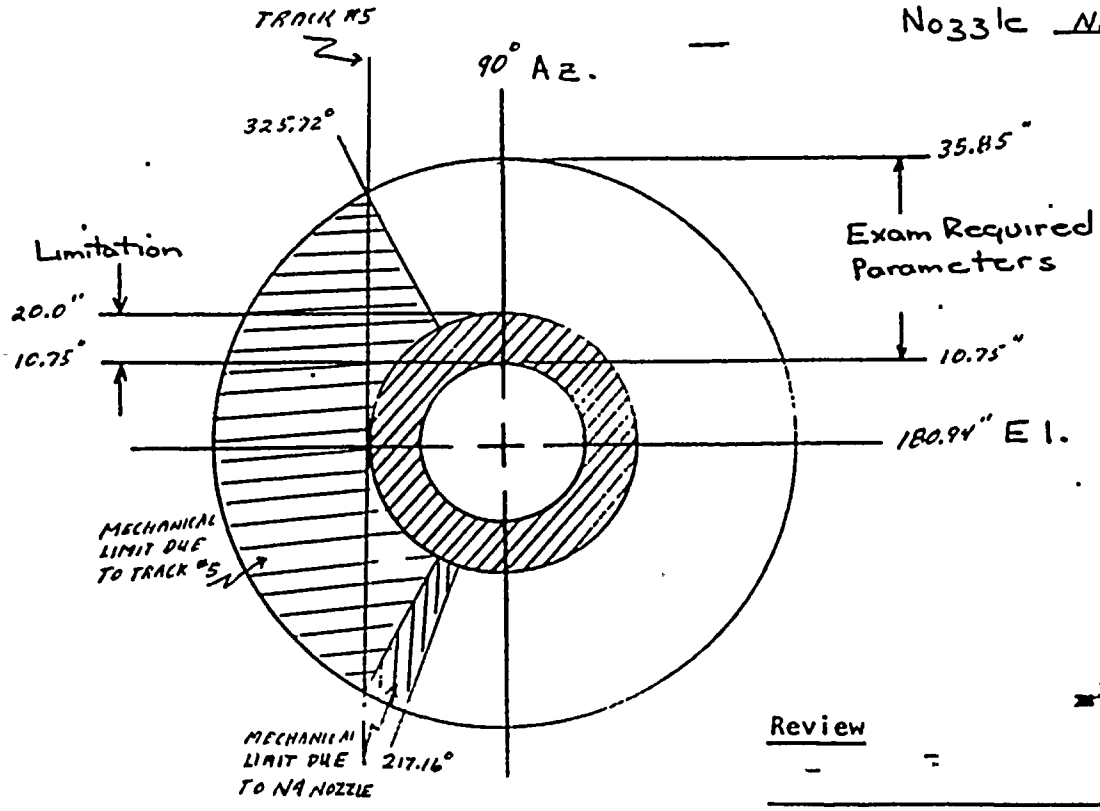
Area not scanned due to limitation

X - 0° to 360° Y - 10.75" to 20.0" NOZZLE BLEND

X = 217.16° to 325.72° Y - 20.0" to 35.85" TRACK #5, AND NOZZLE

Comments (use sketch to provide clarity)

Nozzle N2C



Review

Date

Date

Date

Prepared By [signature] Date 2-19-86

EXAMINATION LIMITATION REPORT SHEET

Site/Unit NMP2 Page 2 of 5

Raster No. A17C1 Package No. 1749C27

Weld No. RPV-KA17 Procedure No. 83A1749

Rev. 0 F.C. No. 001,002

Limitation caused by NOZZLE BLEND

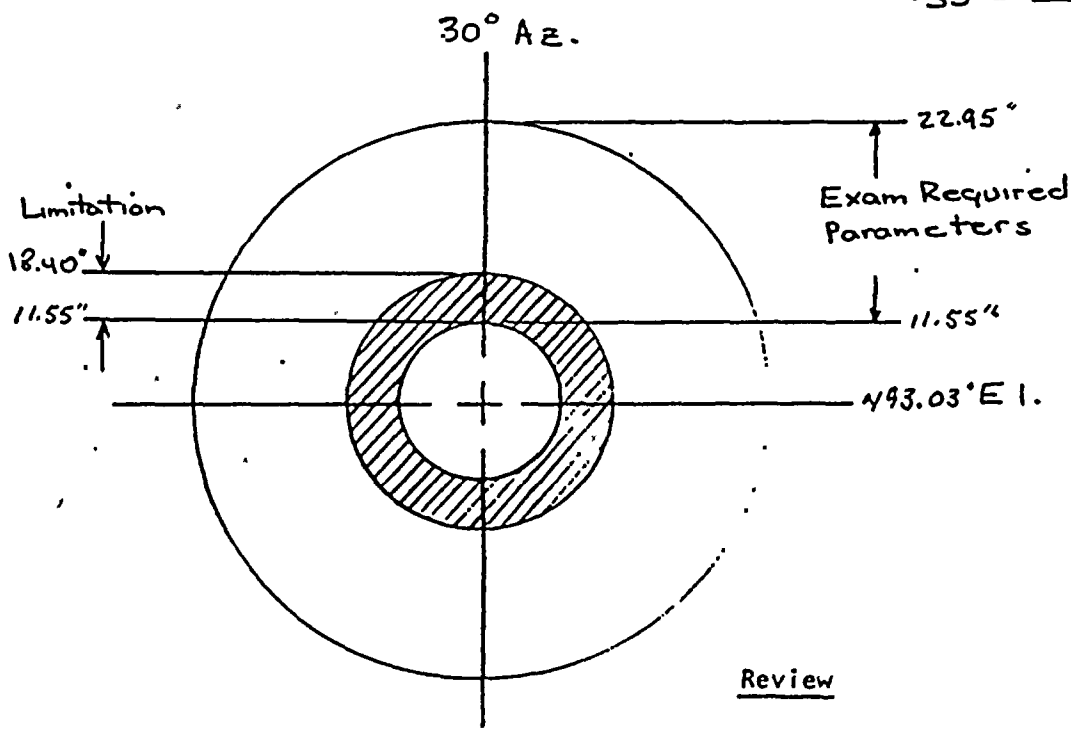
Area not scanned due to limitation

X - 0° - ~~361°~~ 360° Y - 18.40" - 11.55"

Comments (use sketch to provide clarity)

REF DWG 80E3536 ~~Rev~~ Rev 3

Nozzle N4A



Review

Date

Date

Date

Prepared By Date 2-17-86

EXAMINATION LIMITATION REPORT SHEET

Site/Unit NMP2 Page 3 of 5

Raster No. A32C1 Package No. 174964

Weld No. KA32 Procedure No. 83A1749

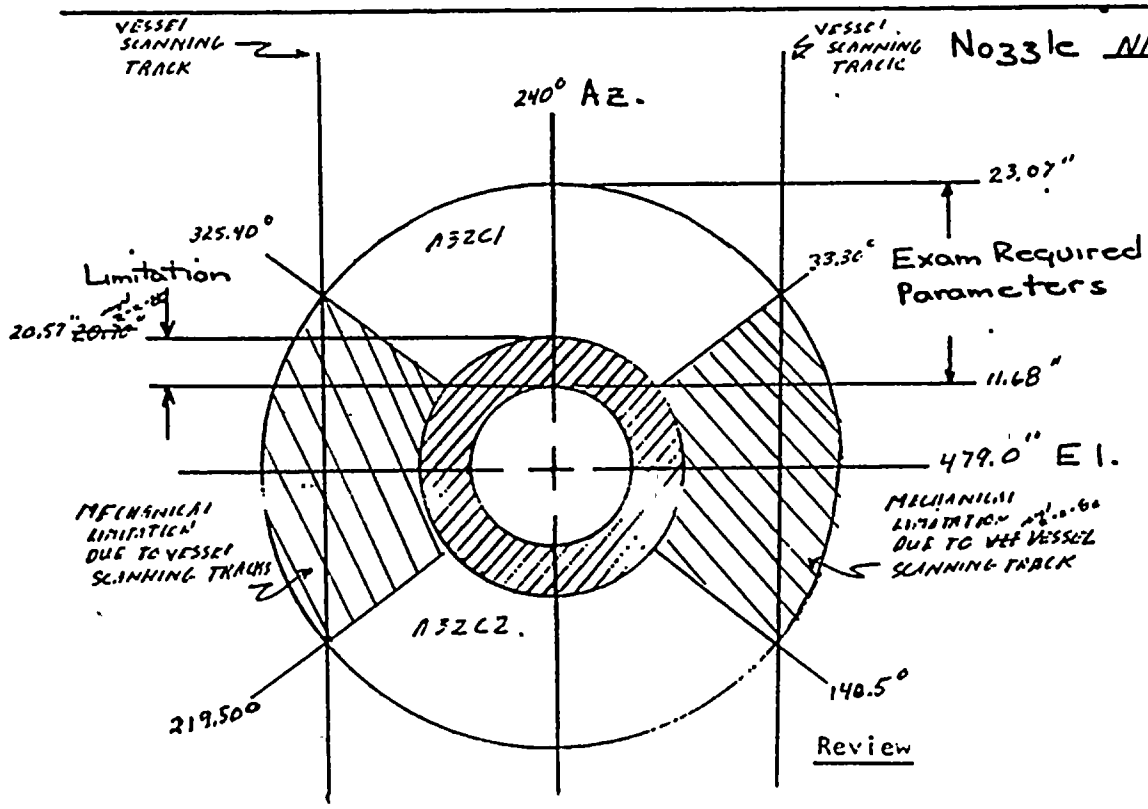
Rev. 0 F.C. No. [illegible]

Limitation caused by (1) NOZZLE BLEND AND (2) VESSEL SCANNING TRACKS

Area not scanned due to limitation

X - 90° TO 270°	Y - 20.66" TO 11.68"	NOZZLE BLEND.
X ~~0 TO 360°~~ 270° TO 90°	Y - 20.57" TO 11.68"	NOZZLE BLEND
X 33.38° TO 140.5°	Y = 20.57" TO 23.07"	[illegible]
X - 219.50° TO 325.40°	Y = 20.57" TO 23.07	[illegible]

Comments (use sketch to provide clarity)



Review

Date

Date

Prepared By [signature] L-111 Date 2-2-86 Date

EXAMINATION LIMITATION REPORT SHEET

Site/Unit NMP2

Page 3 of 11

Raster No. A26I1

Package No. 1749C24

Weld No. RPV-KA26

Procedure No. 83A1749

Rev. 0 F.C. No. 001,002

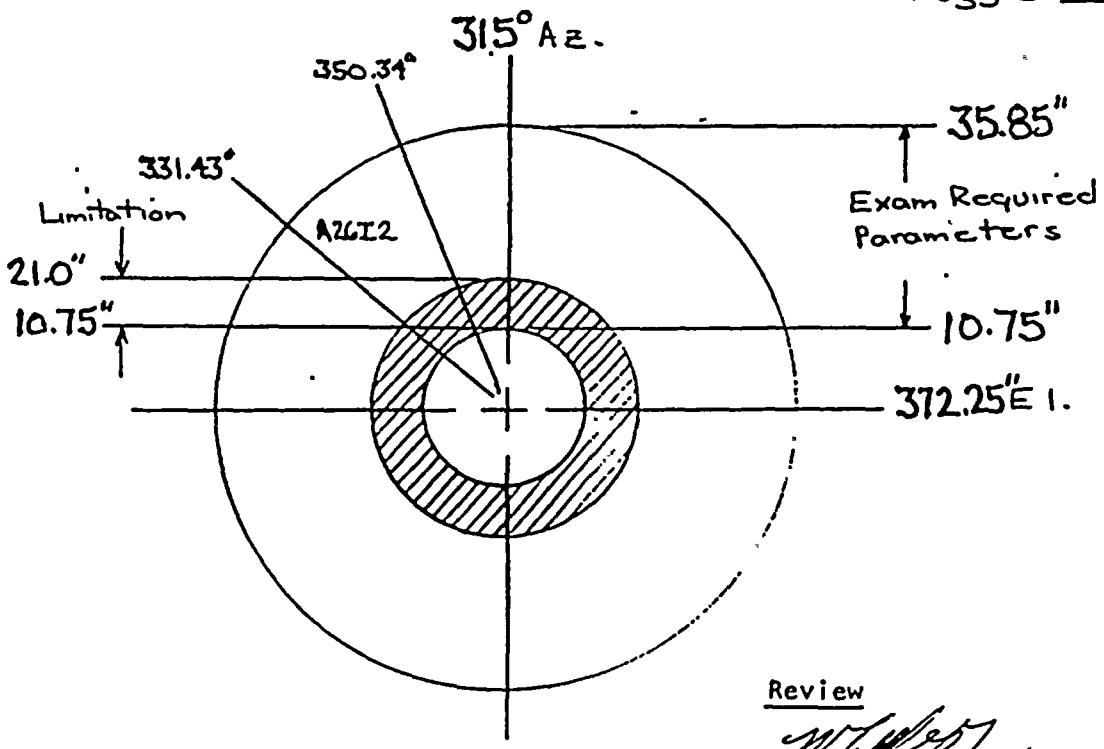
Limitation caused by NOZZLE BLEND

Area not scanned due to limitation

X - 0° TO 360° Y - 10.75" TO 21.0"

Comments (use sketch to provide clarity)

Nozzle N6C



Review

Date 2-20-86

Date

Date

Prepared By W.C. Bolt Date 2-19-86

FORM NES 028-114/1 8/85 REF: Automated

Relief Request No.: RR-IWB-3

1. Identification of Components

   Pages 3 through 5 of 5 identify RPV seam welds for which partial relief from ASME XI examination is required.

2. ASME Section XI Requirements

   Volumetric examinations are required for RPV seam welds in accordance with Table IWB-2500-1, Category B-A, Item Nos. B.11 and B.12.

3. Basis for Relief

   The automated examination of the RPV seam welds as identified in the Unit 2 PSI Program Plan can only be performed on a limited scope due to vessel weld transitions, RPV stabilizers, RPV ID plate, nozzles, and mechanical limitations of the scanning equipment. The extent and causes of the limitations are shown on pages 3 through 5 of 5. The integrity of the subject welds has also been previously verified by nondestructive examination during fabrication under ASME Section III.

4. Inspection Period for Relief Request

   Preservice inspection.

5. Alternate Tests or Examinations

   Ultrasonic inspections performed in the vessel fabrication shop will also be used.

6. Schedule for Implementing Alternate Test

   Previously performed in shop.

7. Impact to Overall Plant Level of Quality

   Overall plant quality is not impacted.

8. Preservice Examination Results

   ASME XI volumetric examination results and shop UT data will be included in the Final Summary Report.

9. Radiation Considerations

None.

RR-IWB-3 (Cont)

Weld	Approximate Extent and Cause of Limitation
AA	Portions of the 40 in high exam area on either side of the weld were not covered for a total of less than 5 deg of the circumference due to mechanical limitations of the scanning equipment. Two areas approximately 3 in wide and 13 in from weld centerline were not covered for less than 20 deg of the circumference due to interference with nozzle N-9.
AB	Portions of the 40 in high exam area were not covered for a total of less than 30 deg of the circumference due to mechanical limitations of the scanning equipment.
AC	Portions of the 40 in wide exam area were not covered for a total of less than 60 deg of the circumference, and an approximately 1 in wide band, 4 in from weld centerline was not covered for less than 90 deg of the circumference due to mechanical limitations of the scanning equipment. Two areas approximately 10 in high and 10 deg around circumference were also not covered due to interference with nozzle N-10.
AD	Due to congestion in the area of this upper ring girth weld, there are many areas of interference with RPV stabilizers, other nozzles, vessel transition region, and mechanical limitations. The areas not covered make up approximately 50 percent of the total exam area.
BA	Portions of the 20 deg wide exam band were not covered for a total height of less than 40 in due to interference with N2 nozzle. An area approximately 0.2 deg wide and 2.0 deg away from weld centerline was not covered for a total height of less than 80 in due to mechanical limitations of the scanning equipment.

RR-IWB-3 (Cont)

Weld	Approximate Extent and Cause of Limitation
BB	Portions of the 20 deg wide exam band were not covered for a total height of less than 45 in due to nozzle interference. Areas approximately 2.0 deg wide, 6 deg away from weld centerline with a height of 10 in and 4.0 deg wide, 3 deg away from weld centerline with a height of 30 in were also not covered due to nozzle blends and mechanical limits of the scanning equipment.
BC	Portions of the 20 deg wide exam band were not covered for a total height of less than 35 in due to nozzle interferences.
BD	An area approximately 1.0 deg wide and 4 deg from the weld centerline was not covered for a total height of less than 160 in due to mechanical limitations of the scanning equipment.
BE	Portions of the 20 deg wide exam band were not covered for a total height of less than 25 in due to nozzle interferences. An area approximately 2.0 deg wide and 4 deg away from the weld centerline was not covered for a total height of less than 160 in due to mechanical limitations of the scanning equipment.
BF.	Portions of the 20 deg wide exam band were not covered for a total height of less than 100 in due to nozzle interferences and mechanical limitations of scanning equipment. An area approximately 2.0 deg wide and 2 deg from weld centerline was not covered for a total height of less than 160 in also due to mechanical limitations.
BG	Portions of the 20 deg wide exam band were not covered for a total height of less than 35 in due to RPV stabilizer interference. An area approximately 0.5 deg wide and 2 deg away from the weld centerline was not covered for a total height of less than 160 in due to mechanical limitations of the scanning equipment.

RR-IWB-3 (Cont)

Weld	Approximate Extent and Cause of Limitation
BH	Portions of the 20 deg wide exam band were not covered for a total height of less than 60 in due to RPV stabilizer and nozzle interferences. An area approximately 0.5 deg wide and 2 deg away from weld centerline was not covered for a total height of less than 160 in due to mechanical limitations of scanning equipment.
BJ	Portions of the 20 deg wide exam band were not covered for a total height of less than 40 in due to RPV stabilizer interferences.

Relief Request No.: RR-IWB-4

1. Identification of Components

   Page 2 of 2 identifies those integral attachment welds for which relief from partial ASME XI examination is required.

2. ASME Section XI Requirements

   Surface examinations are required for the integral attachment welds in accordance with Table IWB-2500-1, Category B-K-1, Item No. B10.10.

3. Basis for Relief

   The examinations of the subject welds as identified in the Unit 2 PSI Program Plan can only be performed on a limited scope due to permanent interferences as indicated on Page 2 of 2. The integrity of the integral attachment welds has also been previously verified by nondestructive examination during erection under ASME Section III.

4. Inspection Period for Relief Request

   Preservice inspection.

5. Alternate Tests or Examinations

   ASME Section XI surface examinations are performed. Results of ASME Section III surface examinations performed prior to installation of permanent obstruction will also be used.

6. Schedule for Implementing Alternate Test

   During preservice inspection.

7. Impact to Overall Plant Level of Quality

   Overall plant quality is not impacted.

8. Preservice Examination Results

   ASME XI and ASME III surface examination results will be included in the Final Summary Report.

9. Radiation Considerations

   None.

RR-IWB-4 (Cont)

Due to interferences on the following welds, 100 percent coverage of surface examinations could not be accomplished. Approximately 75 percent of the weld exam area has been covered to full code requirements.

Weld	Interferences
2FWS-47-18-FW300 through 301	Permanent Plate
2MSS-01-13-FW324 through 327	Permanent Plate
2MSS-01-14-FW320 through 323	Permanent Plate
2MSS-01-15-FW310 through 317	Permanent Clamp
2MSS-01-15-FW320 through 323	Permanent Plate
2MSS-01-15-FW332 through 335	Permanent Clamp
2MSS-01-16-FW308 through 315	Permanent Clamp
2MSS-01-13-FW320 through 323	Permanent Clamp
2MSS-01-13-FW328 through 331	Permanent Plate
2MSS-01-14-FW334 through 337	Permanent Plate
2MSS-01-16-FW324 through 327	Permanent Plate
2MSS-01-16-FW334,336,338	Permanent Plate
2FWS-47-13-FW312 through 315	Permanent Plate
2FWS-47-14-FW304 through 307	Permanent Plate
2FWS-47-18-FW302 through 305	Permanent Plate

Relief Request No.: RR-IWB-5

1. Identification of Components

   Page 3 of 4 identifies those piping welds for which relief from partial ASME XI examination is required.

2. ASME Section XI Requirements

   Volumetric and surface examinations are required for the piping welds in accordance with Table IWB-2500-1, Category B-J, Item No. B9.11 and Category B-F, Item No. B5.10.

3. Basis for Relief

   The surface and volumetric examinations of these piping welds as identified in the Unit 2 PSI Program Plan can only be performed on a limited scope due to permanent interferences as indicated on Page 3 of 4. Page 3 of 4 also identifies the approximate extent of coverage obtained by the ASME XI preservice examinations as well as the permanent interferences. The integrity of the piping welds has also been previously verified by nondestructive volumetric surface examinations during erection under ASME Section III.

4. Inspection Period for Relief Request

   Preservice inspection.

5. Alternate Tests or Examinations

   Due to the amount of coverage obtained, no alternate examinations are performed.

6. Schedule for Implementing Alternate Test

   Not applicable.

7. Impact to Overall Plant Level of Quality

   Overall plant quality is not impacted.

8. Preservice Examination Results

   ASME XI volumetric/surface examination results will be included in the Final Summary Report.

9. Radiation Considerations

None.

RR-IWB-5 (Cont)

Due to interferences on the following welds, 100 percent coverage could not be accomplished.

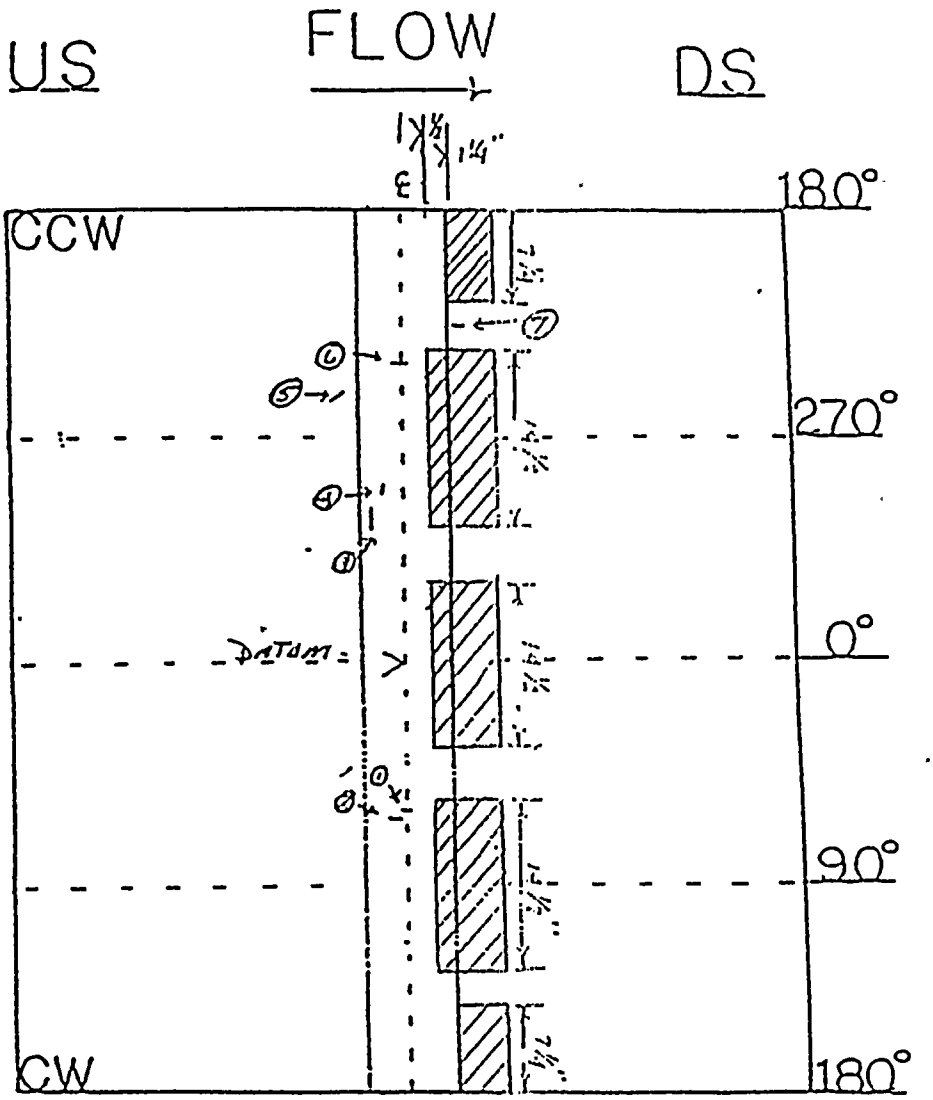
Weld	% Coverage Vol/Sur	Interferences
2MSS-01-14-SW020	100/65	Permanent Integral Attachment
2MSS-01-15-SW016	100/80	Permanent Integral Attachment
2MSS-01-13-FW07	95/100	Valve Taper
2MSS-01-15-SW14	98/100	Permanent Weld-o-let
2MSS-01-15-FW03	100/98	Permanent Welded Restraint
2MSS-01-15-FW06	98/100	Permanent Restraint
2MSS-01-14-HYV7B	90/100	Valve Body Configuration
2ICS-57-7-FW14	75/100	(2) Sock-o-lets
2ICS-57-7-FW21	85/100	Sock-o-let
2RHS-66-50-SW013	99/100	Weld/Base Metal Configuration
2RCS-6400-LW05	97/99	Permanent Restraint
2RCS-6400-LW06A	90/100	(2) Sock-o-lets
2RCS-6400-LW06B	98/100	(2) Sock-o-lets
2RCS-6400-LW07	90/100	(3) Sock-o-lets
2RCS-6400-LW24	98/100	Permanent Welded Attachment
2RCS-6400-LW36	98/100	Permanent Restraint
2RCS-6400-LW37A	95/100	(2) Sock-o-lets
2RCS-6400-LW37B	95/100	(2) Sock-o-lets
2RCS-6400-LW38	90/100	(3) Sock-o-lets
2RCS-6400-LW39A	99/100	Permanent Restraint
2RCS-6400-LW54	98/100	Permanent Welded Attachment
2RCS-6400-LW57	98/100	Permanent Welded Attachment
RPV-KB-13	98/100	Permanent Welded Attachment

SKETCH SHEET

Area/System MSS/ 01-15 RR-IWB-5 Page 2 of 2

Data Sheet No. 7720-1930

Item No. 2-MSS-SW 01-15-SW016



NOT TO SCALE

INFORMATION ONLY

Examiner [signature] Level II Date 2-1-86

Examiner N/A Level N/A Date N/A

Reviewer [signature] Level III Date 2/5/86

Relief Request No.: RR-IWB-6

1. Identification of Components

   Pages 4 and 5 of 5 identify the stainless steel circumferential butt welds for which partial relief from ASME XI examination is required.

2. ASME Section XI Requirements

   Volumetric and surface examinations are required for these piping butt welds in accordance with Table IWB-2500-1, Category B-J, Item Nos. B9.11, B9.31, and Category B-F, Item No. B5.50.

3. Basis for Relief

   The volumetric examinations of the subject welds as identified in the Unit 2 PSI Program can only be performed on a limited scope due to piping system design and fitting configuration. These stainless steel welds have been examined from one side using the UT techniques specified on applicable line D or F of the attached matrix. The inspection data sheet for each specific weld defines in detail the extent of coverage obtained by the combination of angles, directions, and techniques utilized. Structural integrity has also been verified during erection by volumetric and surface examinations under ASME Section III.

   NOTE: Welds with exam limitations due to both joint configurations <u>and</u> varying degrees of austenitic overlay are addressed on RR-IWB-10.

4. Inspection Period for Relief Request

   Preservice inspection.

5. Alternate Tests or Examinations

   ASME XI surface examinations are performed on the code required surface area of the subject welds. Although code required coverage is not obtained, the latest UT techniques are employed and documented in detail in order to establish as much baseline data as possible for future ISI comparisons.

6. Schedule for Implementing Alternate Test

   During preservice inspection.

7. Impact to Overall Plant Level of Quality

   Overall plant quality is not impacted.

8. Preservice Examination Results

   ASME XI surface and volumetric examination results will be included in the Final Summary Report.

9. Radiation Considerations

   None.

RR-IWB-6 (Cont)

TABLE A

EXAMINATION MATRIX FOR STAINLESS PIPING

		Austenitic Piping, 45° Refracted L	IGSCC and Inner Exam 45° and 60° Shear 1/2 Vee	Austenitic Piping, 45° Shear, 2nd Leg Fusion Zone
A.	Long seams (SW) access both sides	N/A	Yes	Yes
B.	Fittings long (SW) access both sides	N/A	Yes	Yes
C.	Circ welds (SW) access both sides	N/A	Yes	Yes
D.	Circ welds (SW) access one side	N/A	Yes (one side)	Yes (one side)
E.	Circ welds (FW) access both sides	Yes If no beam skew If contour O.K.	Yes	Only if 45° RL is ineffective
F.	Circ weld (FW) access one side	Yes If no beam skew If contour O.K.	Yes	Only if 45° RL is ineffective
G.	Circ overlay weld (SW)	N/A	Yes	Yes
H.	Circ overlay weld (FW)	Yes If no beam skew If contour O.K.	Yes	Only if 45° RL is ineffective

NOTE: The letter corresponding to the examination condition and technique shall be noted in the remarks section of the examination data sheet.

RR-IWB-6 (Cont)

CAT	ITEM	WELD NO.	CONFIGURATION	EXAM FROM
B-J	B9.31	2RCS-64-00-SW56	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.11	2RCS-64-00-FWB08	Elbow to VLV	Elbow Side Only
B-J	B9.31	2RCS-64-00-SW29	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.11	2RCS-64-00-SW27	Pipe to Tee	Pipe Side Only
B-J	B9.31	2RCS-64-00-SW55	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.11	2RCS-64-00-SW58	Pipe to Cross	Pipe Side Only
B-J	B9.11	2RCS-64-00-SW59	Pipe to Cross	Pipe Side Only
B-J	B9.31	2RCS-64-00-SW60	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.31	2RCS-64-00-SW61	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.11	2RCS-64-00-FWA16	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.11	2RCS-64-00-FWA14	Pipe to Reduce	Pipe Side Only
B-J	B9.31	2RCS-64-00-SW28	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.11	2RCS-64-00-SW15	Pipe to Cross	Pipe Side Only
B-J	B9.31	2RCS-64-00-SW16	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.31	2RCS-64-00-SW17	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.11	2RCS-64-00-SW38	Pipe to Toe	Pipe Side Only
B-J	B9.31	2RCS-64-00-SW41	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.31	2RCS-64-00-SW01	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.31	2RCS-64-00-FWA24	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.11	2RCS-64-00-FW37	Pipe to Tee	Pipe Side Only
B-J	B9.11	2RCS-64-00-FWB05	Elbow to Pump	Elbow Side Only
B-J	B9.11	2RCS-64-00-FWB10	Elbow to VLV	Elbow Side Only
B-J	B9.31	2RCS-64-00-FWB24	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.31	2RCS-64-00-SW07	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.31	2RCS-64-00-SW51	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.11	2RCS-64-00-SW12	Tee to Reducer	Reducer Side Only
B-J	B9.11	2RCS-64-00-SW52	Tee to Reducer	Reducer Side Only
B-J	B9.11	2RCS-64-00-FWB07	Pipe to VLV	Pipe Side Only
B-J	B9.11	2RCS-64-00-FWA08	Pipe to VLV	Pipe Side Only
B-J	B9.11	2RCS-64-00-FWA10	Elbow to VLV	Elbow Side Only
B-J	B9.11	2RCS-64-00-FWA07	Pipe to VLV	Pipe Side Only
B-J	B9.11	2RCS-64-00-FWA13	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.11	2RCS-64-00-FWA03	Elbow to VLV	Elbow Side Only
B-J	B9.11	2RCS-64-00-FWA05	Elbow to Pump	Elbow Side Only
B-J	B9.11	2RCS-64-00-FWB03	Elbow to VLV	Elbow Side Only
B-J	B9.11	2RCS-64-00-FWB09	Pipe to VLV	Pipe Side Only
B-J	B9.11	2RCS-64-00-FWA09	Pipe to VLV	Pipe Side Only
B-J	B9.11	2RCS-64-00-FWB04	Pipe to VLV	Pipe Side Only
B-J	B9.11	2RCS-64-00-FWA12	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.11	2RCS-64-00-FWB12	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.11	2RCS-64-00-FWB13	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.11	2RCS-64-00-FWA01	Pipe to Safe End Ext.	Pipe Side Only
B-J	B9.11	2RCS-64-00-FWB01	Pipe to Safe End Ext.	Pipe Side Only
B-F	B5.50	2WCS-09-05-SW028	Pipe to Tee	Tee Side Only
B-J	B9.11	2WCS-09-05-SW030	Pipe to Tee	Tee Side Only

RR-IWB-6 (Cont)

CAT	ITEM	WELD NO.	CONFIGURATION	EXAM FROM
B-J	B9.11	2WCS-09-05-SW032	Pipe to Tee	Tee Side Only
B-J	B9.11	2WCS-09-05-SW033	Pipe to Flange	Pipe Side Only
B-J	B9.11	2WCS-09-05-SW025	Pipe to Flange	Pipe Side Only
B-J	B9.11	2WCS-09-05-FW015	Pipe to Sweep-o-let	Pipe Side Only
B-F	B5.50	2WCS-09-05-SW020	Pipe to Tee	Pipe Side Only
B-J	B9.11	2WCS-09-05-SW021	Pipe to Tee	Pipe Side Only
B-J	B9.11	2WCS-09-05-SW022	Pipe to Tee	Pipe Side Only
B-J	B9.11	2WCS-09-05-SW023	Pipe to Tee	Pipe Side Only
B-J	B9.11	2WCS-09-05-SW024	Pipe to Tee	Pipe Side Only
B-J	B9.11	2WCS-09-05-SW026	Pipe to Tee	Pipe Side Only
B-J	B9.11	2WCS-09-05-SW029	Pipe to Tee	Pipe Side Only
B-J	B9.11	2WCS-09-05-SW031	Pipe to Tee	Pipe Side Only
B-J	B9.11	2WCS-09-05-SW034	Pipe to Tee	Pipe Side Only
B-J	B9.11	2RCS-6400-FWB16	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.11	2RCS-6400-SW003	Pipe to Flange	Pipe Side Only
B-J	B9.11	2RCS-6400-SW002	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.11	2RCS-6400-SW042	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.11	2RCS-6400-SW043	Pipe to Flange	Pipe Side Only
B-J	B9.11	2RCS-6400-FWB15	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.11	2RCS-6400-FWA14	Pipe to Sweep-o-let	Pipe Side 1/2 Sweep
B-J	B9.11	2RCS-6400-FWA11	Pipe to Tee	Pipe Side Only
B-J	B9.11	2RHS-6655-FW001	Pipe to Tee	Pipe Side Only
B-J	B9.11	2RHS-6654-FW006	Pipe to Sweep-o-let	Pipe Side Only
B-J	B9.11	2RHS-6653-FW007	Pipe to Sweep-o-let	Pipe Side Only

Relief Request No.: RR-IWB-7

1. Identification of Components

Reactor vessel top and bottom head welds, Nos. RPV-DA, DB, DC, DD, DE, DF, DG, DR, and AG require partial relief from ASME XI examination.

2. ASME Section XI Requirements

Volumetric examination is required for the bottom head welds in accordance with Table IWB-2500-1, Category B-A, Item Nos. B1.21 and B1.22. Volumetric and surface examination is required for top head to flange in accordance with Item No. B1.40.

3. Basis for Relief

Manual examination of these RPV bottom head welds as identified in the Unit 2 PSI Program Plan can only be performed on a limited scope due to CRD penetrations and vessel support skirt. Only approximately 12 in. to 24 in. on each end of welds RPV-DG and DR can be examined due to interference with CRD penetration housings. Approximately 1 ft is not being examined on each of welds RPV-DA through DF due to interference with RPV support skirt. Weld No. RPV-AG is top head to flange weld which can only be examined from the head side due to flange configuration. Structural integrity of these welds has also been verified during fabrication under ASME Section III.

4. Inspection Period for Relief Request

Preservice inspection.

5. Alternate Tests or Examinations

Additional angles are used for volumetric examinations and weld RPV-AG receives a surface examination over the entire code required surface area.

6. Schedule for Implementing Alternate Test

During preservice inspection.

7. Impact to Overall Plant Level of Quality

Overall plant quality is not affected.

8. Preservice Examination Results

ASME XI volumetric and surface examination results will be included in the Final Summary Report.

9. Radiation Considerations

None.

Relief Request No.: RR-IWB-8

1. Identification of Components

   Page 3 of 8 identifies the welds for which partial relief from ASME XI examination is required.

2. ASME Section XI Requirements

   Volumetric and surface examinations are required for these welds in accordance with Table IWB-2500-1, Category B-J, Item No. B9.11 and Category B-F, Item No. B5.10.

3. Basis for Relief

   The volumetric examinations of the subject welds as identified in the Unit 2 PSI Program Plan can only be performed on a limited scope due to varying degrees of austenitic weld overlays. The ultrasonic responses encountered while performing examinations are described in the attached report. The inspection data sheet for each specific weld defines in detail the extent of coverage obtained for use as a baseline for future ISI comparison. Other welds in the system that are subject to the same operating conditions receive complete ASME XI volumetric examinations. Structural integrity has also been verified during erection by volumetric and surface examination under ASME Section III.

   NOTE: Welds with examination limitations due to both joint configurations <u>and</u> varying degrees of austenitic overlay are addressed on RR-IWB-10.

4. Inspection Period for Relief Request

   Preservice inspection.

5. Alternate Tests or Examinations

   ASME XI surface examinations are performed on the code required surface area of the subject welds. Latest UT techniques, described in the attached report, are employed and documented in detail.

6. Schedule for Implementing Alternate Test

   During preservice inspections.

7. Impact to Overall Plant Level of Quality

   Overall plant quality is not impacted.

8. Preservice Examination Results

   ASME XI surface and volumetric examination results will be included in the Final Summary Report.

9. Radiation Considerations

   None.

RR-IWB-8 (Cont)

Weld Numbers

2-RCS-64-00-FWB11
2-RCS-64-00-FWA06
2-RCS-64-00-FWB06
RPV KB-30
RPV KB-29

NUCLEAR ENERGY SERVICES

ULTRASONIC EXAMINATION OF RECIRCULATION LINE
STAINLESS STEEL OVERLAYED WELDS
NINE MILE POINT, UNIT 2

This report serves to document the information from ultrasonic findings with regard to the Metallurgical nature of the weldments contained within the recirculation loops. (see list attached)

Welds within the recirculation loops have been overlayed with welding (an example is shown in Figure 1). During the examination of these welds, it was noted that in certain welds the intended angle at which the sound should travel was not the actual angle observed.

It appears that the ultrasound has a tendency to divert from it's intended path and redirect in an almost perpendicular fashion to the inside wall (ID) of the pipe. The generally accepted theory pertaining to this type of occurence is that the columnar grain structure present in Austenitic weldments provides a "wave guide" effect and thus carries the sound in a direction other than the intended one. Other theories such as granular impedence or filtration have also been postulated.

Examinations

These were performed in accordance with the appropriate procedure. Beam redirection was noted and where this occurence was evident, other examination frequencies and angles were used to try and overcome the effects produced by the grain structure. A low frequency was selected because of it's longer wavelength and greater penetration abilities.

1. 45° x 1.5 MHz shear wave search units were initially applied with little success. Reflections which when plotting at the calibration measured 45° angle, appeared to occur at approximately 3/4 'T' metal path. These reflections when postulated perpendicular to the surface, occur at or around 'T' 0° (Velocity Shear Wave). Counterbore could be detected but this appeared almost directly beneath the search unit, confirming beam redirection.

2. 60° x 1.5 MHz shear wave was selected and applied as above. The results noted with this unit were not unlike those noted when using the 45° shear wave unit. Again the reflection observed, appeared to originate from the ID surface.

3. The frequency was then reduced to 1.0 MHz with much the same result as in 1 + 2 above.

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4. Refracted longitudinal techniques were applied. The rationale behind this excerise was consideration to the fact that (a) A longer wavelength can be achieved for a given frequency. (b) Penetration should be greater due to (a) above and (c) It has been demonstrated in the past in similar situations, longitudinal modes are less prone to beam redirection than are shear modes.

   The disadvantage is that while using longitudinal wave modes, the response to corner reflectors (cracks) is less desirable than the response noted when using shear wave modes. (This is due to mode conversion and energy losses in a corner situation using longitudinal wave modes.) We essentially have a "trade-off" situation.

   4.1 One of the other problems generated is that because of the incident angle necessary to produce a refracted longitudinal wave mode in the material, the "noise" generated in the search unit (SU) is greater than that in a shear wave search unit. To overcome this, a transmit/receive unit is used. Here again there is a trade off in that, for a given size SU the element size has to be smaller resulting in a greater beam divergence for a given frequency. This reduces the amount of energy that is transmitted into the material.

   4.2 With these and other considerations in mind, this technique was applied at code calibration sensitivity which resulted in excessive amounts of noise returning to the SU from within the material. To add to this, it was discovered that the beam redirection noted when using the shear wave techniques, also occurred when using the refracted "L" Wave techniques.

   4.3 An interesting observation was that the redirection is not necessarily the same when facing the sound "beam" in opposite directions. For example when facing the SU (on a vertical pipe) in the upward direction, beam redirection was noted to be considerably greater than when rotating the search unit through 180° and facing the beam downward. We can readily assume that this has to do with the direction of the columnar grains (which follow the direction of heat dissippation during their formation and generally grow epitaxially from weld bead to weld bead). We can also assume that in a vertically welded situation, the structure will differ considerably from that welded in a horizontal situation, basically determining that the responses observed should be weld direction sensitive.

5. To unquestionably verify the above, a variable angle search unit was applied. This unit is a 2 1/4 MHz transducer mounted on a device which enables the sound to be introduced into the material at any

selected angle. 0° longitudinal wave was the starting point, with the unit mounted on the overlayed area on FWB11 facing upwards, (toward the weld) the instrument calibrated in metal path for longitudinal velocity.

5.1 A back reflection (BR) and repeat BR's were apparent on the CRT. The unit was scanned forward and the BR appeared constant until the counterbore (CB) was located, at which time the metal path changed accordingly. The unit was replaced to its original position and the BR returned to its original position on the time base. The unit was then angled to produce a refracted longitudinal wave. The BR signal amplitude was seen to reduce and a second reflection (CB) could be seen appearing just after the BR (later in time). The unit was angled over until the second signal was at peak amplitude at which time the BR could no longer be seen. The unit was scanned forward toward the CB and the signal moved closer in time until it disappeared. This sequence was repeated, each time with a steeper angle. It is noteworthy that regardless of the angle introduced into the material, the CB always appeared at or slightly after 'T" 0°. This confirmed the fact that the beam was not being reflected in the manner in which it should be, given "normal" conditions.

5.2 At some point as the angle was increased, a series of signals could be seen later in time as the unit was scanned back and forth. These signals appeared at or about 'T" 0° for shear wave and increased in amplitude as the beam angle was increased. This was established to be shear wave redirection (due to its position in time on the time base).

5.3 The unit could indicate that higher angles, beam redirection may be more evident for a given grain structure. Similar results were observed while going through the "longitudinal wave" range.

5.4 The unit was rotated through 180° and the above was repeated. This time beam redirection was minimal as noted above in 4.3. The absense of 'T' 0° signals would indicate that there is not significant redirection while scanning in this direction (facing away from the weld (down)). A Pitch/Catch using 45° shear wave also performed in this (downward) direction and a "full vee path" could be detected at a measured and calculated angle of approximately 43°, which would tend to substantiate the conclusion that the sound is extremely sensitive to the dendritic formation angle, and in this case is redirecting mainly when scanning with the beam directed upwards toward the weld.

6. The possibility of introducing large amounts of low frequency energy was considered, and a dual 1 MHz x 1" diameter longitudinal wave SU was applied (each side having a 1" diameter element). The unit had

a "roof angle" of approximately 2° and a forward refracted angle of 45° in the material under test. Beam redirection was still apparent, but due to the large energy source, return signals were noted. These were calculated as occurring from ID geometry at an angle of approximately 45°. the "prose" were that we were now penetrating the material at a known angle. The cons were more in evidence. The search unit being so large and the surface undulations being such as they are, contact was made and lost too frequently to perform a meaningful examination. With this condition, the beam shape characteristics change due to variations in contact. Considering the small area available (due to physical geometric constraints - the coverage and information acquired would be marginal in terms of calling the examination "meaningful" with this unit).

Recommendations

In cases where 45° longitudinal examinations have not been attempted, these should be carried out where possible. The results should be documented and included with the existing data. We determine that based on the above exercise, the returns for effort in terms of ALARA and ultimate defect detectability will be marginal in some cases and request for relief from examination of specific welds be sought.

NES is constantly researching new techniques and technology and as developments occur, these will be made known to the utility.

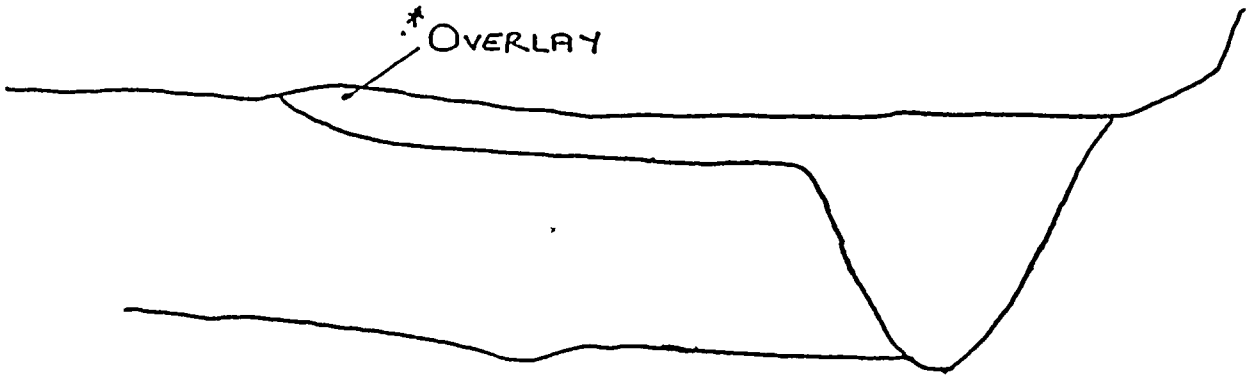
Michael L. Shakinovsky

SKETCH SHEET

Area/System _____ Page ___of___

Data Sheet No._____

Item No._____



*ESTIMATED THICKNESS BASED ON ACTUAL MEASUREMENT FROM EDGE

WELD PROFILE - ULTRASONIC + PIN GAGE

FIGURE 1

Nine Mile Point Unit 2

Relief Request No.: RR-IWB-9

1. Identification of Components

   Page 3 of 6 identifies RPV nozzle to safe end welds for which partial relief from ASME XI examination is required.

2. ASME Section XI Requirements

   Volumetric and surface examinations are required for RPV nozzle to safe end welds in accordance with Table IWB-2500-1, Category B-F, Item No. B5.10.

3. Basis for Relief

   The automated examination of the subject welds as identified in the Unit 2 PSI Program Plan can only be performed on a limited scope. The approximate extent of coverage due to physical limitations such as nozzle blend, insulation supports, and biological shield wall is shown on pages 3 and 4 of 6. Other limitations due to the inability of the examination to distinguish the weld root from the inside diameter notch on the calibration standard are detailed in the attached discussion. Structural integrity has also been verified by volumetric and surface examination during erection under ASME Section III.

4. Inspection Period for Relief Request

   Preservice inspection.

5. Alternate Tests or Examinations

   ASME XI surface examinations are performed on the code required surface area of the subject welds. The UT techniques described in the attached discussion are employed and documented in detail. Pictorial data are permanently stored on UDRP5 as a baseline for direct ISI comparison.

6. Schedule for Implementing Alternate Test

   During preservice inspections.

7. Impact to Overall Plant Level Quality

   Overall plant quality is not impacted.

8. Preservice Examination Results

ASME XI surface and volumetric examination results will be included in the Final Summary Report.

9. Radiation Considerations

None.

RR-IWB-9 (Cont)

Weld No.	Nozzle No.	Extent of Coverage Perp.	Extent of Coverage Parallel	Cause of Limitation
RPV-KB01	N1A	64.85	100	Nozzle Blend
RPV-KB02	N1B	75.35	85.21	Nozzle Blend
RPV-KB03	N2A	71.25	94.30	Nozzle Blend
RPV-KB04	N2B	76.6	100	Nozzle Blend
RPV-KB05	N2C	74.3	91.4	Nozzle Blend
RPV-KB06	N2D	76.6	100	Nozzle Blend
RPV-KB07	N2E	69.0	100	Nozzle Blend
RPV-KB08	N2F	76.6	100	Nozzle Blend
RPV-KB09	N2G	76.6	100	Nozzle Blend
RPV-KB10	N2H	64.4	67.9	Nozzle Blend
RPV-KB11	N2J	76.6	100	Nozzle Blend
RPV-KB12	N2K	68.2	76.8	Nozzle Blend
RPV-KB17	N4A	66.1	75.5	Nozzle Blend, Insulation Support
RPV-KB18	N4B	61.7	74.8	Nozzle Blend, Insulation Support
RPV-KB19	N4C	22.7	22.5	Nozzle Blend, Insulation Support
RPV-KB20	N4D	75.9	94.4	Nozzle Blend, Insulation Support
RPV-KB21	N4E	45.3	40.1	Nozzle Blend, Insulation Support
RPV-KB22	N4F	56.0	66.5	Nozzle Blend, Insulation Support
RPV-KB23	N5A	36.5	43.7	Nozzle Blend, Insulation Support
RPV-KB24	N6A	40.2	58.9	Nozzle Blend, Insulation Support
RPV-KB25	N6B	45.2	54.3	Nozzle Blend
RPV-KB26	N6C	60.5	61.8	Nozzle Blend
RPV-KB32	N16A	30.9	31.1	Nozzle Blend, Biological Shield Wall

RR-IWB-9 (Cont)

DISCUSSION

Relief on the limited examination volume of the 45 deg L axial examination is required:

> The limited volume is the perpendicular examination of the inner 1/3T (Approx.). to 1/2 in. on both sides of the weld centerline. This volume was scanned and recorded; however, the ability to evaluate is minimal due to signals from the weld root. The pictorial data from this area are preserved on UDRPS as a baseline for direct comparison to ISI data.

During the 45 deg perpendicular examination on both calibration blocks (N1 and N2), the indication from the notch could not be distinguished from the root indication. Both calibration blocks had the weld root ground off for just a long enough distance to put in the notch. Even though we are using a 45 deg longitudinal wave there are also some dissimilar material and beam skew indications. The beam skew indications are the result of dendrites, and can occur at a depth of from (0.7)(T) to beyond (T), whenever the ultrasonic beam enters the weld in the 45 deg longitudinal axial examination.

Since this examination cannot distinguish weld root from the ID (inside diameter) notch, we cannot "size" to code requirements in the root area of the weld.

The 0 deg examination establishes the existence and location of ID Geometry; however, dissimilar materials, because of their different velocities, sometimes show up as slight thickness changes. It is therefore possible to establish if a particular angle beam indication is probably coming from Geometry or a dissimilar metal interface.

Manual examination cannot reduce any detection or discrimination problems. Special manual techniques may help in sizing specific indicators.

The additional "unlimited" examinations performed on this volume are:

- The 45 deg L parallel examination with the sensitivity increased to provide a noise level suitable for IGSCC baseline data.

RR-IWB-9 (Cont)

- A perpendicular baseline IGSCC examination covering the inner 1/3T in the safe end material with a 52 deg shear wave.

- The specific weld inspection data sheet defines in detail the extent of coverage obtained from each examination performed.

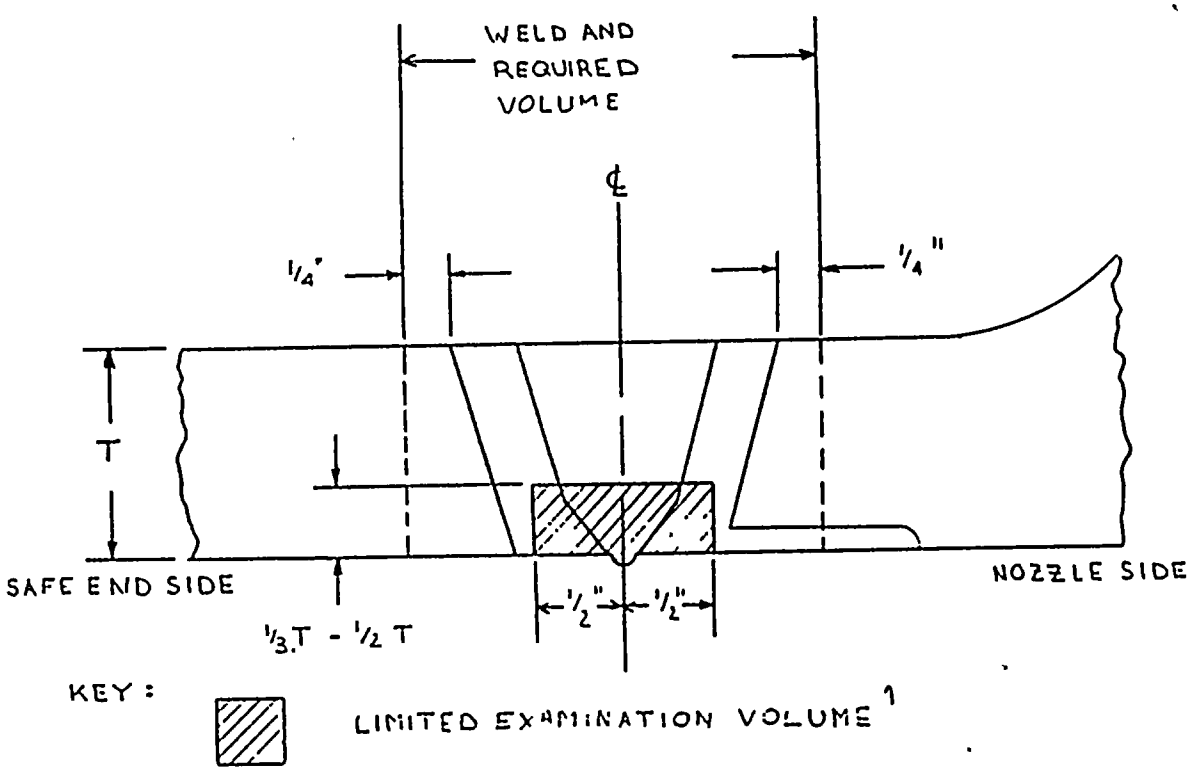
RR-IWB-9 (Cont)

SKETCH SHEET

Area/System SAFE END WELDS Page ___ of ___

EXTENT OF AXIAL COVERAGE Data Sheet No. N/A

FULL VOLUME EXAMINATION Item No. N/A



1 THIS "LIMITED VOLUME" WAS SCANNED AND RECORDED, HOWEVER, THE ABILITY TO EVALUATE THIS AREA IS MINIMAL DUE TO SIGNALS FROM THE WELD ROOT.

NES NUCLEAR ENERGY SERVICES, INC.

Relief Request No.: RR-IWB-10

1. Identification of Components

Page 3 of 8 identifies recirculation system welds for which partial relief from ASME XI examination is required. All of these welds are for a pipe to safe end extension.

2. ASME Section XI Requirements

Volumetric and surface examinations are required for these recirculation system welds in accordance with Table IWB-2500-1, Category B-J, Item No. B9.11.

3. Basis for Relief

The volumetric examinations of the subject welds as identified in the Unit 2 PSI Program Plan can only be performed on a limited scope due to the following two reasons:

a. The piping system design and fitting configuration allows inspection from only one side (the pipe side) of the weld.

b. There is austenitic weld overlay on the weld that interferes with the ultrasonic examination.

The ultrasonic responses encountered while performing examinations are described in the attached report. The inspection data sheet for each specific weld defines in detail the extent of coverage obtained for use as a baseline for future ISI comparison. Other welds in the system that are subject to the same operating conditions receive complete ASME XI volumetric examinations. Structural integrity has also been verified during erection by volumetric and surface examination under ASME Section III.

4. Inspection Period for Relief Request

Preservice inspection.

5. Alternate Tests or Examinations

ASME XI surface examinations are performed on the code required surface area of the subject welds. Latest UT

techniques, described in the attached report, are employed and documented in detail.

6. Schedule for Implementing Alternate Test

   During preservice inspections.

7. Impact to Overall Plant Level of Quality

   Overall plant quality is not impacted.

8. Preservice Examination Results

   ASME XI surface and volumetric examination results will be included in the Final Summary Report.

9. Radiation Considerations

   None.

RR-IWB-10 (Cont)

WELD NUMBERS	ESTIMATE OF TOTAL PERCENT CODE REQUIRED VOLUME COMPLETED
2-RCS-64-00-FWA21	25
2-RCS-64-00-FWA20	25
2-RCS-64-00-FWA19	25
2-RCS-64-00-FWA18	25
2-RCS-64-00-FWA17	25
2-RCS-64-00-FWB17	25
2-RCS-64-00-FWB18	20
2-RCS-64-00-FWB19	20
2-RCS-64-00-FWB20	25
2-RCS-64-00-FWB21	25
2-RCS-64-00-FWA04	0

NUCLEAR ENERGY SERVICES

ULTRASONIC EXAMINATION OF RECIRCULATION LINE
STAINLESS STEEL OVERLAYED WELDS
NINE MILE POINT, UNIT 2

This report serves to document the information from ultrasonic findings with regard to the Metallurgical nature of the weldments contained within the recirculation loops. (see list attached)

Welds within the recirculation loops have been overlayed with welding (an example is shown in Figure 1). During the examination of these welds, it was noted that in certain welds the intended angle at which the sound should travel was not the actual angle observed.

It appears that the ultrasound has a tendency to divert from it's intended path and redirect in an almost perpendicular fashion to the inside wall (ID) of the pipe. The generally accepted theory pertaining to this type of occurence is that the columnar grain structure present in Austenitic weldments provides a "wave guide" effect and thus carries the sound in a direction other than the intended one. Other theories such as granular impedence or filtration have also been postulated.

Examinations

These were performed in accordance with the appropriate procedure. Beam redirection was noted and where this occurence was evident, other examination frequencies and angles were used to try and overcome the effects produced by the grain structure. A low frequency was selected because of it's longer wavelength and greater penetration abilities.

1. 45° x 1.5 MHz shear wave search units were initially applied with little success. Reflections which when plotting at the calibration measured 45° angle, appeared to occur at approximately 3/4 'T' metal path. These reflections when postulated perpendicular to the surface, occur at or arbund 'T' 0° (Velocity Shear Wave). Counterbore could be detected but this appeared almost directly beneath the search unit, confirming beam redirection.

2. 60° x 1.5 MHz shear wave was selected and applied as above. The results noted with this unit were not unlike those noted when using the 45° shear wave unit. Again the reflection observed, appeared to originate from the ID surface.

3. The frequency was then reduced to 1.0 MHz with much the same result as in 1 + 2 above.

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4. Refracted longitudinal techniques were applied. The rationale behind this excerise was consideration to the fact that (a) A longer wavelength can be achieved for a given frequency. (b) Penetration should be greater due to (a) above and (c) It has been demonstrated in the past in similar situations, longitudinal modes are less prone to beam redirection than are shear modes.

   The disadvantage is that while using longitudinal wave modes, the response to corner reflectors (cracks) is less desirable than the response noted when using shear wave modes. (This is due to mode conversion and energy losses in a corner situation using longitudinal wave modes.) We essentially have a "trade-off" situation.

   4.1 One of the other problems generated is that because of the incident angle necessary to produce a refracted longitudinal wave mode in the material, the "noise" generated in the search unit (SU) is greater than that in a shear wave search unit. To overcome this, a transmit/receive unit is used. Here again there is a trade off in that, for a given size SU the element size has to be smaller resulting in a greater beam divergence for a given frequency. This reduces the amount of energy that is transmitted into the material.

   4.2 With these and other considerations in mind, this technique was applied at code calibration sensitivity which resulted in excessive amounts of noise returning to the SU from within the material. To add to this, it was discovered that the beam redirection noted when using the shear wave techniques, also occurred when using the refracted "L" Wave techniques.

   4.3 An interesting observation was that the redirection is not necessarily the same when facing the sound "beam" in opposite directions. For example when facing the SU (on a vertical pipe) in the upward direction, beam redirection was noted to be considerably greater than when rotating the search unit through 180° and facing the beam downward. We can readily assume that this has to do with the direction of the columnar grains (which follow the direction of heat dissippation during their formation and generally grow epitaxially from weld bead to weld bead). We can also assume that in a vertically welded situation, the structure will differ considerably from that welded in a horizontal situation, basically determining that the responses observed should be weld direction sensitive.

5. To unquestionably verify the above, a variable angle search unit was applied. This unit is a 2 1/4 MHz transducer mounted on a device which enables the sound to be introduced into the material at any

selected angle. 0° longitudinal wave was the starting point, with the unit mounted on the overlayed area on FWB11 facing upwards, (toward the weld) the instrument calibrated in metal path for longitudinal velocity.

5.1 A back reflection (BR) and repeat BR's were apparent on the CRT. The unit was scanned forward and the BR appeared constant until the counterbore (CB) was located, at which time the metal path changed accordingly. The unit was replaced to its original position and the BR returned to its original position on the time base. The unit was then angled to produce a refracted longitudinal wave. The BR signal amplitude was seen to reduce and a second reflection (CB) could be seen appearing just after the BR (later in time). The unit was angled over until the second signal was at peak amplitude at which time the BR could no longer be seen. The unit was scanned forward toward the CB and the signal moved closer in time until it disappeared. This sequence was repeated, each time with a steeper angle. It is noteworthy that regardless of the angle introduced into the material, the CB always appeared at or slightly after 'T" 0°. This confirmed the fact that the beam was not being reflected in the manner in which it should be, given "normal" conditions.

5.2 At some point as the angle was increased, a series of signals could be seen later in time as the unit was scanned back and forth. These signals appeared at or about 'T" 0° for shear wave and increased in amplitude as the beam angle was increased. This was established to be shear wave redirection (due to its position in time on the time base).

5.3 The unit could indicate that higher angles, beam redirection may be more evident for a given grain structure. Similar results were observed while going through the "longitudinal wave" range.

5.4 The unit was rotated through 180° and the above was repeated. This time beam redirection was minimal as noted above in 4.3. The absense of 'T' 0° signals would indicate that there is not significant redirection while scanning in this direction (facing away from the weld (down)). A Pitch/Catch using 45° shear wave also performed in this (downward) direction and a "full vee path" could be detected at a measured and calculated angle of approximately 43°, which would tend to substantiate the conclusion that the sound is extremely sensitive to the dendritic formation angle, and in this case is redirecting mainly when scanning with the beam directed upwards toward the weld.

6. The possibility of introducing large amounts of low frequency energy was considered, and a dual 1 MHz x 1" diameter longitudinal wave SU was applied (each side having a 1" diameter element). The unit had

a "roof angle" of approximately 2° and a forward refracted angle of 45° in the material under test. Beam redirection was still apparent, but due to the large energy source, return signals were noted. These were calculated as occurring from ID geometry at an angle of approximately 45°. the "prose" were that we were now penetrating the material at a known angle. The cons were more in evidence. The search unit being so large and the surface undulations being such as they are, contact was made and lost too frequently to perform a meaningful examination. With this condition, the beam shape characteristics change due to variations in contact. Considering the small area available (due to physical geometric constraints - the coverage and information acquired would be marginal in terms of calling the examination "meaningful" with this unit).

Recommendations

In cases where 45° longitudinal examinations have not been attempted, these should be carried out where possible. The results should be documented and included with the existing data. We determine that based on the above exercise, the returns for effort in terms of ALARA and ultimate defect detectability will be marginal in some cases and request for relief from examination of specific welds be sought.

NES is constantly researching new techniques and technology and as developments occur, these will be made known to the utility.

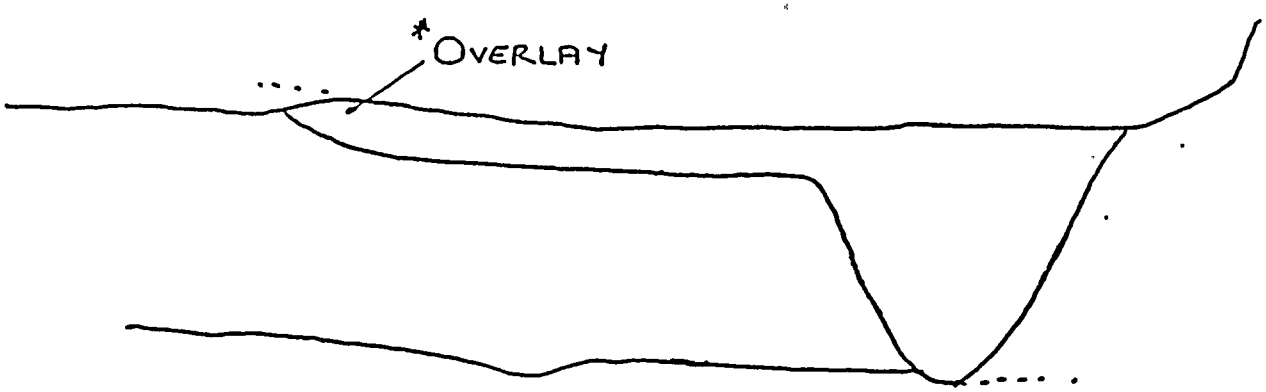
Michael L. Shakinovsky

SKETCH SHEET

Area/System _____ Page ___ of ___

Data Sheet No. _____

Item No. _____



*ESTIMATED THICKNESS BASED ON ACTUAL MEASUREMENT FROM EDGE

WELD PROFILE - ULTRASONIC + PIN GAGE

FIGURE 1

NUCLEAR ENERGY SERVICES, INC.

Nine Mile Point Unit 2

Relief Request No.: RR-IWC-1

RELIEF REQUEST FOR RHR, HPCS, AND LPCS SYSTEM PUMP CASING WELDS

1. Identification of Components

Components - 2RHS*P1A, P1B, P1C pump casing welds
- 2CSH*P1 pump casing welds
- 2CSL*P1 pump casing welds

See the attached ISI sketches:

004A, 004B, 004C, 010A, 010B, 010C, 088A, 088B, 089A, 089B, 090A, and 090B, which indicate the welds for which relief is requested.

2. ASME Section XI Requirements

Pump casing welds require a surface examination in accordance with Table IWC-2500-1, Category C-G, Item No. C6.10.

3. Basis for Relief

The pump casing welds listed are inaccessible due to the pump being installed in a concrete pit, which does not allow access to the pump casing exterior to perform surface examinations. The pumps would require disassembly in order to perform the required examination. Pump disassembly at this stage of construction is considered impractical and not in the interest of safety from both a potential pump damage and disassembly/reassembly error.

In addition, the structural integrity of the pump(s) pressure boundary(s) has been demonstrated during fabrication and construction and will undergo hydrostatic testing as part of ASME Section III final certification.

4. Inspection Period for Relief Request

Preservice Inspection.

5. Alternate Tests or Examinations

All ASME Section III nondestructive examination will be used. In addition, the pumps will receive further

testing in accordance with ASME Section XI, Article IWP, which further ensures the pumps' structural integrity.

6. Schedule for Implementing Alternate Test

   The alternate test will be performed during PSI.

7. Impact to Overall Plant Level of Quality

   No impact.

8. Preservice Examination Results

   ASME Section III results will be submitted in the Final Summary Report.

9. Radiation Considerations

   None.

Nine Mile Point Unit 2

RR-IWC-1 (Cont)

WELD NUMBER	COMPONENT/ WELD NAME	EXAM CAT	ITEM NO.	EXAM REQ
PW207	2CSH*P1 Item 2.2 to 2.1	C-G	C6.10	Sur
PW208	2CSH*P1 Item 2.2 to 2.2	C-G	C6.10	Sur
PW209	2CSH*P1 Item 2.2 to 2.6	C-G	C6.10	Sur
PW212	2CSH*P1 Item 2.2 to 2.2	C-G	C6.10	Sur
PW217	2CSH*P1 Item 2.2 Long Weld	C-G	C6.10	Sur
PW218	2CSH*P1 Item 2.2 Long Weld	C-G	C6.10	Sur
PW219	2CSH*P1 Item 2.2 Long Weld	C-G	C6.10	Sur
PW302	2CSL*P1 Item 1.15 to 1.9	C-G	C6.10	Sur
PW311	2CSL*P1 Item 2.3 to 2.1	C-G	C6.10	Sur
PW312	2CSL*P1 Item 2.3 to 2.5	C-G	C6.10	Sur
PW315	2CSL*P1 Item 2.3 Long Weld	C-G	C6.10	Sur
PW111A	2RHS*P1A Item 2.3 to 2.1	C-G	C6.10	Sur
PW111B	2RHS*P1B Item 2.3 to 2.1	C-G	C6.10	Sur
PW111C	2RHS*P1C Item 2.3 to 2.1	C-G	C6.10	Sur
PW112A	2RHS*P1A Item 2.3 to 2.3	C-G	C6.10	Sur

RR-IWC-1 (Cont)

WELD NUMBER	COMPONENT/ WELD NAME	EXAM CAT	ITEM NO.	EXAM REQ
PW112B	2RHS*P1B Item 2.3 to 2.3	C-G	C6.10	Sur
PW112C	2RHS*P1C Item 2.3 to 2.3	C-G	C6.10	Sur
PW113A	2RHS*P1A Item 2.3 to 2.5	C-G	C6.10	Sur
PW113B	2RHS*P1B Item 2.3 to 2.5	C-G	C6.10	Sur
PW113C	2RHS*P1C Item 2.3 to 2.5	C-G	C6.10	Sur
PW116A	2RHS*P1A Item 2.3 Upper	C-G	C6.10	Sur
PW116B	2RHS*P1B Item 2.3 Upper	C-G	C6.10	Sur
PW116C	2RHS*P1C Item 2.3 Upper	C-G	C6.10	Sur
PW118A	2RHS*P1A Item 2.3 Lower	C-G	C6.10	Sur
PW118B	2RHS*P1B Item 2.3 Lower	C-G	C6.10	Sur
PW118C	2RHS*P1C Item 2.3 Lower	C-G	C6.10	Sur

Nine Mile Point Unit 2

Relief Request No.: RR-IWC-2

RELIEF REQUEST FOR ASME SECTION III CLASS 2 PIPING SUBMERGED UNDERWATER

1. Identification of Components

   Pages 3 of 5 through 5 of 5 identify certain welds in the CSH, CSL, ICS, and RHS systems classified in accordance with ASME Section XI Examination Category C-F, which are submerged in the suppression pool.

2. ASME Section XI Requirements

   Piping is non-exempt and requires a volumetric and/or surface examination in accordance with Table IWC-2500-1, Category C-F, Item No. C5.11 and/or C5.21.

3. Basis for Relief

   Relief is requested due to inaccessibility of the welds located underwater within the suppression pool.

   Structural integrity of those portions of the piping system has been demonstrated during fabrication and erection under ASME Section III. The piping has been designed for submerged conditions and postulated plant loading combinations. Postulated cracks in this piping are not detrimental to the safety function of the systems in which these lines are located.

4. Inspection Period for Relief Request

   Preservice Inspection.

5. Alternate Tests or Examinations

   All ASME Section III nondestructive examination results will be used.

6. Schedule for Implementing Alternate Tests

   Prior to completion of PSI.

7. Impact to Overall Plant Level of Quality

   No impact.

8. Preservice Examination Reults

ASME Section III examination results will be submitted in the Final Summary Report.

9. Radiation Considerations

None.

RR-IWC-2 (Cont)

WELD NUMBER	COMPONENT/ WELD NAME	EXAM CAT	ITEM NO.	EXAM REQ
25-05-CSH-FW012	Pipe/Elbow	C-F	C5.11	Sur
25-05-CSH-FW013	Pipe/WNF	C-F	C5.11	Sur
25-05-CSH-FW014	Elbow/Z-12	C-F	C5.11	Sur
25-19-CSH-FW011	Elbow/Z-13	C-F	C5.11	Vol and Sur
25-19-CSH-SW013	Pipe/Elbow	C-F	C5.11	Vol and Sur
26-01-CSL-FW026	Pipe/Elbow	C-F	C5.11	Sur
26-01-CSL-FW027	Pipe/WNF	C-F	C5.11	Sur
26-01-CSL-FW028	Elbow/Z-15	C-F	C5.11	Sur
26-01-CSL-FW035	Pipe/Pipe	C-F	C5.11	Vol and Sur
57-08-ICS-FW007	Pipe/Pene Z-19	C-F	C5.11	Sur
57-08-ICS-FW015	Pipe/Elbow	C-F	C5.11	Sur
57-08-ICS-FW016	Pipe/Elbow	C-F	C5.11	Sur
57-08-ICS-SW056	Pipe/Plate	C-F	C5.11	Sur
Diff 1-A	Pipe/Z-88A	C-F	C5.21	Vol and Sur
Diff 1-B	Pipe/Pipe	C-F	C5.21	Vol and Sur
Diff 1-C	Pipe/Pipe	C-F	C5.21	Vol and Sur

RR-IWC-2 (Cont)

WELD NUMBER	COMPONENT/ WELD NAME	EXAM CAT	ITEM NO.	EXAM REQ
Diff 1-D	Pipe/Pipe	C-F	C5.21	Vol and Sur
Diff 1-E	Pipe/Flange	C-F	C5.21	Vol and Sur
Diff 1-M	Pipe/Flange	C-F	C5.21	Vol and Sur
Diff 2-A	Pipe/Z-88B	C-F	C5.21	Vol and Sur
Diff 2-B	Pipe/Pipe	C-F	C5.21	Vol and Sur
Diff 2-C	Pipe/Pipe	C-F	C5.21	Vol and Sur
Diff 2-D	Pipe/Pipe	C-F	C5.21	Vol and Sur
Diff 2-E	Pipe/Flange	C-F	C5.21	Vol and Sur
Diff 2-M	Pipe/Flange	C-F	C5.21	Vol and Sur
66-08-RHS-FW001	Pipe/Pipe	C-F	C5.11	Sur
66-08-RHS-FW003	Pipe/Z73	C-F	C5.11	Sur
66-08-RHS-FW011	Pipe/Elbow	C-F	C5.11	Sur
66-08-RHS-SW018	Pipe/Elbow	C-F	C5.11	Sur

RR-IWC-2 (Cont)

WELD NUMBER	COMPONENT/ WELD NAME	EXAM CAT	ITEM NO.	EXAM REQ
66-13-RHS-FW023	Pipe/Elbow	C-F	C5.11	Sur
66-13-RHS-FW024	Pipe/WNF	C-F	C5.11	Sur
66-13-RHS-FW025	Z5A/Pipe	C-F	C5.11	Sur
66-13-RHS-FW029	Pipe/Pipe	C-F	C5.11	Sur
66-17-RHS-FW010	Pipe/Z6B	C-F	C5.11	Sur
66-17-RHS-SW016	Pipe/Elbow	C-F	C5.11	Sur
66-22-RHS-FW021	Pipe/Elbow	C-F	C5.11	Sur
66-22-RHS-FW022	Pipe/WNF	C-F	C5.11	Sur
66-22-RHS-FW023	Pipe/Z5C	C-F	C5.11	Sur
66-22-RHS-FW029	Pipe/Pipe	C-F	C5.11	Sur
66-22-RHS-SW014	Pipe/Elbow	C-F	C5.11	Sur
66-23-RHS-FW018	Flg/Pipe	C-F	C5 11	Sur
66-23-RHS-FW019	Pipe/Sr Elb	C-F	C5.11	Sur
66-23-RHS-FW020	Elb/Z-5B	C-F	C5.11	Sur
66-23-RHS-FW022	Pipe/Pipe	C-F	C5.11	Sur
66-28-RHS-FW007	Z-6A/Elbow	C-F	C5.11	Sur
66-28-RHS-SW006	Elb/Pipe	C-F	C5.11	Sur

Nine Mile Point Unit 2

Relief Request No.: RR-IWC-3

RELIEF REQUEST FOR ASME SECTION III, CLASS 2
DIFFUSERS (2RHS*DIFF1 AND DIFF2)
SHELL WELDS

1. Identification of Components

   Page 2 of 2 identifies those welds as shown on ISI Isometric Drawing Nos. ISI-66-11 and 66-07 for which relief is requested.

2. ASME Section XI Requirements

   Volumetric examination is required in accordance with Table IWC-2500-1, Category C-A, Item No. C1.10.

3. Basis for Relief

   Relief is requested due to inaccessibility of welds located underwater within the suppression pool.

   Structural integrity of the diffusers has been demonstrated during fabrication and installation under ASME Section III. A through-wall crack in the diffuser is not detrimental to the safety function of the RHS sys .em.

4. Inspection Period for Relief Request

   Preservice Inspection.

5. Alternate Tests or Examinations

   All ASME Section III nondestructive examination results will be used.

6. Schedule for Implementing Alternate Tests

   Prior to completion of PSI.

7. Impact to Overall Plant Level of Quality

   No impact.

8. Preservice Examination Results

   ASME Section III examination results will be submitted in the Final Summary Report.

9. Radiation Considerations

None.

RR-IWC-3 (Cont)

WELD NUMBER	COMPONENT/ WELD NAME	EXAM CAT	ITEM NO.	EXAM REQ
Diff 1-F	Cap/Shell	C-A	C1.10	Vol
Diff 1-G	Cap/Shell	C-A	C1.10	Vol
Diff 1-H	Shell/Shell	C-A	C1.10	Vol
Diff 1-J	Shell/Shell	C-A	C1.10	Vol
Diff 1-K	Shell/Shell	C-A	C1.10	Vol
Diff 2-F	Cap/Shell	C-A	C1.10	Vol
Diff 2-G	Cap/Shell	C-A	C1.10	Vol
Diff 2-H	Shell/Shell	C-A	C1.10	Vol
Diff 2-J	Shell/Shell	C-A	C1.10	Vol
Diff 2-K	Shell/Shell	C-A	C1.10	Vol

Nine Mile Point Unit 2

Relief Request No.: RR-IWC-4

RELIEF REQUEST FOR ASME SECTION III, CLASS 2
DIFFUSERS (2RHS*DIFF1 AND DIFF2)
NOZZLE-TO-SHELL WELDS

1. Identification of Components

   Page 3 of 3 identifies those welds as shown on ISI Isometric Drawing Nos. ISI-66-11 and 66-07 for which relief is requested.

2. ASME Section XI Requirements

   Volumetric and surface examinations are required in accordance with Table IWC-2500-1, Category C-B, Item No. C2.21.

3. Basis for Relief

   Relief is requested due to the inaccessibility of welds located underwater within the suppression pool.

   Structural integrity of the diffusers has been demonstrated during fabrication and installation under ASME Section III. A through-wall crack in the diffuser is not detrimental to the safety function of the RHS system.

4. Inspection Period for Relief Request

   Preservice Inspection.

5. Alternate Tests or Examinations

   All ASME Section III nondestructive examination results will be used.

6. Schedule for Implementing Alternate Tests

   Prior to completion of PSI.

7. Impact to Overall Plant Level of Quality

   No impact.

8. Preservice Examination Results

   ASME Section III examination results will be submitted in the Final Summary Report.

9. Radiation Considerations

   None.

Nine Mile Point Unit 2

RR-IWC-4 (Cont)

WELD NUMBER	COMPONENT/ WELD NAME	EXAM CAT	ITEM NO.	EXAM REQ
Diff 1-L	Nozzle/Shell	C-B	C2.21	Vol and Sur
Diff 2-L	Nozzle/Shell	C-B	C2.21	Vol and Sur

Nine Mile Point Unit 2

Relief Request No.: RR-IWC-5

RELIEF REQUEST FOR ASME SECTION III, CLASS 2
PIPING INTEGRAL ATTACHMENTS

1. Identification of Components

   Page 3 of 3 identifies piping integral attachment welds.

2. ASME Section XI Requirements

   Piping integral attachment welds require a surface examination in accordance with Table IWC-2500-1, Category C-C, Item No. C3.40.

3. Basis for Relief

   Relief is requested due to the inaccessibility of the welds.

   Structural integrity of those portions of the piping boundary has been demonstrated during the fabrication and installation under ASME Section III. The piping and the related integral attachments have been designed for submerged conditions and postulated plant loading combinations. Postulated cracks in this piping are not detrimental to the safety function of the CSL system.

4. Inspection Period for Relief Request

   Preservice Inspection.

5. Alternate Tests or Examinations

   All ASME Section III nondestructive examination records will be used.

6. Schedule for Implementing Alternate Tests

   Prior to completion of PSI.

7. Impact to Overall Plant Level of Quality

   No impact.

8. Preservice Examination Results

   ASME Section III NDE results shall be submitted in the Final Summary Report.

9. Radiation Considerations

None.

Nine Mile Point Unit 2

RR-IWC-5 (Cont)

WELD NUMBER	COMPONENT/ WELD NAME	EXAM CAT	ITEM NO.	EXAM REQ
26-01-CSL-FW313	Pipe/Plate	C-C	C3.40	Sur
26-01-CSL-FW314	Pipe/Plate	C-C	C3.40	Sur

Nine Mile Point Unit 2

Relief Request No.: RR-IWC-6

RELIEF REQUEST FOR RHR,
HPCS, AND LPCS SYSTEM (ASME CLASS 2)
PUMP INTEGRAL ATTACHMENTS

1. Identification of Components

Pages 3 of 5 through 5 of 5 list pump integral attachments in the CSH, CSL, and RHS pumps classified in accordance with ASME Section XI Examination Category C-C. Refer to the pump drawings with Relief Request RR-IWC-1 which identifies the pump weld numbers.

2. ASME Section XI Requirements

Pump integral attachments require a surface examination in accordance with Table IWC-2500-1, Category C-C, Item No. C3.70.

3. Basis for Relief

The pump integral attachments are inaccessible due to the pump being installed in a concrete pit, which does not allow access to the pump casing to perform surface examinations. The pumps would require disassembly to perform the required examination. Pump disassembly at this stage of construction is considered impractical and not in the interest of safety from both a potential pump damage and disassembly/reassembly error.

In addition, the structural integrity of the pump(s) pressure boundary(s) has been demonstrated during fabrication and construction and will undergo hydrostatic testing as part of the ASME Section III final certification.

4. Inspection Period for Relief Request

Preservice Inspection.

5. Alternate Tests or Examinations

All ASME Section III nondestructive examination results will be used. In addition, the pumps will receive further testing in accordance with ASME Section XI, Article IWP, which further ensures the pumps' structural integrity.

6. Schedule for Implementing Alternate Test

   The alternate test will be performed during PSI.

7. Impact to Overall Plant Level of Quality

   No impact.

8. Preservice Examination Results

   ASME Section III results will be submitted in the Final Summary Report.

9. Radiation Considerations

   None.

Nine Mile Point Unit 2

RR-IWC-6 (Cont)

WELD NUMBER	COMPONENT/ WELD NAME	EXAM CAT	ITEM NO.	EXAM REQ
PW202	2CSH*P1 Item 1.14 to 1.7	C-C	C3.70	Sur
PW211	2CSH*P1 Item 1.14 to 1.2	C-C	C3.70	Sur
PW220	2CSH*P1 Item 2.5 to 2.2	C-C	C3.70	Sur
PW221	2CSH*P1 Item 2.5 to 2.2	C-C	C3.70	Sur
PW222	2CSH*P1 Item 2.7 to 2.2	C-C	C3.70	Sur
PW223	2CSH*P1 Item 2.7 to 2.2	C-C	C3.70	Sur
PW224	2CSH*P1 Item 2.4 to 2.2	C-C	C3.70	Sur
PW225	2CSH*P1 Item 2.4 to 2.2	C-C	C3.70	Sur
PW226	2CSH*P1 Item 2.3 to 2.2	C-C	C3.70	Sur
PW227	2CSH*P1 Item 2.3 to 2.2	C-C	C3.70	Sur
PW229	2CSH*P1 Item 1.9 to 1.7	C-C	C3.70	Sur
PW230	2CSH*P1 Item 1.9 to 1.7	C-C	C3.70	Sur
PW307	2CSL*P1 Item 1.15 to 1.2	C-C	C3.70	Sur
PW319	2CSL*P1 Item 2.2 to 2.5	C-C	C3.70	Sur
PW323	2CSL*P1 Item 2.4 to 2.3	C-C	C3.70	Sur

Nine Mile Point Unit 2

RR-IWC-6 (Cont)

WELD NUMBER	COMPONENT/ WELD NAME	EXAM CAT	ITEM NO.	EXAM REQ
PW105A	2RHS*P1A Item 1.15 to 1.9	C-C	C3.70	Sur
PW105B	2RHS*P1B Item 1.15 to 1.9	C-C	C3.70	Sur
PW105C	2RHS*P1C Item 1.15 to 1.9	C-C	C3.70	Sur
PW107A	2RHS*P1A Item 1.15 to 1.2	C-C	C3.70	Sur
PW107B	2RHS*P1B Item 1.15 to 1.2	C-C	C3.70	Sur
PW107C	2RHS*P1C Item 1.15 to 1.2	C-C	C3.70	Sur
PW121A	2RHS*P1A Item 2.2 to 2.5	C-C	C3.70	Sur
PW121B	2RHS*P1B Item 2.2 to 2.5	C-C	C3.70	Sur
PW121C	2RHS*P1C Item 2.2 to 2.5	C-C	C3.70	Sur
PW125A	2RHS*P1A Item 1.13 to 1.1	C-C	C3.70	Sur
PW125B	2RHS*P1B Item 1.13 to 1.1	C-C	C3.70	Sur
PW125C	2RHS*P1C Item 1.13 to 1.1	C-C	C3.70	Sur
PW126A	2RHS*P1A Item 1.13 to 1.1	C-C	C3.70	Sur
PW126B	2RHS*P1B Item 1.13 to 1.1	C-C	C3.70	Sur
PW126C	2RHS*P1C Item 1.13 to 1.1	C-C	C3.70	Sur

RR-IWC-6 (Cont)

Weld Number	Component/ Weld Name	Exam Cat.	Item No.	Exam Req.	ASME III Exam Method
PW126B	2RHS*P1B Item 1.13 to 1.1	C-C	C3.70	Sur	Sur
PW126C	2RHS*P1C Item 1.13 to 1.1	C-C	C3.70	Sur	Sur
PW127A	2RHS*P1A Item 2.4 to 2.3	C-C	C3.70	Sur	Sur
PW127B	2RHS*P1B Item 2.4 to 2.3	C-C	C3.70	Sur	Sur
PW127C	2RHS*P1C Item 2.4 to 2.3	C-C	C3.70	Sur	Sur
PW128A	2RHS*P1A Item 2.4 to 2.3	C-C	C3.70	Sur	Sur
PW128B	2RHS*P1B Item 2.4 to 2.3	C-C	C3.70	Sur	Sur
PW128C	2RHS*P1C. Item 2.4 to 2.3	C-C	C3.70	Sur	Sur

Relief Request No.: RR-IWC-7

1. Identification of Components

   Page 3 of 4 identifies those RDS integral attachment welds for which relief from partial ASME XI examination is required.

2. ASME Section XI Requirements

   Surface examinations are required for the RDS integral attachment welds in accordance with Table IWC-2500-1, Category C-C, Item No. C3.40.

3. Basis for Relief

   The examinations of the subject welds as identified in the Unit 2 PSI Program Plan can only be performed on a limited scope due to the interferences from the tube steel of their associated supports. The sketch on Page 4 of 4 shows the typical configuration of the RDS integral attachment welds as well as the area covered by the ASME XI preservice surface examinations and the limiting permanent interferences. The as-installed position of the tube steel relative to the lug is required for the support to perform its design function. It is not practical to redesign the interfering tube steel outside the lug weld exam area or to cut the tube steel to perform this exam. The integrity of the RDS integral attachment welds has also been previously verified by nondestructive examination during erection under ASME Section III.

4. Inspection Period for Relief Request

   Preservice inspection.

5. Alternate Tests or Examinations

   ASME Section XI surface examinations are performed. Results of ASME Section III magnetic particle examination performed prior to installation of permanent obstruction will also be used.

6. Schedule for Implementing Alternate Test

   During preservice inspection.

RR-IWC-7 (Cont)

7. Impact to Overall Plant Level of Quality

   Overall plant quality is not impacted.

8. Preservice Examination Results

   ASME XI and ASME III surface examination results will be included in the Final Summary Report.

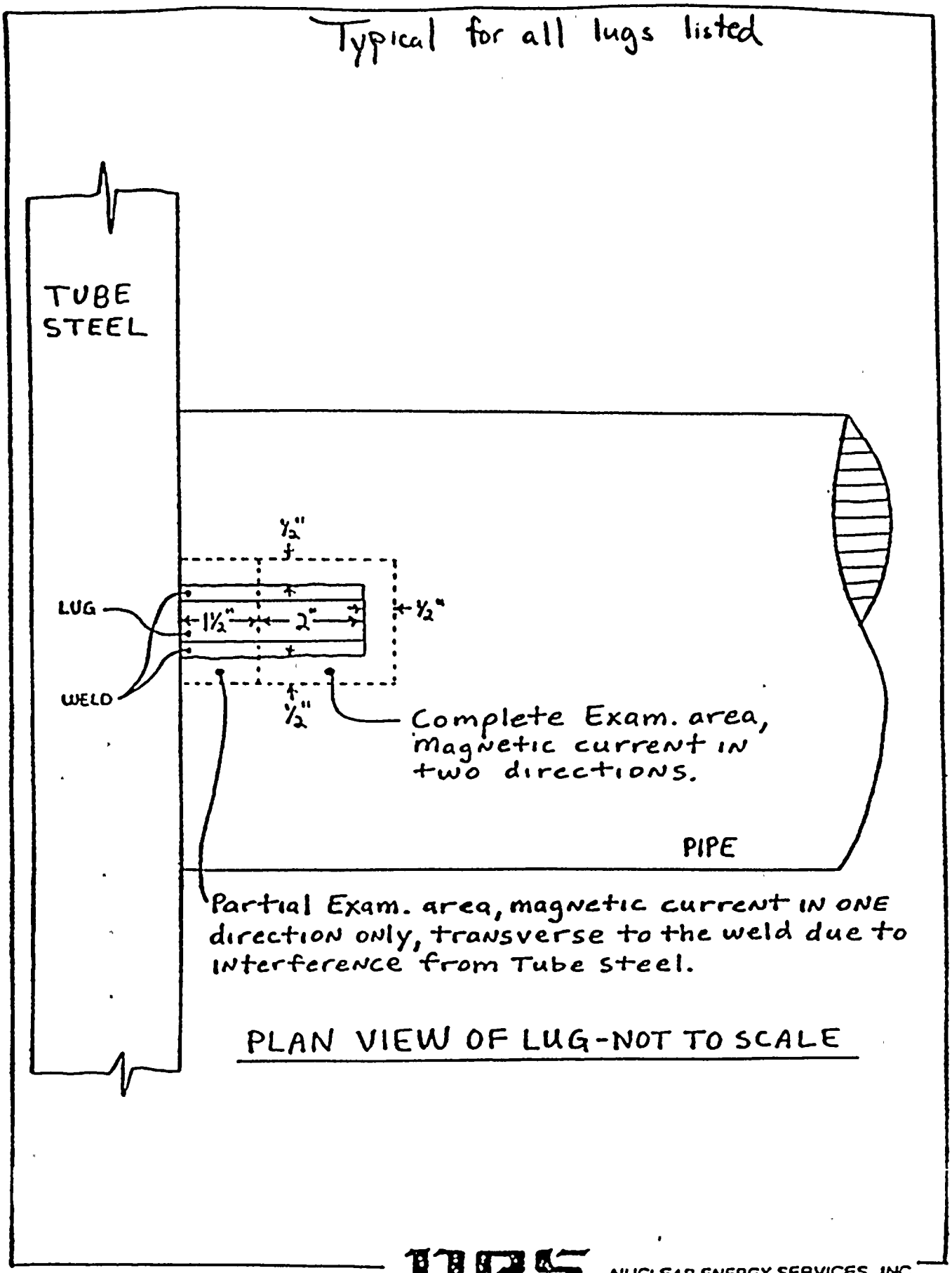
9. Radiation Considerations

   None.

RR-IWC-7 (Cont)

Due to component support on the following welds, 100 percent coverage of magnetic particle examinations could not be accomplished.

2-RDS-65-00-IAW01B-12 through 19
2-RDS-65-00-IAW06A-12 through 19
2-RDS-65-00-IAW03A-12 through 19
2-RDS-65-00-IAW07B-12 through 19
2-RDS-65-00-IAWSP-2N-1 through 8
2-RDS-65-00-IAWSP-2S-1 through 8
2-RDS-65-00-IAW04B-12 through 19
2-RDS-65-00-IAW22A-16 through 25
2-RDS-65-00-IAW12A-20A through 27A
2-RDS-65-00-IAW12A-30 and 31
2-RDS-65-00-IAW13B-20 through 27
2-RDS-65-00-IAW13B-32 and 33
2-RDS-65-00-IAW09A-16 through 25
2-RDS-65-00-IAW15A-20 through 27
2-RDS-65-00-IAW15A-30 and 31
2-RDS-65-00-IAW16B-20 through 27
2-RDS-65-00-IAW16B-32 and 33
2-RDS-65-00-IAW19B-20 through 25
2-RDS-65-00-IAW19B-32 and 33
2-RDS-65-00-IAW10B-16 through 23
2-RDS-65-00-IAW19B-26 and 27


Typical for all lugs listed
TUBE STEEL
LUG
WELD
1½"
2"
½"
½"
½"
Complete Exam. area, magnetic current in two directions.
PIPE
Partial Exam. area, magnetic current in one direction only, transverse to the weld due to interference from Tube steel.
PLAN VIEW OF LUG-NOT TO SCALE

Relief Request No.: RR-IWC-8

1. Identification of Components

   Pages 2 and 3 of 3 identify those integral attachment, vessel, piping and valve body welds for which relief from partial ASME XI examination is required.

2. ASME Section XI Requirements

   Surface and/or volumetric examinations are required for these welds in accordance with Table IWC-2500-1, Categories C-A, C-B, C-C, C-F and C-G.

3. Basis for Relief

   The surface and volumetric examinations of the subject welds as identified in the Unit 2 PSI Program Plan can only be performed on a limited scope due to permanent interferences as indicated on Pages 2 and 3 of 3. The integrity of the subject welds has also been previously verified by nondestructive examination during erection under ASME Section III.

4. Inspection Period for Relief Request

   Preservice inspection.

5. Alternate Tests or Examinations

   Results of ASME Section III volumetric and surface examination results will also be used.

6. Schedule for Implementing Alternate Test

   During preservice inspection.

7. Impact to Overall Plant Level of Quality

   Overall plant quality is not impacted.

8. Preservice Examination Results

   ASME XI and ASME III volumetric and/or surface results will be included in the Final Summary Report.

9. Radiation Considerations

   None.

RR-IWC-8 (Cont)

Due to interferences on the following welds, 100 percent coverage could not be accomplished.

Weld	Exam Category	Exam Item	% Coverage Vol/Sur	Interference
2RHS-66-57-FW307	C-C	C3.40	NA/45	Permanent Tube Steel
2RHS-66-12 VWMOV1C-B through D	C-G	C6.20	NA/85	Permanent Stiffener Plate
2RHS-66-13 VWMOV2A-A through C	C-G	C6.20	NA/90	Permanent Stiffener Plate
2CSL-26-01 VWMOV112-B through D	C-G	C6.20	NA/85	Permanent Stiffener Plate
2MSS-01-05-FW-08	C-F	C5.21	95/100	Sock-o-let
2MSS-01-04-FW-12	C-F	C5.21	98/100	Header Configuration
2CSH-25-04-FW-03	C-F	C5.11	70/100	Weld Configuration
2CSH-25-04-FW-07	C-F	C5.11	85/100	Weld Configuration
2CSH-25-04-FW-08	C-F	C5.11	85/100	Weld Configuration
2CSH-25-08-FW-06	C-F	C5.21	85/100	Permanent Restraint
2CSH-25-09-FW-04	C-F	C5.21	66/100	Permanent Restraint
2CSH-25-09-FW-300	C-C	C3.40	NA/55	Concrete Structure
2CSH-25-09-FW-305	C-C	C3.40	NA/55	Concrete Structure
2CSL-26-02 VWHCV118 C and D	C-G	C6.20	NA/80	Welded Attachment
2CSL-26-03-FW-25	C-F	C5.11	90/100	Sweep-o-let
2RHS-66-13-FW-21	C-F	C5.11	50/100	One Side S.S. Exam
2RHS-66-14-FW-01	C-F	C5.11	90/100	Permanent Restraint
2RHS-66-14-PW-114A	C-C	C3.70	NA/70	Integral Attachments

RR-IWC-8 (Cont)

Weld	Exam Category	Exam Item	% Coverage Vol/Sur	Interference
2RHS-66-15-HW-100A	C-A	C1.10	99/100	Welded Attachments
2RHS-66-15-HW-101A	C-A	C1.20	98/100	Adjacent Nozzle Weld
2RHS-66-15-HW-102A	C-B	C2.21	90/100	Adjacent Flange Weld
2RHS-66-15-HW-103A	C-B	C2.21	95/100	Sock-o-let
2RHS-66-15-HW-105A	C-B	C2.22	75/100	Nozzle Configuration
2RHS-66-16-FW-304	C-C	C3.40	NA/95	Floor Sleeve
2RHS-66-18-FW-311, 312	C-C	C3.40	NA/60	Permanment Restraint
2RHS-66-19-SW-26	C-F	C5.11	95/100	Weld Configuration
2RHS-66-20-FW-303-306	C-C	C3.40	NA/70	Permanent Restraint
2RHS-66-22-FW-19	C-F	C5.11	50/100	One Side S.S. Exam
2RHS-66-32-FW-05	C-F	C5.11	95/100	Sock-o-let
2RHS-66-57-FW-305, 306	C-C	C3.40	NA/85	Permanent Restraint

SECTION 7

PROCEDURES FOR PRESERVICE INSPECTION

7.1 PRESERVICE INSPECTION AND TESTING PROCEDURES

All approved PSI procedures, including hydrostatic test procedures which are used for Unit 2, shall be controlled and maintained at Unit 2. The following procedures have been approved for use during PSI:

Procedure No.	Title
80A7716	Visual Inspection Procedure
80A7717	Ultrasonic Examination General Requirements
80A7718	Ultrasonic Examination Procedure for Austenitic Piping
80A7719	Ultrasonic Examination Procedure for Ferritic Piping
80A7720	Liquid Penetrant Examination Procedure
80A7721	Magnetic Particle Examination Procedure

Additional nondestructive examination procedures are undergoing a review. When approved they will be implemented into the PSI plan for Unit 2. The following procedures are undergoing review for use in the examination of the RPV:

Procedure No.	Title
83A1749	Automated Ultrasonic Examination Procedure for Reactor Vessel Shell Welds from the O.D. Surface
83A1750	Automated Ultrasonic Examination Procedure for Reactor Vessel Nozzle Safe End Welds From the O.D. Surface
83A1754	Automated Operations - General Examination - Requirements for NMP2

Other procedures used for fabrication of calibration blocks and marking of weld datum points and weld identification have been approved. They are listed below:

Procedure No.	Title
80A7726	Fabrication Specification of Piping Calibration Blocks
80A7727	Piping Calibration Blocks (.250" ≤ T ≤1.00")
80A7728	Piping Calibration Blocks T>1.000"
83A1757	Procedure for Weld Datum Points and Identification Marking

The response to NRC Question F250.1 discusses the degree of compliance with Regulatory Guide 1.150. In addition, the response dicusses how the RPV automated procedures for Unit 2 are qualified to assure finding service-induced flaws on the RPV I.D. surface.

Procedures used during the PSI will be submitted with the Final Summary Report.

SECTION 8

WELD AND COMPONENT IDENTIFICATION DIAGRAMS

Table 8-1 lists the Weld and Component Identification Diagrams for all ASME Section III Class 1 and Class 2 nonexempt welds listed in Appendix A. These diagrams are made part of the Preservice Inspection Plan and are located after Table 8-1.

Until construction, and all PSI examinations are completed, it is recognized that the PSI plan is subject to change.

Pending the as-built condition for Unit 2 these drawings shall be controlled at Unit 2 in conjunction with the PSI Program Plan Tables.

TABLE 8-1

WELD AND COMPONENT IDENTIFICATION DIAGRAMS
ASME SECTION III, CLASS 1 AND 2

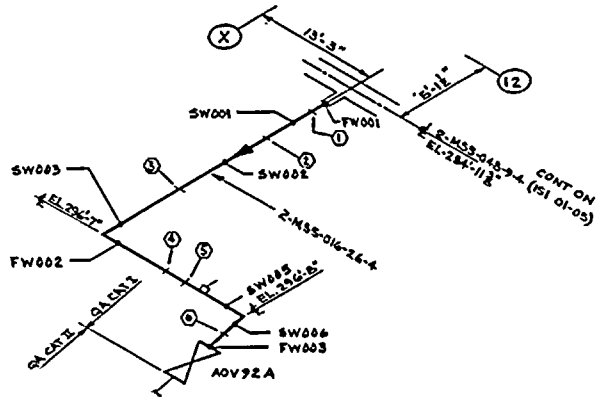
System	Drawing No.	ASME Class
Main Steam (MSS)	ISI-01-03	2
Main Steam (MSS)	ISI-01-04	2
Main Steam (MSS)	ISI-01-05	2
Main Steam (MSS)	ISI-01-06	2
Main Steam (MSS)	ISI-01-07	2
Main Steam (MSS)	ISI-01-13	1
Main Steam (MSS)	ISI-01-14	1
Main Steam (MSS)	ISI-01-15	1
Main Steam (MSS)	ISI-01-16	1
Main Steam (MSS)	ISI-01-17	2
Main Steam (MSS)	ISI-01-19	2
Main Steam (MSS)	ISI-01-20	1
Main Steam (MSS)	ISI-01-21	1
Main Steam (MSS)	ISI-47-A	1
Main Steam (MSS)	ISI-106-A	1
Main Steam (MSS)	ISI-107-A	1
Main Steam (MSS)	ISI-110-A	1
Main Steam (MSS)	ISI-110-B	1
Reactor Building Equipment Drains (DER)	ISI-07-A	1
Reactor Water Cleanup (WCS)	ISI-09-05	1
Reactor Water Cleanup (WCS)	ISI-09-06	1
Reactor Water Cleanup (WCS)	ISI-09-14	1
Reactor Water Cleanup (WCS)	ISI-12-A	1
Reactor Water Cleanup (WCS)	ISI-94-A	1
Reactor Water Cleanup (WCS)	ISI-100-A	1
Reactor Water Cleanup (WCS)	ISI-217-A	1
Reactor Building Closed Loop Cooling Water (CCP)	ISI-18-15	2
Reactor Building Closed Loop Cooling Water (CCP)	ISI-18-20	2
Auxiliary Steam (ASS)	ISI-20-01	2
High Pressure Core Spray (CSH)	ISI-25-01	2
High Pressure Core Spray (CSH)	ISI-25-03	2
High Pressure Core Spray (CSH)	ISI-25-04	2
High Pressure Core Spray (CSH)	ISI-25-05	2
High Pressure Core Spray (CSH)	ISI-25-08	2
High Pressure Core Spray (CSH)	ISI-25-09	1, 2
High Pressure Core Spray (CSH)	ISI-25-10	1
High Pressure Core Spray (CSH)	ISI-25-13	2
High Pressure Core Spray (CSH)	ISI-25-17	2
High Pressure Core Spray (CSH)	ISI-25-18	2
High Pressure Core Spray (CSH)	ISI-25-19	2

TABLE 8-1 (Cont)

System	Drawing No.	ASME Class
Low Pressure Core Spray (CSL)	ISI-26-01	2
Low Pressure Core Spray (CSL)	ISI-26-02	2
Low Pressure Core Spray (CSL)	ISI-26-03	2
Low Pressure Core Spray (CSL)	ISI-26-04	2
Low Pressure Core Spray (CSL)	ISI-26-05	1, 2
Low Pressure Core Spray (CSL)	ISI-26-06	2
Feedwater (FWS)	ISI-47-13	1
Feedwater (FWS)	ISI-47-14	1
Feedwater (FWS)	ISI-47-15	1
Feedwater (FWS)	ISI-47-16	1
Feedwater (FWS)	ISI-47-17	1
Feedwater (FWS)	ISI-47-18	1
Reactor Core Isolation Cooling (ICS)	ISI-57-05	2
Reactor Core Isolation Cooling (ICS)	ISI-57-06	2
Reactor Core Isolation Cooling (ICS)	ISI-57-07	1, 2
Reactor Core Isolation Cooling (ICS)	ISI-57-08	2
Reactor Core Isolation Cooling (ICS)	ISI-57-09	1, 2
Reactor Vessel Instrumentation (ISC)	ISI-322-B	1
Reactor Coolant (Recirculation) (RCS)	ISI-64-00 Sheet 1 of 6	1
Reactor Coolant (Recirculation) (RCS)	ISI-64-00 Sheet 2 of 6	1
Reactor Coolant (Recirculation) (RCS)	ISI-64-00 Sheet 3 of 6	1
Reactor Coolant (Recirculation) (RCS)	ISI-64-00 Sheet 4 of 6	1
Reactor Coolant (Recirculation) (RCS)	ISI-64-00 Sheet 5 of 6	1
Reactor Coolant (Recirculation) (RCS)	ISI-64-00 Sheet 6 of 6	1
Control Rod Drive Hydraulic System (RDS)	ISI-65-00 Sheet 1 of 2	2
Control Rod Drive Hydraulic System (RDS)	ISI-65-00 Sheet 2 of 2	2
Residual Heat Removal (RHS)	ISI-66-05	2
Residual Heat Removal (RHS)	ISI-66-06	2
Residual Heat Removal (RHS)	ISI-66-07	2
Residual Heat Removal (RHS)	ISI-66-08	2
Residual Heat Removal (RHS)	ISI-66-09	2

TABLE 8-1 (Cont)

System	Drawing No.	ASME Class
Residual Heat Removal (RHS)	ISI-66-10	2
Residual Heat Removal (RHS)	ISI-66-11	2
Residual Heat Removal (RHS)	ISI-66-13	2
Residual Heat Removal (RHS)	ISI-66-14	2
Residual Heat Removal (RHS)	ISI-66-15	2
Residual Heat Removal (RHS)	ISI-66-16	2
Residual Heat Removal (RHS)	ISI-66-17	2
Residual Heat Removal (RHS)	ISI-66-18	2
Residual Heat Removal (RHS)	ISI-66-19	1
Residual Heat Removal (RHS)	ISI-66-20	2
Residual Heat Removal (RHS)	ISI-66-21	1, 2
Residual Heat Removal (RHS)	ISI-66-22	2
Residual Heat Removal (RHS)	ISI-66-23	2
Residual Heat Removal (RHS)	ISI-66-24	2
Residual Heat Removal (RHS)	ISI-66-25	2
Residual Heat Removal (RHS)	ISI-66-26	1, 2
Residual Heat Removal (RHS)	ISI-66-27	2
Residual Heat Removal (RHS)	ISI-66-28	2
Residual Heat Removal (RHS)	ISI-66-29	2
Residual Heat Removal (RHS)	ISI-66-30	2
Residual Heat Removal (RHS)	ISI-66-31	1, 2
Residual Heat Removal (RHS)	ISI-66-32	1, 2
Residual Heat Removal (RHS)	ISI-66-34	2
Residual Heat Removal (RHS)	ISI-66-36	2
Residual Heat Removal (RHS)	ISI-66-41	2
Residual Heat Removal (RHS)	ISI-66-42	2
Residual Heat Removal (RHS)	ISI-66-47	1, 2
Residual Heat Removal (RHS)	ISI-66-50	1
Residual Heat Removal (RHS)	ISI-66-51	1
Residual Heat Removal (RHS)	ISI-66-52	1
Residual Heat Removal (RHS)	ISI-66-53	1
Residual Heat Removal (RHS)	ISI-66-54	1
Residual Heat Removal (RHS)	ISI-66-55	1
Residual Heat Removal (RHS)	ISI-66-57	2
Residual Heat Removal (RHS)	ISI-66-58	2
Residual Heat Removal (RHS)	ISI-66-60	2
Residual Heat Removal (RHS)	ISI-177-A	1
Standby Liquid Control (SLS)	ISI-88-A	1
Standby Liquid Control (SLS)	ISI-88-B	1
Standby Liquid Control (SLS)	ISI-75-A	1



NO.	PIPE SUPPORT	BZ NO.
1	2MSS PSSP073A4	BE-2AA
2	2MSS PSSP217AA	BE-2CB
3	2MSS PSSR216A4	BE-2CC
4	2MSS PSSN209A4	BE-2CD
5	2MSS PSSP210A4	BE-2BE
6	2MSS PSSP209A4	BE-2BY
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 01-03-MSS
4. ALL SUPPORTS PRECEDED BY 2MSS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 01-3-N
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2 MSS N

NO	DATE	REVISION	BY	CHKD	APPR
1	7/15/85	REVISED PER PSI PLAN UPDATE			
0	7/2/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2

NIAGARA MOHAWK POWER CORPORATION,

CLASS 2 REHEATING STEAM LOOP A

DWG NO ISI-01-03

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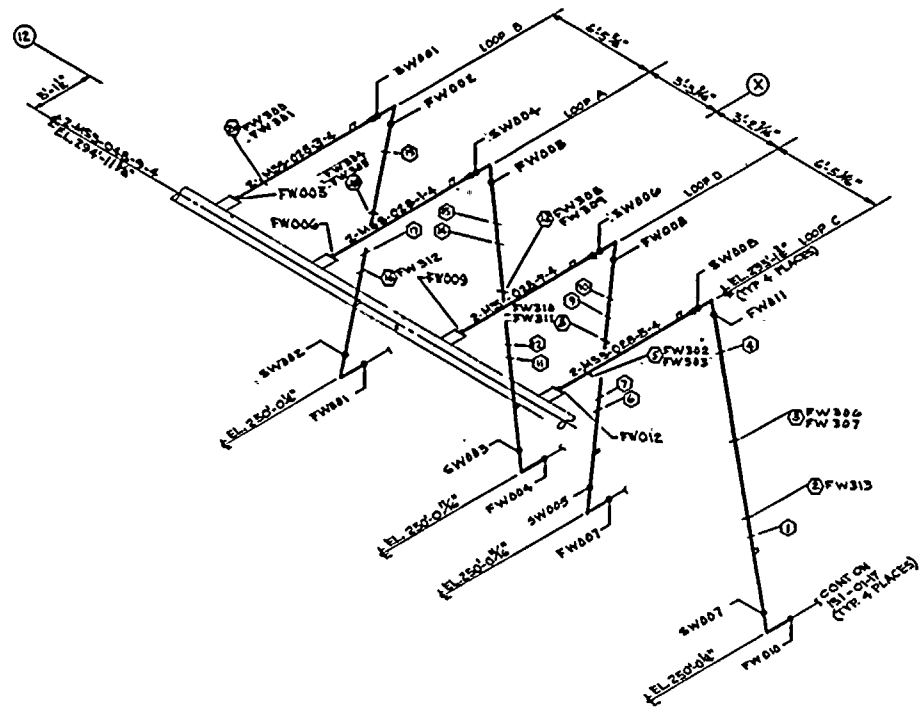
CHKD BY J DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2MSS P008P 064 AA	B2-2 AL
2	PS2P 068 AA	AL
3	PS2H 219 AA	CE
4	PS2P 227 AA	CM
5	PS2H 073 AA	BB
6	PS2P 064 AA	AP
7	PS2P 063 AA	AP
8	PS3H 220 AA	CE
9	PS3P 229 AA	CM
10	PS2P 228 AA	CM
11	PS3P 062 AA	AM
12	PS3P 061 AA	AM
13	PS3H 221 AA	CE
14	PS3P 231 AA	CE
15	PS3P 230 AA	CP
16	PS3P 059 AA	AL
17	PS3P 060 AA	AL
18	PS3H 216 AA	CE
19	PS2P 226 AA	CL
20	PS2H 074 AA	AT
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 01-04-MSS
4. ALL SUPPORTS PRECEDED BY 2MSS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 01-4-3
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

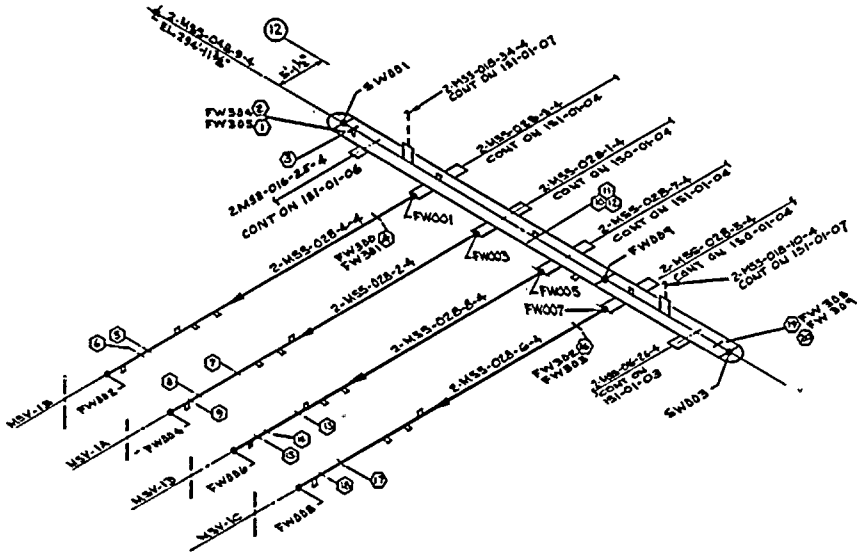
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2MSSN

NO	DATE	REVISION	BY	CHKD	APPR
1	3/13/85	REVISED PER PSI PLAN UPDATE			
0	7/8/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 MSS LOOP A,B,C,D
DWG NO ISI-01-04

DRAWN BY J.J. PILLI
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2MSS PMSP 318 AA	BZ-2AR
2	PSSP071AA	BZ-2AR
3	PSR 070 AA	BZ-2AR
4	PSSR 008AA	BZ-2AJ
5	PSSP052 AA	BZ-2CS
6	PSSP051AA	BZ-2CS
7	PSSH003AA	BZ-2K
8	PSSP054AA	BZ-2CQ
9	PSSP053AA	BZ-2CQ
10	PSSP069AA	BZ-2AQ
11	PSSP068AA	BZ-2AQ
12	PSR 067AA	BZ-2AQ
13	PSSH004AA	BZ-2L
14	PSSP056AA	BZ-2AM
15	PSSP055AA	BZ-2AM
16	PSSH006AA	BZ-2AK
17	PSSP058AA	BZ-2CR
18	PSSP057AA	BZ-2CR
19	PSR 072AA	BZ-2AS
20	PSSP379AA	BZ-2AS
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 01-05-MSS
4. ALL SUPPORTS PRECEDED BY 2MSS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 01-5-K

ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2MSS *

NO	DATE	REVISION	BY	CHKD	APPR
1	7/25/85	REVISED PER PSI PLAN UPDATE			
0	7/1/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 MSS LOOP A,B,C,D

DWG NO ISI 01-05

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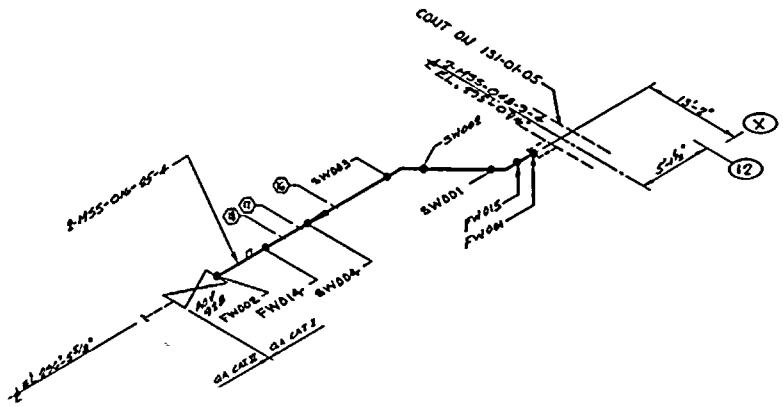
CHKD BY J DAVID



NO.	PIPE SUPPORT	BZ NO.
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16	2-MSS-PSSP 122 A4	BZ-2BC
17	• PSSP 120	2BL
18	• PSSP 121	2BM
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 01-06-MSS
4. ALL SUPPORTS PRECEDED BY 2 MSS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 01-6-R
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2MSS

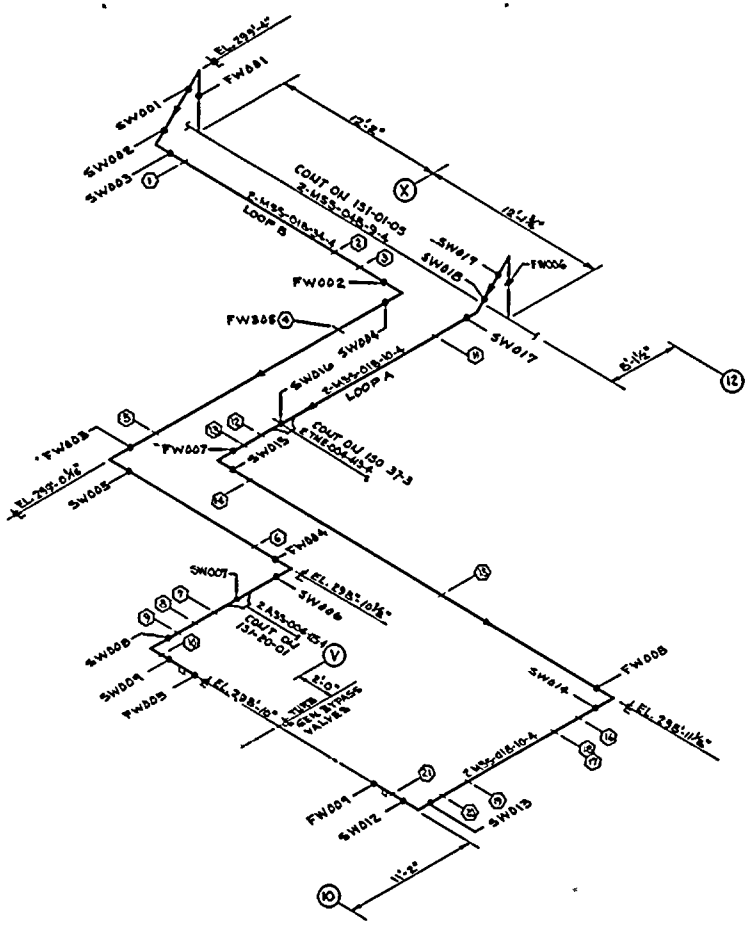
NO	DATE	REVISION	BY	CHKD	APPR
1	9/23/85	REVISED PER PSI PLAN UPDATE			
0	7/19/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 REHEATING STEAM LOOP B

DWG NO ISI-01-06

DRAWN BY D. P. GEORGE
CHKD BY J. DAVID



NO.	PIPE SUPPORT		BZ NO.	
1	2MSS PSSH 107 AA		DT-2E6	
2	PSSP 144			H
3	PSSP 143			K
4	PSSH 154			W
5	PSSH 106			EP
6	PSSP 146			N
7	PSSP 148			Q
8	PSSH 105			EE
9	PSSP 147			P
10	PSSP 142			L
11	PSSH 101			EA
12	PSSP 142			J
13	PSSH 102			EB
14	PSSP 149			R
15	PSSH 103			EC
16	PSSP 154			A
17	PSSP 226			U
18	PSSP 152			U
19	PSSP 151			T
20	PSSH 104			ED
21	PSSP 145			M
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LEGEND

O - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 01-07-MSS
4. ALL SUPPORTS PRECEDED BY 2MSS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 01-7-6

ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2MSS#

NO	DATE	REVISION	BY	CHKD	APPR
1	7/13/85	REVISED PER PSI PLAN UPDATE			
0	7/9/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2

WELD & COMPONENT

IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2

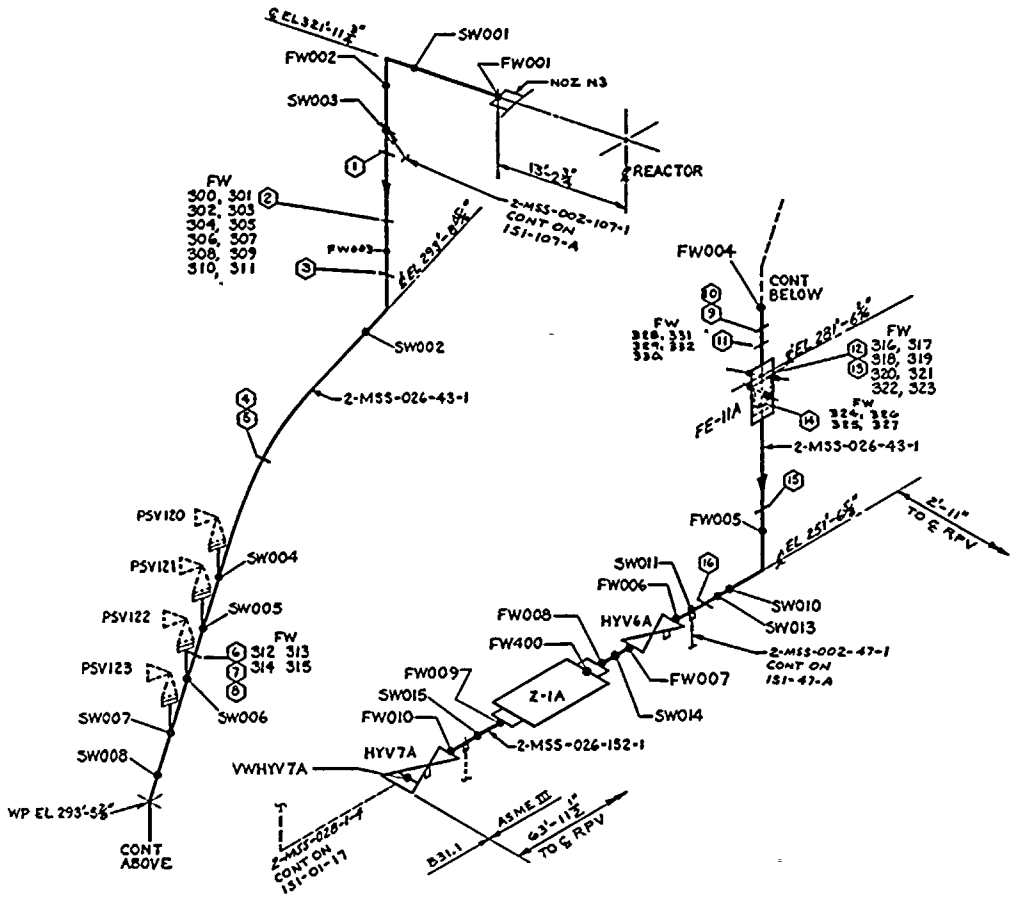
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 TURBINE BYPASS LOOP A,B

DWG NO ISI-01-07

DRAWN BY A.A. POLLI

CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2MSS-PSSH332A1	BZ-2 DS
2	PSSH338	DS
3	PSR339	DS
4	PSSP335	DR
5	PSSP336	DR
6	PSSP337	DQ
7	PSSP338	DQ
8	PSSP339	DQ
9	PSSP340	DP
10	PSSP341	DP
11	LATER	BZ-4 EEJ
12	PSSP427	BZ-2 EE
13	PSSP348	EE
14	PSSH349	EE
15	PSR350	EL
16	2MSS PSR364A1	EM
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 01-13-MSS
4. ALL SUPPORTS PRECEDED BY 2MSS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 01-13-N
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

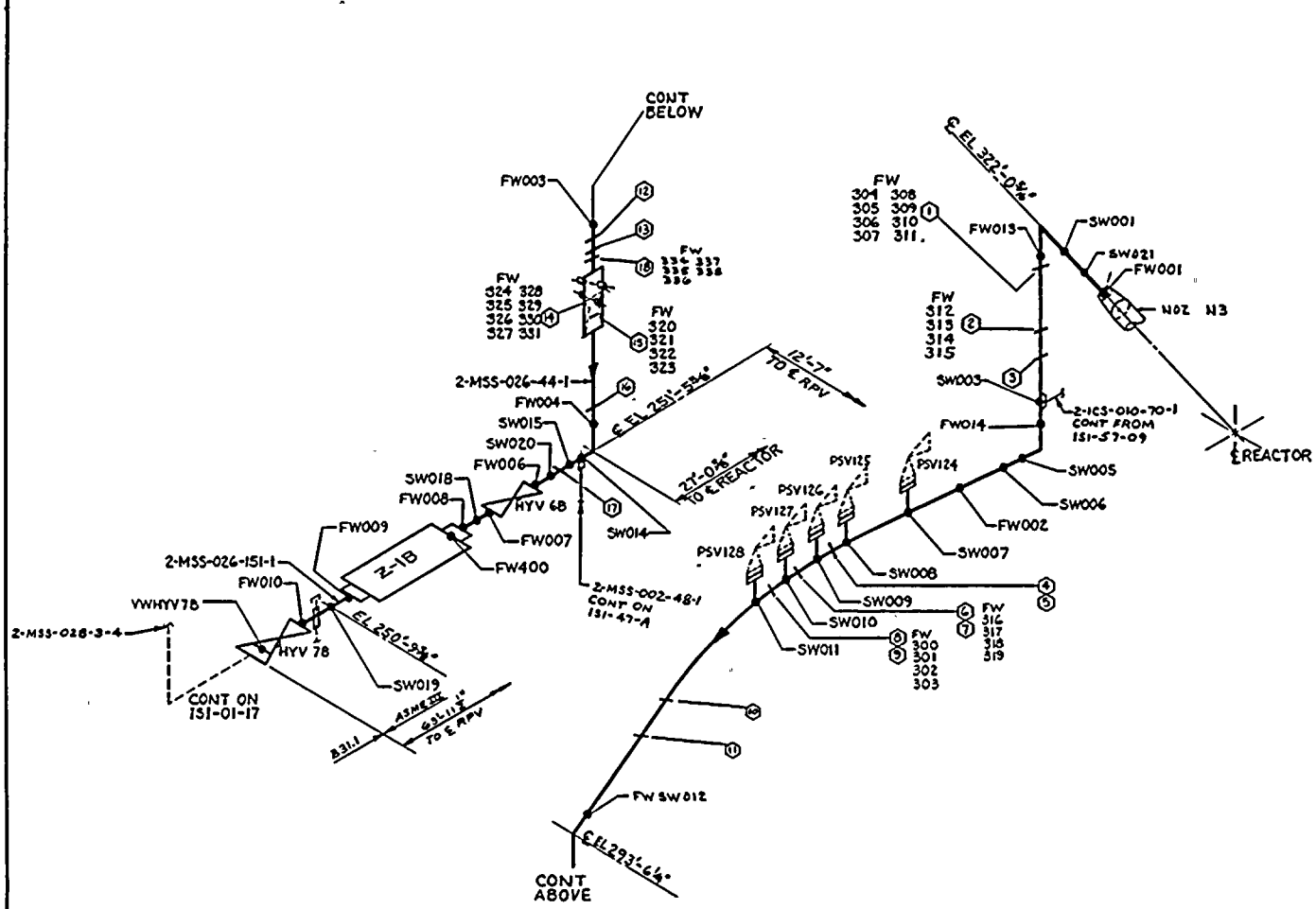
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2MSS#

NO	DATE	REVISION	BY	CHKD	APPR
1	3/15/85	REVISED PER PSI PLAN UPDATE			
0	7/8/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 MSS LOOP A
DWG NO ISI-01-13

DRAWN BY L.H. STANG
CHKD BY J DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2-MSS-PSSP-080A	BZ-2 DT
2	PSSH-081	DU
3	PSR-340	DW
4	PSSH-341	DX
5	PSSH-342	DX
6	PSSP-343	DY
7	PSSP-344	DY
8	PSSP-345	DZ
9	PSSP-354	DZ
10	PSSP-346	EA
11	PSSP-349	EB
12	PSSP-353	EP
13	PSSP-346	EC
14	PSSP-082	DV
15	PSSH-347	ED
16	PSR-363	EN
17	PSR-362	EP
18	LATER	BZ-43 ED
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LEGEND
○-INDICATES PIPE SUPPORT
•-INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 01-14-MSS
4. ALL SUPPORTS PRECEDED BY 2MSS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 01-14-R
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

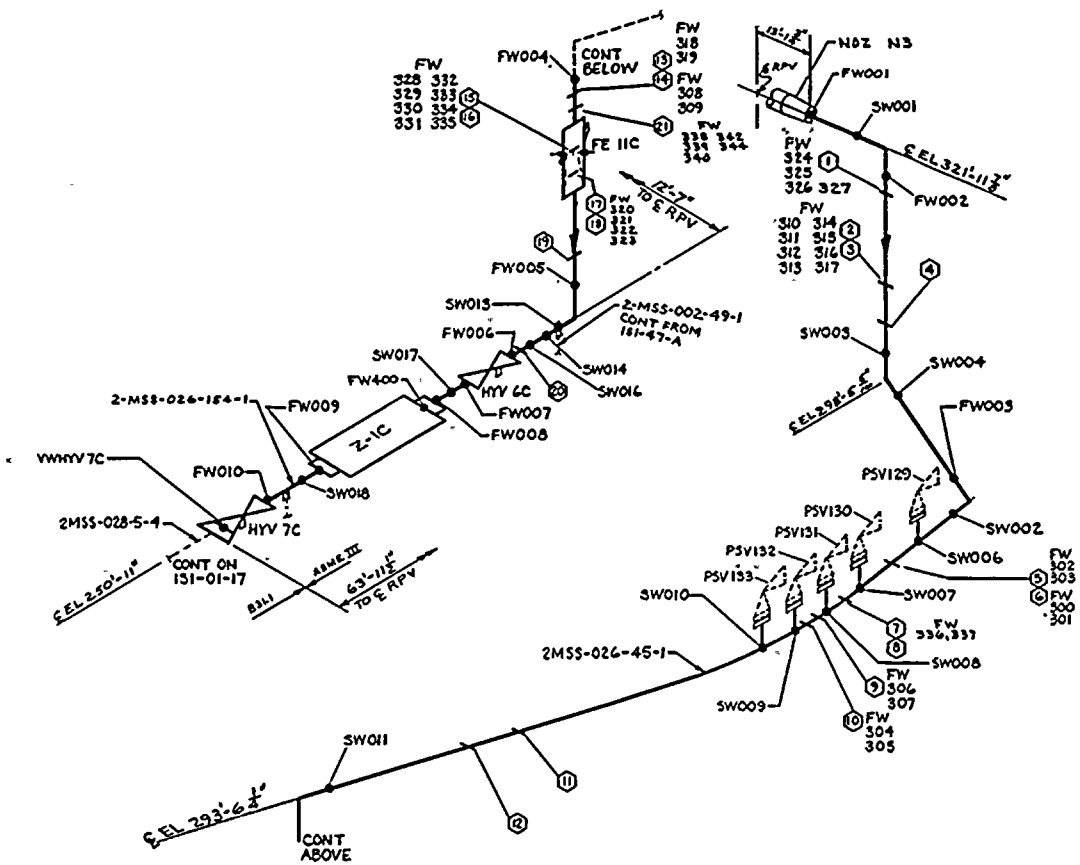
ALL VALVE + EQUIPMENT NUMBERS PRECEDED BY 2MSS*

NO	DATE	REVISION	BY	CHKD	APPR
1	9/13/86	REVISED PER PSI PLAN UPDATE			
0	7/1/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS I MSS LOOP B
DWG NO 1S1-01-14

DRAWN BY L.H. STANG
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2MSS-PSH083A1	BZ-2CT
2	PSSP244	CU
3	PSSP242	CU
4	PSR085	CV
5	PSSP251	CW
6	PSSP250	CW
7	PSSH252	CX
8	PSSH253	CX
9	PSSP253	CY
10	PSSP261	CY
11	PSSP254	CZ
12	PSSP255	DA
13	PSSP256	DB
14	PSSP257	DC
15	PSSP259	DE
16	PSSP247	DE
17	PSSH258	DD
18	PSSH246	DD
19	PSR361	EJ
20	2MSS-PSR362A1	EK
21	LATER	BZ-424MC
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 01-15-MSS
4. ALL SUPPORTS PRECEDED BY 2MSS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 01-15-P
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

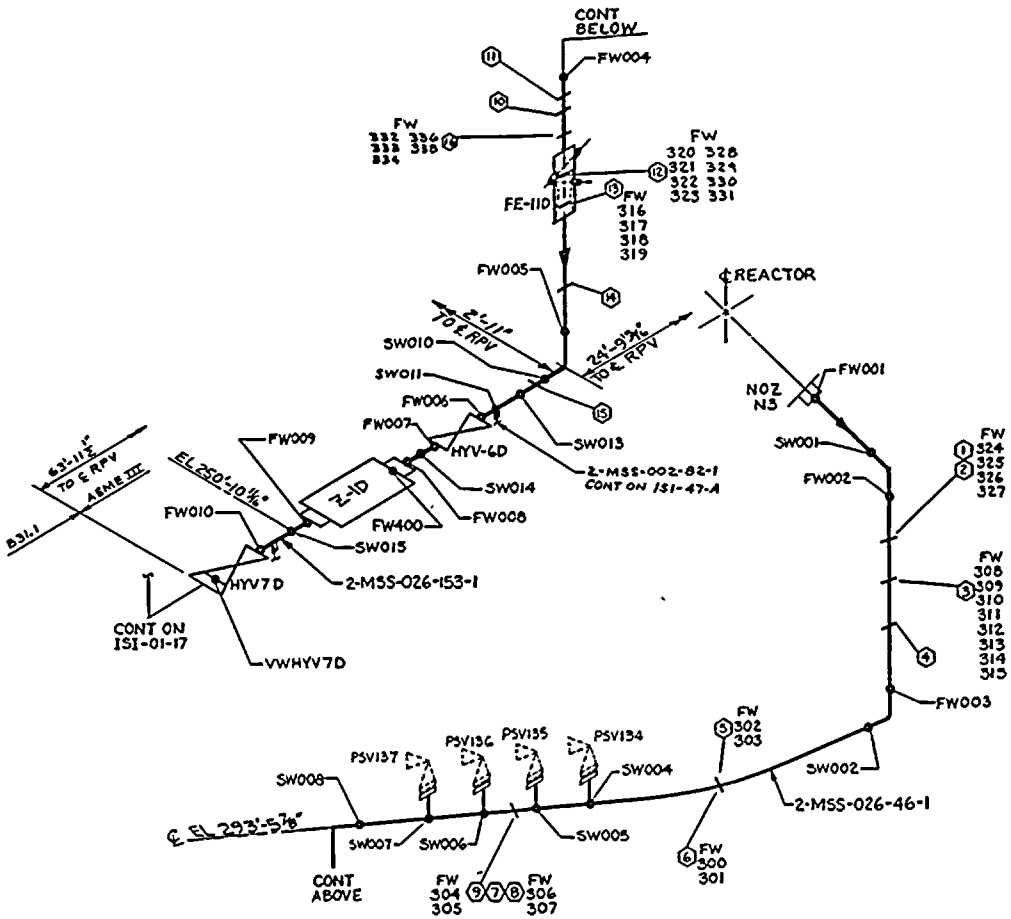
ALL VALVES + EQUIPMENT NUMBERS PRECEDED BY 2MSS*

NO	DATE	REVISION	BY	CHKD	APPR
1	9/23/85	REVISED PER PSI PLAN UPDATE			
0	7/8/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 MSS LOOP C
DWG NO 1SI-01-15

DRAWN BY L. H. STANG
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2-MSS-PSSH-308A1	BZ-2 DF
2	PSSH-318	DF
3	PSSP-309	DG
4	PSR-310	DH
5	PSSP-311	DJ
6	PSSP-312	DJ
7	PSSP-313	DK
8	PSSP-314	DK
9	PSSP-315	DK
10	PSSP-316	DL
11	PSSP-320	DL
12	PSSP-317	EE
13	PSSH-319	EE
14	PSR-339	EG
15	2-MSS-PSR-360A1	BZ-2 EH
16	LATER	BZ-42 EK
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 01-16-MSS
4. ALL SUPPORTS PRECEDED BY 2MSS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 01-16-T

ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE + EQUIPMENT NUMBERS PRECEDED BY 2MSS*

NO	DATE	REVISION	BY	CHKD	APPR
1	9/13/85	REVISED PER PSI PLAN UPDATE			
0	7/12/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

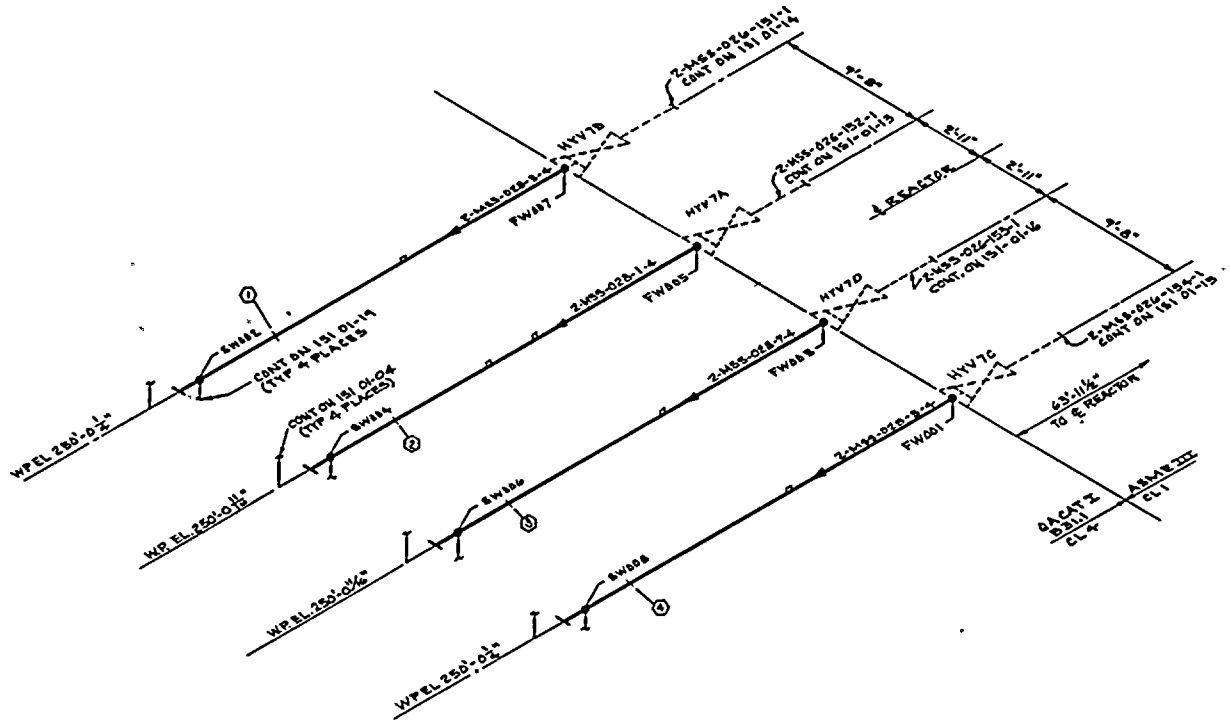
NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 MSS LOOP D

DWG NO ISI-01-16

DRAWN BY L.H. STANG
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2MSS PSR 368 A4	BB-28B
2	2MSS PSR 369 A4	BB-24H
3	2MSS PSR 370 A4	BB-26J
4	2MSS PSR 371 A4	BB-24K
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LEGEND

○-INDICATES PIPE SUPPORT

•-INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 01-17-MSS
4. ALL SUPPORTS PRECEDED BY 2MSS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 01-17-J

ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2MSS#

NO	DATE	REVISION	BY	CHKD	APPR
1	9-26-85	REVISED PER PSI PLAN UPDATE			
0	7/1/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2

WELD & COMPONENT

IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2

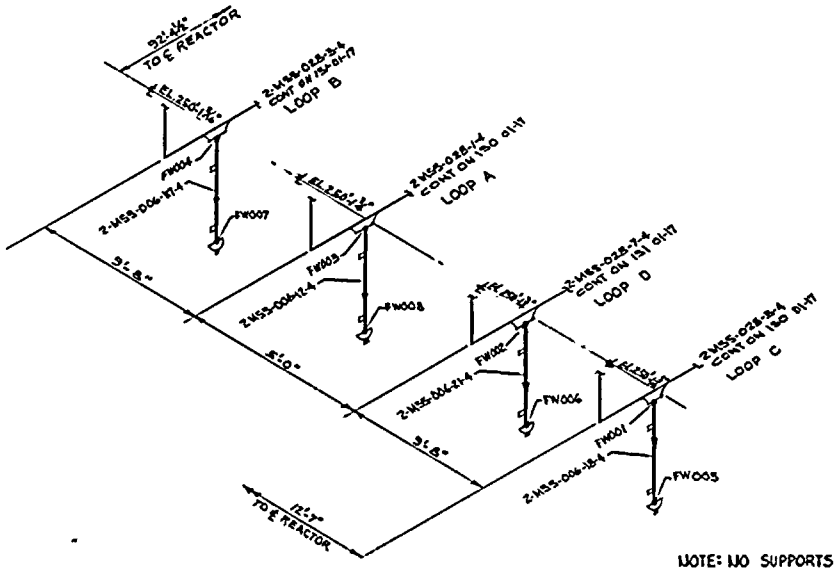
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 MSS LOOP A,B,C,D

DWG NO ISI-01-17

DRAWN BY J.J. PULLI

CHKD BY J. DAVID



NOTE: NO SUPPORTS PROVIDED

NO.	PIPE SUPPORT	BZ NO.
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 01-19-MSS
4. ALL SUPPORTS PRECEDED BY 2MSS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 01-19-3
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

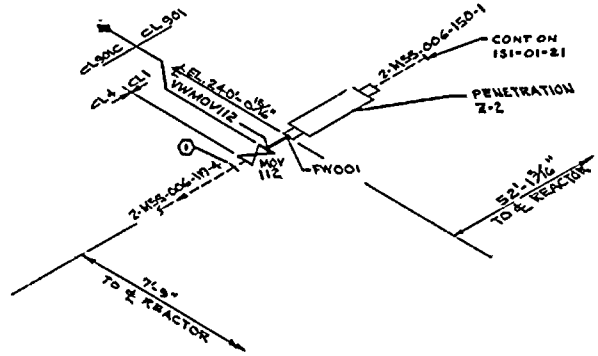
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2MSS*

NO	DATE	REVISION	BY	CHKD	APPR
1	9/13/85	REVISED PER PSI PLAN UPDATE			
0	7/5/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 MSS LOOP A,B,C,D DRAINS
DWG NO ISI-01-19

DRAWN BY J.J. PULLI
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2MSS PSR38FA4	BZ-139 BM
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LEGEND

○-INDICATES PIPE SUPPORT
•-INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 01-20-MSS
4. ALL SUPPORTS PRECEDED BY 2MSS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 01-20-4
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

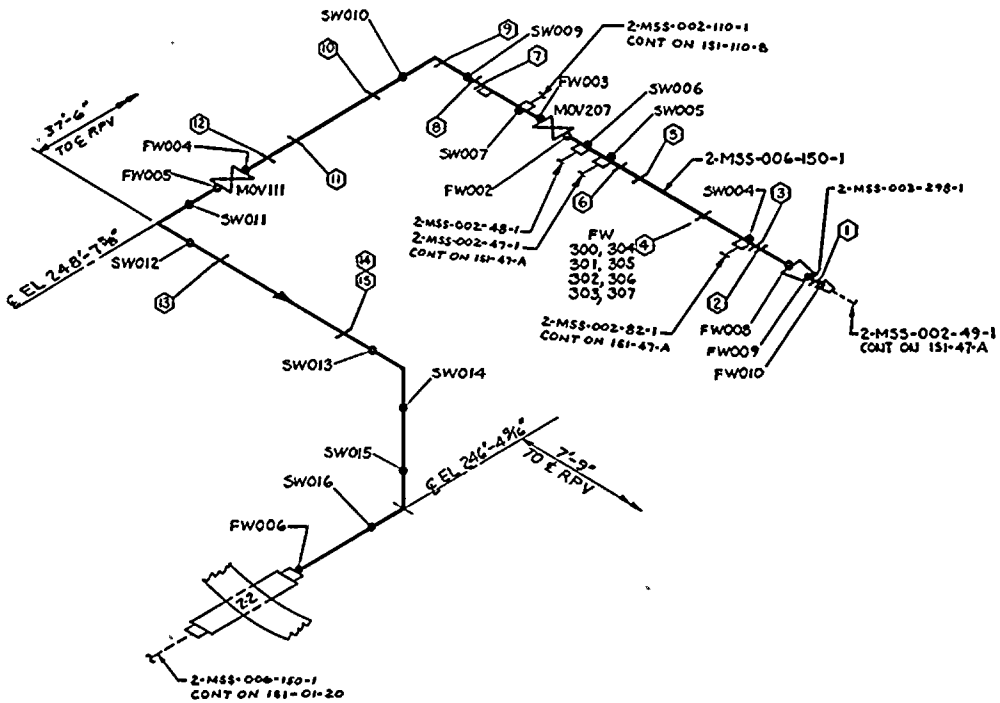
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2MSS #

NO	DATE	REVISION	BY	CHKD	APPR
1	9/25/85	REVISED PER PSI PLAN UPDATE			
0	7/9/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 MSS DRAIN HDR
DWG NO ISI-01-20

DRAWN BY
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2MSS-PSSP281A1	62-137Z
2	PSSP276	AN
3	PSR279	W
4	PSST328	BH
5	PSSP264	H
6	PSR278	BK
7	PSR277	U
8	PSSP321	BA
9	PSSP284	AC
10	PSST272	P
11	PSSP283	AB
12	PSR290	AG
13	PSST273	Q
14	PSSP266	K
15	2MSS PSST254	R
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 01-21-MSS
4. ALL SUPPORTS PRECEDED BY 2MSS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 01-21-F
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

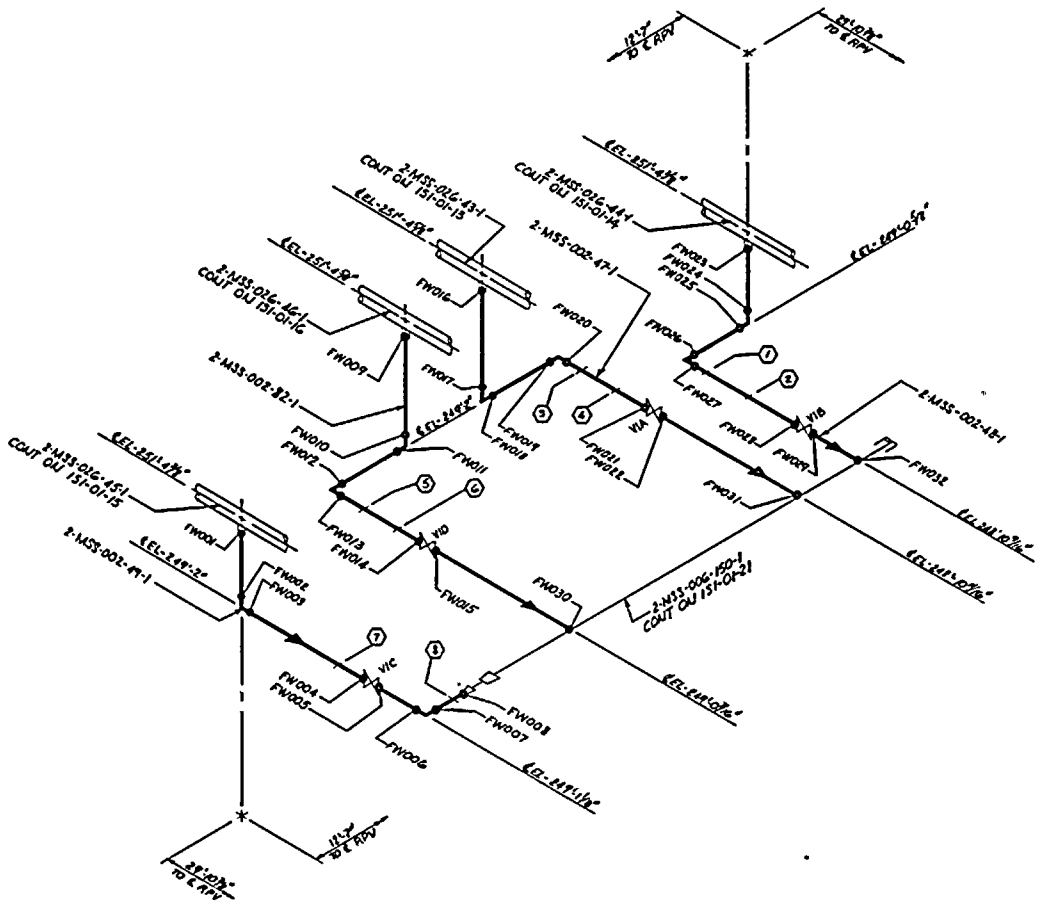
ALL VALVE + EQUIPMENT NUMBERS PRECEDED BY 2MSS*

NO	DATE	REVISION	BY	CHKD	APPR
1	9/25/95	REVISED PER PSI PLAN UPDATE			
0	7/11/95	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 MSS DRAIN HDR
DWG NO 1S1-01-21

DRAWN BY L.H. STANG
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2MSS-PSSP 901A1	BZ-137AT
2	PSR 906	AY
3	PSSP 902	AU
4	PSST 907	AZ
5	PSSP 906	AW
6	PSSP 897	AP
7	PSST 923	BC
8	PSSP 891	AM
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY MSS-047A
4. ALL SUPPORTS PRECEDED BY 2MSS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC N/A
ASME CONTROL DWG 2-MSS-47-A-0

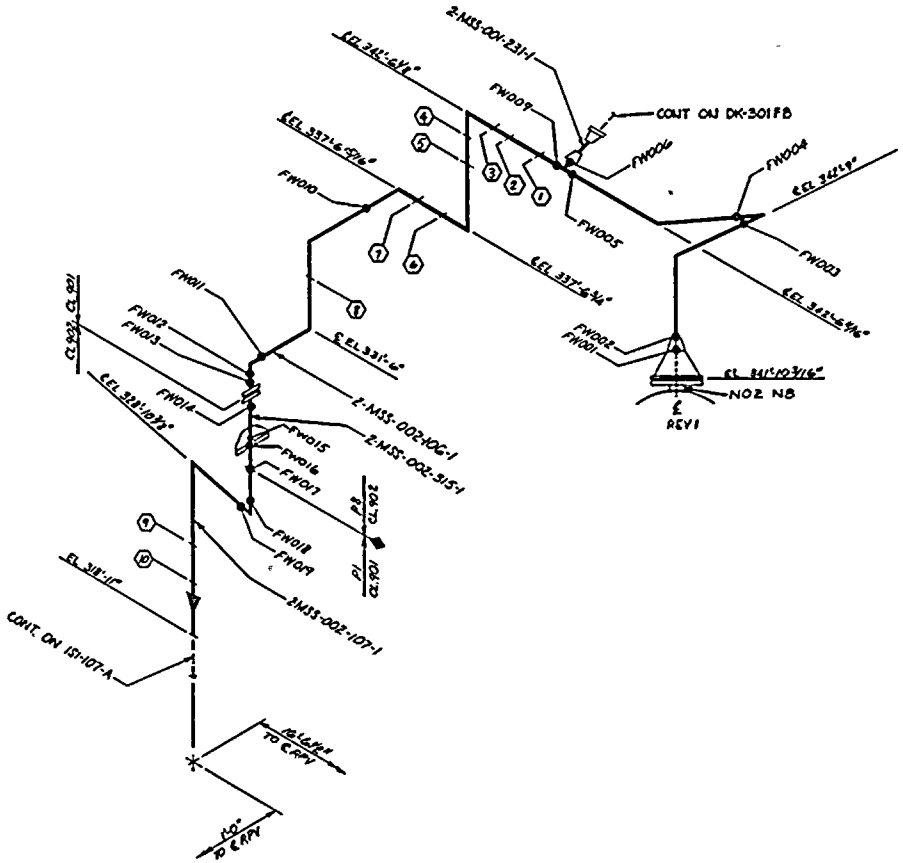
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2MSS#

NO	DATE	REVISION	BY	CHKD	APPR
1	7/25/85	REVISED PER PSI PLAN UPDATE			
0	7/5/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 MSS DRAINS LOOP A,B,C,D
DWG NO ISI-47-A

DRAWN BY S. ANSELMO
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2MSS PSSP428 A1	BZ-2FT
2	PSST429	FU
3	PSSH430	FV
4	PSST425	FS
5	PSST426	FS
6	PSSH423	FR
7	PSSP422	FR
8	PSR416	FQ
9	PSSP414	FP
10	PSSP413	FP
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LEGEND
○-INDICATES PIPE SUPPORT
•-INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY MSS-106A
4. ALL SUPPORTS PRECEDED BY 2MSS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC N/A
ASME CONTROL DWG 2-MSS-106-A-0

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

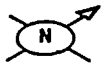
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2MSS#

NO	DATE	REVISION	BY	CHKD	APPR
1	9/25/85	REVISED PER PSI PLAN UPDATE		SLH	
0	7/8/85	SWEC RELEASED FOR PRESERVICE INSPECTION		SLH	

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 MSS REACTOR HEAD VENT
DWG NO ISI-106-A

DRAWN BY S. ANSELMO
CHKD BY J DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2MSS PSSP382 A1	82-2EY
2	PSST380	EW
3	PSSP383	EE
4	PSST399	EX
5	PSSP392	FB
6	PSSH394	FC
7	PSSP390	FA
8	PSSP391	FA
9	PSSP412	FN
10	PSSP396	FD
11	PSSH397	FE
12	PSSH408	FJ
13	PSSP400	FF
14	PSSP411	FM
15	PSSP402	FG
16	PSSH409	FK
17	PSSP410	FL
18	PSST398	EW
19	PSST381	EX
20	PSSP393	FB
21	PSSP395	FD
22	PSSP401	FF
23	PSSP403	FG
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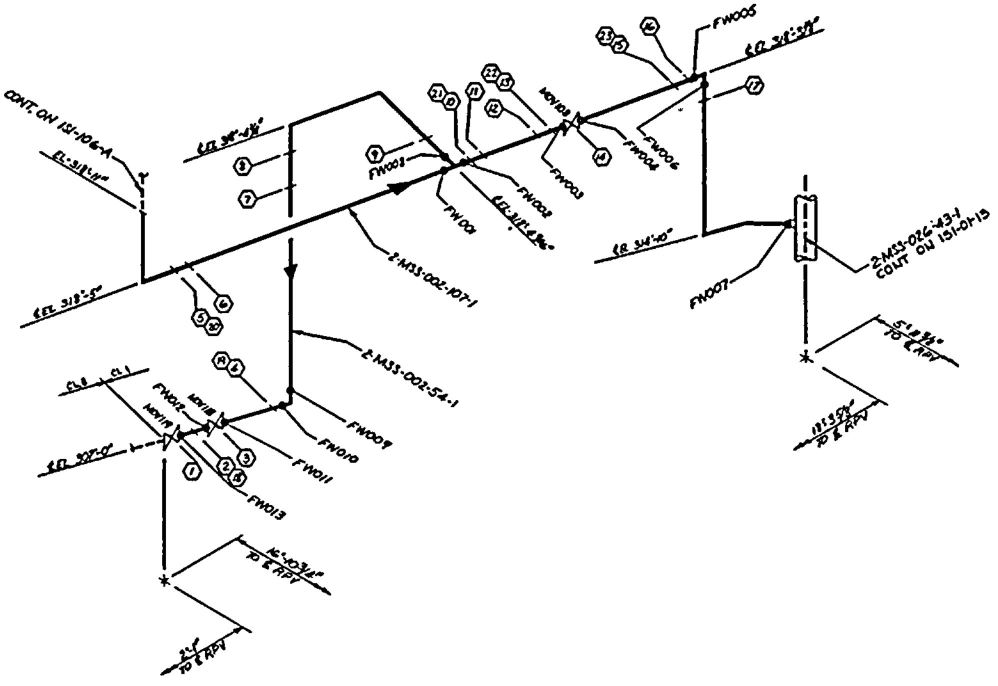


LEGEND

⬡ -INDICATES PIPE SUPPORT

● -INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY *MSS-107A*
4. ALL SUPPORTS PRECEDED BY *2MSS*

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC *N/A*
ASME CONTROL DWG *2-MSS-107-A-0*

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

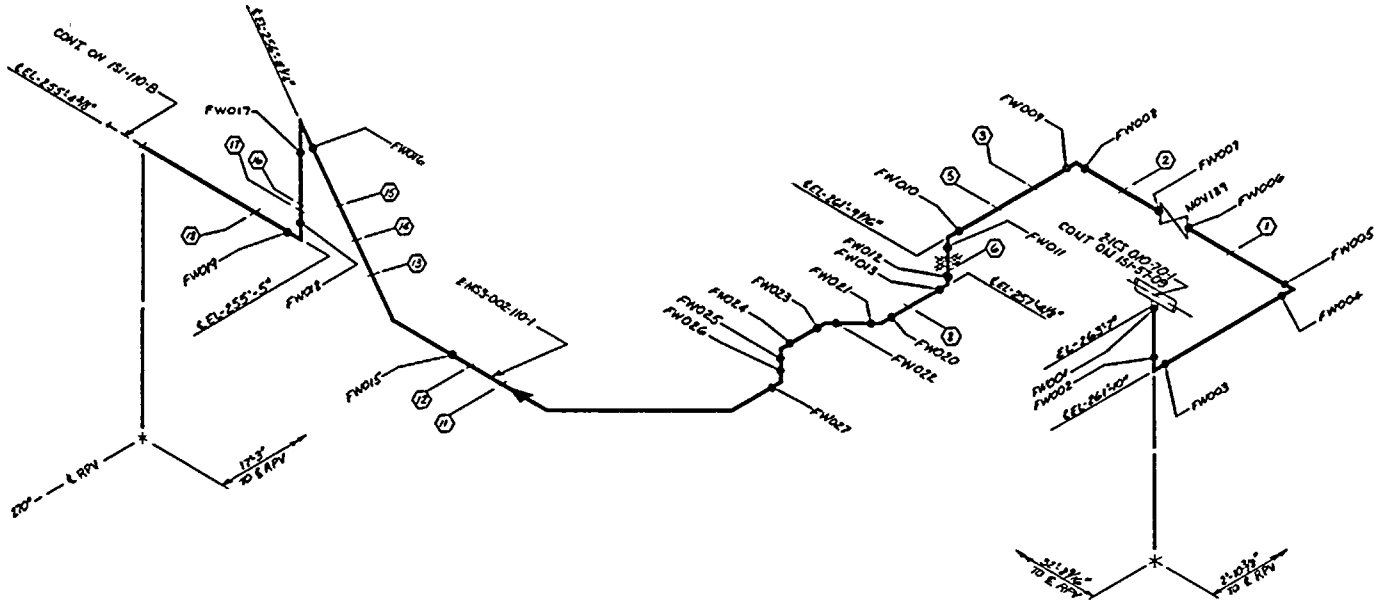
*ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2MSS**

NO	DATE	REVISION	BY	CHKD	APPR
1	9/23/85	REVISED PER PSI PLAN UPDATE			
0	7/2/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS *1* MSS REACTOR HEAD VENT
DWG NO ISI-*107-A*

DRAWN BY *S. ANSELMO*
CHKD BY *J. DAVID*



NO.	PIPE SUPPORT	BZ NO.
1	2MSS PSST 303A1	BZ1394V
2	PSSP 305	AX
3	PSSP 271	N
4	PSSP 440	CF
5	PSR 439	CE
6	PSST 438	CD
7		
8	PSR 435	CA
9		
10		
11	PSSP 443	CG
12	PSSP 442	CH
13	PSR 433	BY
14	PSST 432	BT
15	PSST 431	BW
16	PSSP 293	AB
17	PSSP 292	AJ
18	PSST 226	BF
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY MSS-110A
4. ALL SUPPORTS PRECEDED BY 2MSS PER DP-302X-4

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC N/A
ASME CONTROL DWG 2-MSS-110-A-0

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

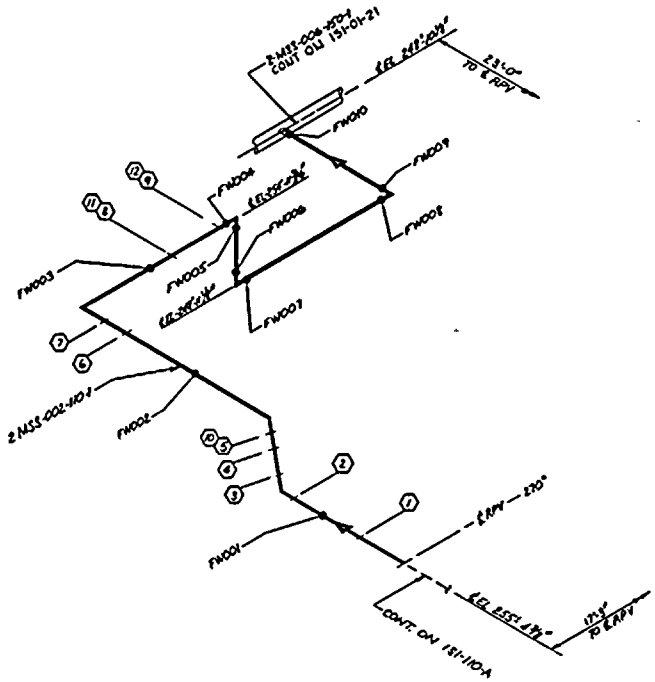
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2MSS

NO	DATE	REVISION	BY	CHKD	APPR
1	9/13/85	REVISED PER PSI PLAN UPDATE			
0	7/8/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS I MSS ICS DRAIN
DWG NO ISI-110-A

DRAWN BY S ANSELMO
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2MSS PSSF 094 A1	02-159 AL
2	PSSF 099	AP
3	PSSF 096	T
4	PSSF 337	AE
5	PSSF 400	CH
6	PSSF 275	S
7	PSSF 265	Y
8	PSSF 277	AE
9	PSSF 215	AD
10	PSSF 441	CH
11	PSSF 238	AF
12	PSSF 236	AD
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY MSS-110B
4. ALL SUPPORTS PRECEDED BY 2MSS

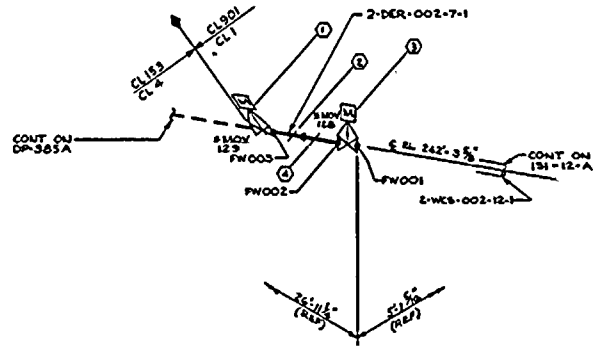
REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC N/A
ASME CONTROL DWG 2-MSS-110-B-0

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

NO	DATE	REVISION	BY	CHKD	APPR
1	4/12/85	REVISED PER PSI PLAN UPDATE			
0	7/5/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 MSS ICS DRAIN
DWG NO ISI-110-B
DRAWN BY S. ANSELMO
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2-DER-PSSP 1433 A1	BZ-85 CP
2	1 1435	1 CR
3	1 1436	1 CR
4	1 1434	1 CQ
5	1 PSSM 1437	1 CT
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY DER-07A
4. ALL SUPPORTS PRECEDED BY 2DER

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC N/A
ASME CONTROL DWG 2-DER-7-A

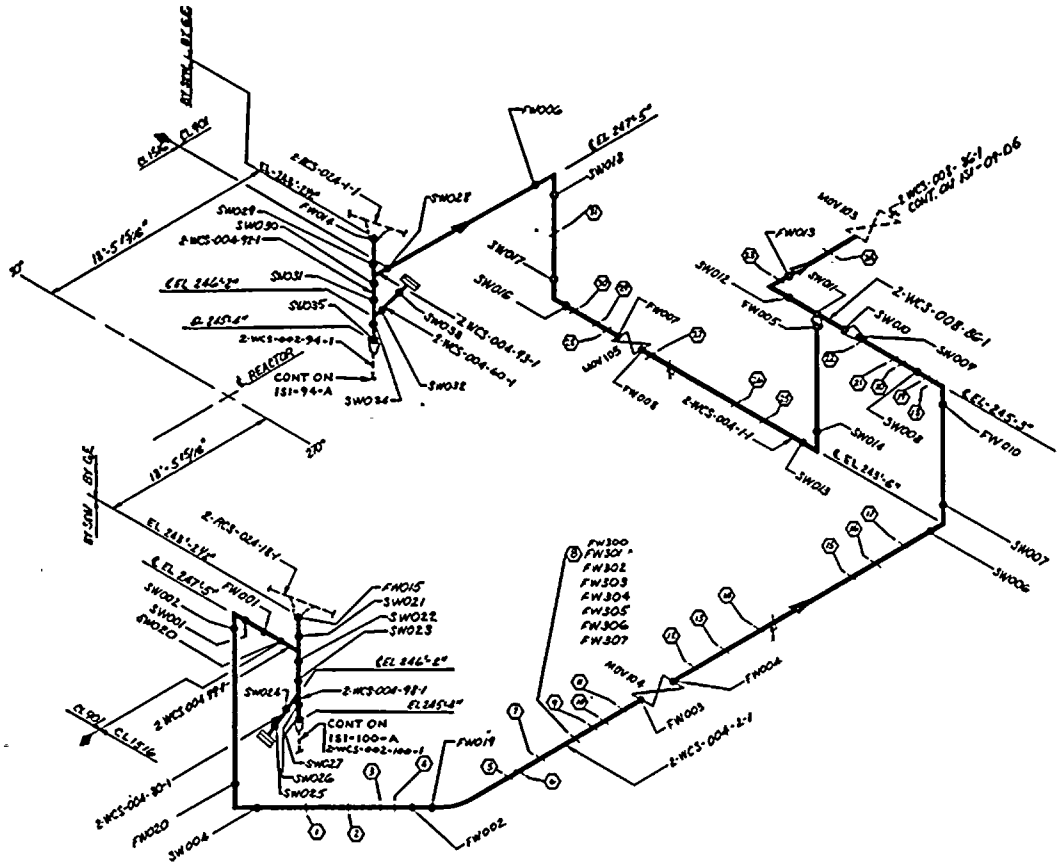
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2DER

NO	DATE	REVISION	BY	CHKD	APPR
1	7/15/85	REVISED PER PSI PLAN UPDATE			
0	7/2/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION.

CLASS 1
DWG NO ISI - 07 - A

DRAWN BY W. STEWART
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2WCS-PSSH-626A	BZ-74 HJ
2	PSSH-624	LY
3	PSSH-625	HM
4	PSSH-626	HG
5	PSSH-623	HT
6	PSSH-621	HE
7	PSSH-627	HD
8	PSSH-628	HB
9	PSSH-635	HC
10	PSSH-639	HB
11	PSSH-633	HA
12	PSSH-637	GE
13	PSSH-636	GY
14	PSSH-638	GX
15	PSSH-634	GW
16	PSSH-613	GV
17	PSSH-612	GU
18	PSSH-614	GT
19	PSSH-530	FA
20	PSSH-610	GS
21	PSSH-609	GR
22	PSSH-608	GQ
23	PSSH-603	JU
24	PSSH-602	FS
25	PSSH-601	GP
26	PSSH-601	GJ
27	PSSH-603	GK
28	PSSH-604	GL
29	PSSH-605	GM
30	PSSH-606	GN
31	PSSH-607	GP
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 09-05-WCS
4. ALL SUPPORTS PRECEDED BY 2WCS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 09-57

ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2WCS#

NO	DATE	REVISION	BY	CHKD	APPR
1	9/13/85	REVISED PER PSI PLAN UPDATE		SLH	
0	7/1/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

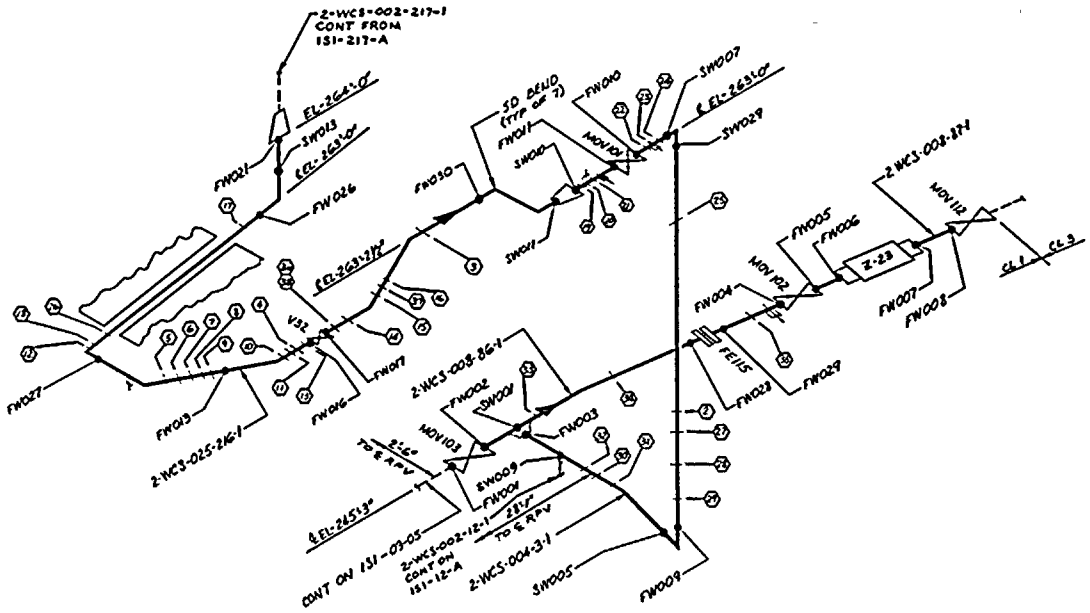
NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1

DWG NO ISI-09-05

DRAWN BY S. ANSELMO

CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1		
2	2WCS PSSR-593 A1	62-745FB
3	PSSR-666	EV
4	PSSF-576	FE
5	PSSR-590	FL
6	PSSR-587	FN
7	PSSH-561	ER
8	PSSR-582	FM
9	PSSR-583	FP
10	PSSR-586	FQ
11	PSSF-585	FR
12	PSSR-579	FK
13	PSSR-575	FJ
14	PSSR-596	FS
15	PSSF-597	FT
16	PSSR-588	FU
17	PSSR-634	FS
18	PSSH-566	EW
19	PSSR-573	FD
20	PSSH-580	EW
21	PSSR-569	EV
22	PSSR-571	EX
23	PSSH-572	EZ
24	PSSR-577	EY
25	PSSR-567	EX
26	PSSR-635	HT
27	PSSR-594	GA
28	PSSR-595	GB
29	PSSR-596	GC
30	PSSH-599	GF
31	PSSR-597	GD
32	PSSR-598	GE
33	PSSR-600	GG
34	PSSR-671	FB
35	PSSR-661	JV
36	PSSR-1116	ABJ
37	PSSR-1121	ABH
38	PSSR-862	GB

LEGEND

○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 09-06-WCS
4. ALL SUPPORTS PRECEDED BY 2WCS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 09-6-AJ
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

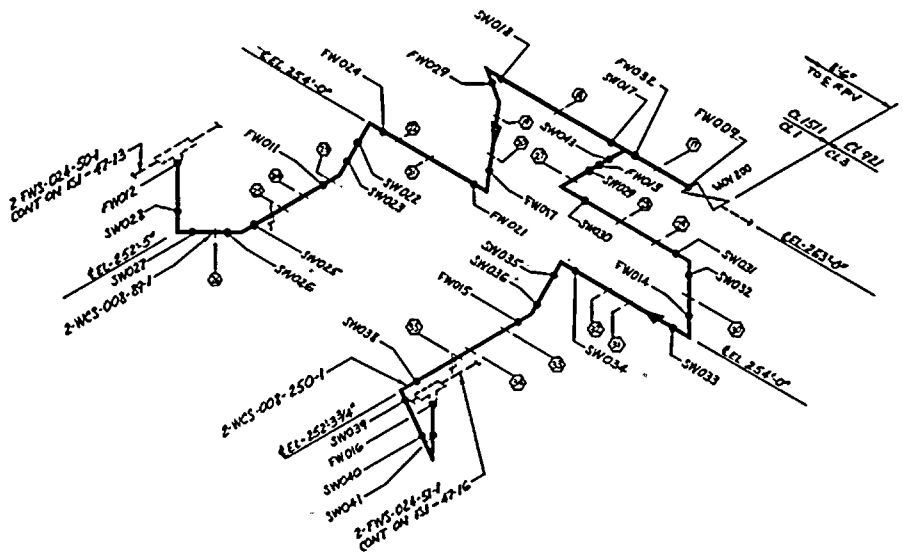
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2WCS•

NO	DATE	REVISION	BY	CHKD	APPR
1	9/26/85	REVISED PER PSI PLAN UPDATE			
0	7/26/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1
DWG NO ISI-09-06

DRAWN BY J. ANSELMO
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
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17	2-WCS-PSSP-709A	BZ-24-LT
18	PSSP-712	LA
19	PSSP-713	LY
20	PSSP-714	LZ
21	PSSP-715	MA
22	PSSP-716	MB
23	PSSP-720	MF
24	PSSP-719	ME
25	PSSP-721	MG
26	PSSP-722	MH
27	PSSP-205	LR
28	PSSP-206	LS
29	PSSP-203	LP
30	PSSP-207	LM
31	PSSP-609	LK
32	PSSP-607	LJ
33	PSSP-671	LH
34	PSSP-676	LG
35	PSSP-675	LF
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LEGEND

○ -INDICATES PIPE SUPPORT

• -INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 09-14-WCS
4. ALL SUPPORTS PRECEDED BY 2WCS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 09-14-AF
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

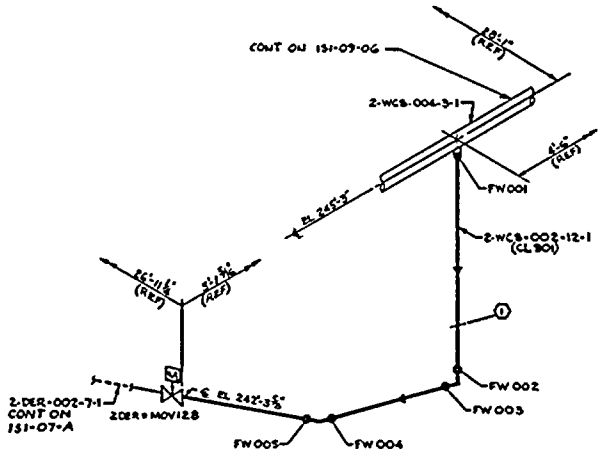
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2WCS#

NO	DATE	REVISION	BY	CHKD	APPR
1	9/6/95	REVISED PER PSI PLAN UPDATE			
0	7/6/95	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1
DWG NO ISI-09-14

DRAWN BY S. ANSELMO
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2-WCS-PSSP 928 A1	D2-74 UX
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LEGEND

○-INDICATES PIPE SUPPORT

•-INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY WCS-012A
4. ALL SUPPORTS PRECEDED BY 2WCS

REFERENCES:

1. TT GRINNELL INDUSTRIAL PIPING ISOMETRIC N/A
2. ASME CONTROL DWG 2-WCS-12-A-0

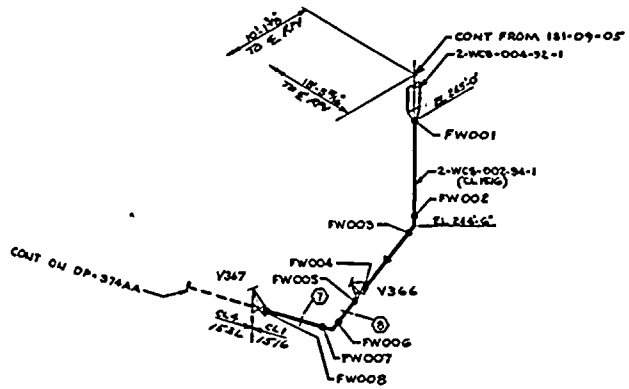
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2WCS #

NO	DATE	REVISION	BY	CHKD	APPR
1	9/23/85	REVISED PER PSI PLAN UPDATE			
0	7/4/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1
DWG NO ISI-12-A

DRAWN BY W. STEWART
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
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7	2WCS PSSP 686 A1	B2-74TE
8	" PSSH 659 "	B2-74TX
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LEGEND

○ - INDICATES PIPE SUPPORT
* - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY WCS-094A
4. ALL SUPPORTS PRECEDED BY 2WCS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC N/A
ASME CONTROL DWG 2-WCS-94-A-0

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

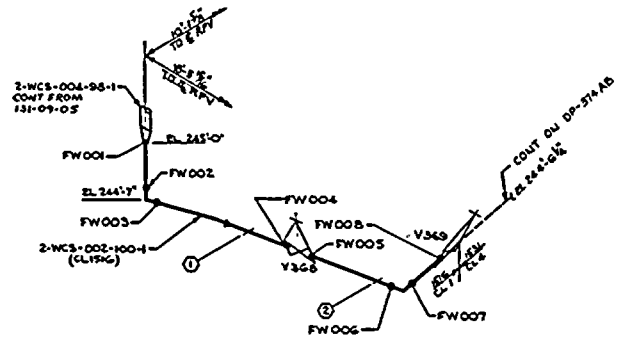
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2WCS #

NO	DATE	REVISION	BY	CHKD	APPR
1	7/5/85	REVISED PER PSI PLAN UPDATE			
0	7/5/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1
DWG NO ISI-94-A

DRAWN BY W. STEWART
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2-WCS-P55P 874 A1	BZ-7455
2	2WCS-P35H 878 A1	BZ-7456
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NOTES
1. WELDS FW006 AND 007 LISTED IN THE ISI PLAN AND SHOWN ON THIS DIAGRAM ARE SHOWN AS FW006A AND FW007A ON ASME CONTROL DRAWING. 2-WCS-100-A

LEGEND
O-INDICATES PIPE SUPPORT
*-INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY WCS-100A
4. ALL SUPPORTS PRECEDED BY 2WCS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC N/A
ASME CONTROL DWG 2-WCS-100-A-1

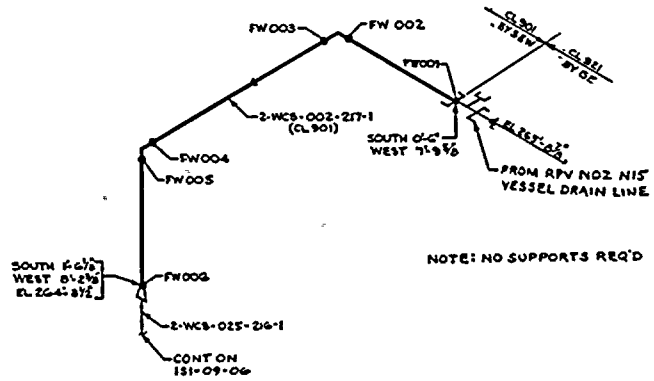
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE & EQUIPMENT NUMBERS PRECEEDED BY 2WCS #

NO	DATE	REVISION	BY	CHKD	APPR
1	2/27/85	REVISED PER PSI PLAN UPDATE			
0	2/5/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1
DWG NO ISI - 100 - A

DRAWN BY W. STEWART
CHKD BY J. DAVID



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LEGEND
O - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY WCS-217A
4. ALL SUPPORTS PRECEDED BY 2WCS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC N/A
ASME CONTROL DWG 2-WCS-27-A-1

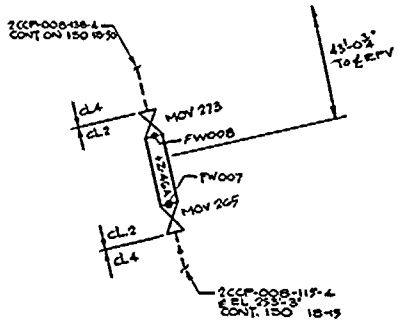
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE & EQUIPMENT NUMBERS PRECEEDED BY 2WCS #

NO	DATE	REVISION	BY	CHKD	APPR
1	4/3/85	REVISED PER PSI PLAN UPDATE			
0	7/5/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1
DWG NO ISI-217-A

DRAWN BY W. STEWART
CHKD BY J. DAVID



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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 18-15-CCP
4. ALL SUPPORTS PRECEDED BY 2CCP

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 18-15-K
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

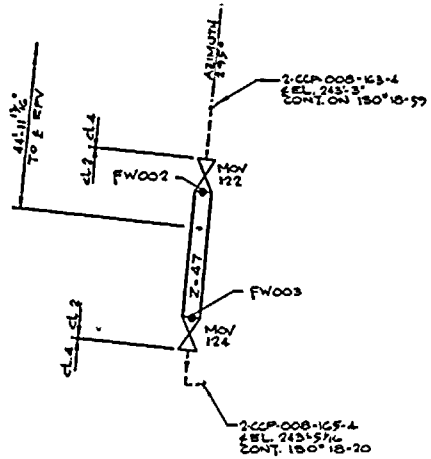
ALL VALVES AND EQUIPMENT NUMBERS PRECEDED BY 2CCP

NO	DATE	REVISION	BY	CHKD	APPR
1	2/23/88	REVISED PER PSI PLAN UPDATE			
0	7/6/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2
DWG NO ISI-18-15

DRAWN BY D. GEORGE
CHKD BY J. DAVID



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LEGEND

○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 18-20-CCP
4. ALL SUPPORTS PRECEDED BY 2CCP

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 18-20-N
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

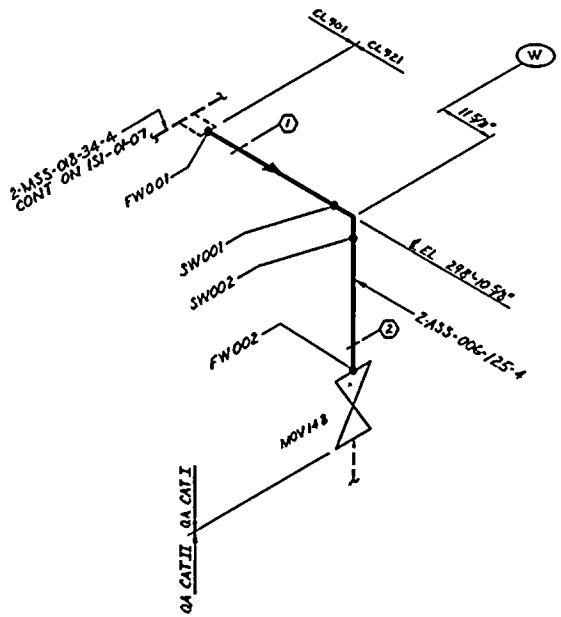
ALL VALVES AND EQUIPMENT NUMBERS PRECEDED BY 2CCP

NO	DATE	REVISION	BY	CHKD	APPR
1	7/23/85	REVISED PER PSI PLAN UPDATE			
0	7/2/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2
DWG NO ISI-18-20

DRAWN BY S F GEORGE
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2A33PS3P133B4	02-150-106
2	2A33PS3H133B4	02-150-105
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 20-01-ASS
4. ALL SUPPORTS PRECEDED BY 2ASS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 20-01-P
ASME CONTROL DWG N/A

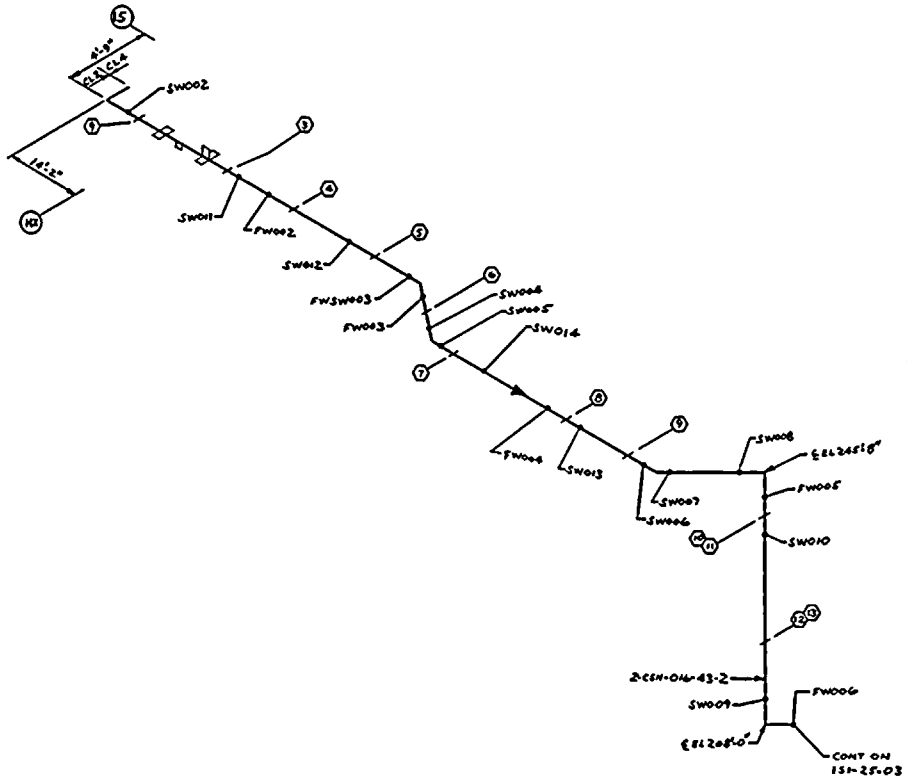
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2ASS

NO	DATE	REVISION	BY	CHKD	APPR
1	7/25/85	REVISED PER PSI PLAN UPDATE			
0	7/2/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2
DWG NO ISI-20-01

DRAWN BY J. SANSELMO
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
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3	2CSHPSR220A2	B2-108QO
4	2CSHPSR221A2	B2-108QQ
5	2CSHPSR222A2	B2-108QL
6	2CSHPSR226A2	B2-108QR
7	2CSHPSR223A2	B2-108QP
8	2CSHPSR224A2	B2-108QS
9	2CSHPSR225A2	B2-108QT
10	2CSHPSSTR219A2	B2-108RN
11	2CSHPSSTR218A2	B2-108RM
12	2CSHPSSTR217A2	B2-108RP
13	2CSHPSSTR218A2	B2-108RP
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 25-01-CSH
4. ALL SUPPORTS PRECEDED BY 2CSH

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 25-01-M
ASME CONTROL DWG N/A

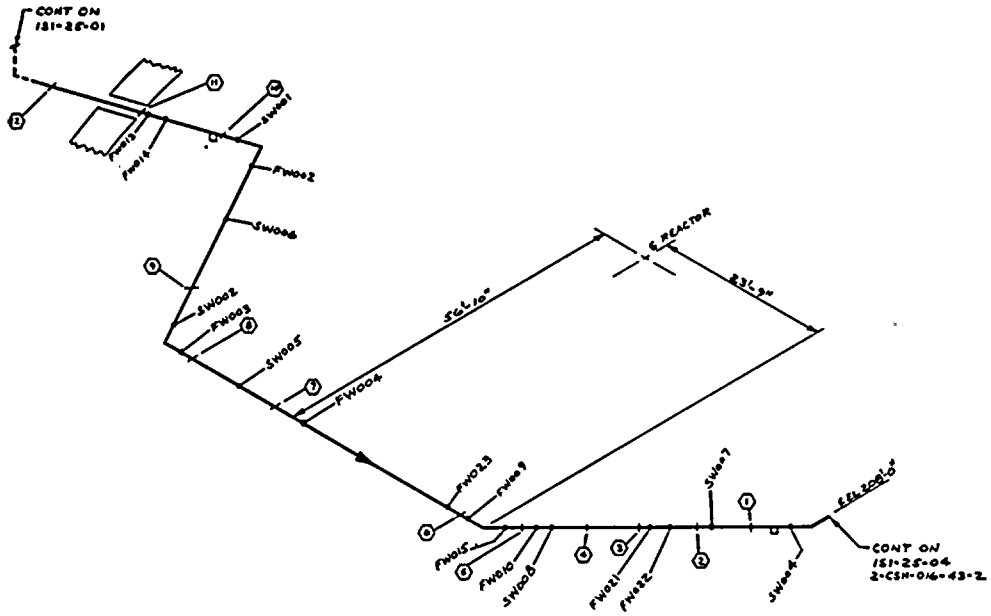
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2CSHP

NO	DATE	REVISION	BY	CHKD	APPR
0	4/25/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2
DWG NO ISI-25-01

DRAWN BY J DAVID
CHKD BY S HEIMOVITZ



NO.	PIPE SUPPORT	EZ NO.
1	2CSHPSST006AZ	82-78M
2	2CSHPSST007AZ	82-78N
3	2CSHPSR008AZ	82-78P
4	2CSHPSR009AZ	82-78Q
5	2CSHPSSP010AZ	82-78R
6	2CSHPSST011AZ	82-78S
7	2CSHPSR012AZ	82-78T
8	2CSHPSR013AZ	82-78U
9	2CSHPSR014AZ	82-78V
10	2CSHPSR015AZ	82-78W
11	2CSHPSS016AZ	82-78X
12	2CSHPSR283AZ	82-H055
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 25-03-CSH
4. ALL SUPPORTS PRECEDED BY 2CSH

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 25-03-P
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

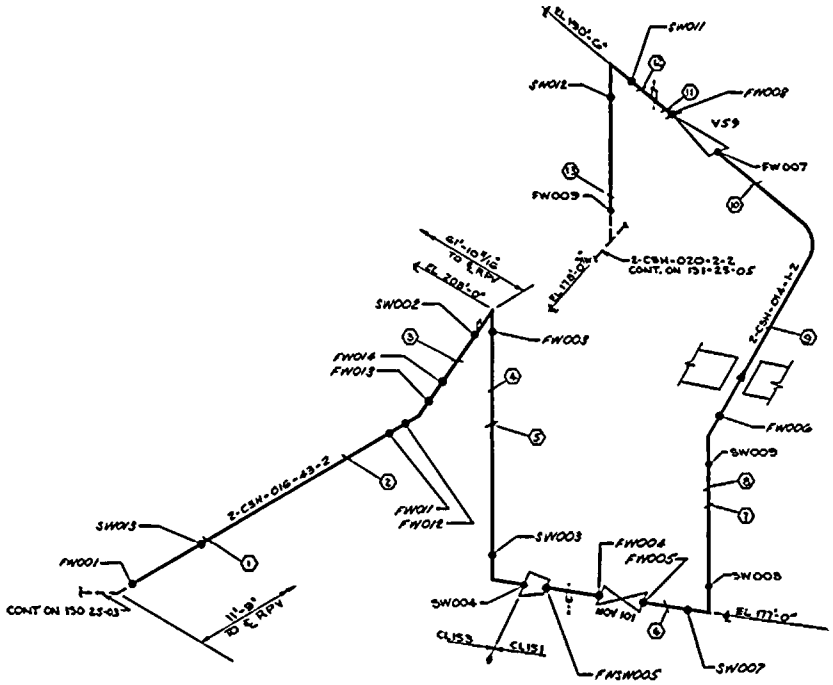
ALL VALVES AND EQUIPMENT NUMBERS PRECEDED BY 2CSH H-

NO	DATE	REVISION	BY	CHKD	APPR
0	7/25/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2
DWG NO ISI-25-03

DRAWN BY J DAVID
CHKD BY S HERMOVITZ



NO.	PIPE SUPPORT	BZ NO.
1	2-CSH-PSA-005 A2	BZ-78 L
2	PSST-004	BZ-78 K
3	003	BZ-78 J
4	002	BZ-78 AE
5	PSA-001	BZ-78 H
6	PSST-078	BZ-78 CG
7	074	BZ-78 CF
8	073	BZ-78 CE
9	PSR-030	BZ-78 AN
10	PSST-071	BZ-78 CD
11	PSSH-031	BZ-78 AP
12	PSST-072	BZ-78 CB
13	PSST-070	BZ-78 CC
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY- 25-04-CSH
4. ALL SUPPORTS PRECEDED BY 2CSH

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 25-4-P

ASME CONTROL DWG N/A

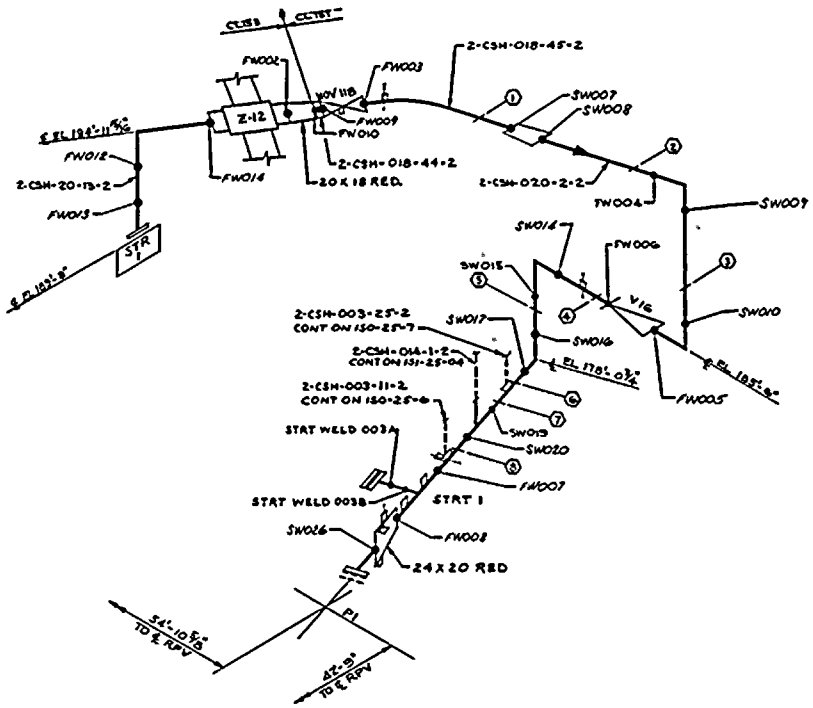
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2CSH

NO	DATE	REVISION	BY	CHKD	APPR
1	8/23/85	REVISED PER PSI PLAN UPDATE			
0	7/11/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2
DWG NO ISI - 25-04

DRAWN BY W. STEWART
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2CSH-PSSH025 A2	B3-78 AG
2	PSR 029	AM
3	PSSP207	NW
4	PSSH027	AJ
5	PSSP068	CA
6	PSSP067	BJ
7	PSSP066	BY
8	PSSH026	AM
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LEGEND

○-INDICATES PIPE SUPPORT

•-INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 25-05-CSH
4. ALL SUPPORTS PRECEDED BY 2CSH

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 25-5-P
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2CSH-

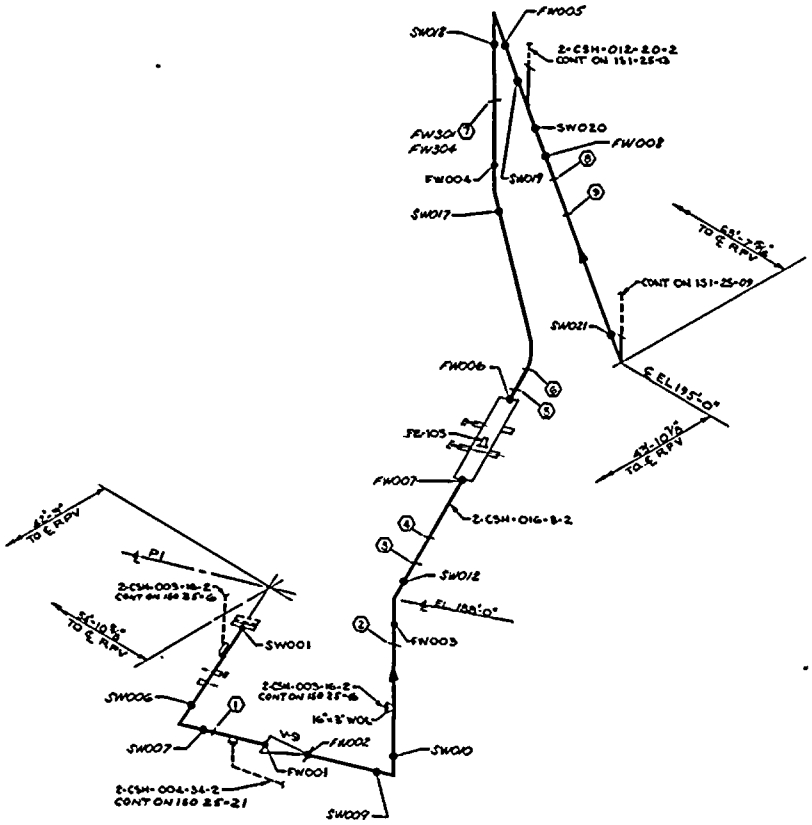
NO	DATE	REVISION	BY	CHKD	APPR
1	5/23/85	REVISED PER PSI PLAN UPDATE			
0	7/8/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2
DWG NO ISI - 25-05

DRAWN BY W. STEWART
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2CSH-PSR018 A2	BZ-78 Z
2	PS3T043	BV
3	PS3P064	BW
4	PS3H017	Y
5	PS3P043	BK
6	PSR019	AA
7	PS3A215	JE
8	PS3T190	HM
9	PS3T197	HL
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LEGEND

○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 25-08-CSH
4. ALL SUPPORTS PRECEDED BY 2CSH

REFERENCES:

1. ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 25-8-J
ASME CONTROL DWG N/A

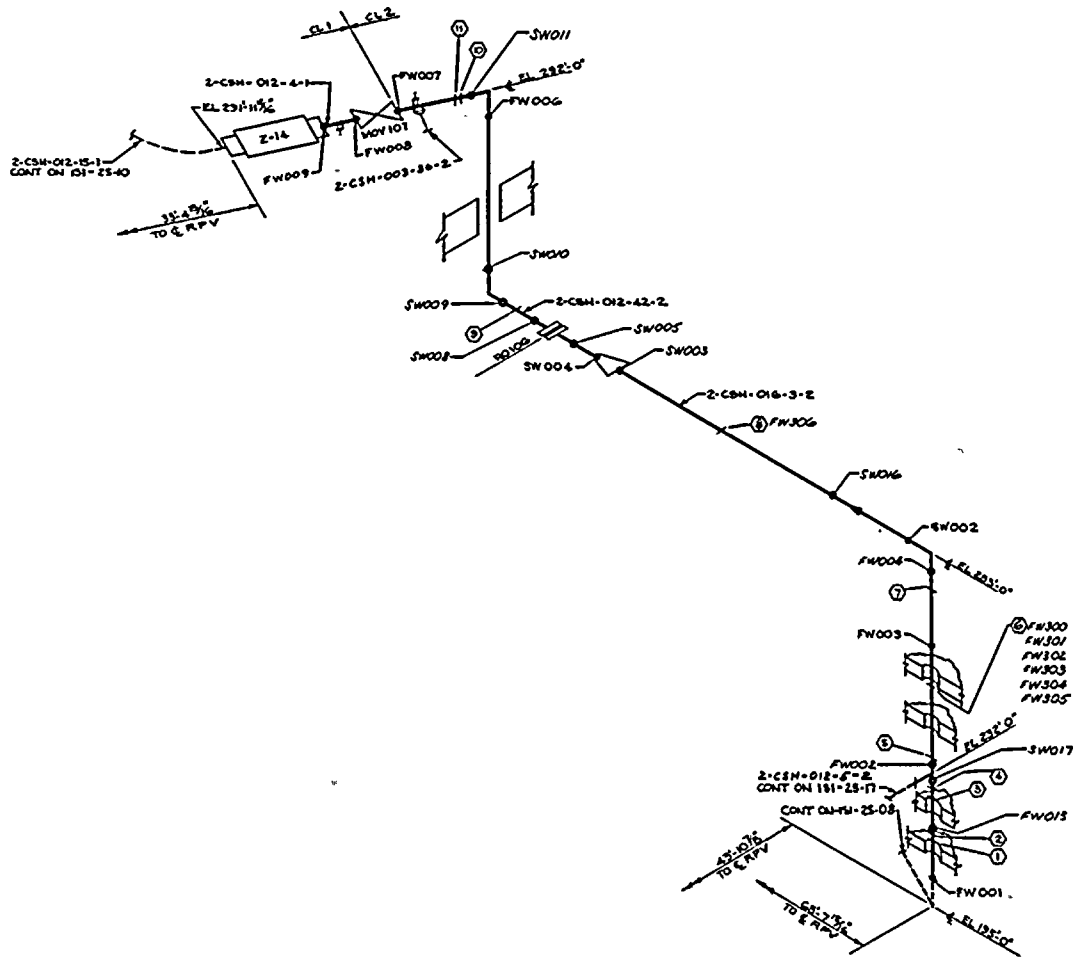
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2CSH #

NO	DATE	REVISION	BY	CHKD	APPR
1	4/23/85	REVISED PER PSI PLAN UPDATE			
0	7/10/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2
DWG NO ISI - 25-08

DRAWN BY W. STEWART
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2CSH-PSSP 196 A2	BZ-78 HK
2	PSST 195	HJ
3	PSSP 194	HH
4	PSSP 193	HG
5	PSR 191	HE
6	PSA 192	HF
7	PSR 079	CL
8	PSA 078	CK
9	PSST 077	CJ
10	PSSP 104	DM
11	PSSH 076	CH
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 25-09-CSH
4. ALL SUPPORTS PRECEDED BY 2CSH

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 25-9-N
ASME CONTROL DWG N/A

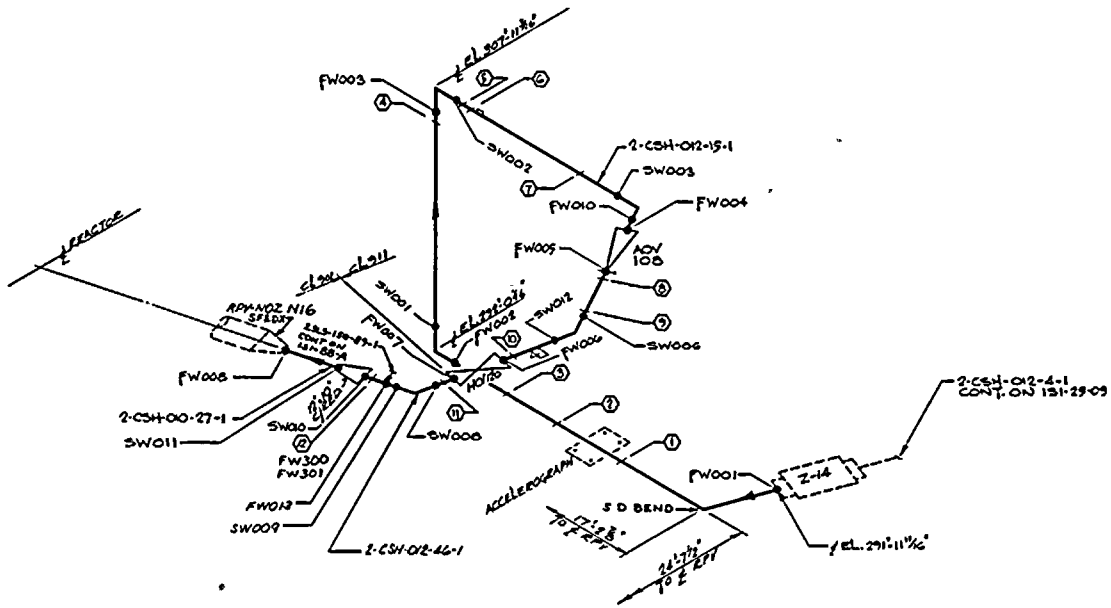
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2CSH #

NO	DATE	REVISION	BY	CHKD	APPR
1	9/21/95	REVISED PER PSI PLAN UPDATE			
0	7/17/95	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 & 2
DWG NO ISI-25-09

DRAWN BY W. STEWART
CHKD BY J DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2CSH-PSSP092 A1	BZ-78 CZ
2	-PSSH 091 A1	CV
3	-PSSP 090 A1	CX
4	-PSSP 089 A1	CW
5	-PSSH 088 A1	CV
6	-PSSP 087 A1	CU
7	-PSSP 086 A1	CT
8	-PSSP 085 A1	CS
9	-PSSP 084 A1	CR
10	-PSSH 083 A1	CQ
11	-PSSP 082 A1	CP
12	-PSSP 081 A1	CN
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 25-10-CSH
4. ALL SUPPORTS PRECEDED BY 2CSH

REFERENCES:

1. ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 25-10-M
2. ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVES AND EQUIPMENT NUMBERS PRECEDED BY 2CSH-

NO	DATE	REVISION	BY	CHKD	APPR
1	9/26/85	REVISED PER PSI PLAN UPDATE	[illegible]	[illegible]	[illegible]
0	7/8/85	SWEC RELEASED FOR PRESERVICE INSPECTION	[illegible]	[illegible]	[illegible]

NMP2

WELD & COMPONENT

IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2

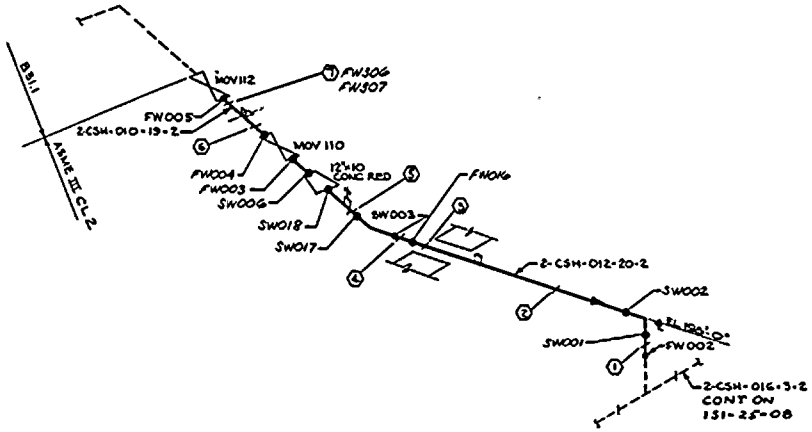
NIAGARA MOHAWK POWER CORPORATION

CLASS 1

DWG NO ISI-25-10

DRAWN BY [illegible]

CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2CSH-PSSP189 A2	B2-78 HN
2	PSSP205	HU
3	PSST200	HP
4	PSSP201	HQ
5	PSST202	HR
6	PSST203	HS
7	PSR204	HT
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LEGEND
○-INDICATES PIPE SUPPORT
•-INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 25-13-CSH
4. ALL SUPPORTS PRECEDED BY 2CSH

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 25-13-K
ASME CONTROL DWG N/A

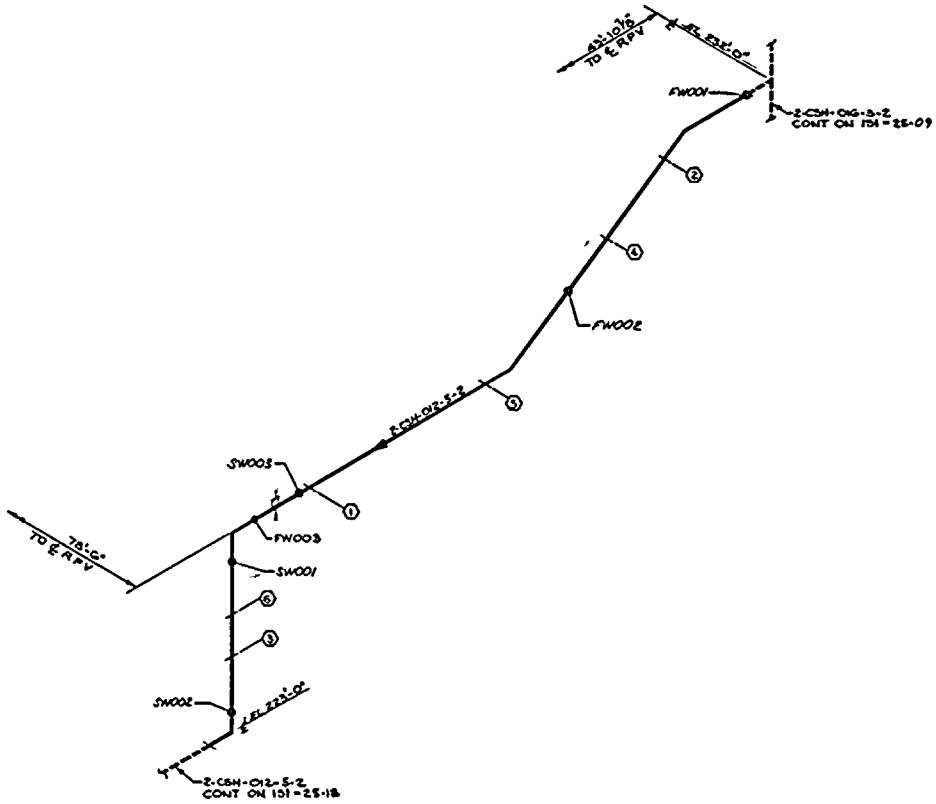
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
VALVE & EQUIPMENT NUMBERS PRECEDED BY 2CSH#

NO	DATE	REVISION	BY	CHKD	APPR
1	2/25/95	REVISED PER PSI PLAN UPDATE			
0	7/15/95	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION,

CLASS 2
DWG NO ISI-25-13

DRAWN BY W. STEWART
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2CSH PSST 187A2	BZ-78 HA
2	PSH 190	HD
3	PSP 185	GX
4	PSP 189	HC
5	PSR 188	HB
6	PST 184	GZ
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LEGEND

○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 25-17-CSH
4. ALL SUPPORTS PRECEDED BY 2CSH

REFERENCES:

1. ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 25-17-C
ASME CONTROL DWG N/A

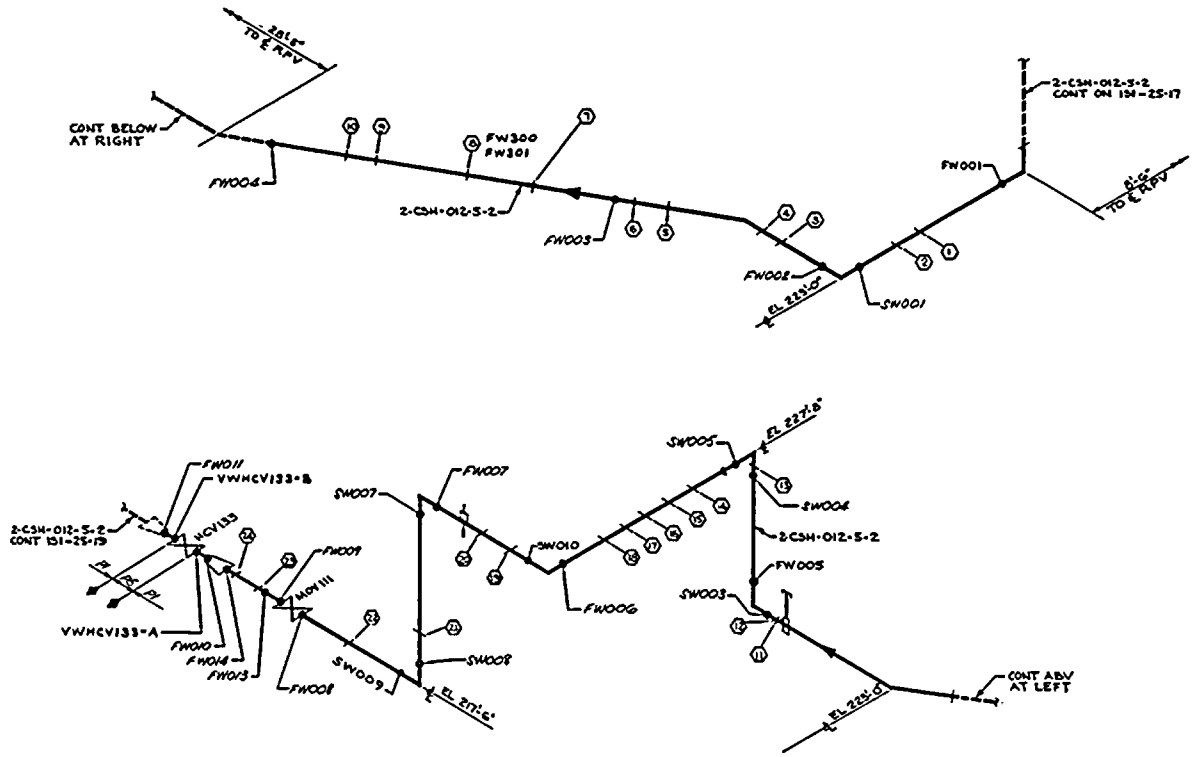
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2CSH #

NO	DATE	REVISION	BY	CHKD	APPR
1	9/25/85	REVISED PER PSI PLAN UPDATE			
0	7/17/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2
DWG NO ISI-25-17

DRAWN BY W. STEWART
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2CSH-P55P-184-A2	B2-70GW
2	P55H-183	GV
3	P55P-182	GU
4	P55P-181	GT
5	P55T-180	GS
6	-179	GR
7	-178	GQ
8	P55P-177	GP
9	P55T-176	GN
10	-175	GM
11	-174	GL
12	-173	GK
13	P55P-172	GJ
14	P55P-171	GH
15	P55P-170	GG
16	P55H-169	GF
17	P55T-168	GE
18	P55P-167	GD
19	P55T-166	GC
20	P55H-165	GB
21	P55P-164	GA
22	P55R-163	FZ
23	P55H-162	FY
24	P55T-161	FX
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 25-18-CSH
4. ALL SUPPORTS PRECEDED BY 2CSH

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 25-18-H

ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2CSH #

NO	DATE	REVISION	BY	CHKD	APPR
1	7/13/85	REVISED PER PSI PLAN UPDATE			
0	7/12/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

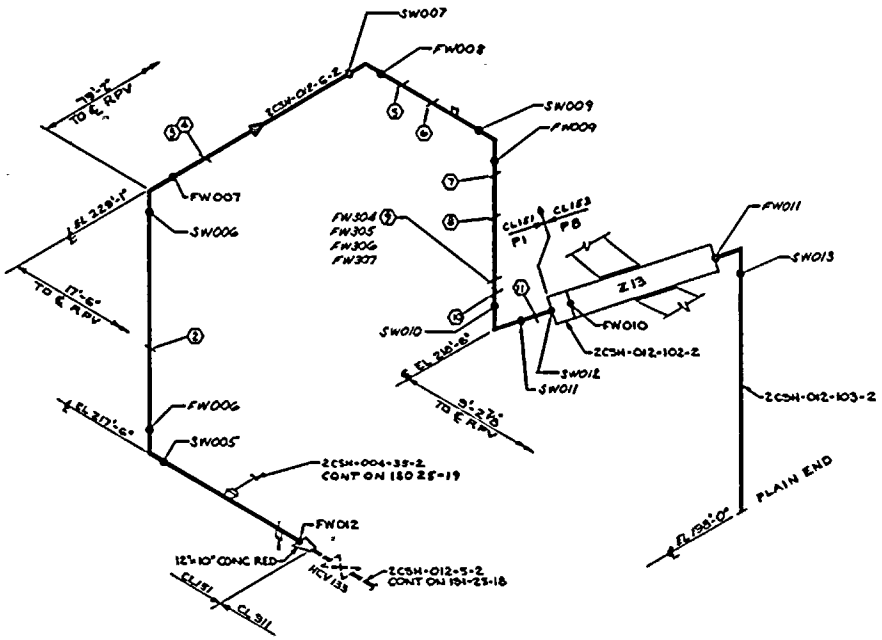
NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2

DWG NO ISI-25-18

DRAWN BY W. STEWART
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1		
2	2CSH PSA109AE	BZ-78DL
3	PSST102	DK
4	216	DM
5	104	DJ
6	PSSP100	DH
7	PSSP099	DG
8	PSST098	DF
9	PSSH097	DE
10	PSSP096	DD
11	PSSP095	DC
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LEGEND

○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 25-19-CSH
4. ALL SUPPORTS PRECEDED BY 2CSH

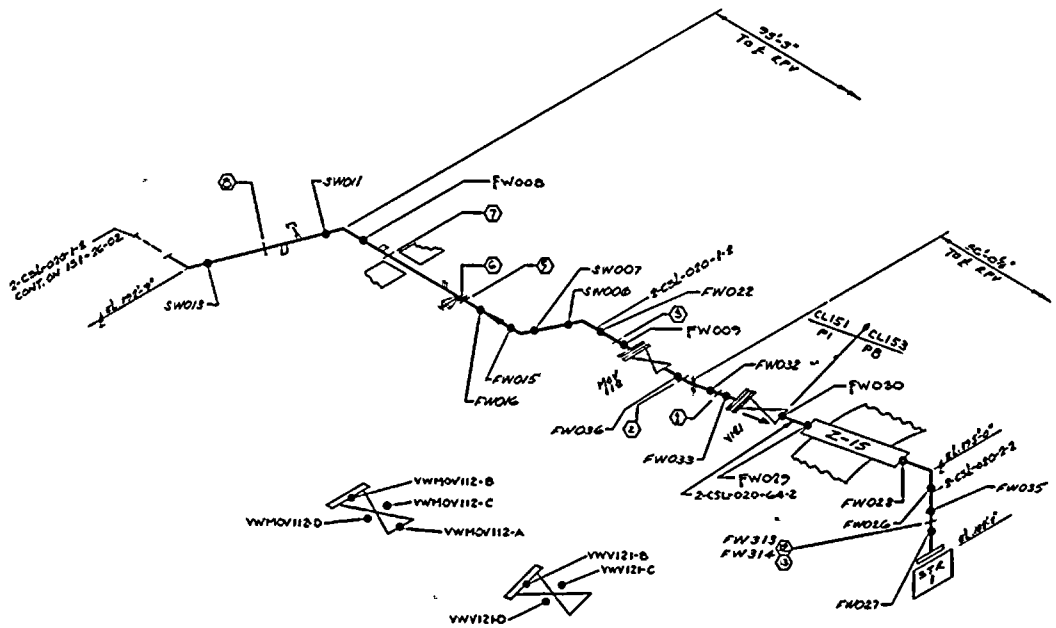
REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 25-19-G
ASME CONTROL DWG N/A

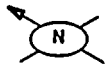
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2CSH#

NO	DATE	REVISION	BY	CHKD	APPR
1	9/25/85	REVISED PER PSI PLAN UPDATE			
0	7/15/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2
DWG NO ISI-25-19
DRAWN BY W. STEWART
CHKD BY J. DAVID





NO.	PIPE SUPPORT	BZ NO.
1	2CSL-PSSR-084-A2	BZ 150 CP
2	-PS67-040-A2	AY
3	-PS67-002-A2	CQ
4		
5	-PS67-084-A2	CS
6	-PS67-005-A2	CT
7	-PS82-002-A2	Z
8	-PS5A-096-A2	BP
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12	-PS82-091-A2	CV
13	-PS82-095-A2	CV
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 2G-01-CSL
4. ALL SUPPORTS PRECEDED BY 2 CSL

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 2G-1-AC
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVES AND EQUIPMENT NUMBERS PRECEDED BY 2CSL

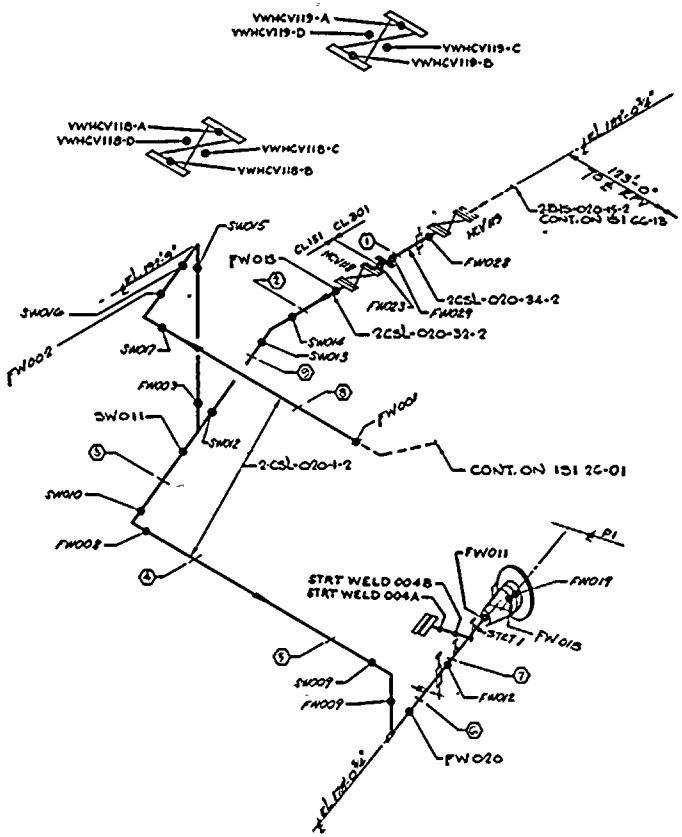
NO	DATE	REVISION	BY	CHKD	APPR
1	7/26/85	REVISED PER PSI PLAN UPDATE			
0	7/16/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2
DWG NO ISI-26-01

DRAWN BY
CHKD BY



NO.	PIPE SUPPORT	BZ NO.
1	2-CSL-PSE 009-A2	BZ-1B-047
2	1 -PSE 010-A2	1 S
3	1 -PSSP 036-A2	1 AU
4	1 -PSE 012-A2	1 U
5	1 -PSSP 037-A2	1 AV
6	1 -PSST 038-A2	1 AW
7	1 -PSSH 005-A2	1 K
8	1 -PSAV 011-A2	1 T
9	1 -PSSP 039-A2	1 CZ
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 26-02-CSL
4. ALL SUPPORTS PRECEDED BY 2CSL

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 26-2-Z
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

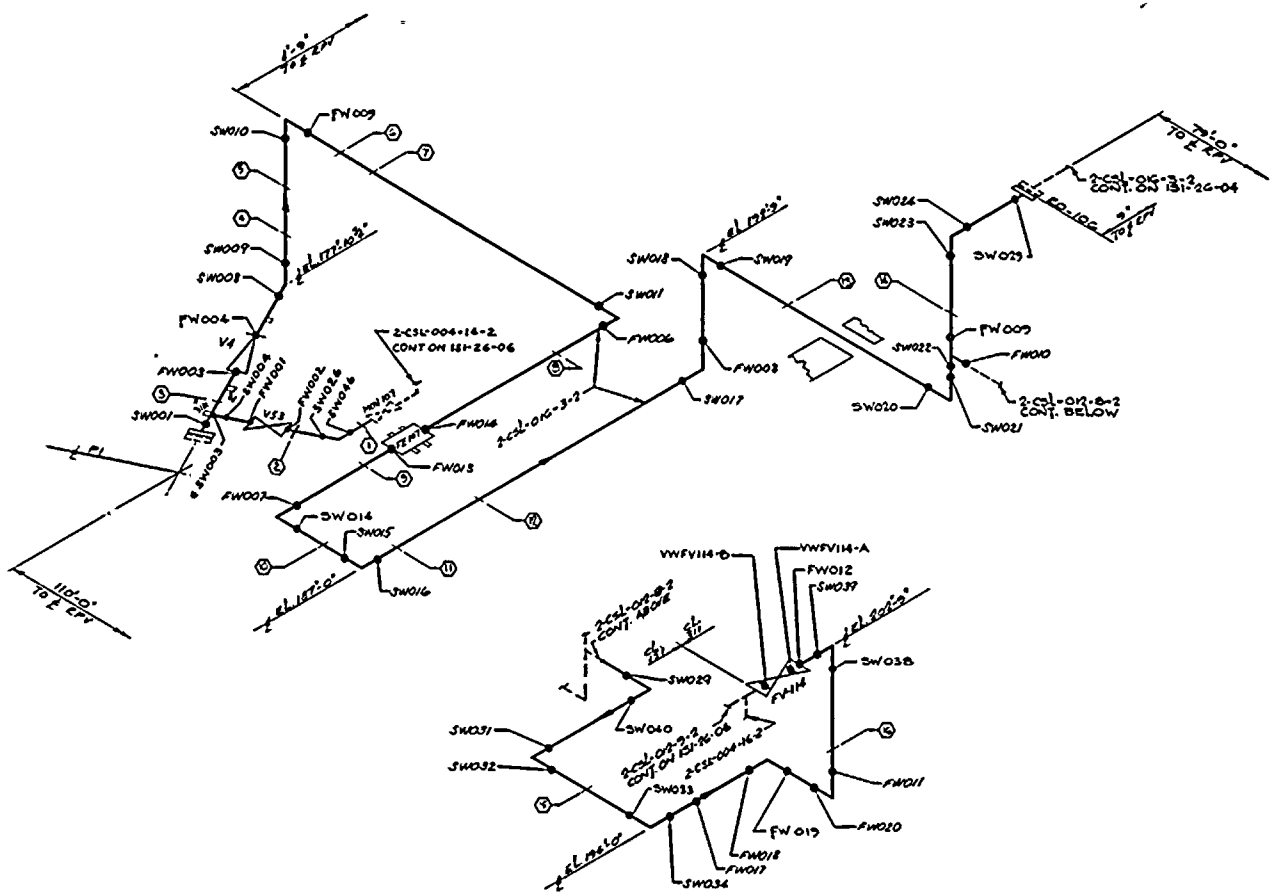
ALL VALVES AND EQUIPMENT NUMBERED PRECEDED BY 2CSL

NO	DATE	REVISION	BY	CHKD	APPR
1	2/23/95	REVISED PER PSI PLAN UPDATE		SLH	
0	7/7/95	SWEC RELEASED FOR PRESERVICE INSPECTION		SLH	

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2
DWG NO ISI-26-02

DRAWN BY
CHKD BY J DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2CSL-P33P-040-A2	BZ-1260BT
2	-P33H-024-A2	AB
3	-P33H-004-A2	AJ
4	-P33T-047-A2	BO
5	-P33T-046-A1	BC
6	-P33P-043-A2	BB
7	-P33H-037-A1	P
8	-P33T-009-A2	M
9	-P33P-015-A2	BA
10	-P33C-009-A2	K
11	-P33T-041-A2	AZ
12	-P33T-001-A2	L
13	-P33A-008-A2	Q
14	-P33T-033-A2	AK
15	-P33A-014-A2	AS
16	-P33C-016-A2	AT
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 2G-03-CSL
4. ALL SUPPORTS PRECEDED BY 2CSL

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 2G-3-Z
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

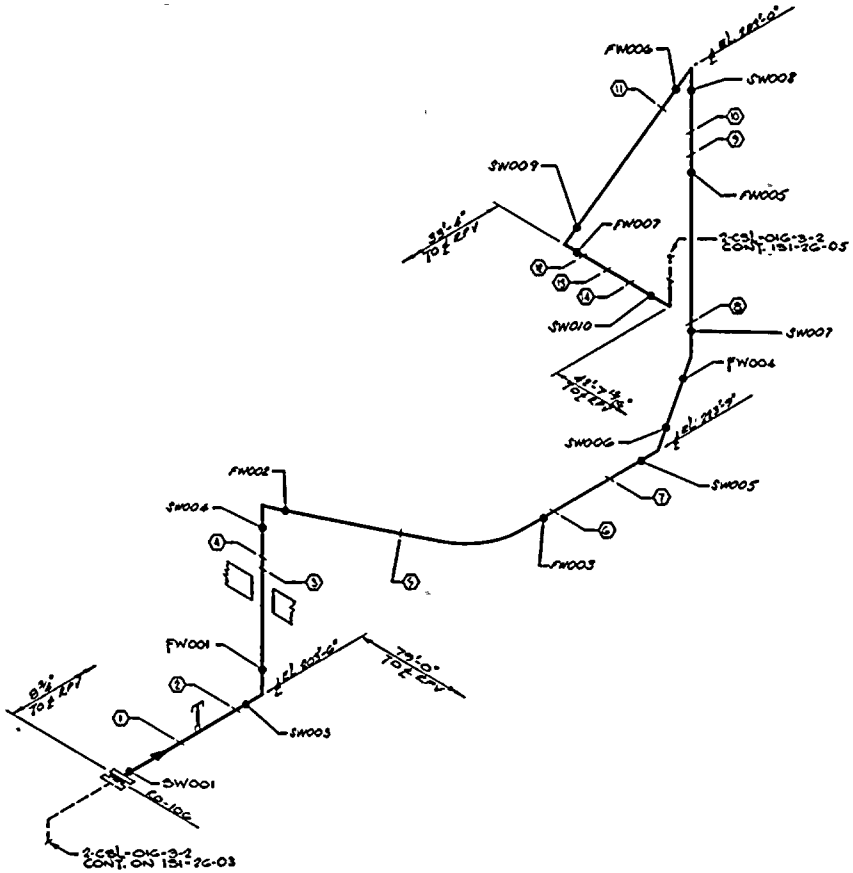
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2CSL*

NO	DATE	REVISION	BY	CHKD	APPR
1	2/13/85	REVISED PER PSI PLAN UPDATE			
0	7/2/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2
DWG NO ISI-26-03

DRAWN BY
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2CSL PSST 043 A1	BZ-1B-V
2	PSST 037 A2	AQ
3	PSST 031 A2	AP
4	PSST 060 A2	AN
5	PSST 023 A2	AR
6	PSST 049 A1	AM
7	PSST 032 A1	AE
8	PSE 028 A2	AL
9	PSA 077 A2	CK
10	PSHE 076 A2	CJ
11	PSCH 073 A2	CP
12	PSHP 075 A2	CH
13	PSHP 072 A2	CE
14	PSCH 071 A2	CD
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 2G-04-CSL
4. ALL SUPPORTS PRECEDED BY 2CSL

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 2G-4-9
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

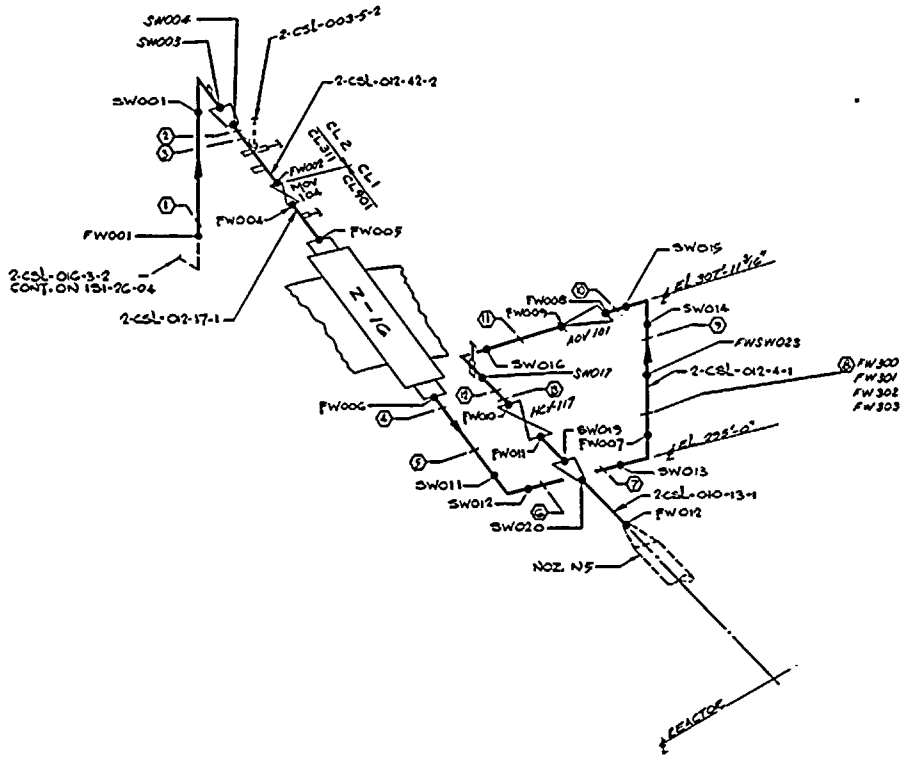
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2CSL.

NO	DATE	REVISION	BY	CHKD	APPR
1	2/2/95	REVISED PER PSI PLAN UPDATE			
0	7/6/95	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2
DWG NO ISI-26-04

DRAWN BY D FRGEORGE
CHKD BY J DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2CSL-PSSP 076 A2	BB-30-CL
2	*PSSP 076 A2	CG
3	*PSSH 070 A2	CC
4	*PSSP 090 A1	CJ
5	*PSSP 054 A1	BZ
6	*PSSP 075 A1	BH
7	*PSSP 071 A1	BL
8	*PSSH 071 A1	BK
9	*PSSP 056 A1	BT
10	*PSSP 049 A1	BH
11	*PSSP 048 A1	BG
12	*PSSH 047 A1	BP
13	*PSSP 046 A1	BR
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LEGEND

○-INDICATES PIPE SUPPORT

*-INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 2C-05-CSL
4. ALL SUPPORTS PRECEDED BY 2CSL

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 2C-5-M

ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2CSL-

NO	DATE	REVISION	BY	CHKD	APPR
1	1/15/85	REVISED PER PSI PLAN UPDATE			
0	1/4/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

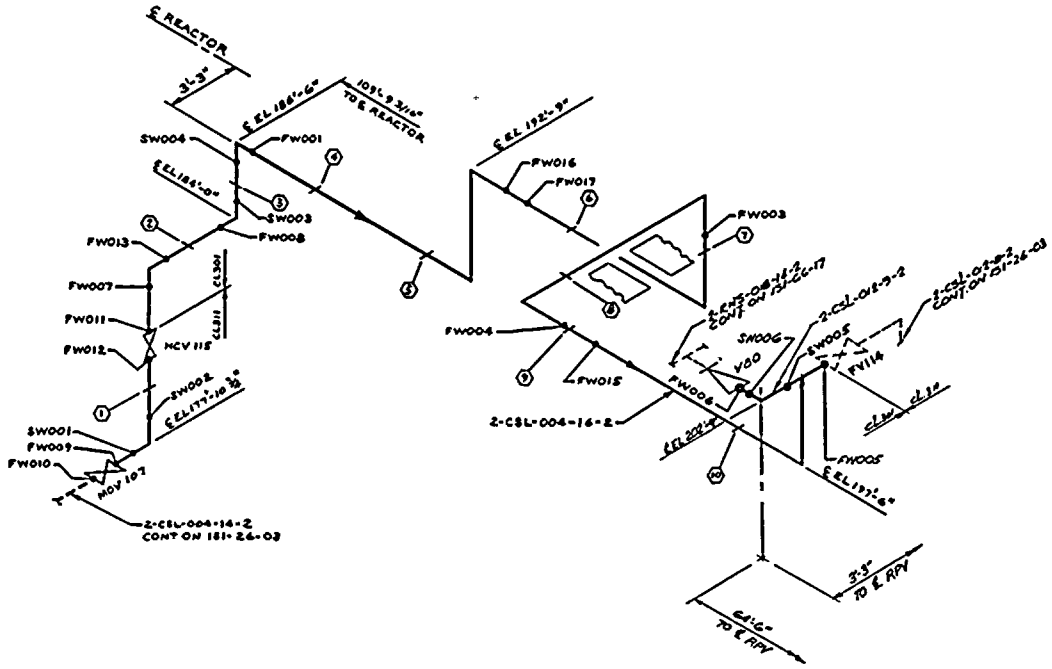
NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 & 2

DWG NO ISI-26-05

DRAWN BY
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2CSLPSSPOETA2	BZ-15080
2	PSR059	BB
3	PSR014	W
4	PSSTO16	X
5	PSR016	Y
6	PSR017	Z
7	PSR018	AA
8	PSR019	AB
9	PSR020	AC
10	PSSTO21	AD
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LEGEND
○-INDICATES PIPE SUPPORT
•-INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 2C-06-CSL
4. ALL SUPPORTS PRECEDED BY 2CSL

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 2C-6-F
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

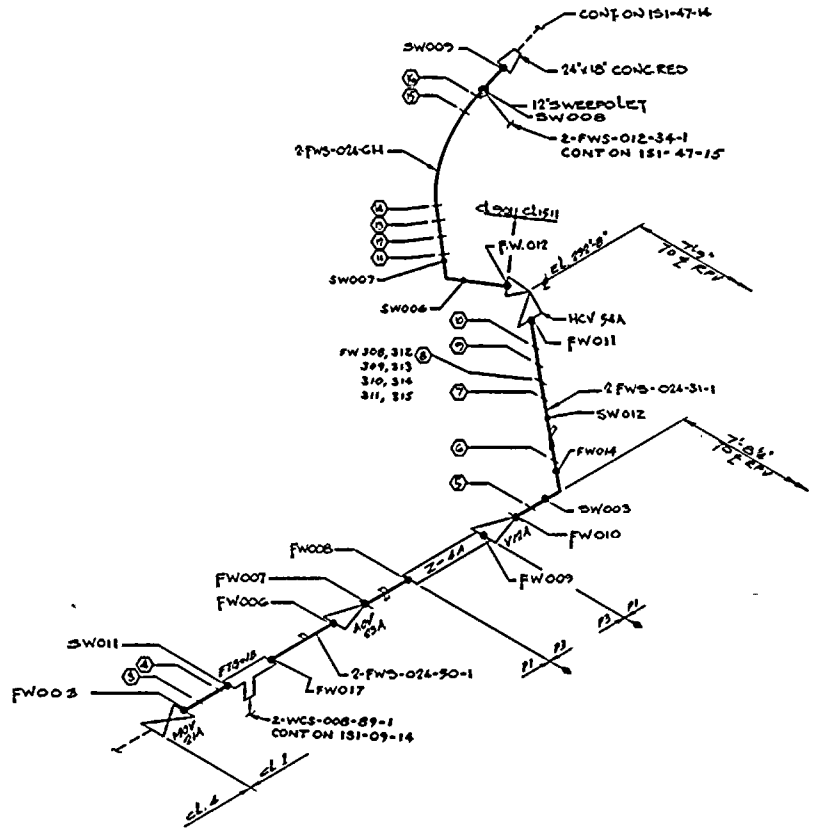
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2CSL-

NO	DATE	REVISION	BY	CHKD	APPR
1	4/23/86	REVISED PER PSI PLAN UPDATE			
0	7/2/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2
DWG NO ISI-26-06

DRAWN BY
CHKD BY J DAVID



NO.	PIPE SUPPORT	BZ NO.
1		
2		
3	2FWS-PSST 044 A1	BZ-17 BM
4	-PSSL 052 A1	BM
5	-PSHE 369 A1	PD
6	-PSSR 348 A1	PC
7	-PSSA 192 A1	JB
8	-PSSP 191 A1	JA
9	-PSST 146 A1	HZ
10	-PSSP 189 A1	HY
11	-PSSA 188 A1	HX
12	-PSSP 187 A1	HW
13	-PSSP 185 A1	HU
14	-PSSP 186 A1	HV
15	-PSSP 377 A1	HT
16	-PSSP 184 A1	HT
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LEGEND
O -INDICATES PIPE SUPPORT
• -INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 47-13-FWS
4. ALL SUPPORTS PRECEDED BY 2FWS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 47-13-W
ASME CONTROL DWG N/A

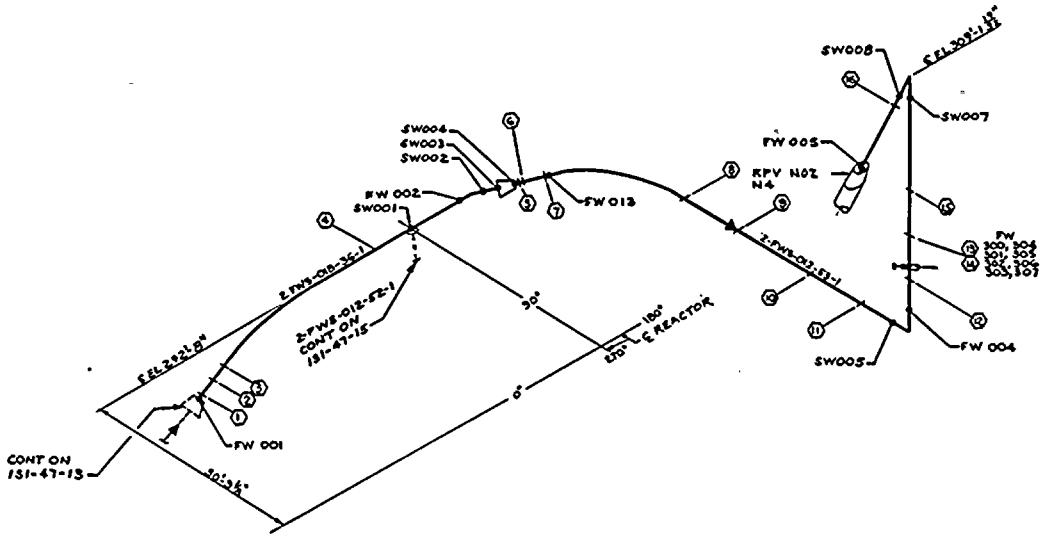
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2FWS*

NO	DATE	REVISION	BY	CHKD	APPR
1	9/15/95	REVISED PER PSI PLAN UPDATE			
0	7/2/95	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS I
DWG NO 1S1-47-13

DRAWN BY S. GEORGE
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2FWS-PSSP 183 A1	02-17 HS
2	PSSP 182	HR
3	PSSH 181	HQ
4	PSSP 180	HP
5	PSSH 179	HM
6	PSSP 178	HN
7	177	HL
8	176	HK
9	175	HJ
10	PSSH 174	HG
11	PSSP 173	HF
12	172	HE
13	171	HD
14	363	HD
15	170	HC
16	PSSH 169	HB
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LEGEND

○ -INDICATES PIPE SUPPORT
• -INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 47-14-FWS
4. ALL SUPPORTS PRECEDED BY 2FWS

REFERENCES:

1. ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 47-14 J
ASME CONTROL DWG N/A

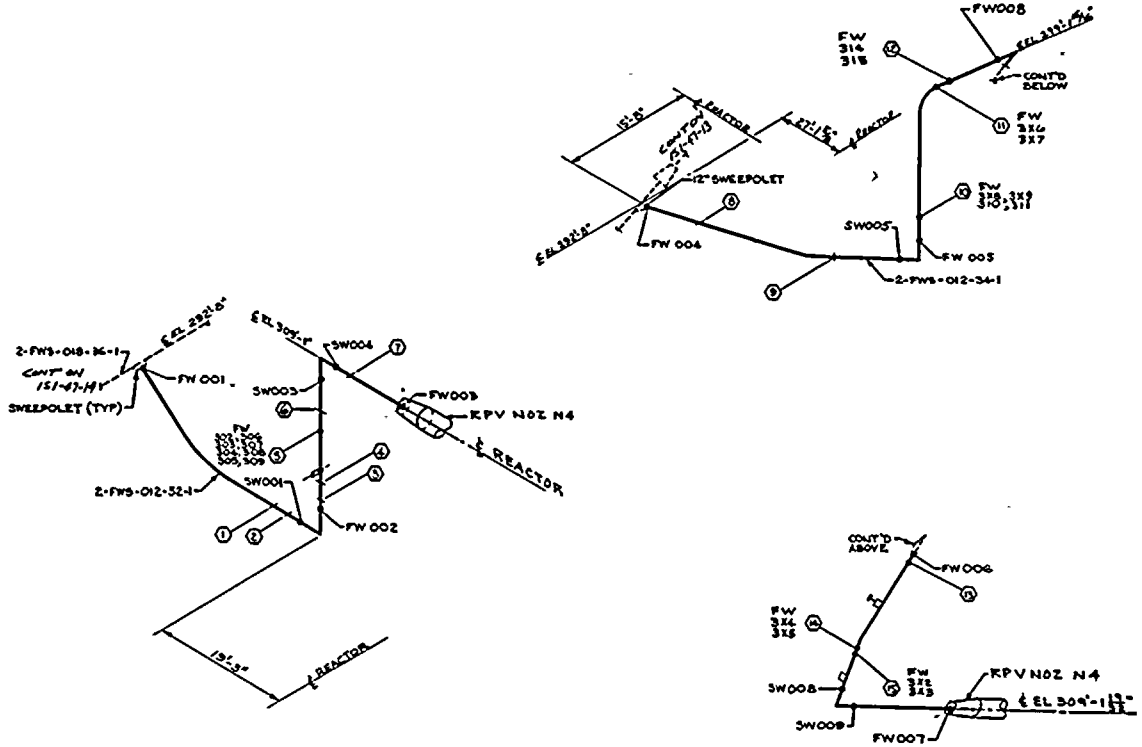
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVES & EQUIPMENT NUMBERS PRECEEDED BY 2FWS #

NO	DATE	REVISION	BY	CHKD	APPR
1	9/13/85	REVISED PER PSI PLAN UPDATE			
0	7/6/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1
DWG NO ISI-47-14

DRAWN BY W. STEWART
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2FWS-PSSP-194-A1	BZ-17JC
2	193	JC
3	195	JE
4	196	JF
5	197	JG
6	198	JH
7	PSSH-199	JJ
8	PSSP-394	PP
9	PSSP-200	JK
10	PSSH-201	JL
11	PSSP-202	JM
12	202	JM
13	204	JP
14	203	JQ
15	3644	JQ
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 47-15-FWS
4. ALL SUPPORTS PRECEDED BY 2FWS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 47-15 J
ASME CONTROL DWG N/A

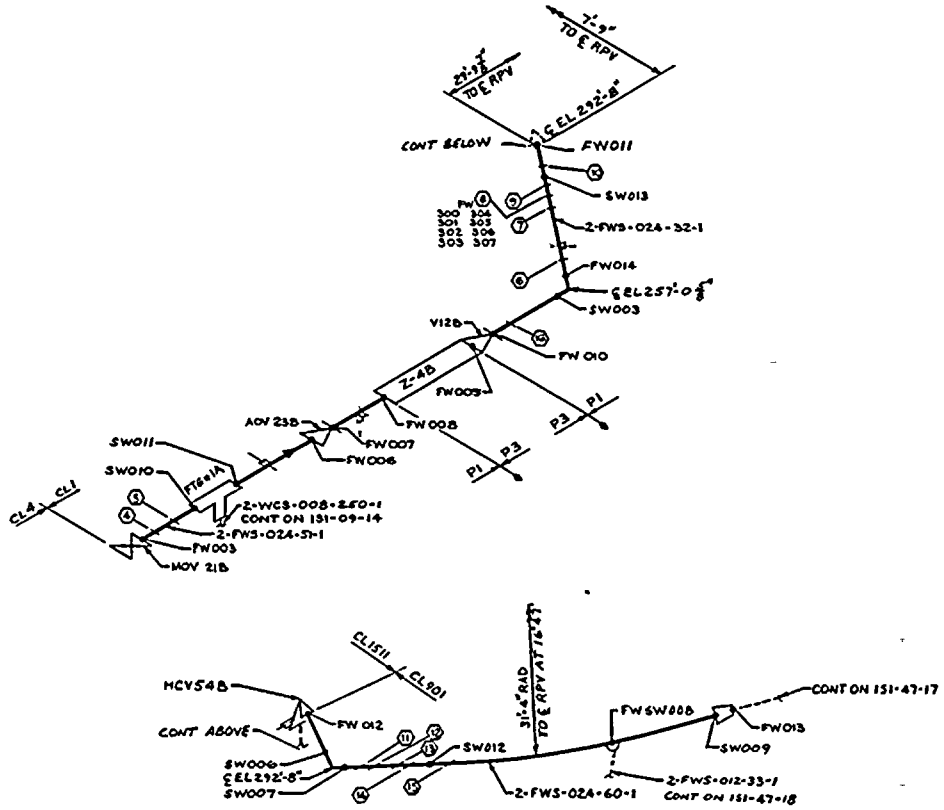
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2FWS

NO	DATE	REVISION	BY	CHKD	APPR
1	9/25/95	REVISED PER PSI PLAN UPDATE			
0	9/6/95	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1
DWG NO ISI 47-15

DRAWN BY W. STEWART
CHKD BY J DAVID



NO.	PIPE SUPPORT	BZ NO.
1		
2		
3		
4	2FWS PSST 033A1	82-17 BJ
5	PSSH 043	BV
6	PSR 066	PA
7	PSSH 233	KU
8	PSSP 232	KT
9	PSR 231	KS
10	PSSP 230	KR
11	PSSH 229	KQ
12	PSSP 228	KP
13	227	KN
14	226	KM
15	225	KL
16	PSR SG79	PB
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LEGEND

○ = INDICATES PIPE SUPPORT

• = INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 47-16-FWS
4. ALL SUPPORTS PRECEDED BY 2FWS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 47-16-W

ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE & EQUIPMENT NUMBERS PRECEEDED BY 2FWS

NO	DATE	REVISION	BY	CHKD	APPR
1	9/23/85	REVISED PER PSI PLAN UPDATE			
0	7/2/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

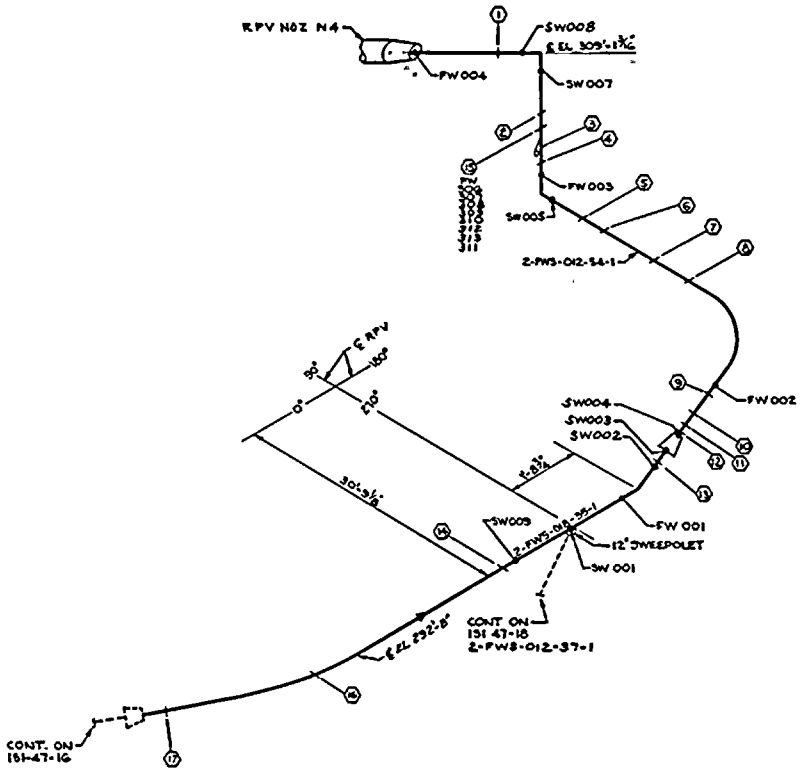
NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1

DWG NO ISI – 47-16

DRAWN BY W. STEWART

CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2-FWS-PSSH-207-A1	BZ-17 J3
2	1 PSSP-208-1	1 JT
3	PSSP-210	JV
4	PSSP-211	JW
5	PSSH-212	JX
6	PSSP-213	JY
7	PSSP-214	JZ
8	PSSP-215	KA
9	PSSP-216	KB
10	PSSP-217	KC
11	PSSH-218	KD
12	PSSP-219	KE
13	PSSP-220	KF
14	PSSP-221	KG
15	PSSP-222	JU
16	PSSH-223	KJ
17	1 PSSP-224	1 KK
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 47-17-FWS
4. ALL SUPPORTS PRECEDED BY 2FWS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 47-17-K
ASME CONTROL DWG N/A

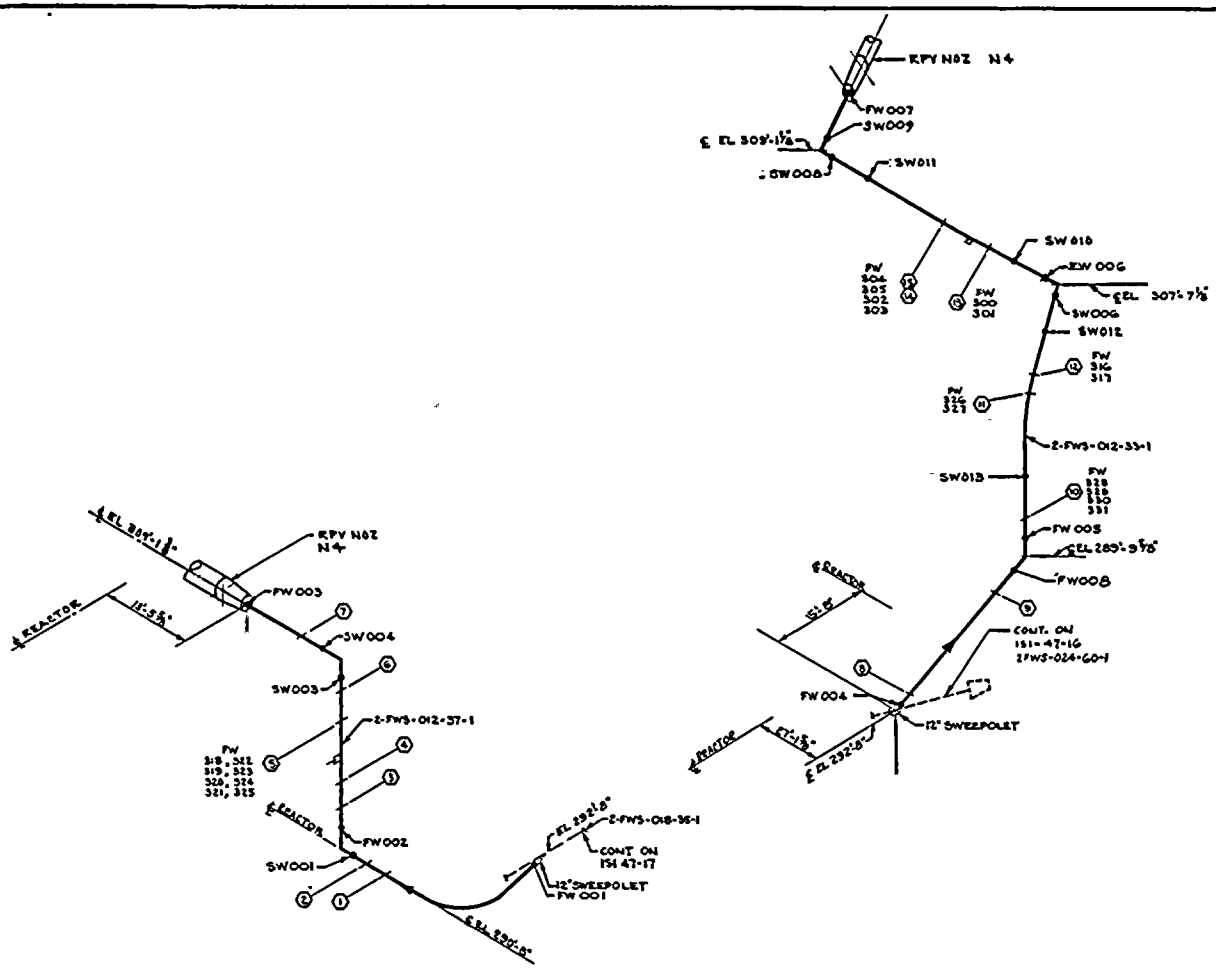
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVES & EQUIPMENT NUMBERS PRECEDED BY 2FWS a

NO	DATE	REVISION	BY	CHKD	APPR
1	4/23/85	REVISED PER PSI PLAN UPDATE			
0	9/6/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1
DWG NO ISI 47-17

DRAWN BY W. STEWART
CHKD BY J DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2-FWS-PSSP 235 A/B	BZ-17 KW
2	234	KV
3	236	KX
4	237	KY
5	238	KZ
6	239	LA
7	PSSH 240	LB
8	PSSP 273	PE
9	PSSP 241	LC
10	PSSH 242	LD
11	PSSP 244	LE
12	243	LF
13	245	LG
14	246	LH
15	263	LM
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LEGEND

○ = INDICATES PIPE SUPPORT
• = INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 47-18-FWS
4. ALL SUPPORTS PRECEDED BY 2FWS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 47-18-G
ASME CONTROL DWG N/A

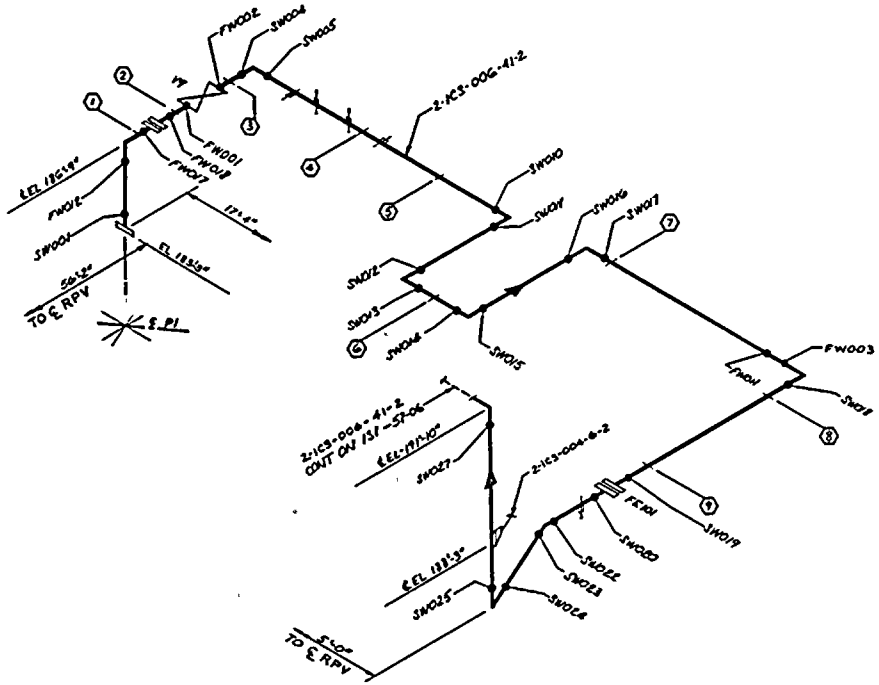
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2FWS •

NO	DATE	REVISION	BY	CHKD	APPR
1	7/30/85	REVISED PER PSI PLAN UPDATE			
0	7/2/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1
DWG NO ISI-47-18

DRAWN BY W STEWART
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2ICS PSSP 283 A1	BR-26-C4
2	PSSH 190	AS
3	PSST 204	BJ
4	PSSP 232	CM
5	PSR 191	AT
6	PSST 189	AR
7	PSR 192	AU
8	PSR 234	CP
9	PSA 205	BK
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LEGEND

○ - INDICATES PIPE SUPPORT

* - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 57-05-ICS
4. ALL SUPPORTS PRECEDED BY 2ICS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 57-5-5

ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2ICS-

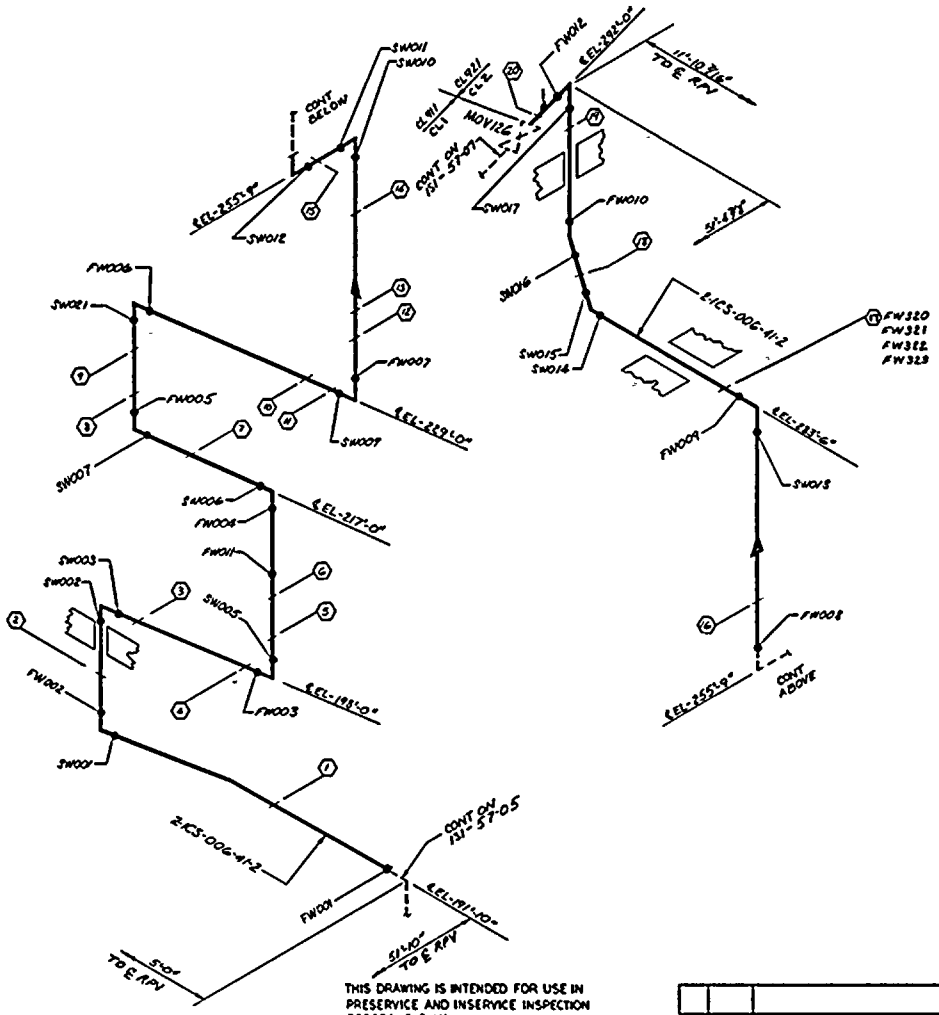
NO	DATE	REVISION	BY	CHKD	APPR
1	7/22/85	REVISED PER PSI PLAN UPDATE	[illegible]	[illegible]	[illegible]
0	7/15/85	SWEC RELEASED FOR PRESERVICE INSPECTION	[illegible]	[illegible]	[illegible]

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2

DWG NO ISI-57-05

DRAWN BY S. ANSELMO
CHKD BY J. DAVID



THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 21CS#

NO.	PIPE SUPPORT	BZ NO.
1	1ICS PSR 186 A2	82 76 AM
2	PSR 186	DK
3	PSSH 182	AH
4	PSSH 181	AG
5	PSR 255	DV
6	PSR 252	DM
7	PSR 183	AJ
8	PSR 256	DO
9	PSR 250	DP
10	PSST 249	DE
11	PSSH 024	AF
12	PSST 248	DD
13	PSSP 311	DD
14	PSR 847	DC
15	PSSH 028	AE
16	PSR 245	DA
17	PSR 296	FA
18	PSSH 299	FD
19	PSSP 298	FC
20	PSST 297	FB
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LEGEND

⬡ - INDICATES PIPE SUPPORT

* - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 57-06-1CS
4. ALL SUPPORTS PRECEDED BY 21CS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 57-6-L

ASME CONTROL DWG N/A

NO	DATE	REVISION	BY	CHKD	APPR
1	4/7/85	REVISED PER PSI PLAN UPDATE			
0	7/5/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

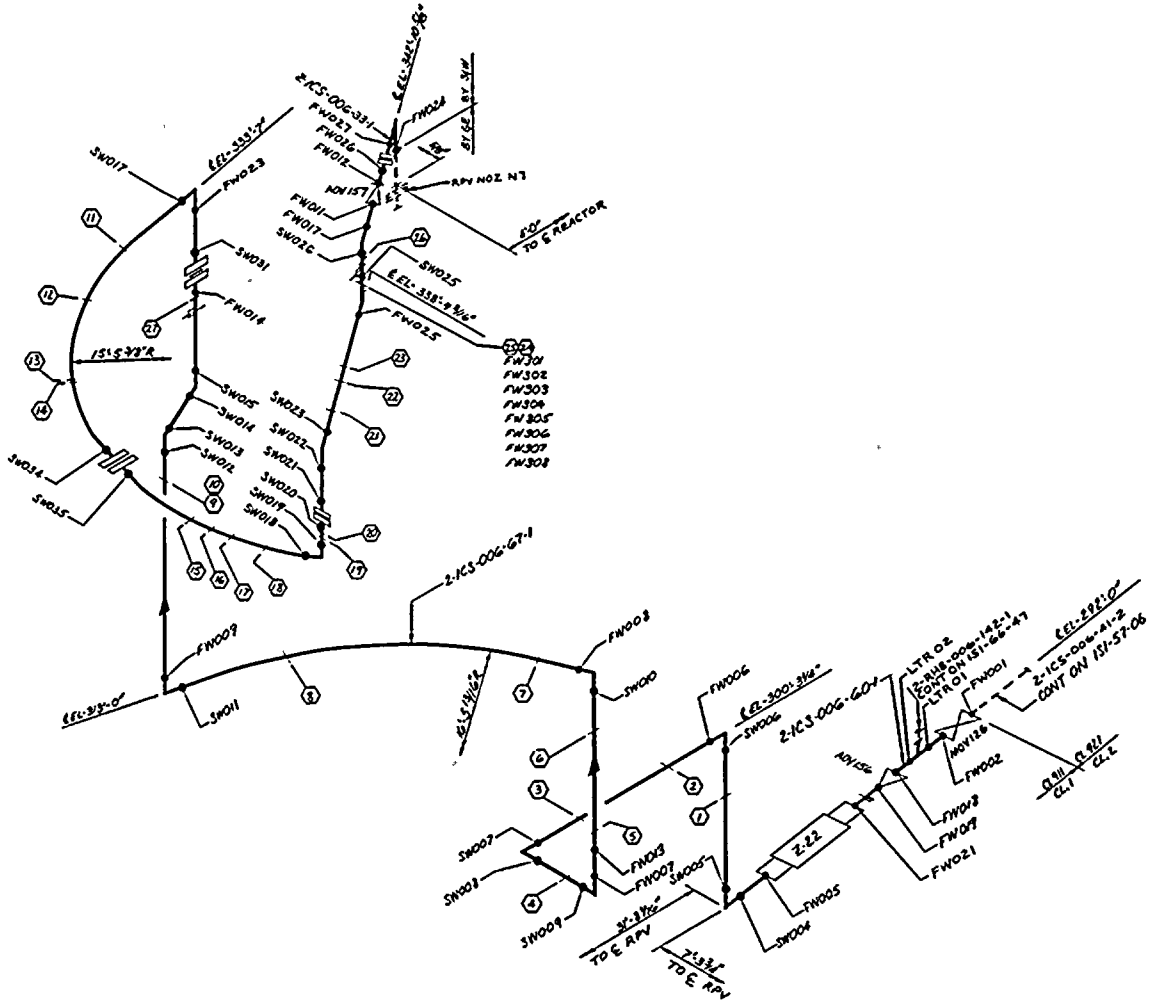
NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2

DWG NO ISI-57-06

DRAWN BY S. ANSELMO

CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2ICS PSR 202 A1	82-06 EW
2	PSSP 238	ET
3	PSSP 283	ER
4	PSR 291	EV
5	PSR 287	ES
6	PSR 286	ER
7	PSSP 135	EQ
8	PSR 284	EP
9	PSSP 139	EU
10	PSSP 140	EU
11	PSSP 303	FN
12	PSSP 308	FP
13	PSSP 309	FQ
14	PSSP 310	FQ
15	PSSP 312	FR
16	PSSP 313	FS
17	PSSP 314	FT
18	PSSP 319	FY
19	PSSP 317	FX
20	PSSP 320	FZ
21	PSSP 316	FV
22	PSSP 318	FV
23	PSSP 315	FU
24	PSSP 322	GB
25	PSSP 323	GB
26	PSSP 321	GA
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 57-07-ICS
4. ALL SUPPORTS PRECEDED BY 2ICS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 57-7-5
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

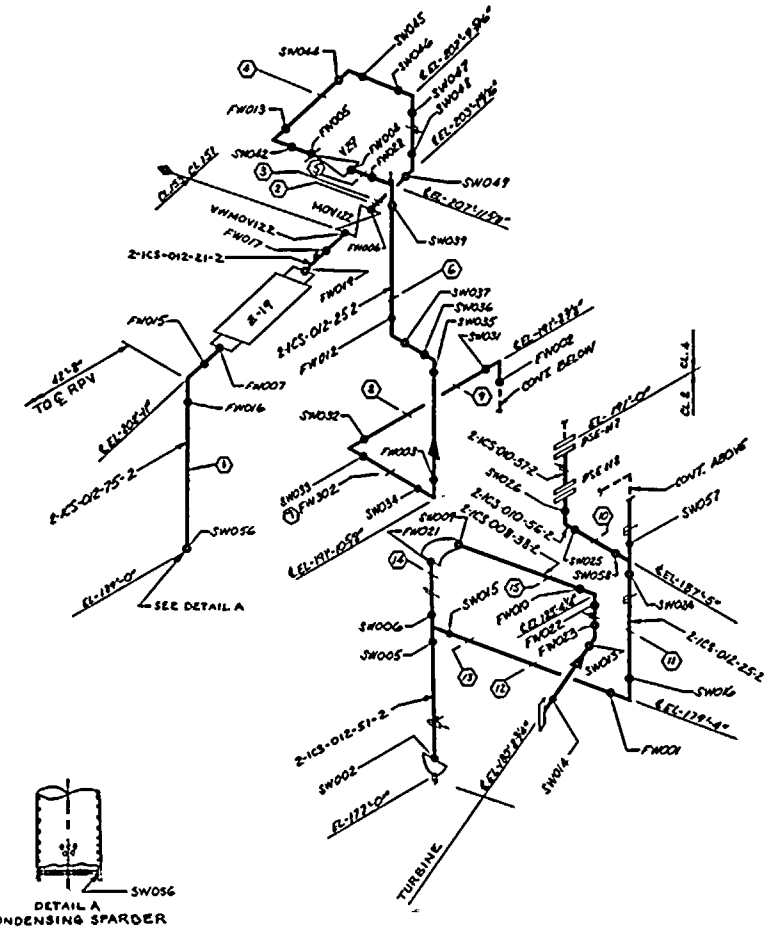
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2ICS#

NO	DATE	REVISION	BY	CHKD	APPR
1	9/13/85	REVISED PER PSI PLAN UPDATE			
0	7/5/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 & 2
DWG NO ISI-57-07

DRAWN BY J ANSELMO
CHKD BY J DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2ICS PSR273 A2	BZ-76BC
2	2ICS-PSST040-A2	BZ76CV
3	PSST002	AD
4	PSR044	W
5	PSW040	S
6	PSR233	CT
7	PSR237	CS
8	PSST049	N
9	PSSF236	CR
10	PSD506	FM
11	PSST215	CQ
12	PSD230	CK
13	PSH005	K
14	PSIF222	CP
15	PSSW002	J
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 57-08-ICS
4. ALL SUPPORTS PRECEDED BY 2ICS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 57-8-V
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

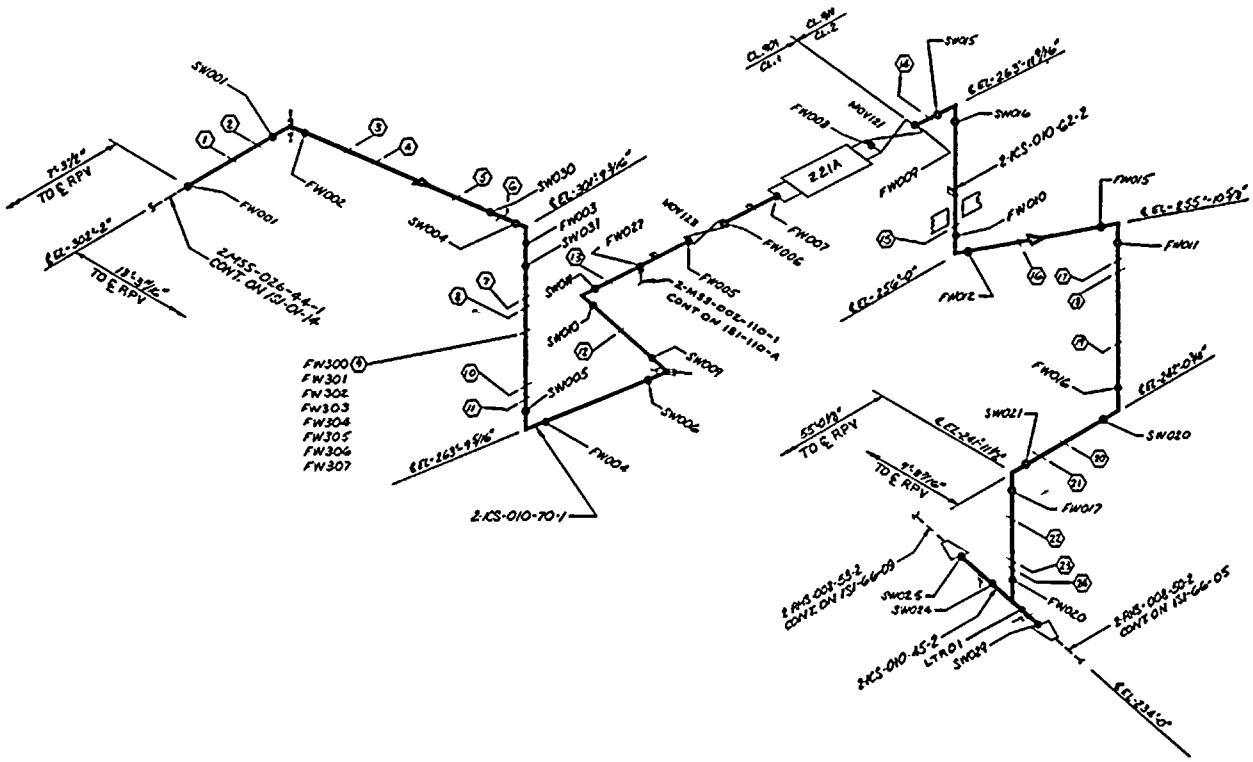
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2ICS

NO	DATE	REVISION	BY	CHKD	APPR
1	7/25/85	REVISED PER PSI PLAN UPDATE			
0	7/5/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2
DWG NO ISI-57-08

DRAWN BY S. ANSELMO
CHKD BY J DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2ICS PSSH 260 A1	BZ-06 OR
2	PSSP 261	OS
3	PSSP 262	OT
4	PSSP 263	OU
5	PSSP 264	OV
6	PSSH 265	OW
7	PSSP 270	OX
8	PSSP 266	OX
9	PSSP 267	OY
10	PSSP 271	OE
11	PSSP 268	OZ
12	PSSP 269	EA
13	PSR 295	EB
14	PSSP 301 A2	FF
15	PSR 300	EC
16	PSSH 275	EE
17	PSSP 276	EF
18	PSSP 277	EG
19	PSR 278	EH
20	PSSH 279	EJ
21	PSSP 280	EK
22	PSSP 281	EL
23	PSSP 282	EM
24	PSSP 283	EN
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 57-09-ICS
4. ALL SUPPORTS PRECEDED BY 2ICS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 57-9-Y

ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2ICSA

NO	DATE	REVISION	BY	CHKD	APPR
1	4/29/85	REVISED PER PSI PLAN UPDATE			
0	7/5/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2

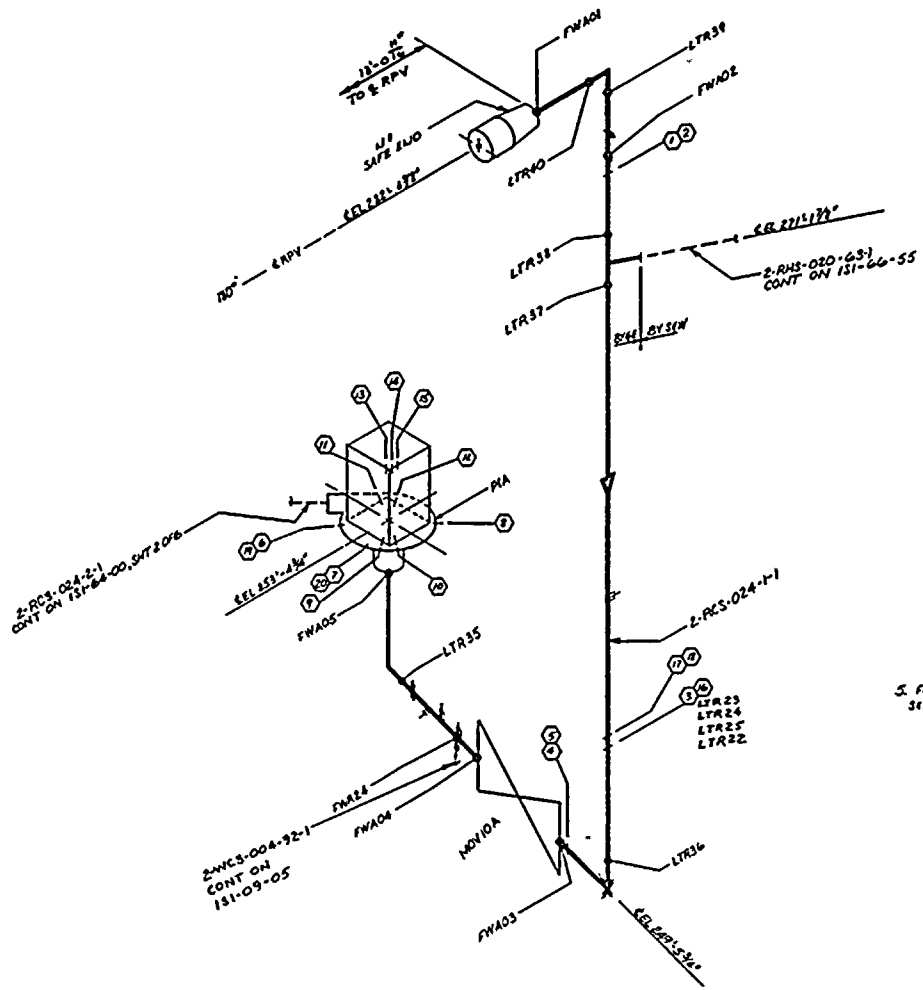
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 & 2

DWG NO ISI-57-09

DRAWN BY J. ANSELMO

CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RCS PSSP024A1	BZ 20 Q
2	PSSP030	Q
3	PSSW005	V
4	PSSP055	AB
5	PSSP056	AB
6	PSSP042	Y
7	PSSP041	T
8	PSSP040	X
9	PSSW011	L
10	PSSW012	L
11	PSSW010	L
12	PSSW009	L
13	PSSP061	AF
14	PSSP063	AN
15	PSSP062	AG
16	PSSW006	K
17	PSSP021	P
18	PSSP022	P
19	PSSP054	AD
20	RAZ	NOTE 5
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5. FOR SUPPORT NO 20 SEE
SKW FILE NO 16.030-001-079F
16.030-001-100E

LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 64-00-RCS
4. ALL SUPPORTS PRECEDED BY 2RCS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC N/A
ASME CONTROL DWG N/A

SKW FILE NO 16.030-001-058J, 059G
16.030-001-078G

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

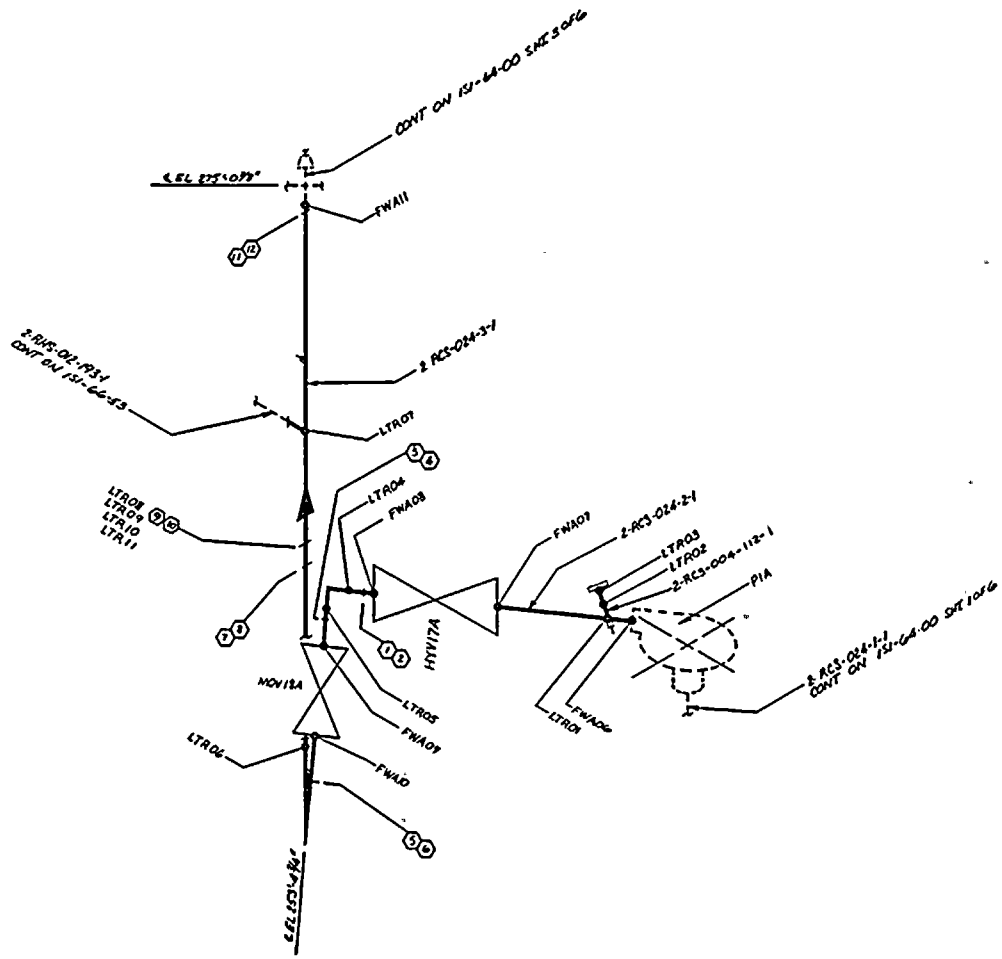
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2RCS#

NO	DATE	REVISION	BY	CHKD	APPR
1	9/26/95	REVISED PER PSI PLAN UPDATE			
0	7/13/95	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1
DWG NO ISI-64-00 SHEET 1 OF 6

DRAWN BY S. ANSELMO
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2 RCS PSSP049 N	BZ 70AA
2	PSSP053	AA
3	PSSH018	M
4	PSSP047	Y
5	PSSP049	N
6	PSSP051	N
7	PSSP053	P
8	PSSP054	P
9	PSSH001	N
10	PSSH002	N
11	PSSP081	Q
12	PSSP082	Q
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 64-00-RCS
4. ALL SUPPORTS PRECEDED BY 2RCS

REFERENCES:
1. ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC N/A
ASME CONTROL DWG N/A

S&W FILE NO 16.030-001-058J, 059G
16.030-001-078G

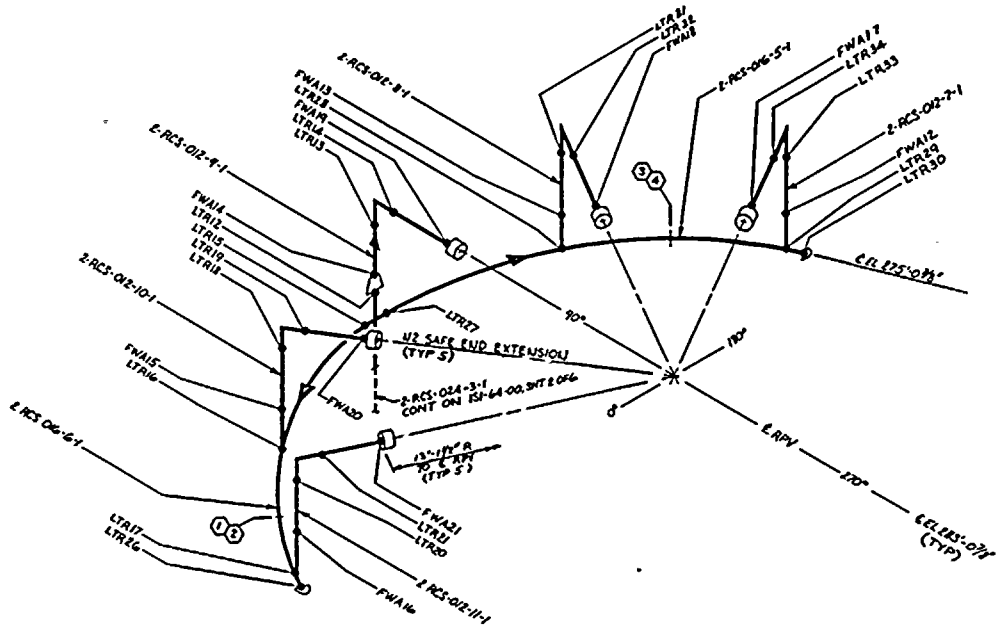
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2RCS#

NO	DATE	REVISION	BY	CHKD	APPR
1	9/13/85	REVISED PER PSI PLAN UPDATE			
0	7/15/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1
DWG NO ISI-64-00 SHEET 2 OF 6

DRAWN BY S. ANSELMO
CHKD BY J DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RCS PSSP027A1	8270R
2	PSSP067	
3	PSSP038	
4	PSSP029	
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 64-00-RCS
4. ALL SUPPORTS PRECEDED BY 2RCS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC N/A
ASME CONTROL DWG N/A

SFW FILE NO 16.030-001-058J
16.030-001-078G

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

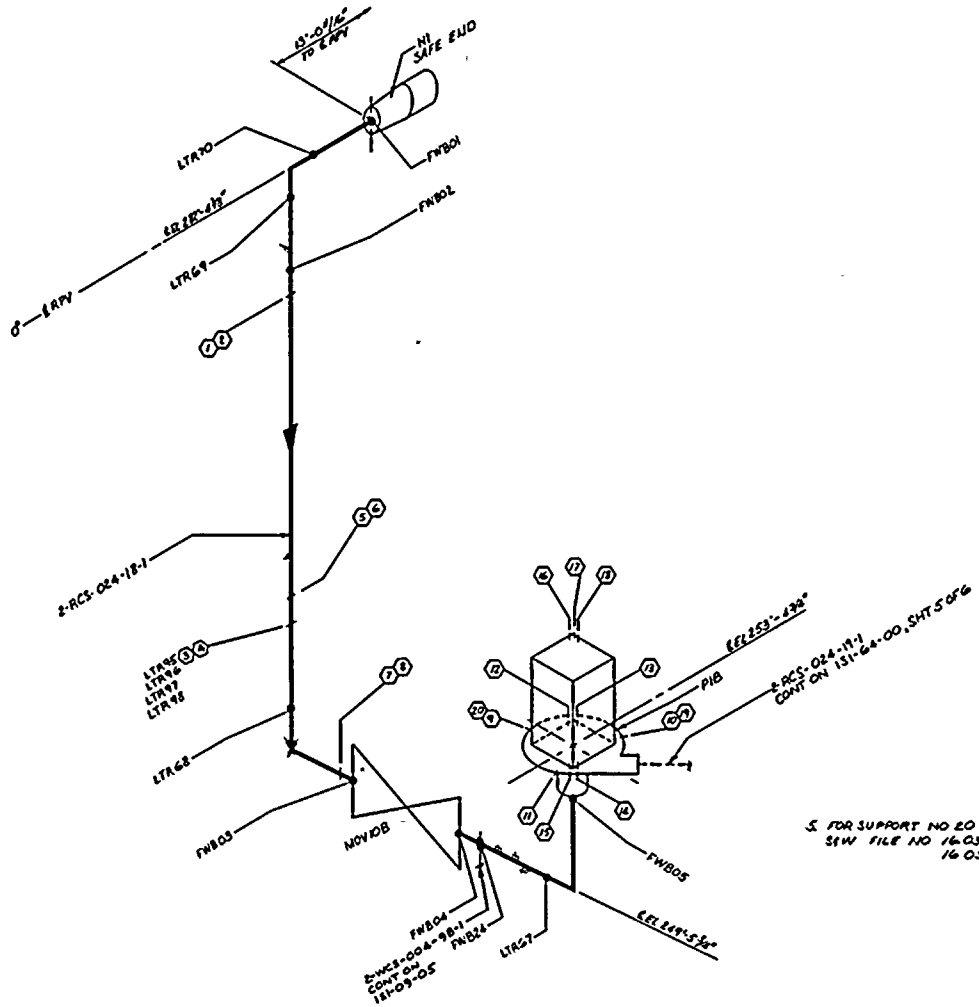
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2RCS#

NO	DATE	REVISION	BY	CHKD	APPR
1	9/23/85	REVISED PER PSI PLAN UPDATE			
0	7/25/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1
DWG NO ISI-64-00, SHEET 3 OF 6

DRAWN BY S. ANSELMO
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RCS PSSP033AR	BZ-90 Q
2	PSSP034	Q
3	PSSH003	J
4	PSSH004	J
5	PSSP025	P
6	PSSP026	P
7	PSSP057	AC
8	PSSP058	AC
9	PSSP043	U
10	PSSP045	W
11	PSSP061	S
12	PSSH015	L
13	PSSH016	L
14	PSSH014	L
15	PSSH013	L
16	PSSP065	AK
17	PSSP063	AH
18	PSSP064	AJ
19	PSSP060	AE
20	RBE	NOTE 5
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 64-00-RCS
4. ALL SUPPORTS PRECEDED BY 2RCS
5. FOR SUPPORT NO 20 SEE SIW FILE NO 16.030-001-079F 16.030-001-100E

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC N/A

ASME CONTROL DWG N/A

SIW FILE NO 16.030-001-058J, 059G 16.030-001-078G

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2RCS+

NO	DATE	REVISION	BY	CHKD	APPR
1	9/13/85	REVISED PER PSI PLAN UPDATE			
0	9/15/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2

WELD & COMPONENT

IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2

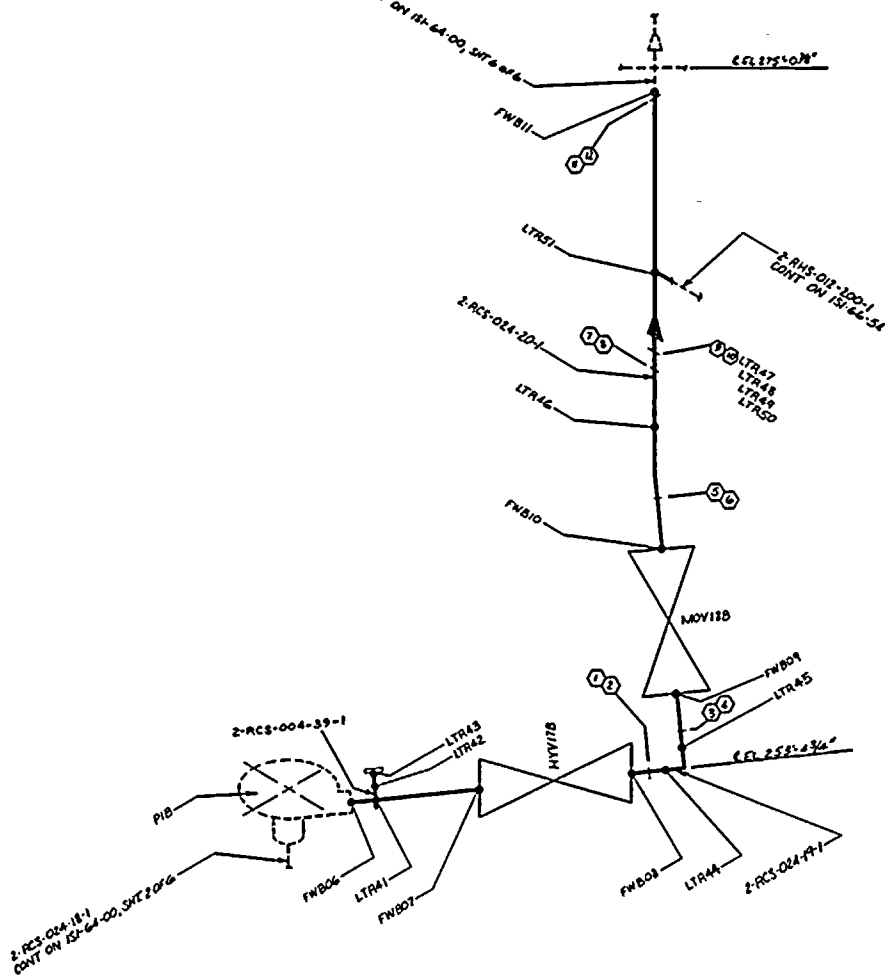
NIAGARA MOHAWK POWER CORPORATION

CLASS 1

DWG NO ISI-64-00 SHEET 4 OF 6

DRAWN BY J ANSELMO

CHKD BY J DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RCS PSSP054A1	8270AA
2	PSSP050	AA
3	PSSP048	B
4	PSSH017	M
5	PSSP020	N
6	PSSP052	N
7	PSSP027	P
8	PSSP028	P
9	PSSH009	N
10	PSSH008	N
11	PSSP035	Q
12	PSSP036	Q
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 64-00-RCS
4. ALL SUPPORTS PRECEDED BY 2RCS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC N/A
ASME CONTROL DWG N/A

SIW FILE NO 16.030-001-058J, 059G
16.030-001-078G

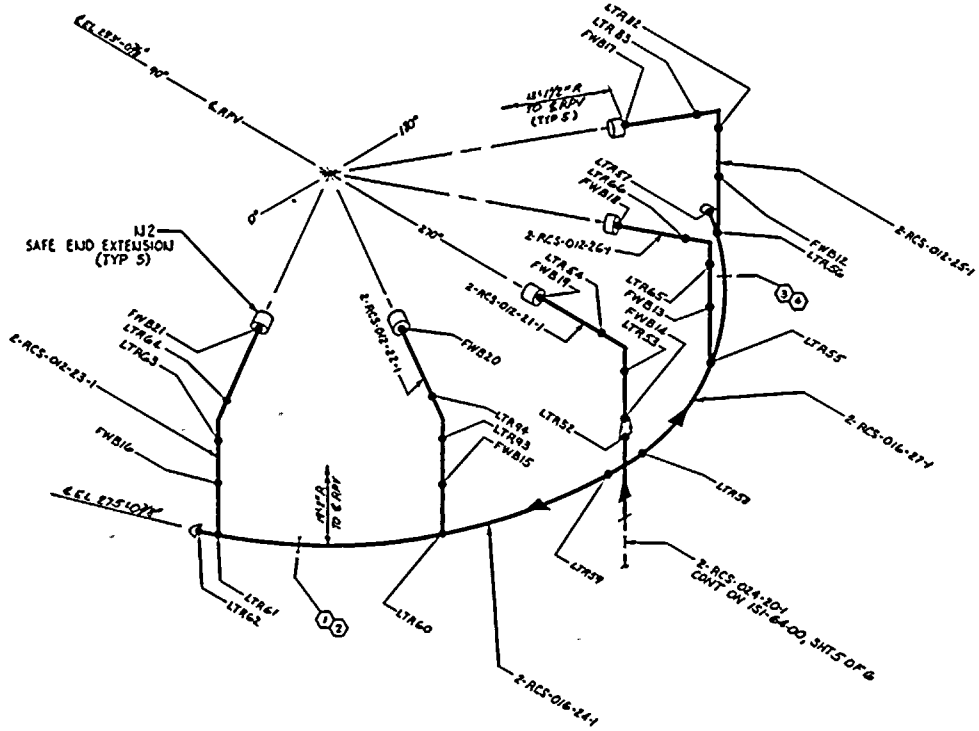
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2RCS*

NO	DATE	REVISION	BY	CHKD	APPR
1	9/13/95	REVISED PER PSI PLAN UPDATE			
0	7/15/95	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS I
DWG NO ISI-64-00 SHEET 5 OF 6

DRAWN BY S. ANSELMO
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	1-RCS PSSP040N	BZ-20R
2	PSSP030	
3	PSSP008	
4	PSSP039	
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LEGEND
O -INDICATES PIPE SUPPORT
• -INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 64-00-RCS
4. ALL SUPPORTS PRECEDED BY 2RCS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC N/A
ASME CONTROL DWG N/A

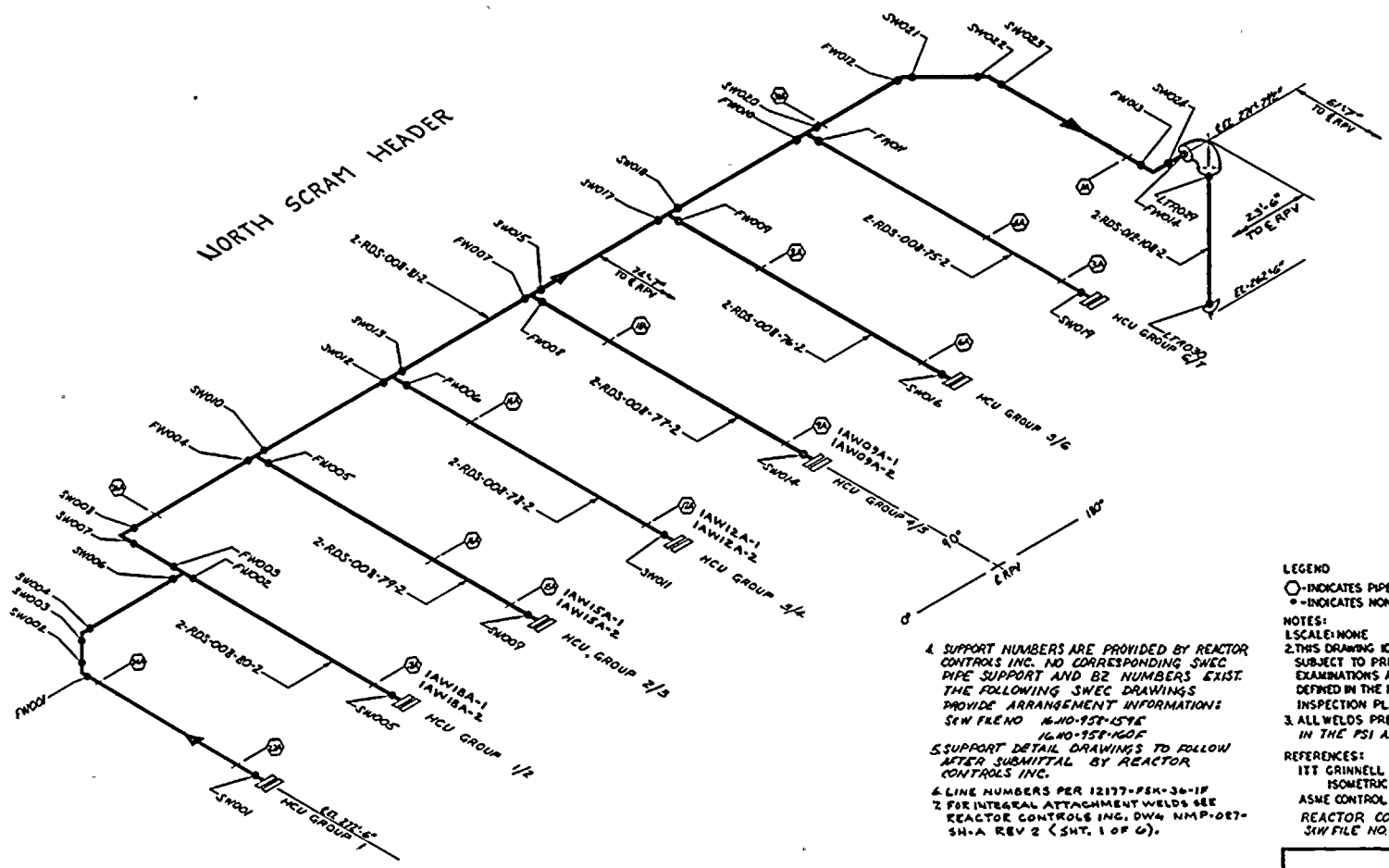
SKH FILE NO 16.030-001-0581
16.030-001-0786

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2RCS#

NO	DATE	REVISION	BY	CHKD	APPR
1	7/23/85	REVISED PER PSI PLAN UPDATE			
0	7/15/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1
DWG NO ISI-64-00 SHEET 6 OF 6
DRAWN BY S. ANSELMO
CHKD BY J. DAVID



PIPE SUPPORT	
SP-1A	
3A	
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 65-00-RDS AS ENTERED IN THE PSI AND ISI INSPECTION PLAN
4. SUPPORT NUMBERS ARE PROVIDED BY REACTOR CONTROLS INC. NO CORRESPONDING SWEC PIPE SUPPORT AND B2 NUMBERS EXIST. THE FOLLOWING SWEC DRAWINGS PROVIDE ARRANGEMENT INFORMATION: SEW FILE NO 16.110-958-1596, 16.110-958-1605
5. SUPPORT DETAIL DRAWINGS TO FOLLOW AFTER SUBMITTAL BY REACTOR CONTROLS INC.
6. LINE NUMBERS PER 12177-FSK-36-1F
7. FOR INTEGRAL ATTACHMENT WELDS SEE REACTOR CONTROLS INC. DWG NMP-027-SH-A REV 2 (SHT. 1 OF 6).

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC N/A
ASME CONTROL DWG N/A
REACTOR CONTROLS INC. DWGS NMP-027 SHTS 1-2 WELD AND SUPPORT LOCATIONS
SEW FILE NO. 16.110-958-2928, 16.110-958-2930

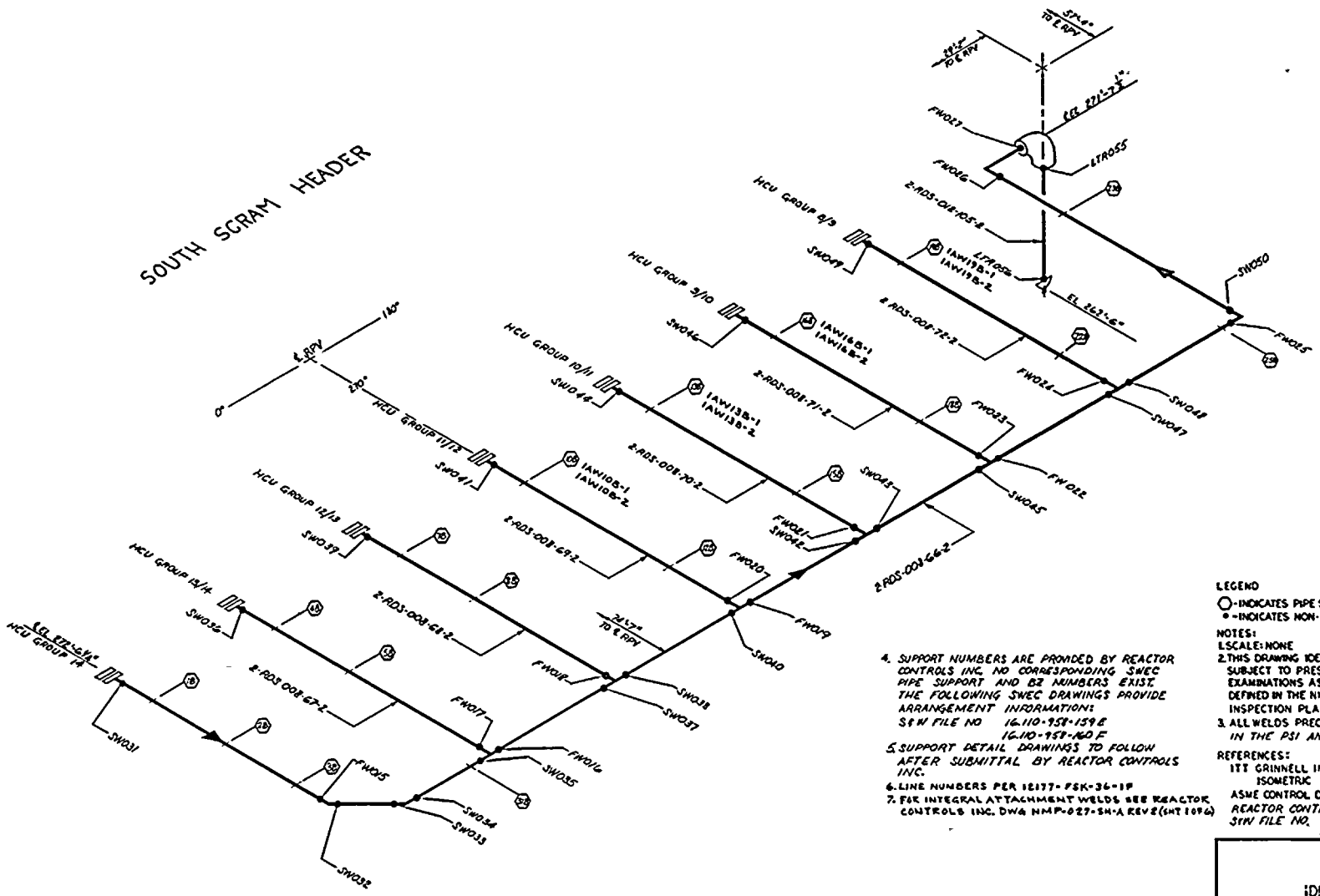
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

NO	DATE	REVISION	BY	CHKD	APPR
1	7/25/85	REVISED PER PSI PLAN UPDATE			
0	7/10/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2
DWG NO ISI-65-00 SHEET 1 OF 2

DRAWN BY S. ANSELMO
CHKD BY J. DAVID



PIPE SUPPORT	
SP-1B	
1 3B	
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5B	
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 65-00-RDS AS ENTERED IN THE PSI AND ISI INSPECTION PLAN
4. SUPPORT NUMBERS ARE PROVIDED BY REACTOR CONTROLS INC. NO CORRESPONDING SWEC PIPE SUPPORT AND B2 NUMBERS EXIST. THE FOLLOWING SWEC DRAWINGS PROVIDE ARRANGEMENT INFORMATION:
   S&W FILE NO 16.110-958-159E
   16.110-958-160F
5. SUPPORT DETAIL DRAWINGS TO FOLLOW AFTER SUBMITTAL BY REACTOR CONTROLS INC.
6. LINE NUMBERS PER 12177-FSK-36-1F
7. FOR INTEGRAL ATTACHMENT WELDS SEE REACTOR CONTROLS INC. DWG NMP-027-SH-A REV 2 (SHT 1 OF 4)

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC N/A
ASME CONTROL DWG N/A
REACTOR CONTROLS INC DWGS - NMP 027 SHTS 1 & 2
S&W FILE NO. 16.110-958-292B } WELD AND SUPPORT
16.110-958-293C } LOCATIONS

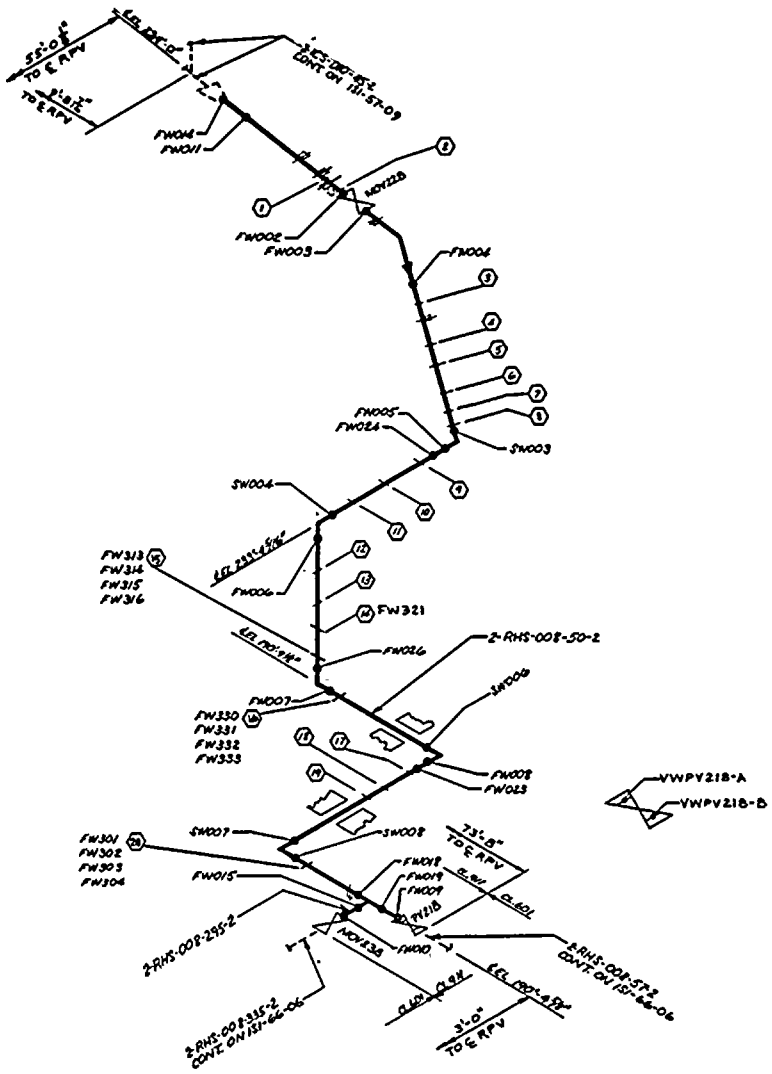
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

NO	DATE	REVISION	BY	CHKD	APPR
1	9/13/95	REVISED PER PSI PLAN UPDATE			
0	7/11/95	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2
DWG NO ISI-65-00 SHEET 2 of 2

DRAWN BY S. ANSELMO
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RHS PSST 705-AE	6BH3 BT
2	PSST 235	BT
3	PSSH 647	CW
4	PSST 234	BS
5	PSST 693	CX
6	PSSH 133	BL
7	PSSH 699	CY
8	PSST 100	CE
9	PSSH 132	BR
10	PSST 231	BQ
11	PSSP 230	BP
12	PSSP 229	BN
13	PSSP 233	BM
14	PSR 114	BA
15	PSR 112	AV
16	PSR 1027	ALV
17	PSSH 111	Y
18	PSSP 132	Z
19	PSST 190	AW
20	PSR 113	AA
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 66-05-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 66-05-W
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2RHS#

NO	DATE	REVISION	BY	CHKD	APPR
1	9/10/85	REVISED PER PSI PLAN UPDATE			
0	7/1/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

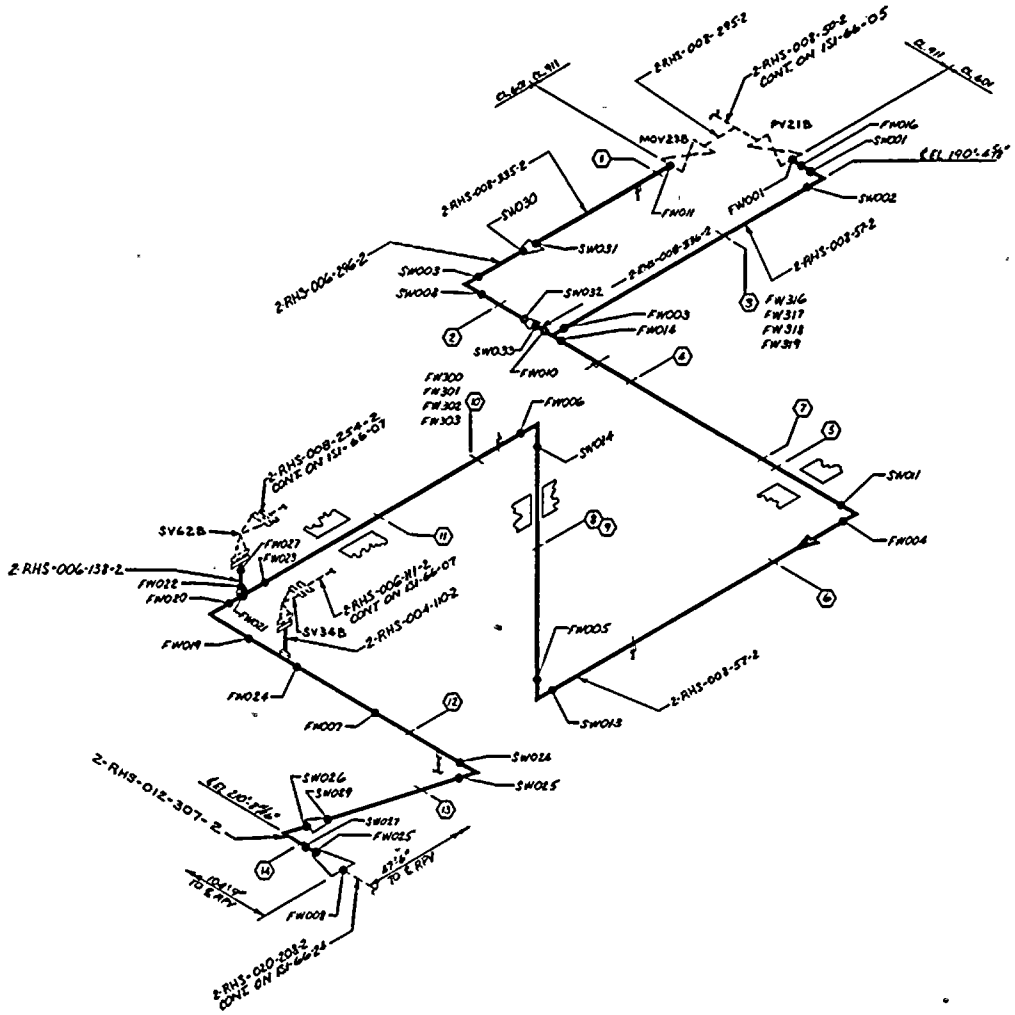
NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 STEAM CONDENSING LOOP B

DWG NO ISI-66-05

DRAWN BY S. ANSELMO
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RHS PSST 996 A2	82-43 DJ
2	PSST 997	DC
3	PSA 174	AB
4	PSST998	DL
5	PSST 775	AC
6	PSST 789	AV
7	PSST 788	AW
8	PSST 785	AS
9	PSST 786	AS
10	PSA 176	J
11	PSA 195	AB
12	PSST 875	DG
13	PSST 871	DF
14	PSST 855	DE
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GG-OG-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC GG-OG-V
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

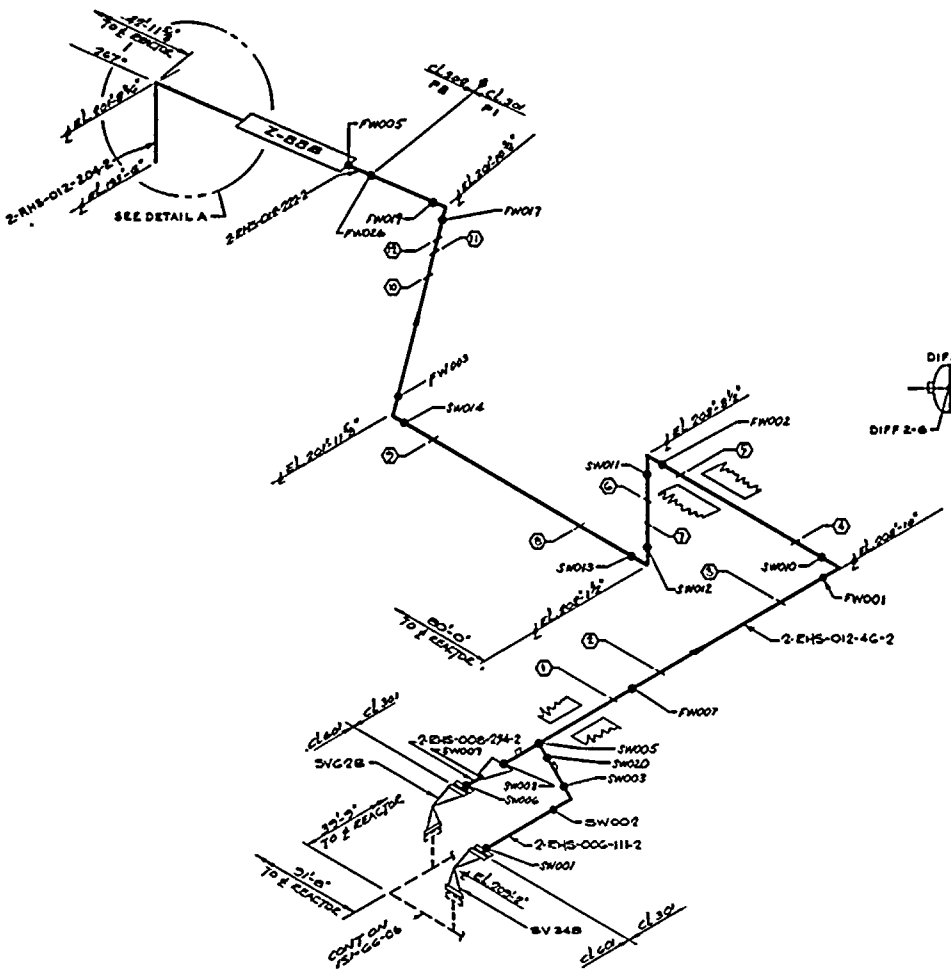
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2RHS-

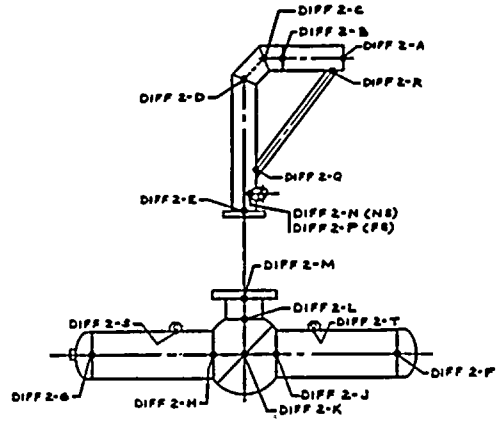
NO	DATE	REVISION	BY	CHKD	APPR
1	12/5/85	REVISED PER PSI PLAN UPDATE			
0	7/11/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 STEAM CONDENSING LOOP B
DWG NO ISI-GG-OG

DRAWN BY S. ANSELMO
CHKD BY J. DAVIS





DETAIL A
DIFF 2
REF. 16.310-826-041,042,043,044

NO.	PIPE SUPPORT	EZ NO.
1	2-RHS-PSA 178 A2	BZ-13R
2	-PSE 149 A2	J
3	-PSE 139 A2	D
4	-PSE 148 A2	H
5	-PSS 120 A2	K
6	-PSE 121 A2	L
7	-PSS 122 A2	BC
8	-PSE 123 A2	M
9	-PSE 124 A2	N
10	-PSG 175 A2	P
11	-PSS 126 A2	BD
12	-PSP 127 A2	Q
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GG-07-RHS
4. ALL SUPPORTS PRECEDED BY 2 RHS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC GG-7-AA
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2 RHS-

NO	DATE	REVISION	BY	CHKD	APPR
1	1/23/85	REVISED PER PSI PLAN UPDATE			
0	7/2/84	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 STEAM CONDENSING LOOP B
DWG NO ISI-66-07

DRAWN BY S.F. GEORGE
CHKD BY J. DAVID

NO.	PIPE SUPPORT	BZ NO.
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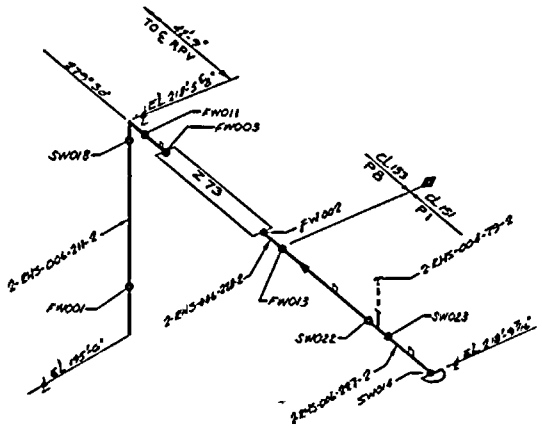


NOTE: NO SUPPORTS PROVIDED

LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY CC-08-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC CC-8-P
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

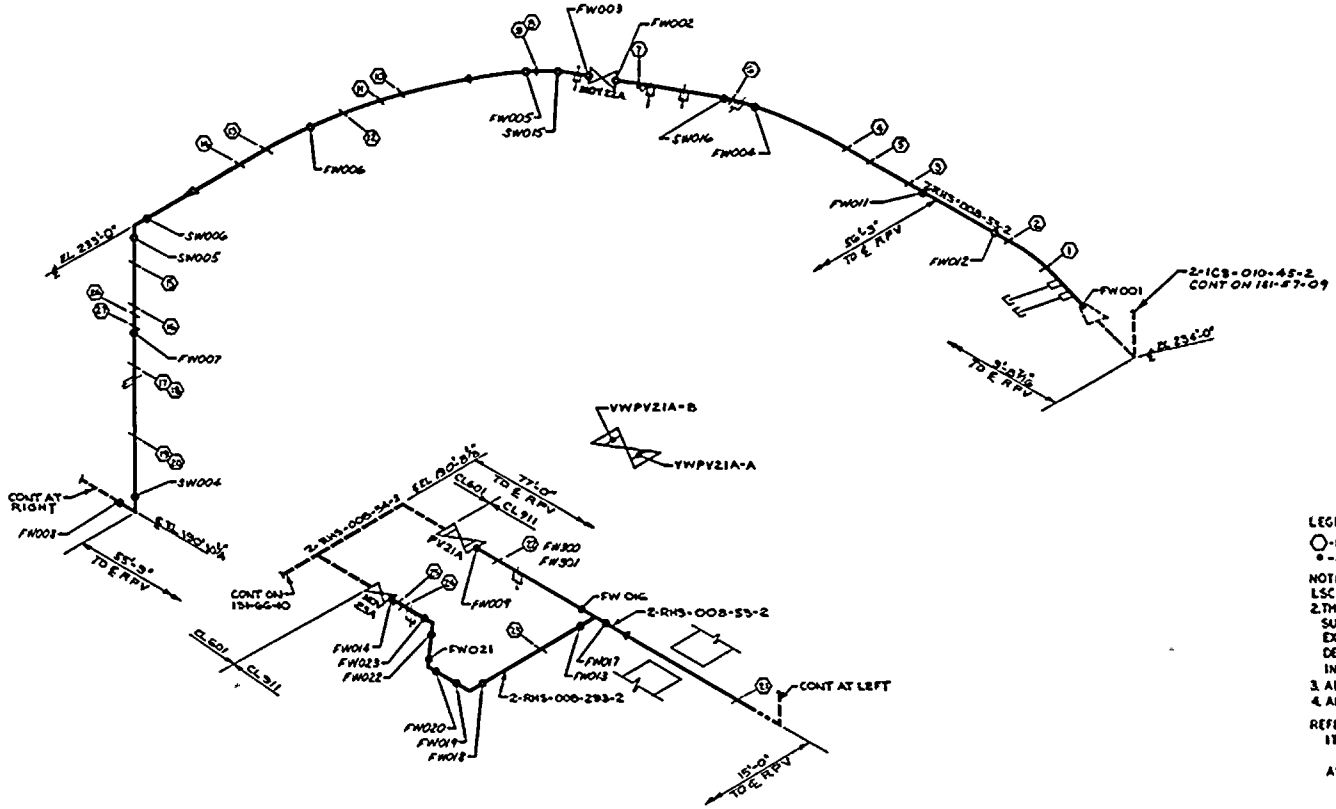
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2RHS-

NO	DATE	REVISION	BY	CHKD	APPR
1	7/21/95	REVISED PER PSI PLAN UPDATE			
0	7/6/95	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 RHS RV DISCH HEADER
DWG NO ISI-66-08

DRAWN BY S PAGEORGE
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RHS PSSP 257A2	BZ 18 BX
2	" PSSP 268 1	" BY
3	" PSSH 259	" BZ
4	" PSST 702	" CC
5	" 662	" CC
6	" 682	" CF
7	" PSR 633	" CG
8	" PSST 733	" CH
9	" PSST 684	" CH
10	" PSSP 685	" CT
11	" PSST 686	" CU
12	" PSSH 687	" CV
13	" PSSP 688	" DA
14	" 689	" DB
15	" 690	" DC
16	" 691	" DD
17	" PSST 692	" CR
18	" 693	" CE
19	" 694	" CS
20	" 695	" CS
21	" PSH 876	" DM
22	" PSR 963	" AF
23	" PSST 1012	" DM
24	" 1013	" DN
25	" 1014	" DP
26	" PSSP 635	" CR
27	" PSSH 674 1	" CD
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GG-09-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

1. ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC GG-09-W
2. ASME CONTROL DWG N/A

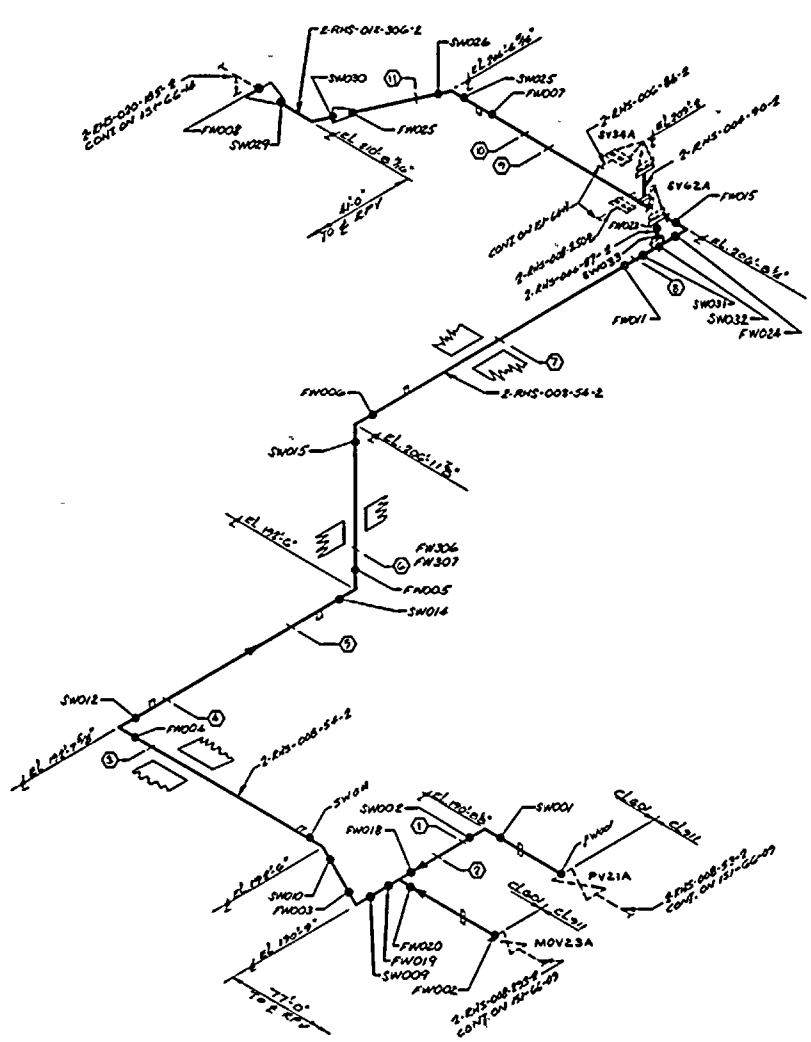
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2RHS ★

NO	DATE	REVISION	BY	CHKD	APPR
1	9/25/95	REVISED PER PSI PLAN UPDATE			
0	7/11/95	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 STEAM CONDENSING LOOP A
DWG NO ISI-66-09

DRAWN BY W. STEWART
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2-RHS-F009-029-A2	BZ-132 W
2	-F9SE-146-A2	AG
3	-F9SE-179-A2	AL
4	-F9SE-147-A2	AH
5	-F9SE-146-A2	AJ
6	-F9SE-178-A2	AK
7	-F9SA-730-A2	CP
8	-F9SH-745-A2	CN
9	-F9SH-731-A2	CK
10	-F9SH-732-A2	CJ
11	-F9SH-733-A2	CL
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GG-10-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC GG-10-U

ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2CHS-

NO	DATE	REVISION	BY	CHKD	APPR
1	9/20/85	REVISED PER PSI PLAN UPDATE	[illegible]	[illegible]	[illegible]
0	7/8/85	SWEC RELEASED FOR PRESERVICE INSPECTION	[illegible]	[illegible]	[illegible]

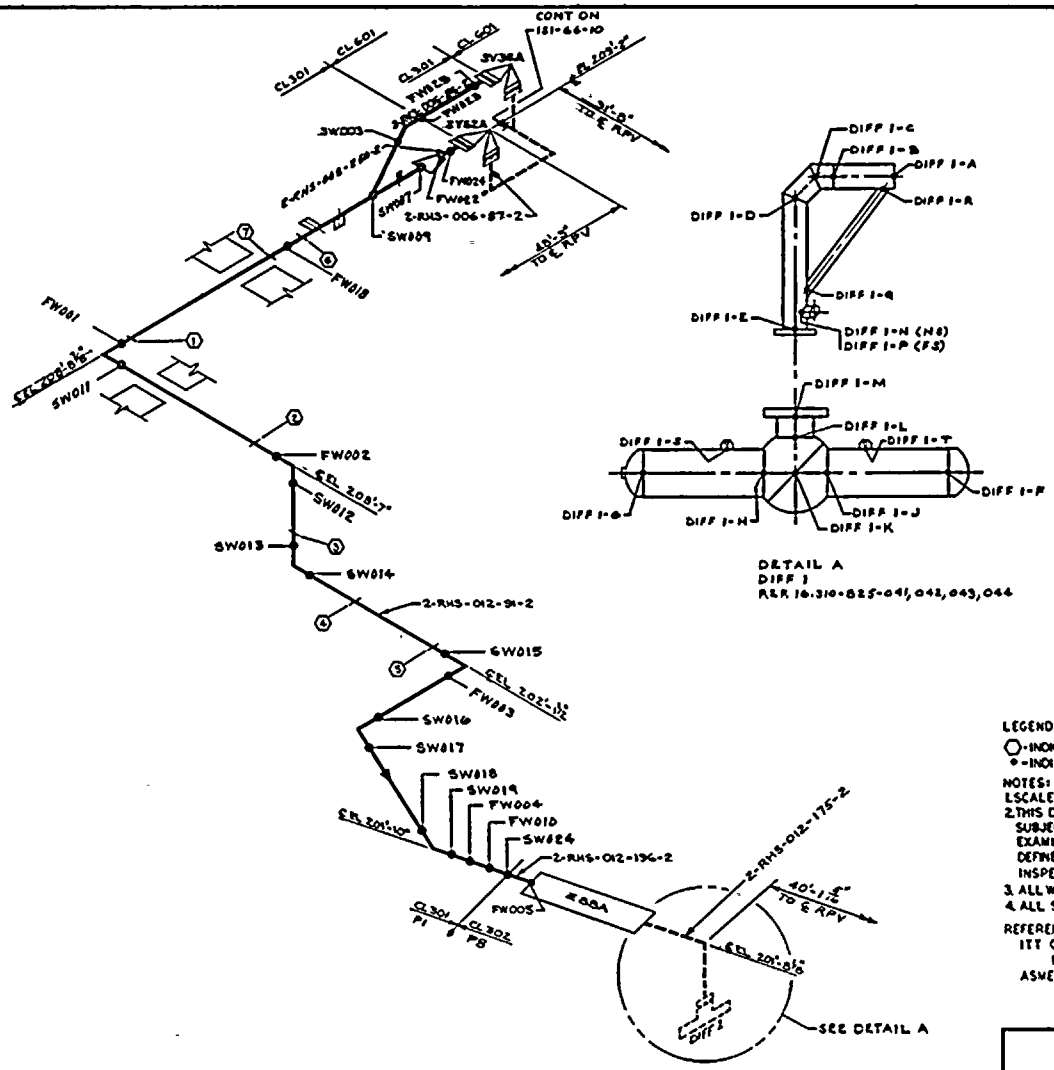
NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 STEAM CONDENSING LOOP A

DWG NO ISI-66-10

DRAWN BY [illegible]
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RHS-PSR180 A2	B2-H3 AM
2	PSR181	AN
3	PSST182	AP
4	PSST183	AQ
5	PSR184	AR
6	PSST 759	CM
7	PSA 765	CQ
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GG-11-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC GG-11-Y

ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2RHS

NO	DATE	REVISION	BY	CHKD	APPR
1	9/28/85	REVISED PER PSI PLAN UPDATE			
0	7/2/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2

WELD & COMPONENT

IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2

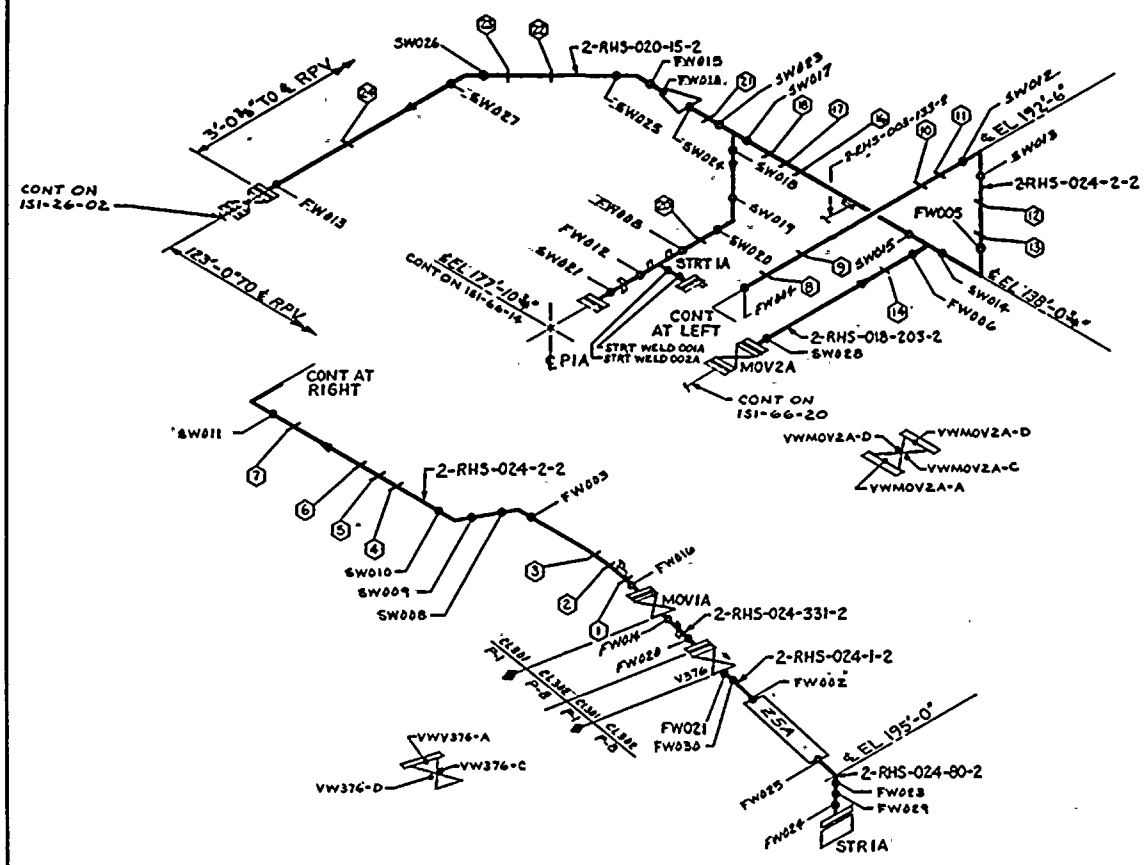
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 STEAM CONDENSING LOOP A

DWG NO ISI-66-11

DRAWN BY W. STEWART

CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RHS-PSSH877A2	62-71AFT
2	PSR878	AFU
3	PSSP883	AGB
4	PSSP880	AFW
5	PSSP879	AFY
6	PSSH052	BL
7	PSSP313	KE
8	PSSP886	AGC
9	PSSH053	BM
10	PSSP314	KF
11	PSSP316	KF
12	PSSP881	AFX
13	PSSP887	AGD
14	PSSP884	AGA
15		
16	PSSP316	KN
17	PSSP890	AGG
18	PSSH054	RN
19		
20	PSSP321	KN
21	PSSP882	AFY
22	PSSP883	AFZ
23	PSSH035	BP
24	2RHS-PSA512A2	62-71KD
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 66-13-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

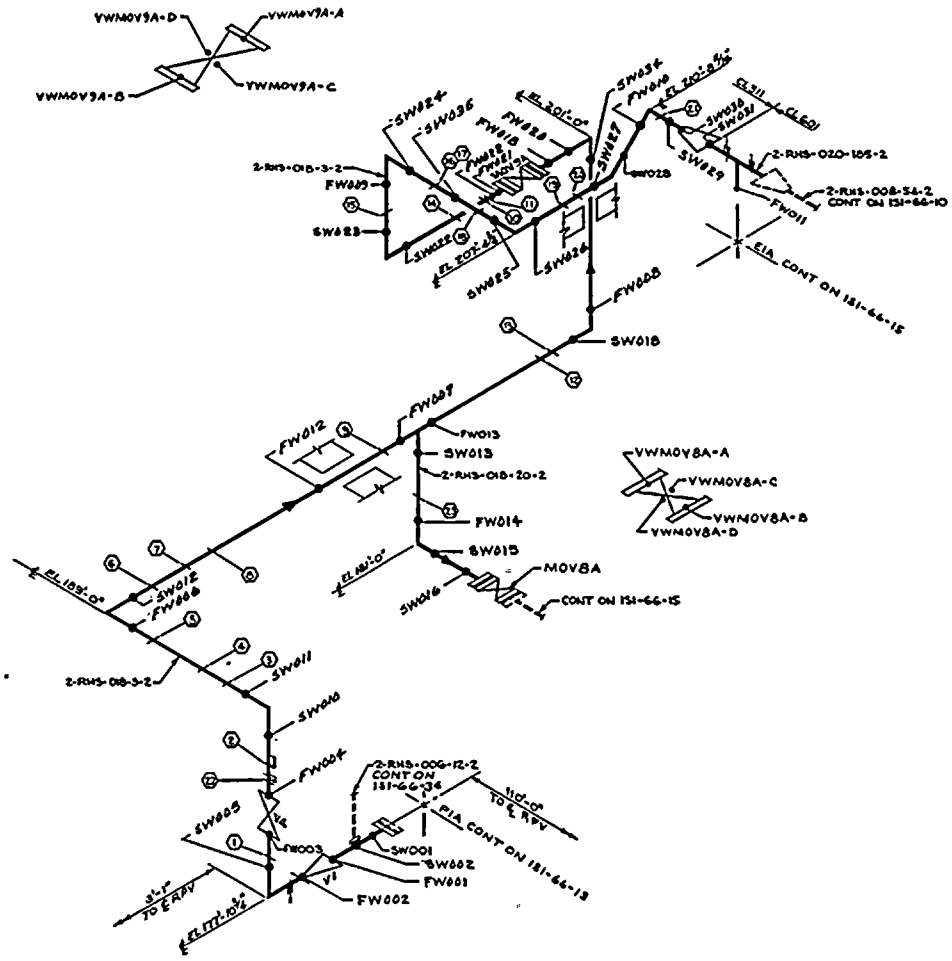
REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 66-13-X
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2RHS *

NO	DATE	REVISION	BY	CHKD	APPR
1	4/23/85	REVISED PER PSI PLAN UPDATE			
0	7/12/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION
LPCI LOOP A
CLASS 2 SHUTDOWN COOLING LOOP A
DWG NO 1S1-66-13
DRAWN BY L.H. STANG
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RHS-PSSP 626 A2	BZ-71 WN
2	PSSH 625	WG
3	PSSP 719	ZZ
4	718	ZY
5	707	ZM
6	715	ZV
7	PSSH 092	DC
8	PSSP 716	ZW
9	PSSH 091	DB
10	PSSP 094	DE
11	PSST 162	FJ
12	PSST 151	EP
13	PSST 709	ZP
14	PSSH 751	ABD
15	PSSP 767	ABP
16	743	AAW
17	744	AAW
18	739	AAG
19	PSSP 746	AAY
20	PSSH 095	DF
21	PSSP 734	ABP
22	PSST 748	ABA
23	PSSP 724	AAP
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LEGEND

O - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GG-14-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC GG-14-2
ASME CONTROL DWG N/A

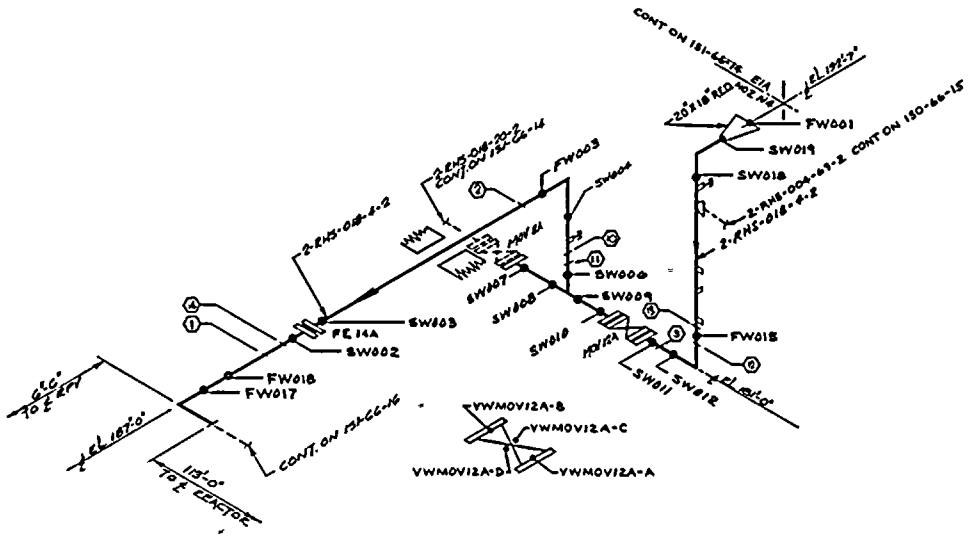
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2RHS #

NO	DATE	REVISION	BY	CHKD	APPR
1	2/25/85	REVISED PER PSI PLAN UPDATE			
0	7/1/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 SHUTDOWN COOLING LOOP A
DWG NO ISI-GG-14

DRAWN BY W. STEWART
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2 RHS-PSSN 008 A2	BZ-71 CY
2	• PSSN 009 A1	CZ
3	• PSSN 010 A1	DA
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10	• PSST 711 A2	ZP
11	• PSST 712 A2	ZR
12	• PSST 713 A2	ZT
13	• PSST 714 A2	ZU
14	• PSST 717 A2	ZX
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GG-15-RHS
4. ALL SUPPORTS PRECEDED BY 2-RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC GG-15-T
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VENT AND EQUIPMENT NUMBERS PRECEDED BY 2 RHS*

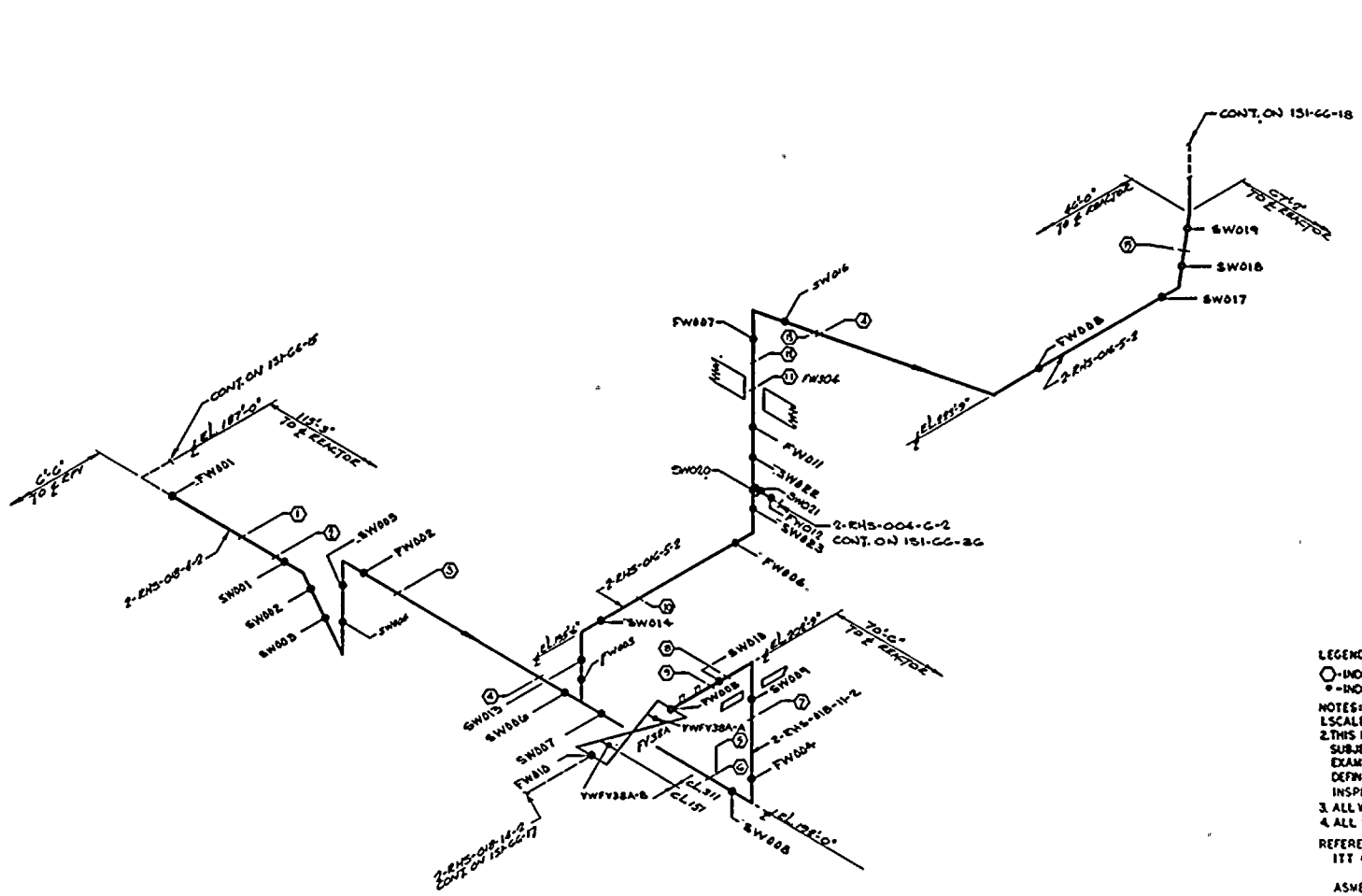
NO	DATE	REVISION	BY	CHKD	APPR
1	6/25/85	REVISED PER PSI PLAN UPDATE	[illegible]	SLA	TBM
0	7/8/85	SWEC RELEASED FOR PRESERVICE INSPECTION	[illegible]	SLA	TBM

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 SHUTDOWN COOLING LOOP A
DWG NO ISI-66-15

DRAWN BY [illegible]
CHKD BY J. DAVID



NO.	PIPE SUPPORT	EZ NO.
1	2-EHS-PRST 721 A2	82-71AAB
2	-PSST 730 A2	1-71EE
3	-PSA 768 A2	-71ABQ
4	-PSST 137 A2	-71CM
5	-PSST 138 A2	-71EAJ
6	-PRST 279 A2	-71HW
7	-PSSP 280 A2	-71HX
8	-PRSP 28 A2	-71HY
9	-PSA 079-A2	-71CK
10	-PSR 270 A2	-71HV
11	-PSA 291 A2	-71JH
12	-PSR 290 A2	-71JG
13	-PSST 289 A2	-71JF
14	-PSST 294 A2	-71JP
15	-PSM 288 A2	-71JE
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LEGEND

○-INDICATES PIPE SUPPORT

•-INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY CC-16-EHS
4. ALL SUPPORTS PRECEDED BY 2EHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC CC-16-E
ASME CONTROL DWG N/A

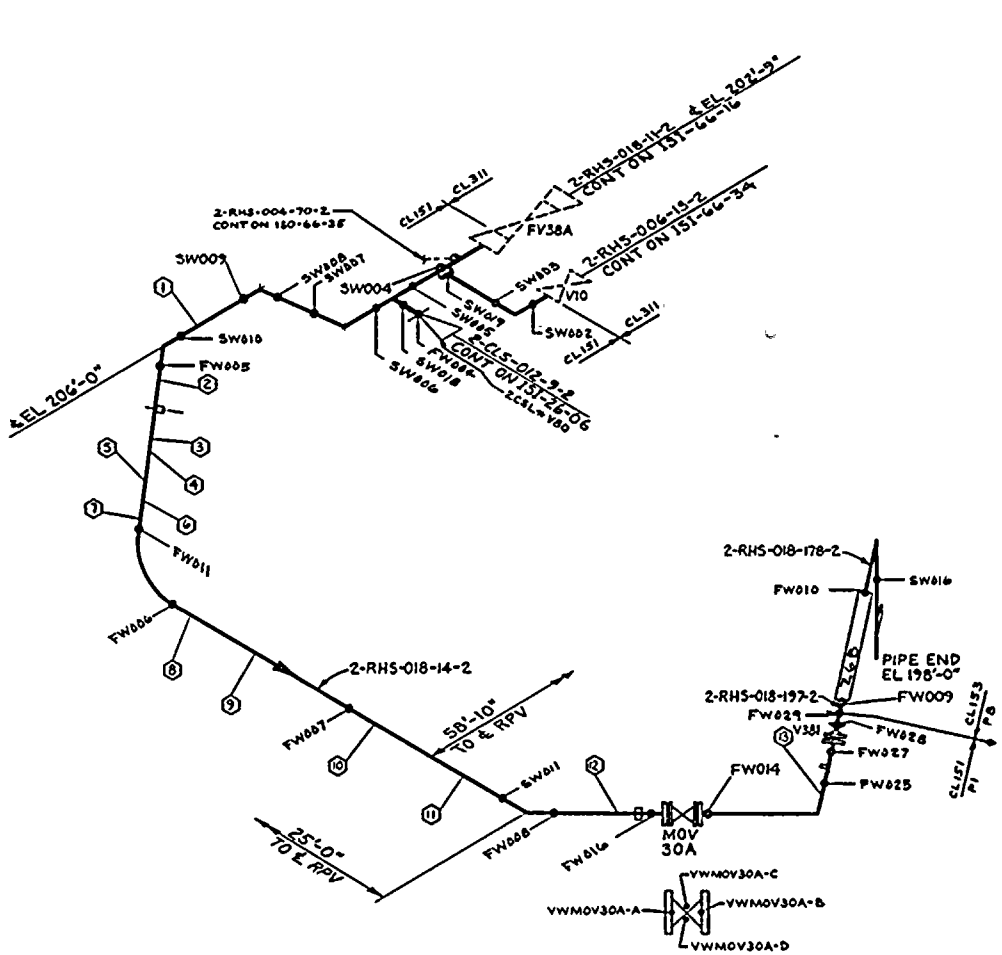
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVES AND EQUIPMENT NUMBERS PRECEDED BY 2EHS #

NO	DATE	REVISION	BY	CHKD	APPR
1	7/16/85	REVISED PER PSI PLAN UPDATE			
0	7/10/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION
LPCI LOOP A
CLASS 2 SHUTDOWN COOLING LOOP A
DWG NO ISI-66-16

DRAWN BY
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2-RHS-PSST-272-AZ	BZ-71 AP
2	PSA-065	X
3	PSST-046	Y
4	PSST-464	AI
5	PSST-472	AJ
6	PSA-019	AB
7	PSST-469	AE
8	PSST-020	AC
9	PSSP-021	AD
10	PSST-022	AE
11	PSST-024	AG
12	PSA-023	AH
13	2-RHS-PSST-471-AZ	BZ-71 AG
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LEGEND
O-INDICATES PIPE SUPPORT
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NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 66-17-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 66-17-X
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

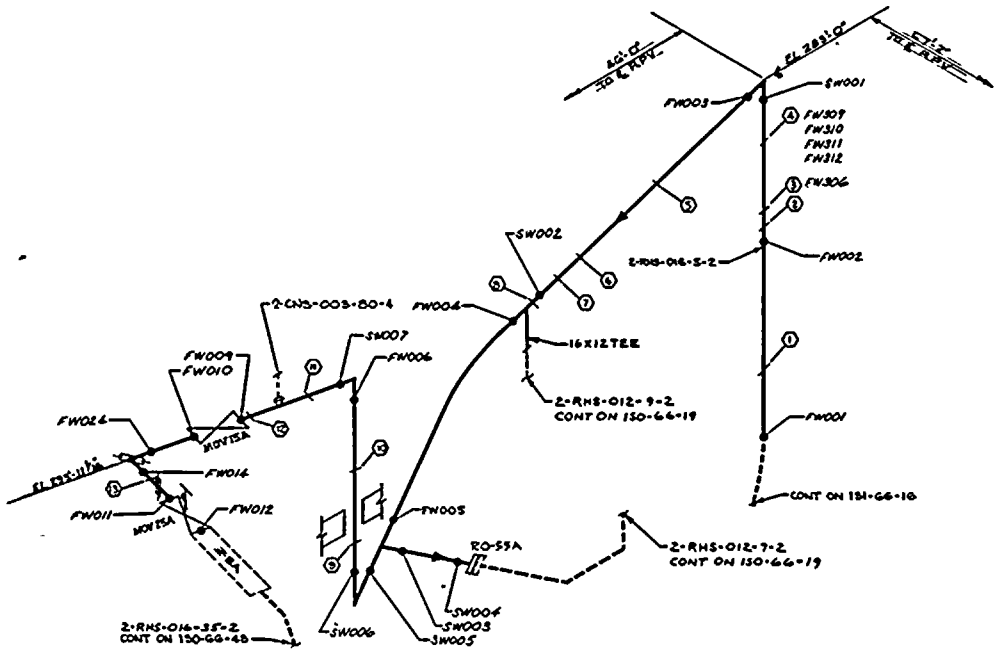
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2RHS*

NO	DATE	REVISION	BY	CHKD	APPR
1	9/25/85	REVISED PER PSI PLAN UPDATE	L	SLB	TBM
0	7/11/85	SWEC RELEASED FOR PRESERVICE INSPECTION	L	SLB	TBM

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 LPCI LOOP A
DWG NO ISI-66-17

DRAWN BY L.H. STANG
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RHS PSR 287 A2	BZ-71 JD
2	PSR 286	JD
3	PSA 285	JB
4	PSR 392	MS
5	PSSH 388	MC
6	PSSP 389	MD
7	PSSH 377	MR
8	PSR 404	MV
9	PSR 327	KU
10	PSSP 326	KT
11	PSSH 325	KS
12	PSSP 324	KR
13	PSSH 323	KQ
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 66-18-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

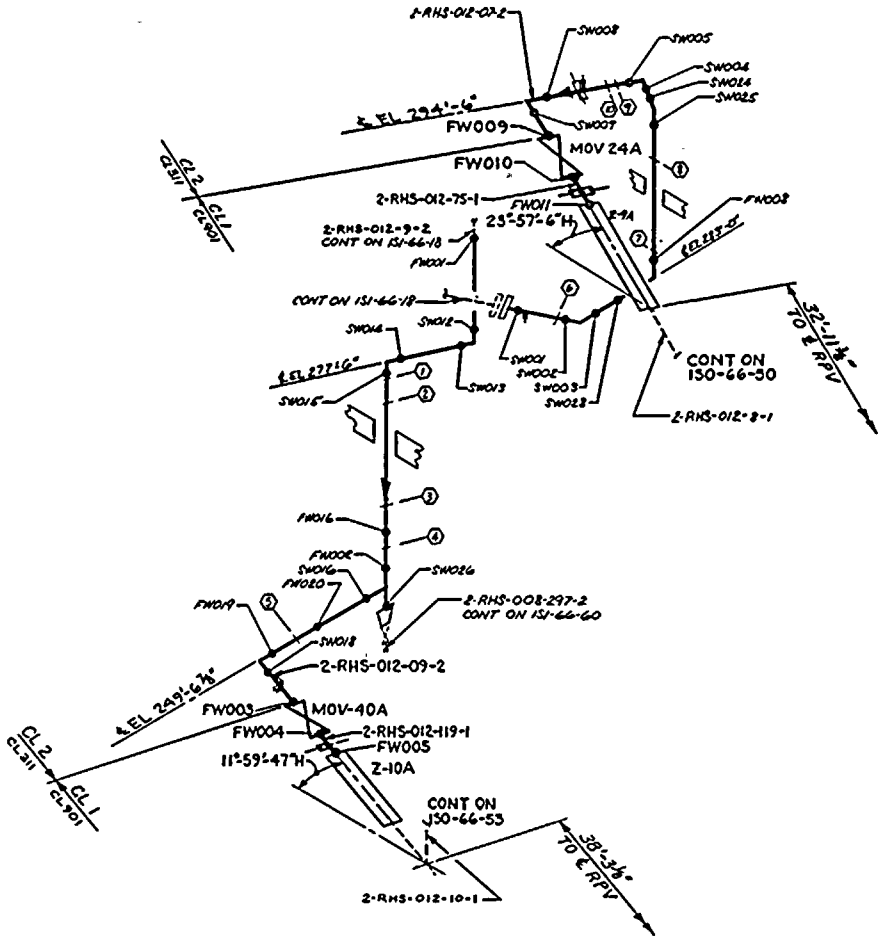
REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 66-18-K
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2RHS #

NO	DATE	REVISION	BY	CHKD	APPR
1	7/25/85	REVISED PER PSI PLAN UPDATE.			
0	7/1/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION
LPCI LOOP A
CLASS 2 SHUTDOWN COOLING LOOP A
DWG NO ISI-66-18

DRAWN BY W. STEWART
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RHS PSSP 394AE	BZ 71 NE
2	PSST 395	NH
3	PSA 322	KP
4	PSSP 1001	ALO
5	PSR 153	FD
6	PSA 394	NJ
7	PSA 403	NT
8	PSST 390	NE
9	PSSW 378	MJ
10	PSSP 1063	AKG
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 66-19-RH8
4. ALL SUPPORTS PRECEDED BY N/A

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 66-19-Q
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

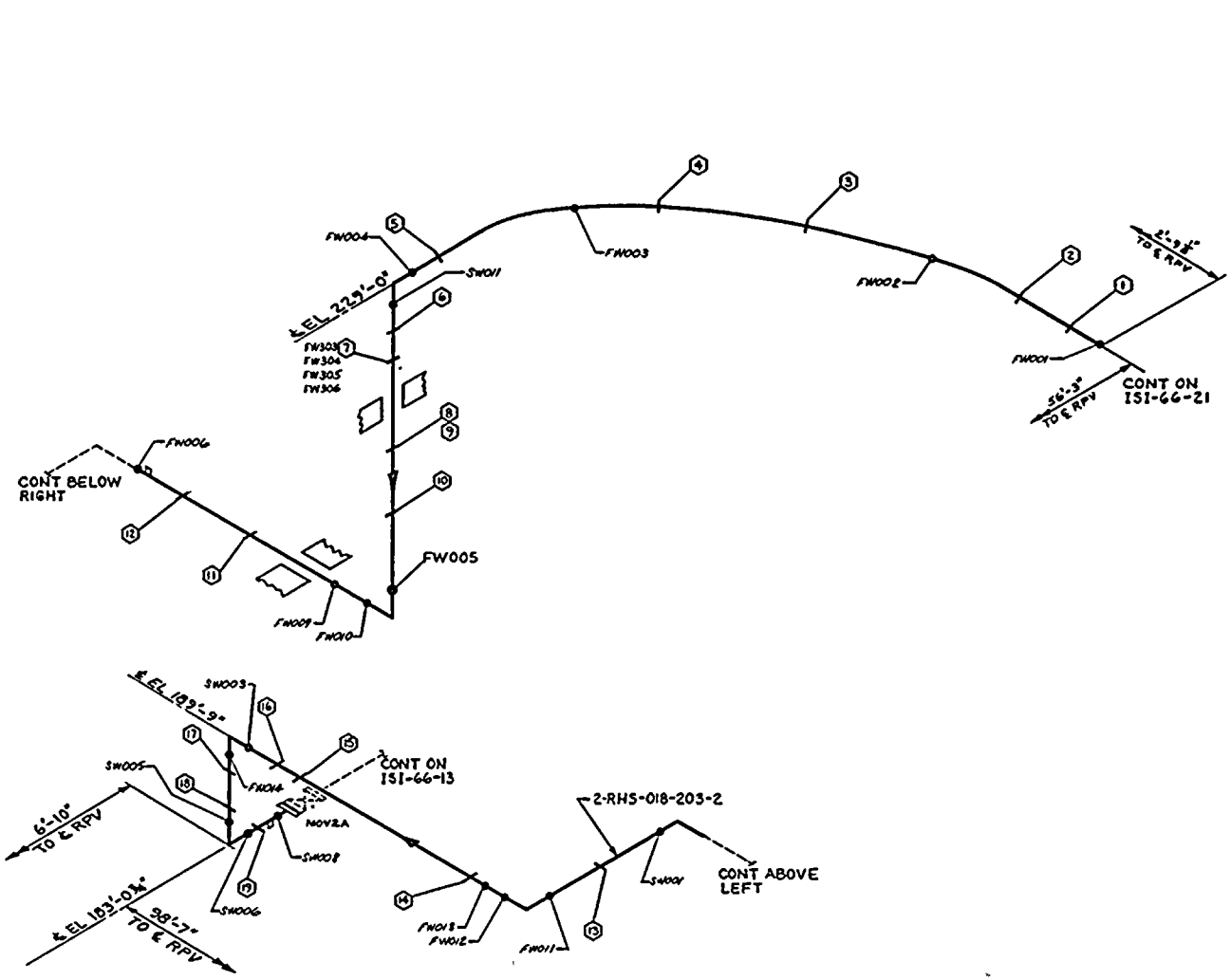
ALL VALVES & EQUIPMENT NUMBERS PRECEDED BY 2RHS*

NO	DATE	REVISION	BY	CHKD	APPR
1	7/23/85	REVISED PER PSI PLAN UPDATE			
0	7/1/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 & 2 SHUTDOWN COOLING LOOP A
DWG NO ISI-66-19

DRAWN BY L.H. STANG
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	[illegible]	[illegible]
2	PSR-1654	AHC
3	PSR-244	GR
4	PSR-243	GQ
5	PSR-242	GP
6	PSR-161	FH
7	PSSH-160	FG
8	PSSP-241	GN
9	PSSP-282	GN
10	PSR-240	GM
11	PSR-239	GL
12	PSST-086	BQ
13	PSR-037	BR
14	PSST-085	BP
15	PSSP-319	KL
16	PSSR-[illegible]	[illegible]
17	PSSP-317	KJ
18	PSSP-318	KK
19	2-RHS-PSSH-058-A2	BZ-71 B3
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 66-20-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 66-20-L
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

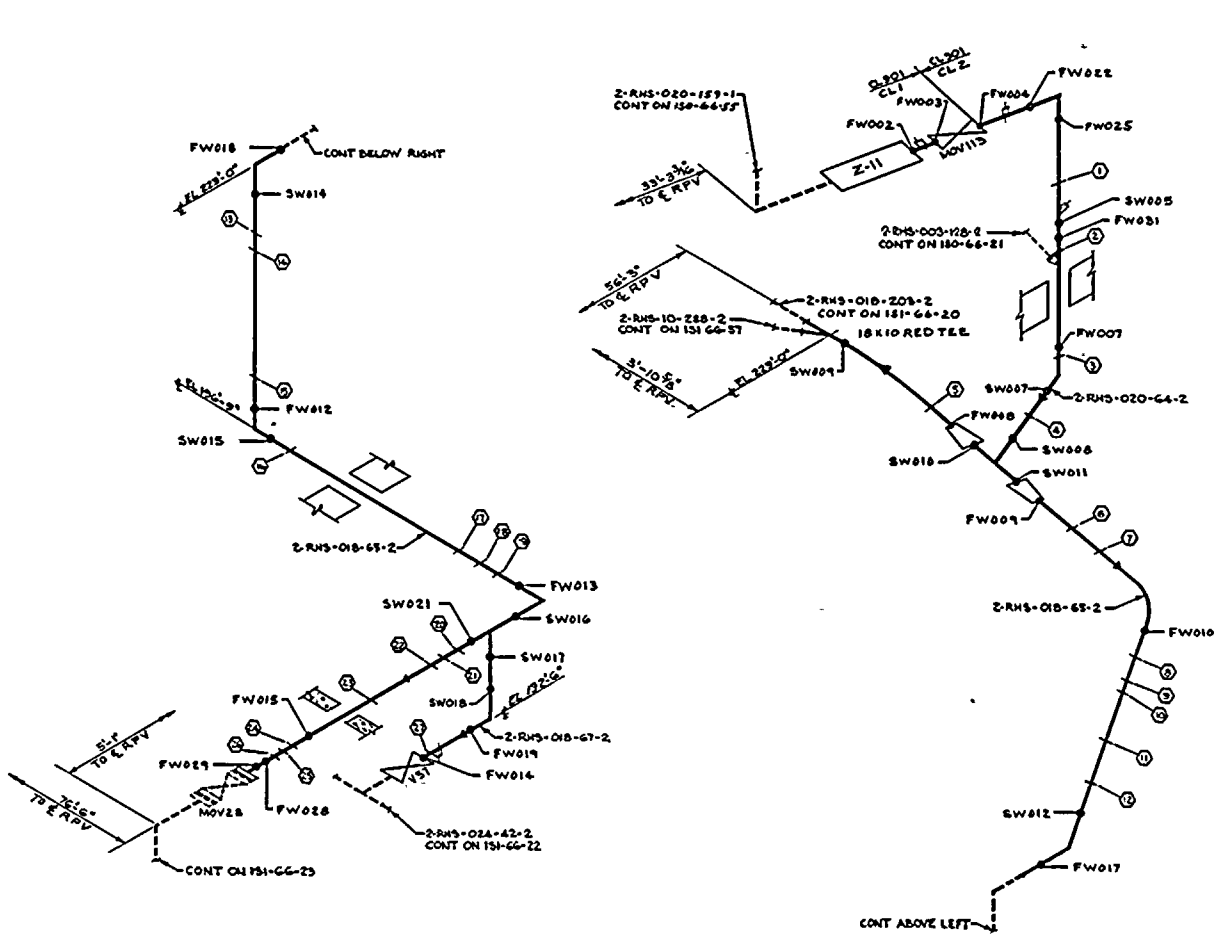
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2RHS*

NO	DATE	REVISION	BY	CHKD	APPR
1	[illegible]	REVISED PER PSI PLAN UPDATE	[illegible]	[illegible]	[illegible]
0	7/1/85	SWEC RELEASED FOR PRESERVICE INSPECTION	[illegible]	[illegible]	[illegible]

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 SHUTDOWN COOLING LOOP A
DWG NO ISI-66-20

DRAWN BY L.H. STANG
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RHS-PSSH155 A2	BZ-71 EY
2	PSSP152	EX
3	263	NE
4	264	NF
5	1030	ALY
6	268	MA
7	PSST266	MH
8	PSSH157	PC
9	PSSP267	NJ
10	PSSP268	HK
11	PSSH156	FD
12	PSSP1054	AMV
13	PSSP269	HL
14	PSSP270	HM
15	PSA920	AMC
16	PSST499	SH
17	PSSH080	CQ
18	PSSP922	AMG
19	493	SF
20	501	SK
21	937	AMV
22	948	AMC
23	PSST159	EP
24	PSSP919	AMD
25	PSSP500	SJ
26	PSSH087	CK
27	PSSP917	AMA
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LEGEND
O - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GG-21-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:
1. ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC GG-21-X
ASME CONTROL DWG N/A

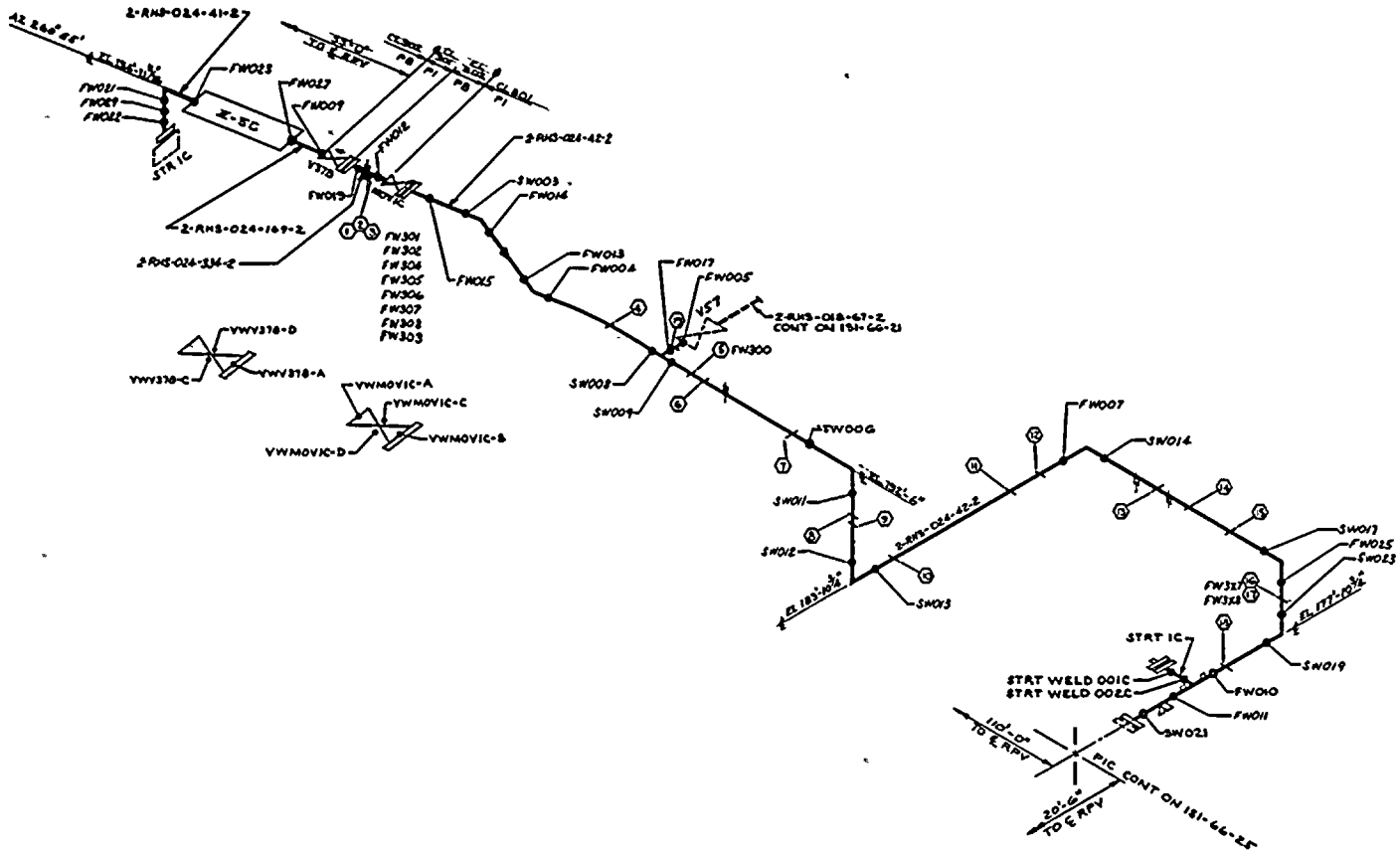
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2RHS *

NO	DATE	REVISION	BY	CHKD	APPR
1	3/21/85	REVISED PER PSI PLAN UPDATE			
0	7/19/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 & 2 SHUTDOWN COOLING LOOP A & B
DWG NO ISI-GG-21

DRAWN BY W. STEWART
CHKD BY J. DAVID



NO.	PIPE SUPPORT		HZ NO.	
1	2RHS-P55P 816 A2		A2	77A46
2		816		
3		917		
4	P55M 082			C3
5	P55T 519			7A
6	P55P 505			3M
7		816		5X
8		776		AAH
9		775		AAG
10	P55M 081			C2
11	P55P 515			3W
12	P55P 510			3Z
13	P55M 078			CU
14	P55P 717			AAJ
15		728		AAJ
16		730		AAL
17	P55T 722			AAL
18	P55M 079			CP
19	P55P 913			AAA
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LEGEND

○-INDICATES PIPE SUPPORT

•-INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GG-22-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC GG-22-AA
ASME CONTROL DWG N/A

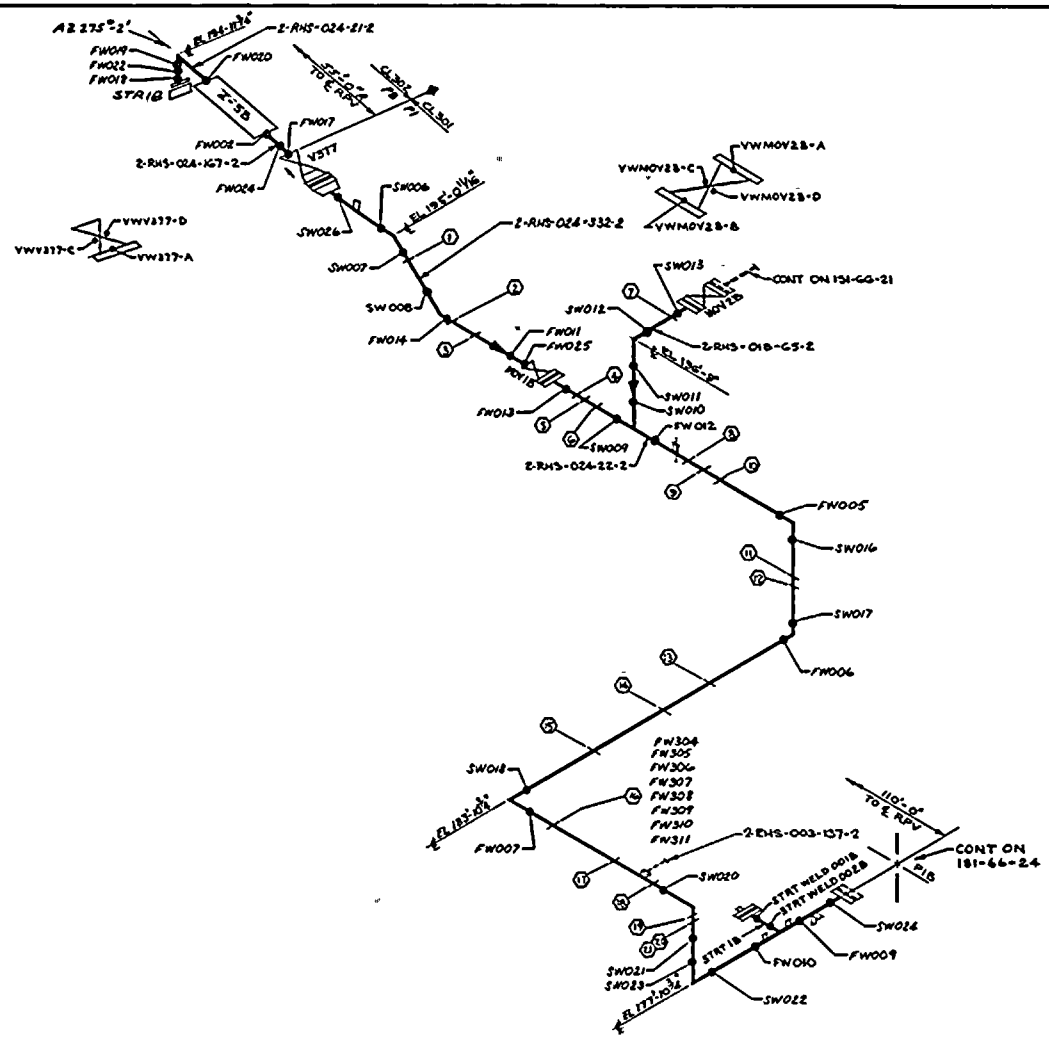
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2RHS 4

NO	DATE	REVISION	BY	CHKD	APPR
1	9/22/95	REVISED PER PSI PLAN UPDATE			
0	7/10/95	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 LPCI LOOP C
DWG NO ISI-GG-22

DRAWN BY W. STEWART
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RHS PSSP 519 A2	BZ-71 SU
2	509	SR
3	509	AAN
4	PSSH 086	CW
5	PSSP 511	AGZ
6	510	AGY
7	504	SV
8	507	SP
9	506	SP
10	PSSH 085	CY
11	PSSP 732	AAP
12	508	AAP
13	508	SQ
14	PSSH 084	CU
15	PSSP 491	RS
16	PSSP 473	RJ
17	PSSP 511	SM
18	510	SS
19	502	SL
20	503	SL
21	PSSH 083	CT
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LEGEND

O -INDICATES PIPE SUPPORT

• -INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GG-23-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC GG-23-V

ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2RHS ◄

NO	DATE	REVISION	BY	CHKD	APPR
1	7/7/85	REVISED PER PSI PLAN UPDATE			
0	7/2/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2

WELD & COMPONENT

IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2

NIAGARA MOHAWK POWER CORPORATION

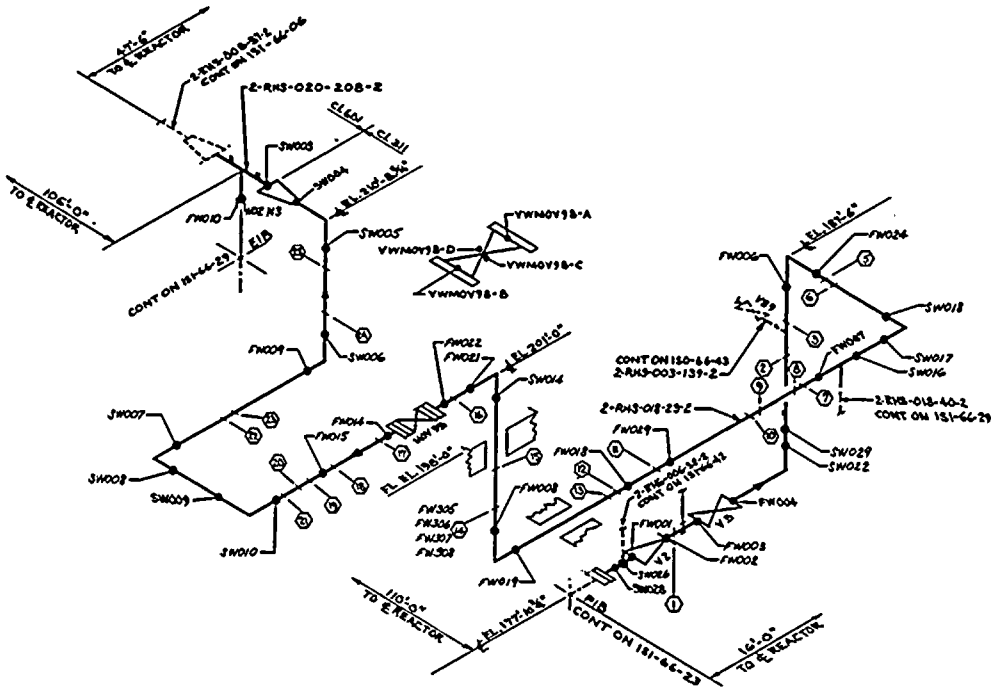
LPCI LOOP B

CLASS 2 SHUTDOWN COOLING LOOP B

DWG NO 1S1-66-23

DRAWN BY W. STEWART

CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2 RHS P54M 066 A2	BB-91CA
2	P55T 818	ABK
3	P55P 872	ABQ
4		
5	P50M 049	BB
6	P56P 819	ABM
7	P55P 777	ABM
8	P55M 044	BY
9	P56P 771	ABT
10	P55P 772	ABT
11	P55M 063	BX
12	P55T 773	ABU
13	P55T 774	ABU
14	P55M 062	BW
15	P55P 704	BJ
16	P55P 778	ABN
17	P55T 841	ABL
18	P55M 061	BV
19	P55P 779	ABN
20	P55P 776	ABN
21	P55P 847	ABW
22	P56T 770	ABS
23	P55M 059	BY
24	P55T 819	ABP
25	P55P 785	ACE
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 66-24-RHS
4. ALL SUPPORTS PRECEDED BY 2 RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC 66-24-W

ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDE BY 2 RHS#

NO	DATE	REVISION	BY	CHKD	APPR
1	4/26/85	REVISED PER PSI PLAN UPDATE			
0	7/29/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM

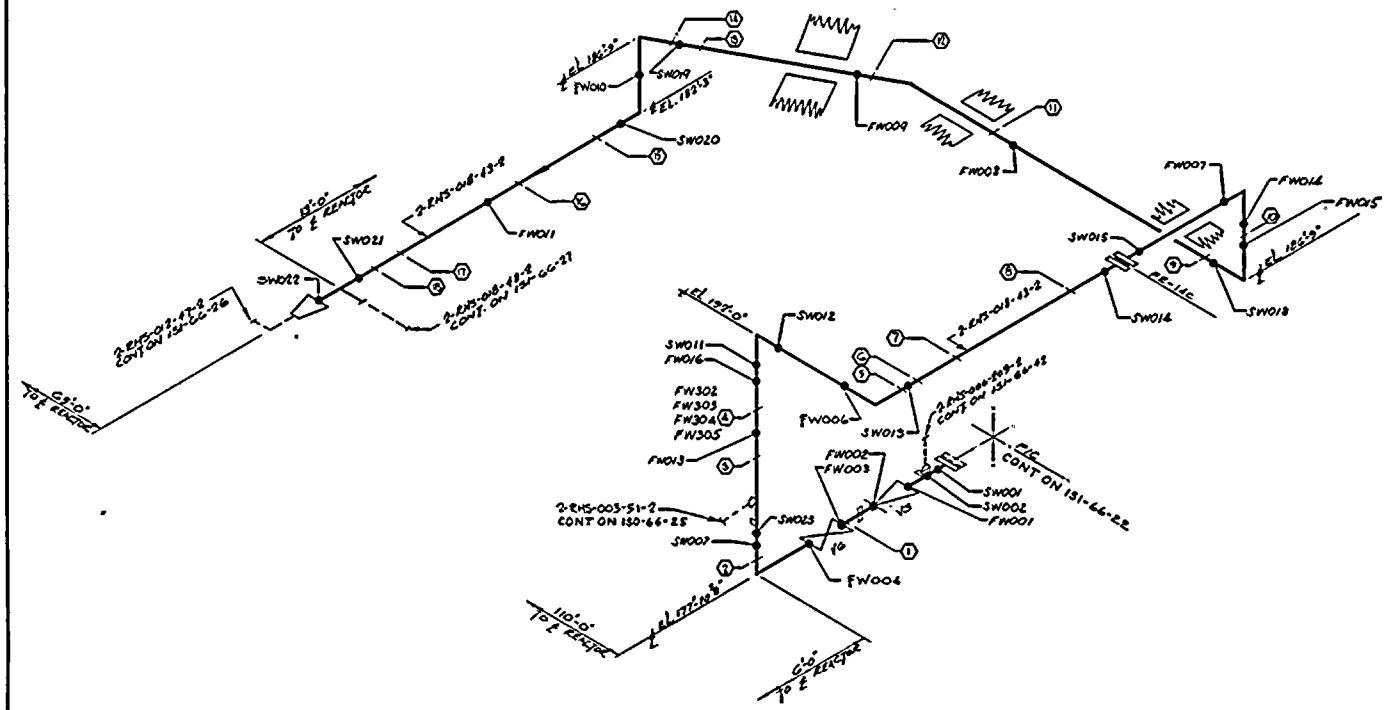
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 SHUTDOWN COOLING LOOP B

DWG NO 1S1-66-24

DRAWN BY L.L. PALLI

CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RHS-PSS40@ A2	BZ 7100
2	-PS37 675	ZE
3	-PS5P 818	AM
4	-PS5H 040	CD
5	-PS6P 817	AEH
6	-PS5P 819	AEH
7	-PS5H 070	CE
8	-PS5H 071	CF
9	-PS5T 791	ACL
10	-PS5T 072	AQ
11	-PS5A 048	DG
12	-PS5T 047	BF
13	-PS5T 046	BB
14	-PS5P 049	BD
15	-PS5P 044	BC
16	-PS5C 043	BB
17	-PS5C 042	BA
18	-PS5P 041	A2
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GG-25-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC GG-25-P

ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2RHS-*

NO	DATE	REVISION	BY	CHKD	APPR
1	7/11/85	REVISED PER PSI PLAN UPDATE			
0	7/12/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

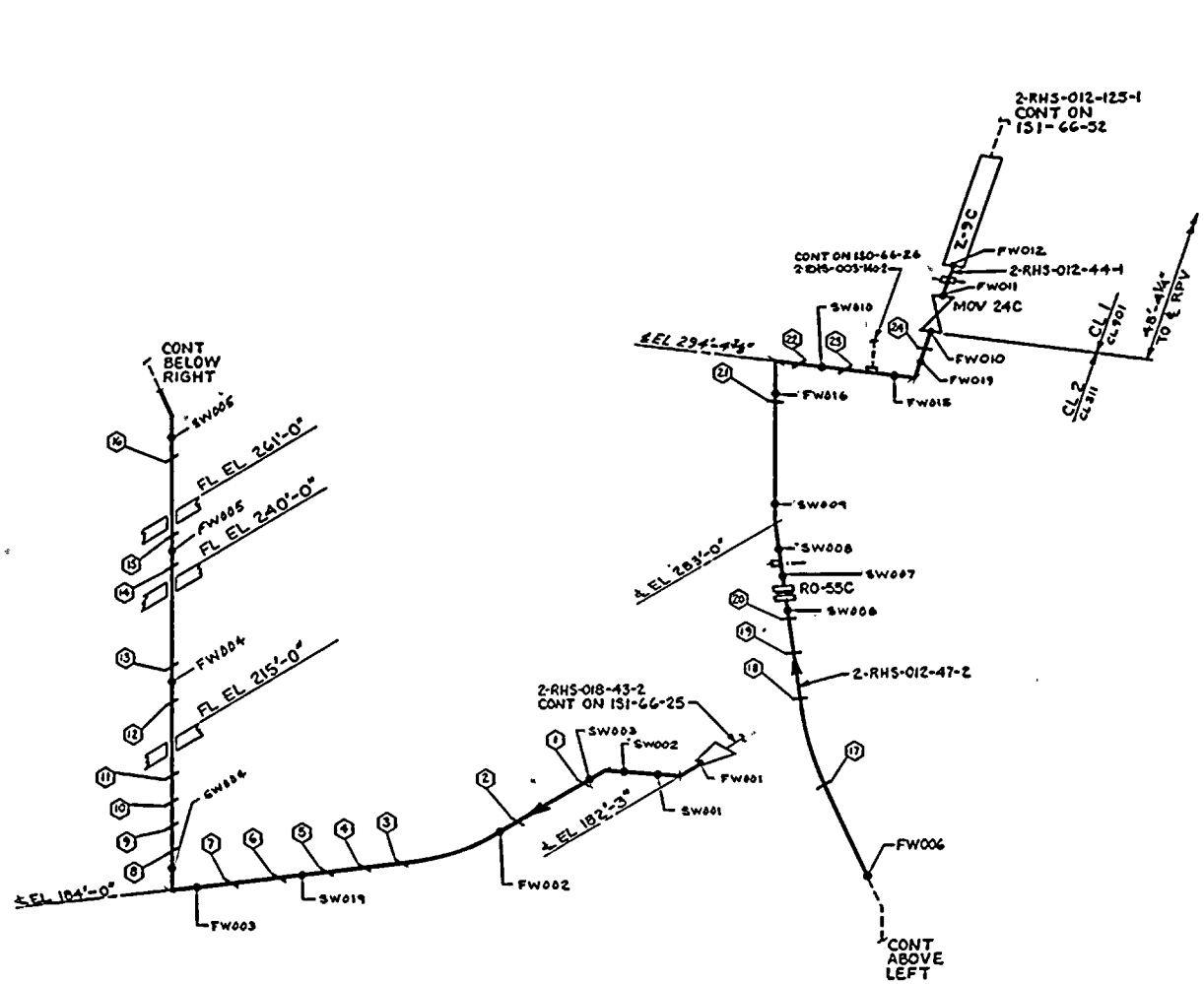
NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 LPCI LOOP C

DWG NO ISI-66-25

DRAWN BY
CHKD BY J DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2-RHS-PSSP-040-A2	BZ-71-AY
2	PSST-039	AX
3	PSSH-038	AW
4	PSSH-037	AV
5	PSST-036	AU
6	PSSH-035	AT
7	PSSP-034	AS
8	PSSP-033	AR
9	PSSP-032	AQ
10	PSSP-031	AP
11	PSA-030	AN
12	PSSP-991	MX
13	PSR-225	MC
14	PSSP-992	MY
15	PSR-254	MB
16	PSR-253	MA
17	PSSH-252	GZ
18	PSST-251	GY
19	PSST-250	GX
20	PSST-249	GW
21	PSSP-248	GV
22	PSR-247	GU
23	PSSH-246	GT
24	2-RHS PSSP-245-A2	BZ-71-63
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 66-26RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 66-26-P
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2RHS*

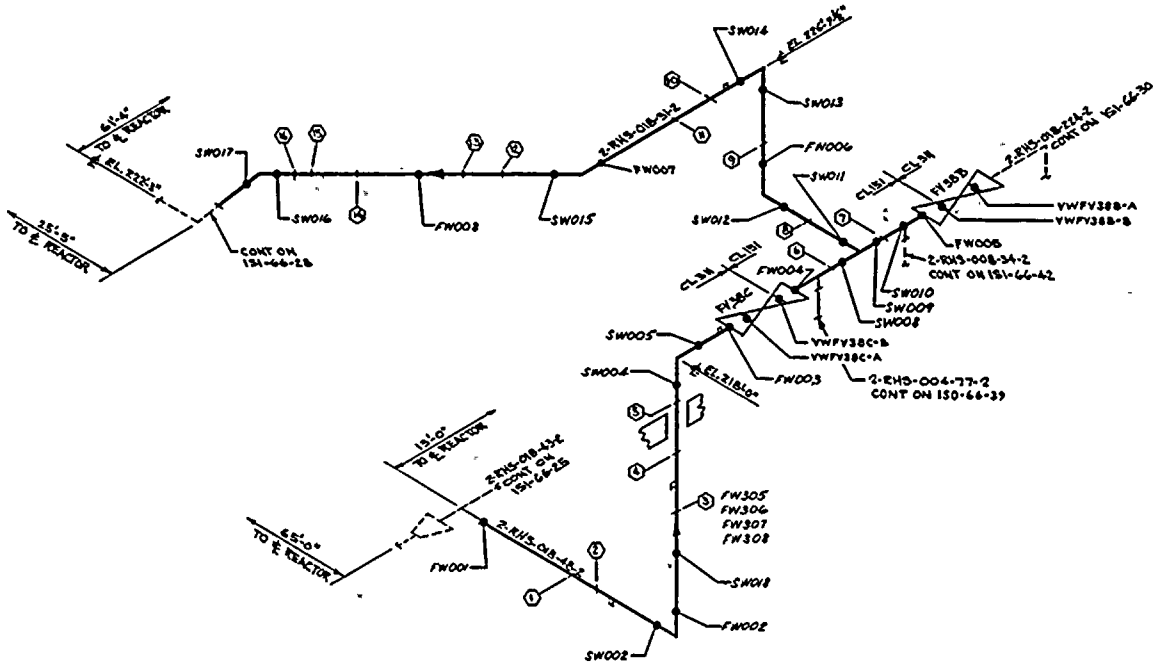
NO	DATE	REVISION	BY	CHKD	APPR
1	4/13/85	REVISED PER PSI PLAN UPDATE			
0	7/12/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1&2 LPCI LOOP C
DWG NO ISI-66-26

DRAWN BY L.H. STANG
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2 RHS PSSP 049A2	BZ-71 BM
2	PSSH 060	BJ
3	PSA 061	BK
4	PSSP 552	TX
5	PSST 492	SA
6	PSST 480	SY
7	PSSH 100	BL
8	PSST 487	SX
9	PSSP 495	SB
10	PSSH 107	BT
11	PSSP 480	SQ
12	PSST 554	TE
13	PSST 152	BG
14	PSA 728	AC H
15	PSST 538	TP
16	PSR 151 1	EW
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 66-27-RHS
4. ALL SUPPORTS PRECEDED BY 2 RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 66-27-3
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2 RHS-K

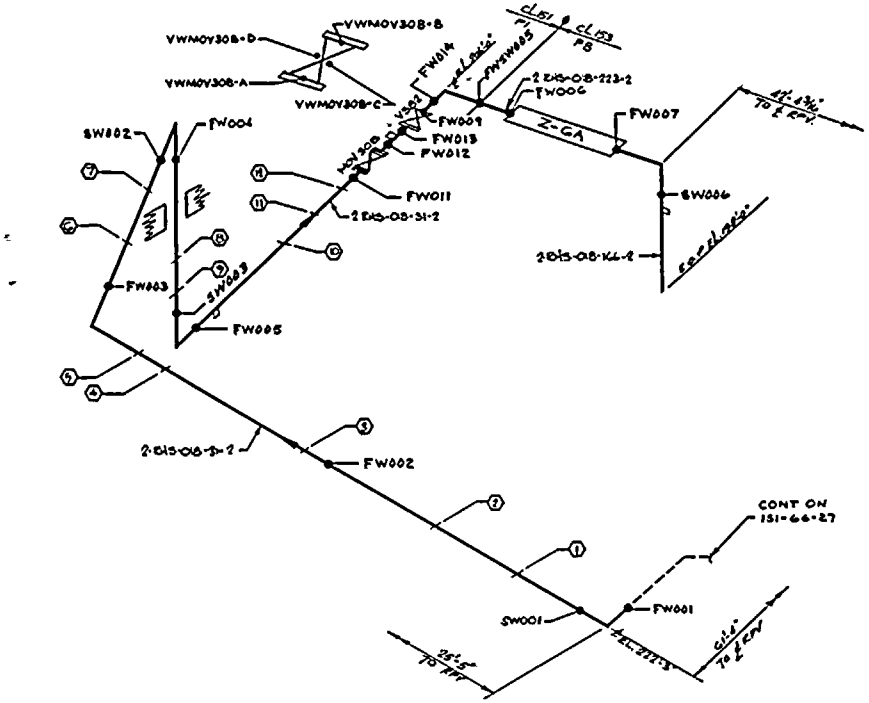
NO	DATE	REVISION	BY	CHKD	APPR
1	8/16/85	REVISED PER PSI PLAN UPDATE			
0	7/11/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 LPCI LOOP B&C
DWG NO ISI-66-27

DRAWN BY
CHKD BY



NO.	PIPE SUPPORT	BZ NO.
1	2RHS-PSSK012 A2	BZ 71AM
2	-PSSP 925	TE
3	-PSSP 574	TD
4	-PSSC 027	AC
5	-PSST 890	AFB
6	-PSST 028	AL
7	-PSST 533	TA
8	-PSST 341	TK
9	-PSST 793	TK
10	-PSSN 060	AJ
11	-PSST 530	TJ
12	-PSST 927	TG
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LEGEND

○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GG-28-RHD
4. ALL SUPPORTS PRECEDED BY 2 RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC GG-28-B
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

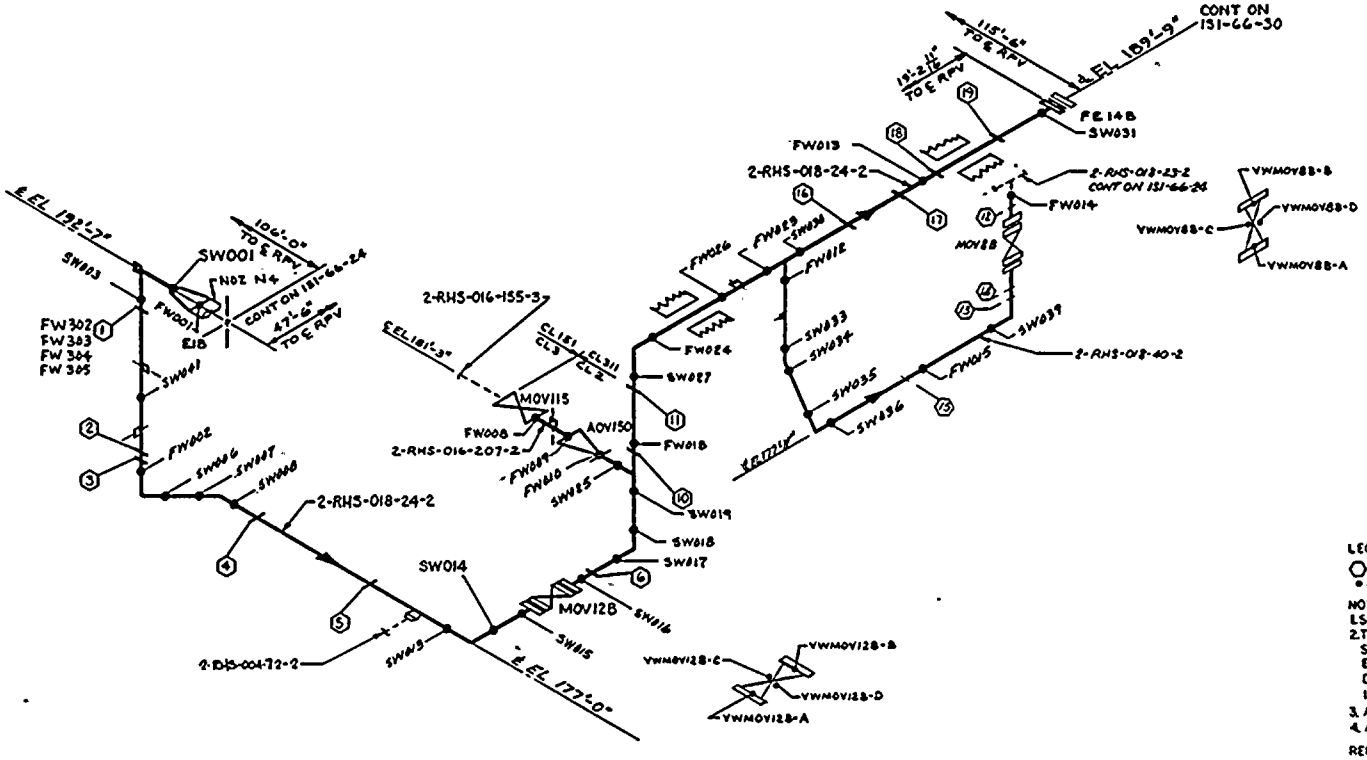
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2RHS

NO	DATE	REVISION	BY	CHKD	APPR
1	9/6/95	REVISED PER PSI PLAN UPDATE			
0	7/9/95	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 LPCI LOOP B & C
DWG NO ISI-66-28

DRAWN BY S PAGEORGE
CHKD BY J DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2-RHS-PSSH-099-A2	B2-71 DK
2	PSSP-601	ADG
3	PSSP-829	ADX
4	PSSP-825	ADW
5	PSSH-098	DJ
6	PSSP-602-A2	ACZ
7		
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10	PSSP-603-A2	ACY
11	PSST-114	EA
12	PSST-840	ADF
13	PSSP-839	AEJ
14	PSSP-840	AEJ
15	PSA-805	ADA
16	PSSH-099	DH
17	PSSP-603	ABZ
18	PSST-101	DM
19	2-RHS-PSSA-604-A2	B2-71 ADA
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 66-29-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 66-29-AD
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2RHS*

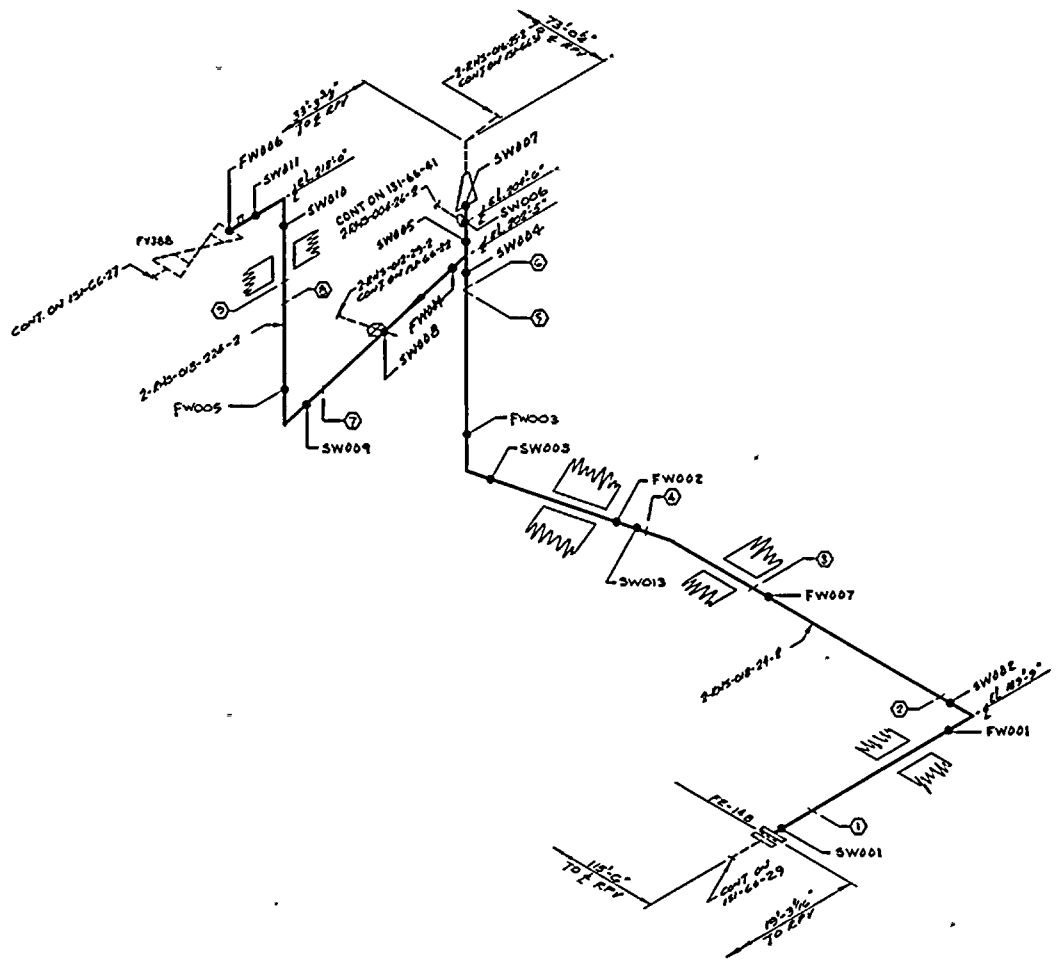
NO	DATE	REVISION	BY	CHKD	APPR
1	7/25/85	REVISED PER PSI PLAN UPDATE			
0	7/11/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 SHUTDOWN COOLING LOOP B
DWG NO ISI-66-29

DRAWN BY L.H. STANG
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2DHS-PSST 05 A2	BZ 71 EB
2	-PSST 86	EC
3	-PSST 851	AD
4	-PSA 672	ZB
5	-PSST 779	UA
6	-PSST 596	UA
7	-PSST 636	RE
8	-PSST 478	RD
9	-PSUP 479	RD
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GC-30-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

1. ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC GC-30-9
2. ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2RHS #

NO	DATE	REVISION	BY	CHKD	APPR
1	9/25/95	REVISED PER PSI PLAN UPDATE			
0	7/7/95	SWEC RELEASED FOR PRESERVICE INSPECTION			

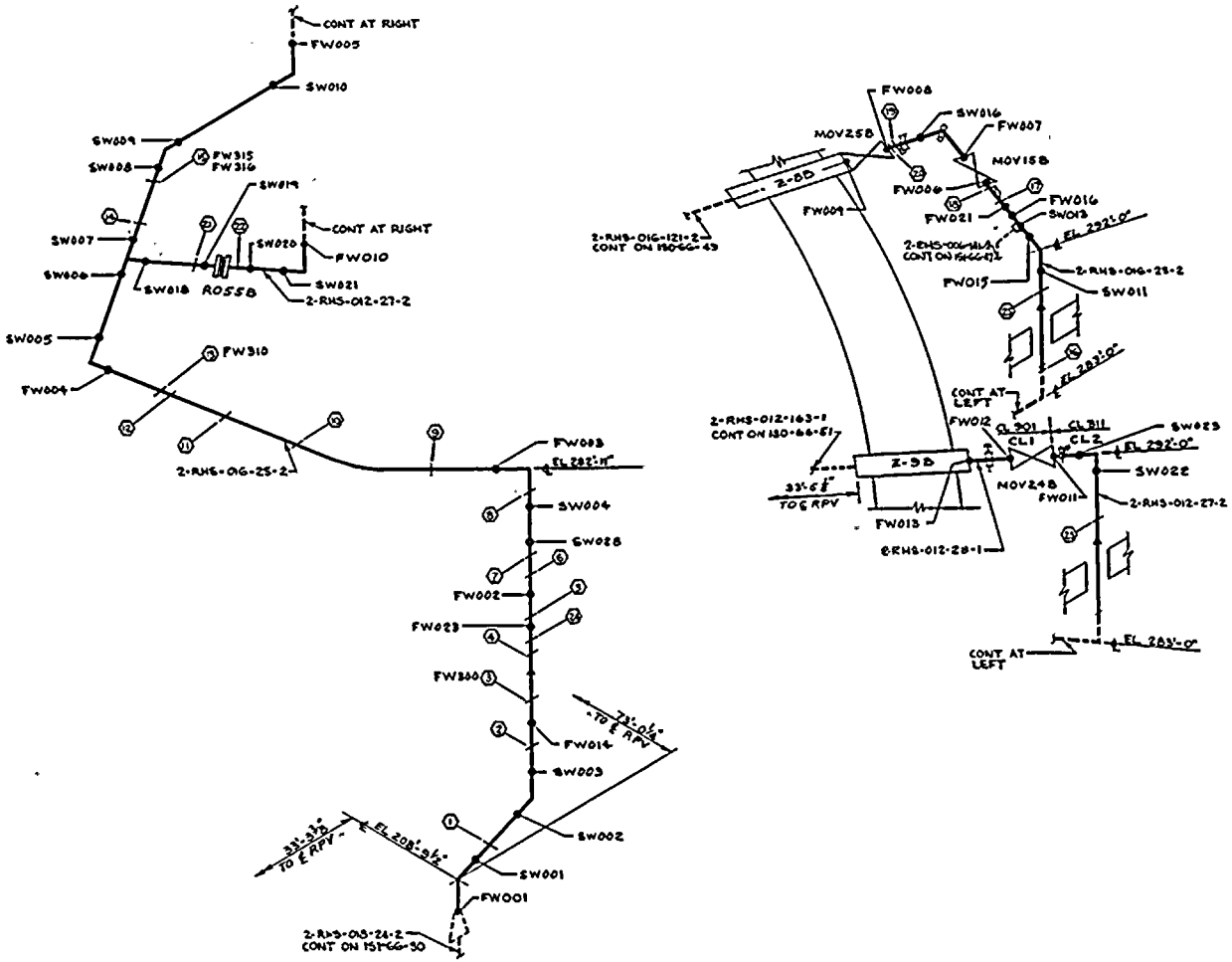
NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 SHUTDOWN COOLING LOOP B

DWG NO ISI-66-30

DRAWN BY F GEORGE
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RHS-PSSH 102 A2	BZ-71 DN
2	PSA 823	ADT
3	PSSP 822	ADS
4	PSST 824	ADU
5	PSSP 830	ADZ
6	PSST 925	AHK
7	926	AHK
8	927	AHM
9	PSSP 710	ZQ
10	PSSP 800	ACV
11	PSST 918	AMN
12	PSSH 794	ACP
13	PSSP 793	ACN
14	PSA 930	AHQ
15	PSST 867	AFN
16	PSA 931	AHR
17	PSSP 864	AFK
18	PSSH 865	AFL
19	PSSH 851	AEP
20	PSSP 852	AEQ
21	PSSP 929	AHP
22	PSSH 891	AGN
23	PSSP 906	AGV
24	PSST 9001	AKN
25	PSSP 9051	AKV
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GG-31-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

1. ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC GG-31-2
   ASME CONTROL DAG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2RHS #

NO	DATE	REVISION	BY	CHKD	APPR
1	2/23/95	REVISED PER PSI PLAN UPDATE			
0	7/10/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2

WELD & COMPONENT

IDENTIFICATION DIAGRAM

NINE MILE POINT NUCLEAR STATION — UNIT 2

NIAGARA MOHAWK POWER CORPORATION

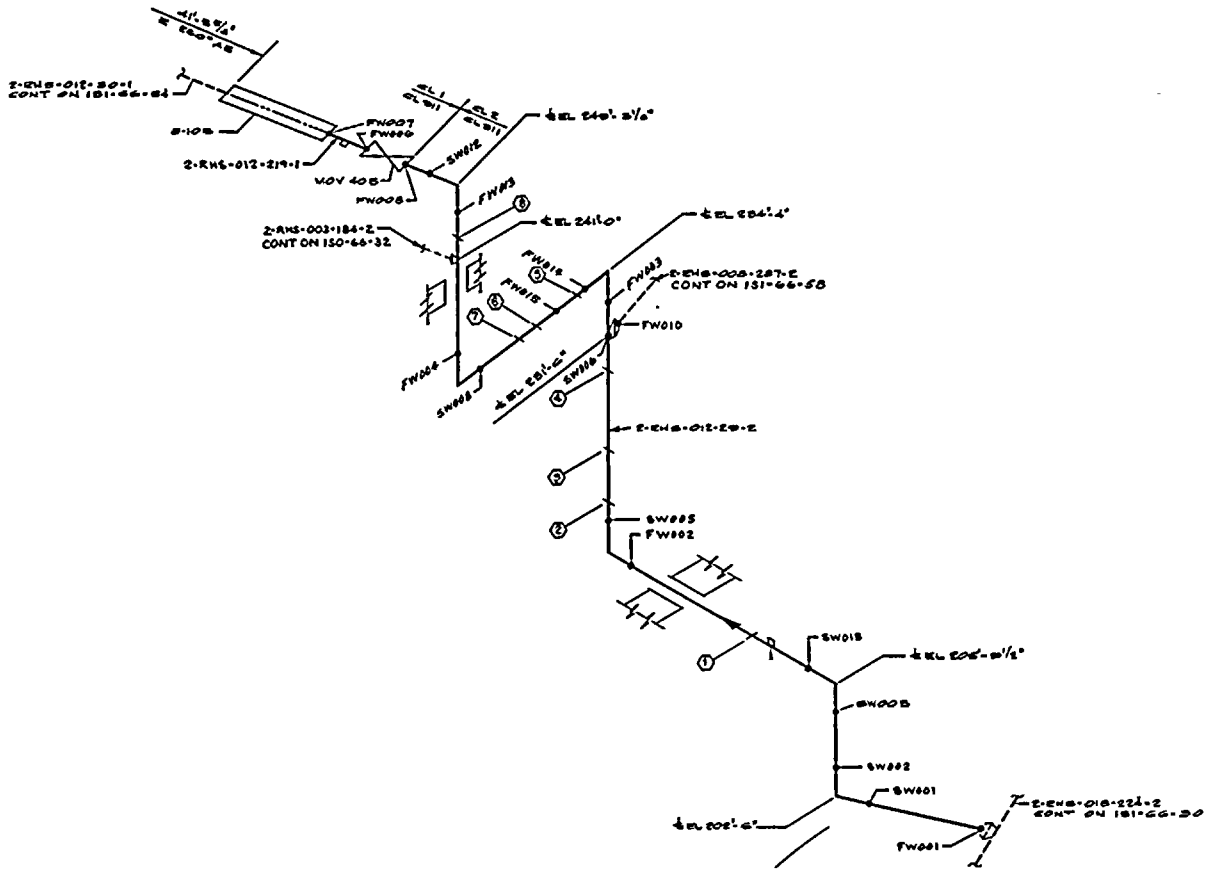
LPCI LOOP B

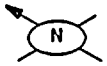
CLASS 1 & 2 SHUTDOWN COOLING LOOP B

DWG NO ISI-GG-31

DRAWN BY W STEWART

CHKD BY J. DAVID





NO.	PIPE SUPPORT	BZ NO.
1	2-RHS-P087-401A2	71 EE
2	1 4X4P	71 EL
3	PSA 871A2	71 UL
4	P087-400L1	71 NQ
5	PSR-394A1	71 NP
6	P088-394A2	71 NN
7	P089-397A2	71 NM
8	P087-394A2	71 NL
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GG-32-RHS
4. ALL SUPPORTS PRECEDED BY 2-RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC GG-32-9
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2RHS #

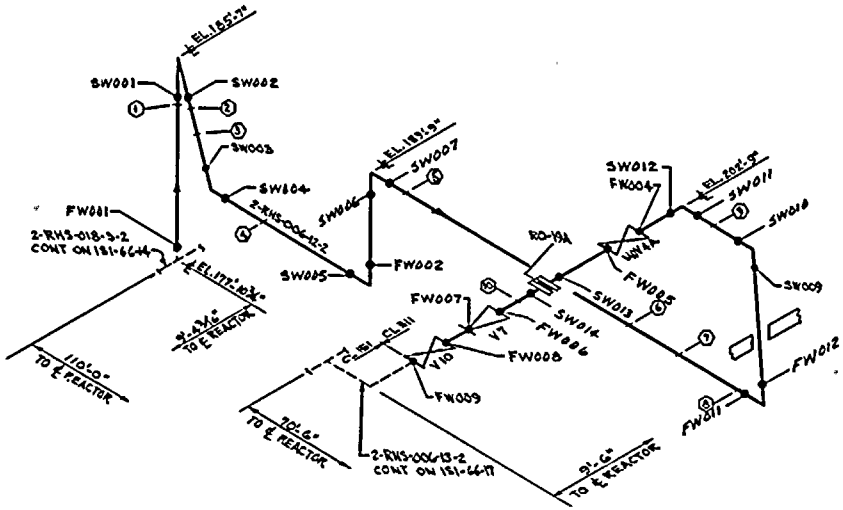
NO	DATE	REVISION	BY	CHKD	APPR
1	9/23/85	REVISED PER PSI PLAN UPDATE			
0	7/12/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 & 2 SHUTDOWN COOLING LOOP B

DWG NO ISI-GG-32

DRAWN BY E. RITZ
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RHS PSST 966A2	BZ-MADM
2	PSSH 096	DS
3	PSST 722	ABC
4	PSST 153	EW
5	PSA 749	ABC
6	PSR 136	EL
7	PSST 277	WLL
8	PSR 135	EK
9	PSSH 013	CM
10	PSST 154	EJ
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LEGEND

○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 66-34-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 66-34-1A
ASME CONTROL DWG N/A

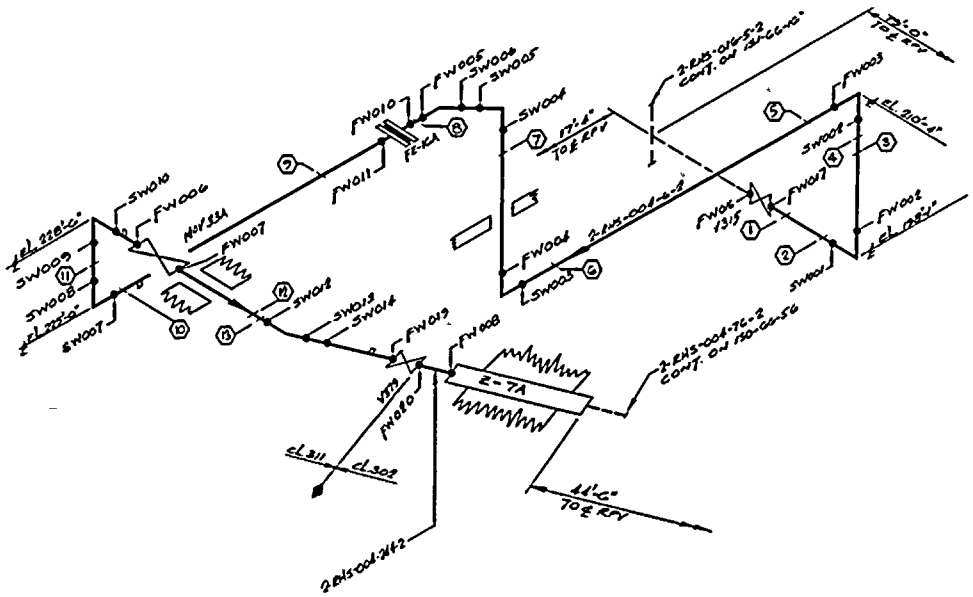
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2RHS*

NO	DATE	REVISION	BY	CHKD	APPR
1	7/10/85	REVISED PER PSI PLAN UPDATE	L	[illegible]	[illegible]
0	7/1/85	SWEC RELEASED FOR PRESERVICE INSPECTION	L	[illegible]	[illegible]

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION
SHUTDOWN COOLING LOOP A
CLASS 2 LPCI LOOP A
DWG NO ISI-66-34

DRAWN BY [illegible]
CHKD BY J DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RHS PSR 170 A2	BZ 7175
2	PSR 150	EV
3	PSR 149	FR
4	PSR 148	FR
5	PSR 149	EJ
6	PSR 148	EJ
7	PSR 168	FG
8	PSR 167	FP
9	PSR 147	EG
10	PSR 146	EK
11	PSR 100F	AM
12	PSR 169	EG
13	PSR 100A	AG
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GG - 3G - RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC GG-3G-P
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

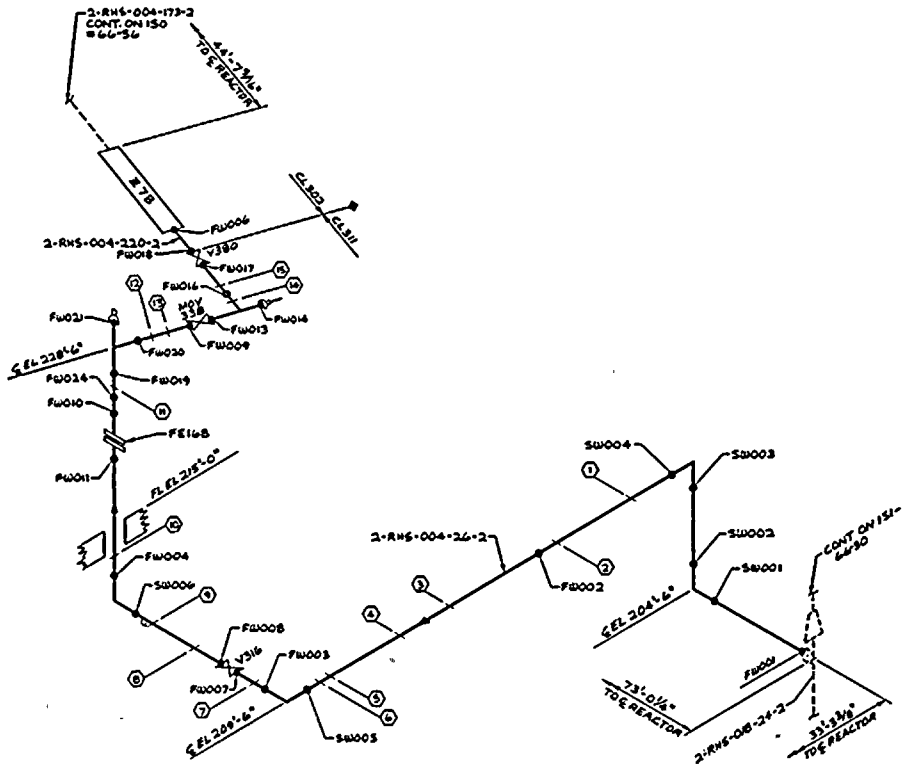
ALL VALVES AND EQUIPMENT NUMBERS PRECEDED BY 2RHS

NO	DATE	REVISION	BY	CHKD	APPR
0	4/6/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 SUPPR POOL SPRAY LOOP A
DWG NO ISI-66-36

DRAWN BY S. GEORGE
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2-RHS-PSR406 A2	B2-71NX
2	PSR407	NY
3	PSR408	NZ
4	PSR409	PA
5	PSST410	PB
6	PSST673	PB
7	PSR411	PC
8	PSSH996	ALA
9	PSSP412	PD
10	PSR413	PE
11	PSR414	PF
12	PSSP995	ALB
13	PSH415	PG
14	PSLP417	PJ
15	PSLP418	PH
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 66-41-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 66-41-M
ASME CONTROL DWG N/A

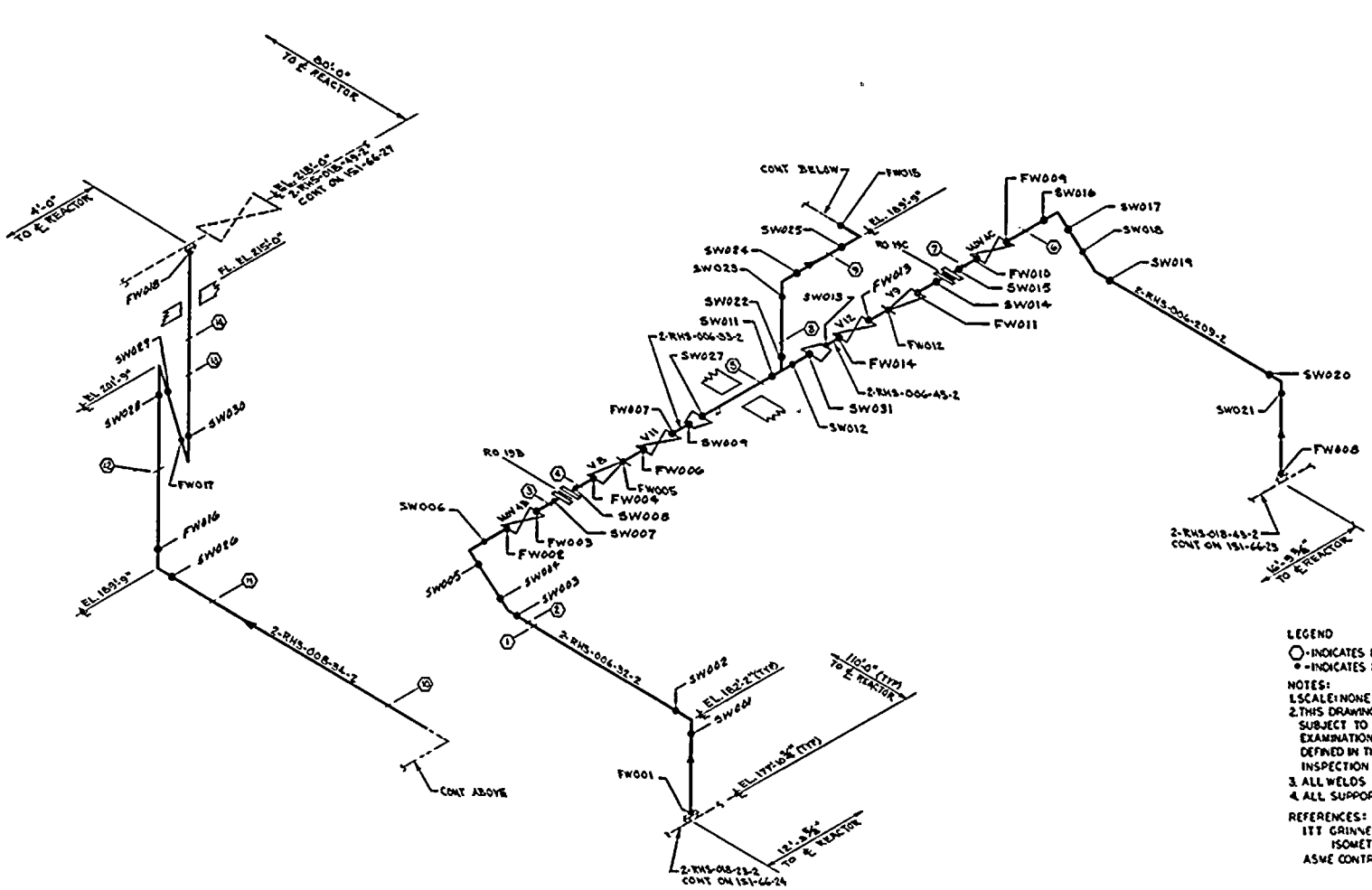
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2RHS•

NO	DATE	REVISION	BY	CHKD	APPR
0	9/23/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION.

CLASS 2 SUPPR POOL SPRAY LOOP B
DWG NO ISI-66-41

DRAWN BY D. ESSLINGER
CHKD BY S. NEIMOVITZ



NO.	PIPE SUPPORT	BZ NO.
1	2RHS PSSH108 A2	BZ-71BA
2	PSSP708	BN
3	PSSP870	AFP
4	PSR 111	DA
5	PSSX 113	DB
6	PSSY 112	DY
7	PSSP 811	ADG
8	PSST 842	ADH
9	PSST 847	CD
10	PSR 806	HDD
11	PSA 805	ADD
12	PSR 498	GG
13	PSST 450	RE
14	PSS9 4891	RE
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 64-42-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

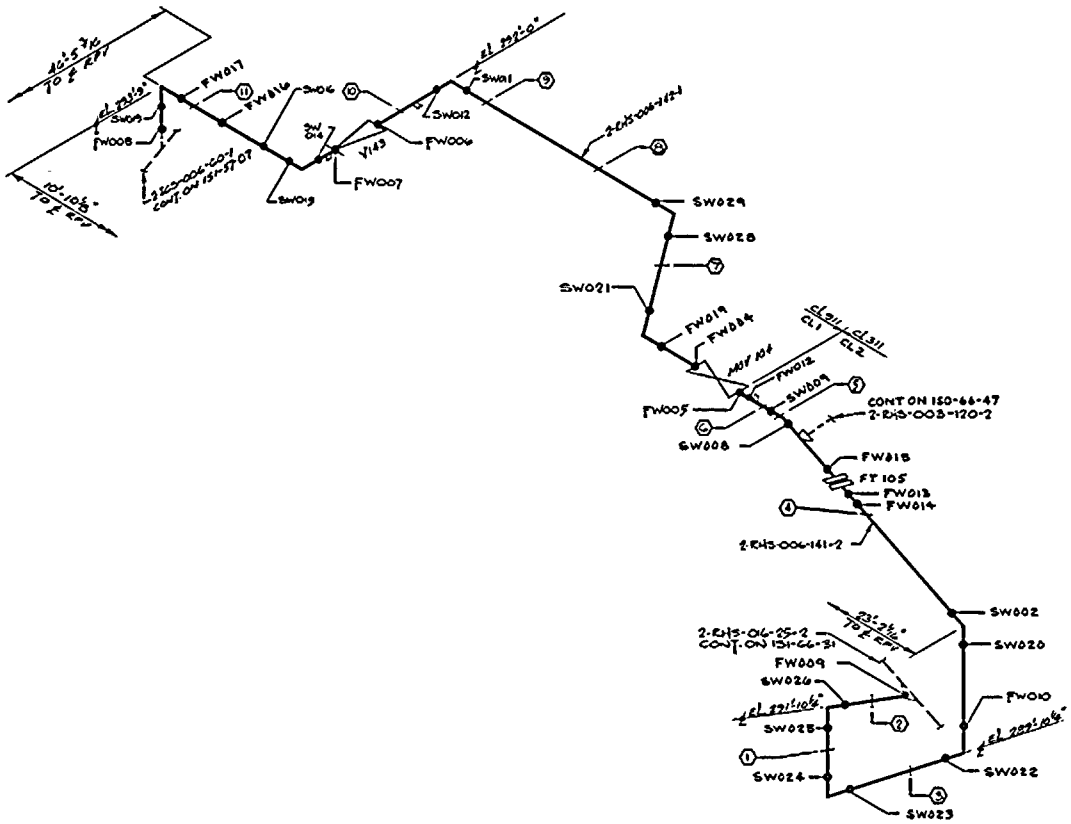
REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 66-42-N
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2 RHS #

NO	DATE	REVISION	BY	CHKD	APPR
1	9/23/85	REVISED PER PSI PLAN UPDATE			
0	7/2/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION
SHUTDOWN COOLING LOOP B
CLASS 2 LPCI LOOP B & C
DWG NO ISI-66-42
DRAWN BY J. J. PULLI
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RHS PSSP 892 AN	BZ-71 ABJ
2	PSSH 932	AHS
3	PSSP 780	ABZ
4	PSA 971	AHP
5	PSSP 1006	ALQ
6	PSST 1011	ALP
7	PSR 1010 A1	ALN
8	PSR 1009	ALM
9	PSSP 1008	ALL
10	PSST 1007	ALK
11	PSSH 1006	ALJ
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GG-47-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC GG-47-3
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

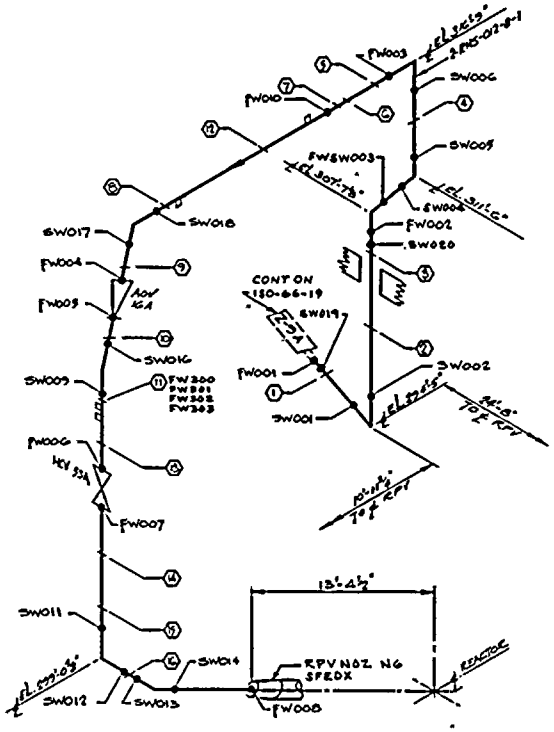
ALL VALVES AND EQUIPMENT NUMBERS PRECEDED BY 2RHS

NO	DATE	REVISION	BY	CHKD	APPR
1	4/25/85	REVISED PER PSI PLAN UPDATE			
0	7/2/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 & 2 SHUTDOWN COOLING LOOP B
DWG NO ISI-66-47

DRAWN BY S.F. GEORGE
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RHS PSSH 345 A1	RZ-71 LM
2	PSSP 346	LN
3	PSSP 347	LP
4	PSSP 348	LQ
5	PSSP 349	LR
6	PSSP 350	LS
7	PSSH 351	LT
8	PSSP 352	AG
9	PSSP 353	LU
10	PSSP 354	LV
11	PSSH 355	AH
12	PSSP 357	LX
13	PSSP 356	LY
14	PSSP 357	LZ
15	PSSP 367	AG1
16	PSSP 358	MA
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY CC-50-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC CC-50-Q
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

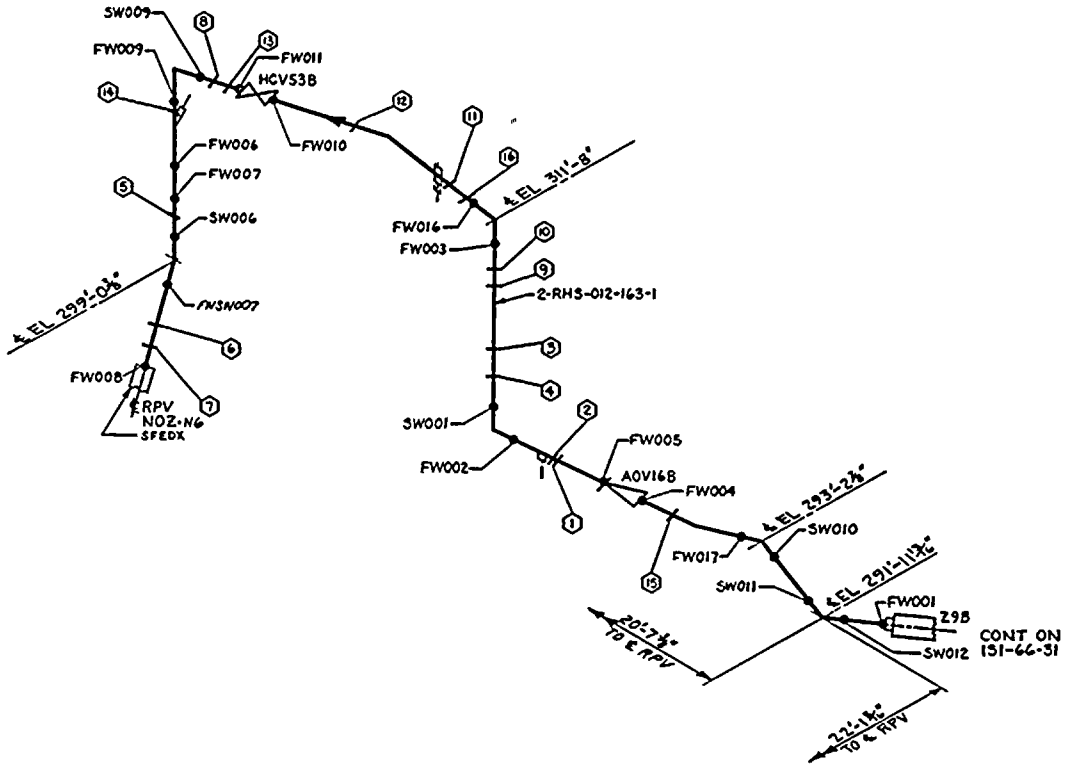
ALL VALVES AND EQUIPMENT NUMBERS PRECEDED BY 2HS*

NO	DATE	REVISION	BY	CHKD	APPR
1	7/26/95	REVISED PER PSI PLAN UPDATE			
0	7/9/95	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 LPCI LOOP A
DWG NO ISI-66-50

DRAWN BY S. GEORGE
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2-RHS-PSSP-298-A1	BZ-71-JM
2	PSSP-296	JN
3	PSSP-298	JP
4	PSSP-297	JQ
5	PSSP-309	KA
6	PSSP-310	KB
7	PSSP-311	KC
8	PSSH-1069	ALX
9	PSSP-301	JS
10	PSSP-302	JT
11	PSSP-304	JV
12	PSSP-305	JW
13	PSSP-307	JY
14	PSSP-308	JZ
15	PSSH-428	PX
16	2-RHS-PSSH-394-U1	BZ-71-TM
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 66-51-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 66-51-Q
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

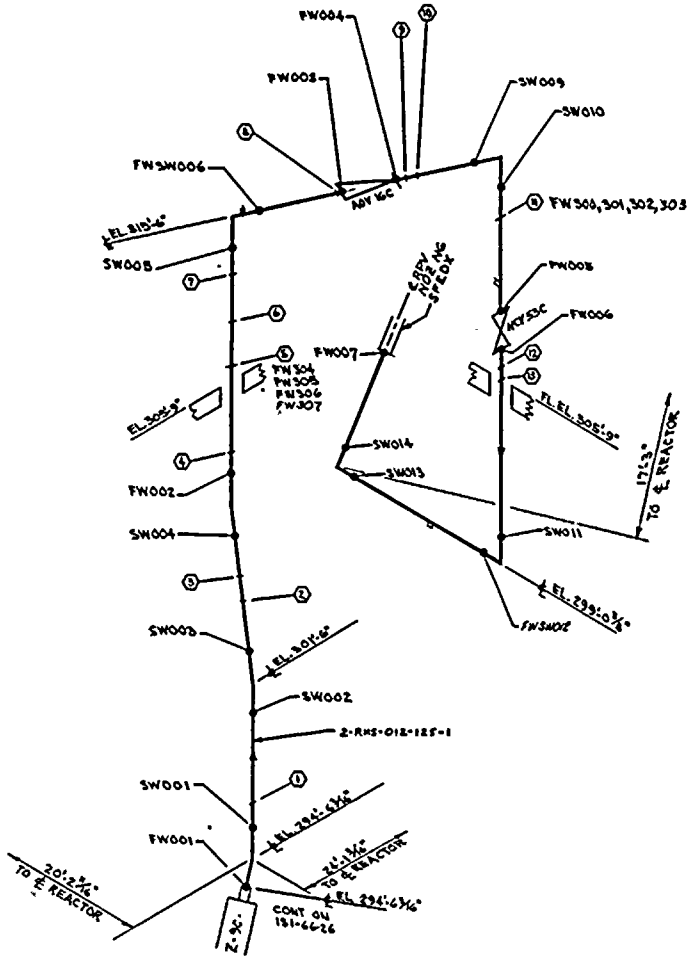
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2RHS*

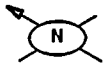
NO	DATE	REVISION	BY	CHKD	APPR
1	7/23/85	REVISED PER PSI PLAN UPDATE			
0	7/19/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS I LPCI LOOP B
DWG NO ISI-66-51

DRAWN BY L.H. STANG
CHKD BY J DAVID





NO.	PIPE SUPPORT	BZ NO.
1	2RHS PSSP 895	BZ-71 AGK
2	PSSH 895	AGL
3	PSSP 919	AMY
4	PSSP 896	AGM
5	PSSH 897	AGN
6	PSSP 924	AMJ
7	PSSP 899	AGP
8	PSSP 900	AGQ
9	PSSP 901	AGR
10	PSSP 902	AGR
11	PSSH 903	AGS
12	PSSP 905	AGU
13	PSSP 904	AGT
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GG-52-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC GG-52-R
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

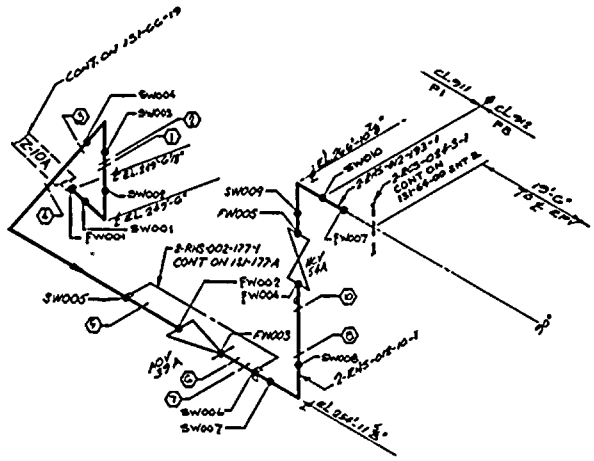
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2-RHS#

NO	DATE	REVISION	BY	CHKD	APPR
1	9/26/95	REVISED PER PSI PLAN UPDATE			
0	7/2/95	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 LPCI LOOP C
DWG NO ISI-66-52

DRAWN BY A.A. PULLI
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RHS PSSP 909 A1	BZ-71AK5
2	PSSP 986	AK8
3	PSSH 986	AKE
4	PSSP 983	AKG
5	PSSP 982	AKP
6	PSSH 993	AKZ
7	PSSP 836	AKQ
8	PSSP 1097	AKY
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10	PSSP 979	AKN
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GG-53-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

ITT-GRINNELL INDUSTRIAL PIPING
ISOMETRIC GG-53-J
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

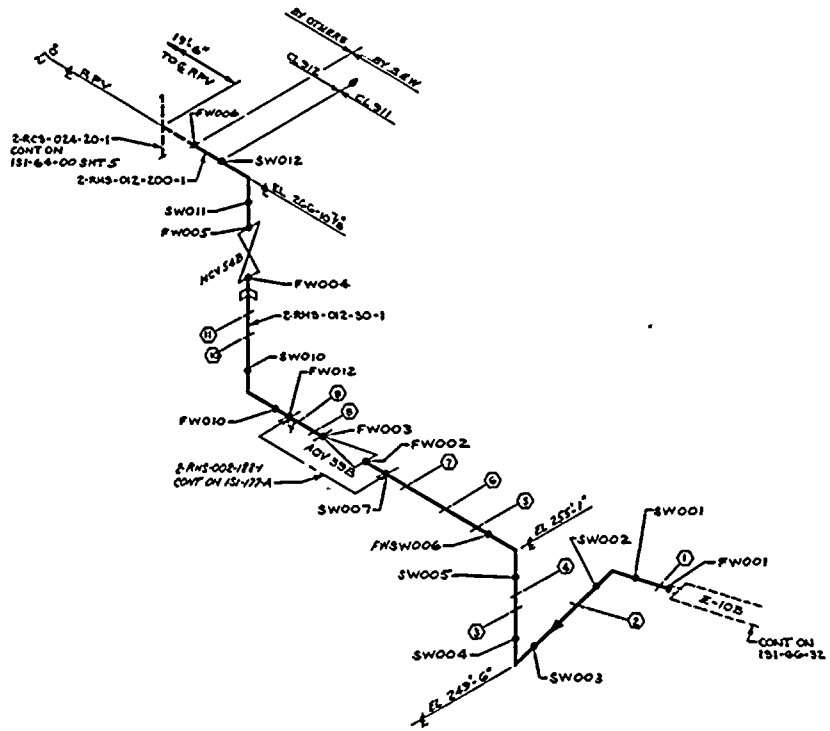
ALL VALVES AND EQUIPMENT NUMBERS PRECEDED BY 2RHS.

NO	DATE	REVISION	BY	CHKD	APPR
1	7/23/85	REVISED PER PSI PLAN UPDATE			
0	7/12/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 SHUTDOWN COOLING LOOP A
DWG NO ISI-66-53

DRAWN BY
CHKD BY J DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RH3-PSSP1045A1	BZ-71AWN
2	386	BZ
3	1044	AMM
4	385	MY
5	PSSH383	MW
6	PSSP387	MA
7	382	MV
8	834	AEE
9	PSSH384	MX
10	PSSP380	MU
11	PSSP381B	MB
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LEGEND

○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GG-54-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC GG-54-R
ASME CONTROL DWG N/A

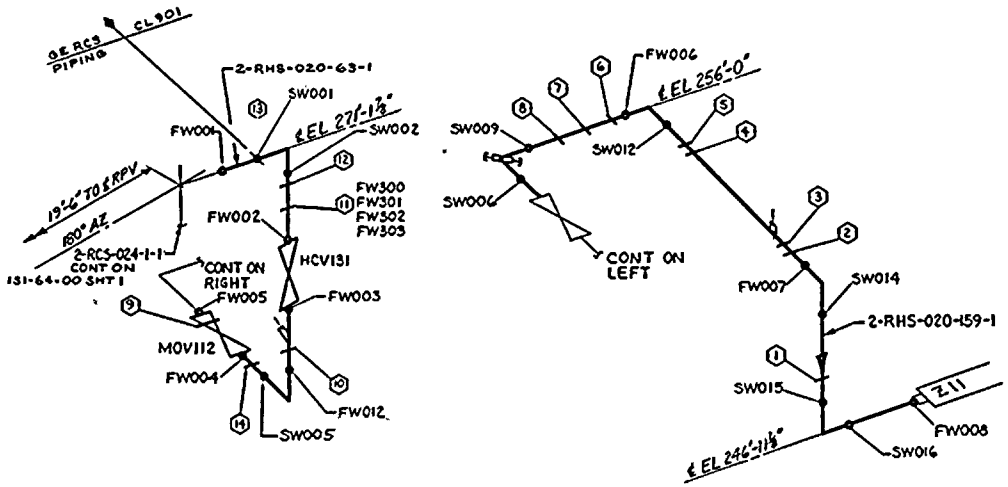
THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2RHS #

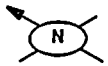
NO	DATE	REVISION	BY	CHKD	APPR
1	9/23/85	REVISED PER PSI PLAN UPDATE			
0	7/2/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 SHUTDOWN COOLING LOOP B
DWG NO ISI-GG-54

DRAWN BY W. STEWART
CHKD BY J. DAVID





NO.	PIPE SUPPORT	BZ NO.
1	2-RHS-PSSP-940-A1	52-71-AM2
2	" PSSH-941 "	" AJA
3	" PSSP-942	" AJB
4	" PSSP-943	" AJC
5	" PSSP-970	" AJD
6	" PSSP-971	" AJE
7	" PSSP-972	" AJF
8	" PSSH-973	" AJG
9	" PSSP-1055	" AJH
10	" PSSP-975	" AJJ
11	" PSSH-976	" AJK
12	" PSSP-977	" AJL
13	" PSSP-978 "	" AJM
14	2-RHS-PSSP-1086-A1	52-71-AM3
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LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 66-55-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 66-55-AC
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

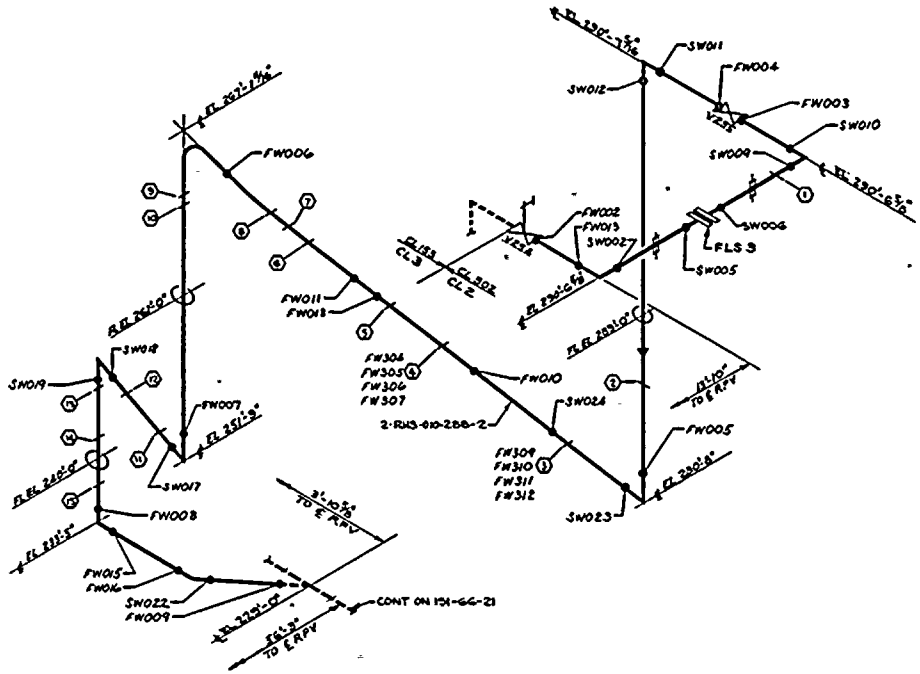
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2RHS*

NO	DATE	REVISION	BY	CHKD	APPR
1	2/27/85	REVISED PER PSI PLAN UPDATE			
0	7/1/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1 SHUTDOWN COOLING LOOP A & B
DWG NO ISI-66-55

DRAWN BY L.H. STANG
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RHS-PSR 1058 A2	02-71 AM E
2	PSA 344	LL
3	PSR 343	LK
4	PSR 342	LJ
5	PSSH 341	LH
6	PSST 340	LG
7	PSSH 339	LF
8	PSSP 338	LE
9	PSST 1053	AM T
10	PSST 1051	AM S
11	PSR 335	LC
12	PSSP 1035	AM D
13	PSST 334	LB
14	PSST 1032	AM A
15	PSST 1033	AM B
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

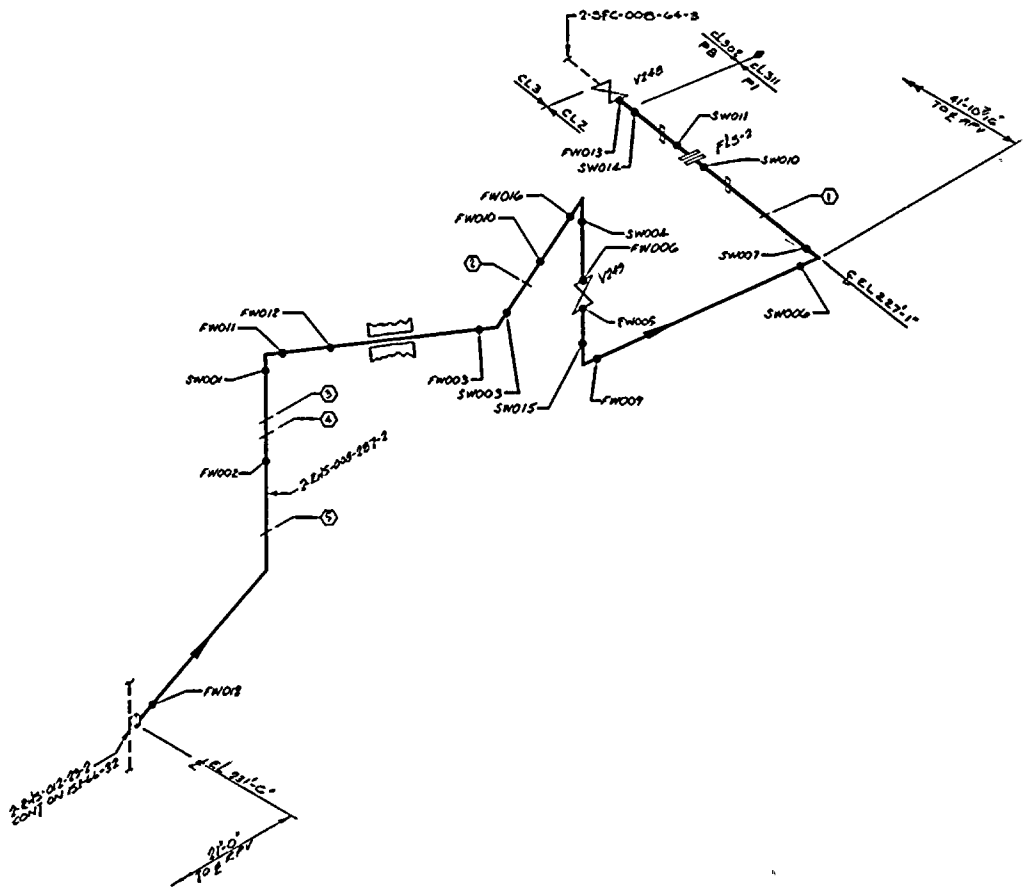
NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY GG-57-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC GG-57-J
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY
ALL VALVE & EQUIPMENT NUMBERS PRECEDED BY 2RHS

NO	DATE	REVISION	BY	CHKD	APPR
1	7/23/85	REVISED PER PSI PLAN UPDATE			
0	7/2/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION
SPENT FUEL POOL SUPPLY
CLASS 2 SHUTDOWN COOLING LOOP A
DWG NO ISI-66-57
DRAWN BY W. STEWART
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RHS PSIE 017A/	BZ-71 ALT
2	PSSH 108	ALS
3	PSSP 101	ALT
4	PSSP 100	ALT
5	PSA 402	NS
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LEGEND

○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY CG-58-RHS
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:

1. ITT GRINNELL INDUSTRIAL PIPING ISOMETRIC CG-58-M
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2RHS.

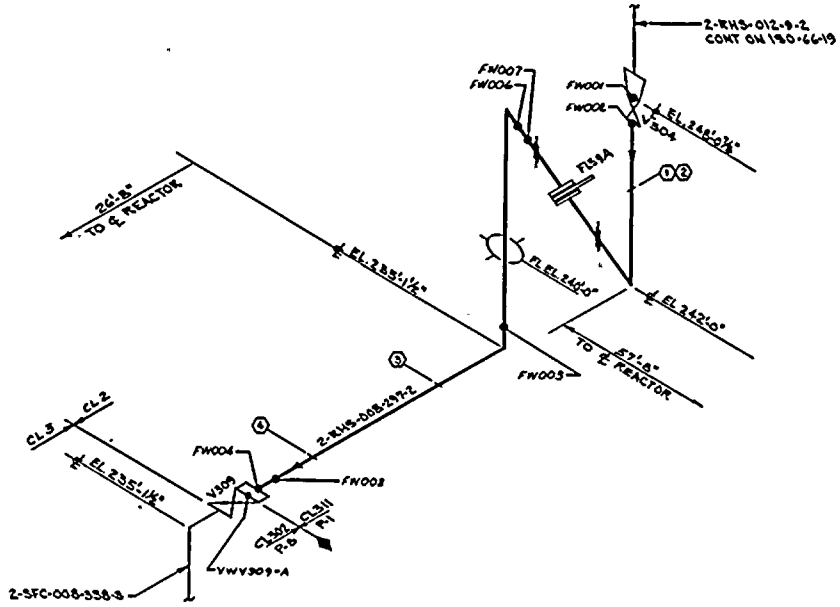
NO	DATE	REVISION	BY	CHKD	APPR
1	7/23/85	REVISED PER PSI PLAN UPDATE			
0	7/12/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

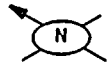
NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 SFC RETURN LOOP B
SHUTDOWN COOLING LOOP B

DWG NO ISI-66-58

DRAWN BY B. FIGUEROA
CHKD BY J. DAVID





NO.	PIPE SUPPORT	BZ NO.
1	2-RHS-PSSP-999 A2	BZ-91 ALC
2	" PSSP1000	" ALC
3	" PSR1002	" ALE
4	" PSA1003	" ALF
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LEGEND

○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY 66-60-RHS
4. ALL SUPPORTS PRECEDED BY 2-RHS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC 66-60-C
ASME CONTROL DWG N/A

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

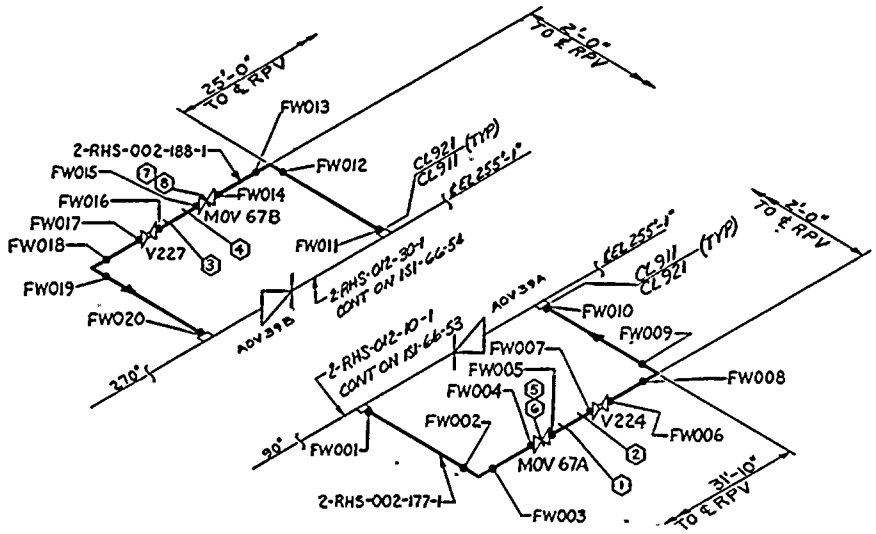
ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2-RHS-

NO	DATE	REVISION	BY	CHKD	APPR
1	7/21/95	REVISED PER PSI PLAN UPDATE			
0	7/10/95	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 2 SFC RETURN LOOP A
DWG NO ISI-66-60

DRAWN BY L.L. PULLI
CHKD BY J. DAVID



NO.	PIPE SUPPORT	BZ NO.
1	2RHS-PSSP1043A1	71AMK
2	2RHS-PSSH1042A1	71AMK
3	2RHS-PSSH1049A1	71AMR
4	2RHS-PSSP1048A1	71AMR
5	2RHS-PSSP1040A1	71AMJ
6	2RHS-PSSP1041A1	71AMJ
7	2RHS-PSSP1044A1	71AMP
8	2RHS-PSSP1043A1	71AMP
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LEGEND
○ - INDICATES PIPE SUPPORT
• - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY RHS-177-A
4. ALL SUPPORTS PRECEDED BY 2RHS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC N/A
ASME CONTROL DWG 2 RHS-177-A-0

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

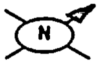
ALL VALVE + EQUIPMENT NUMBERS PRECEDED BY 2RHS*

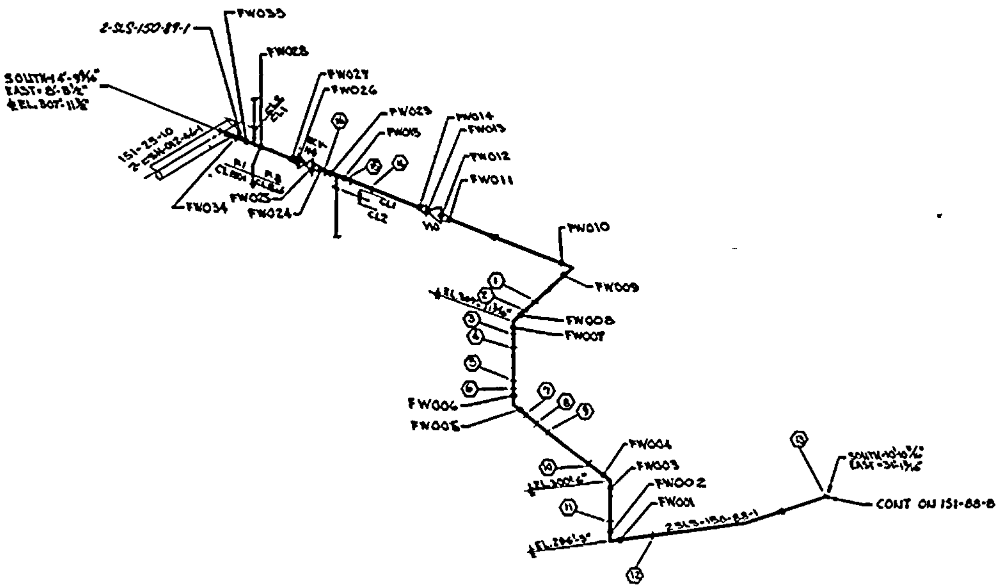
NO	DATE	REVISION	BY	CHKD	APPR
1	7/10/85	REVISED PER PSI PLAN UPDATE			
0	7/1/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS I SHUTDOWN COOLING LOOP A & B
DWG NO ISI-177-A

DRAWN BY L.H. STANG
CHKD BY J DAVID





NO.	PIPE SUPPORT	BZ NO.
1	2 SLS PSSP 103 A1	33-75 CB
2	PSSH 100	CB
3	PSST 078	BL
4	PSSP 092	BK
5	PSST 077	BK
6	PSST 076	BM
7	PSST 099	CA
8	PSSP 078	BJ
9	PSSH 074	BJ
10	PSR 072	BM
11	PSR 070	BG
12	PSR 068	BF
13	PSR 066	BE
14	PSSP 106	CC
15	PSSH 118	CH
16	PSSP 114	CH
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LEGEND

⬡ - INDICATES PIPE SUPPORT
● - INDICATES NON-EXEMPT WELD

NOTES:
1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY SLS-088A
4. ALL SUPPORTS PRECEDED BY 2 SLS

REFERENCES:
ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC N/A
ASME CONTROL DWG 2-SLS-88-A-0

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2SLS

NO	DATE	REVISION	BY	CHKD	APPR
1	9/23/85	REVISED PER PSI PLAN UPDATE			
0	7/4/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1
DWG NO ISI-88-A

DRAWN BY A.J.PULLI
CHKD BY J.DAVID

NO.	PIPE SUPPORT	BZ NO.
1	2SLS P33T 033A1	BZ-75BV
2	• P33R 061A1	BZ-75BC
3	P33T 054A1	BZ-75AY
4	P33T 116 A1	BZ-75CK
5	P33R 060A1	BZ-75DB
6	• P33R 064A1	BZ-75BD
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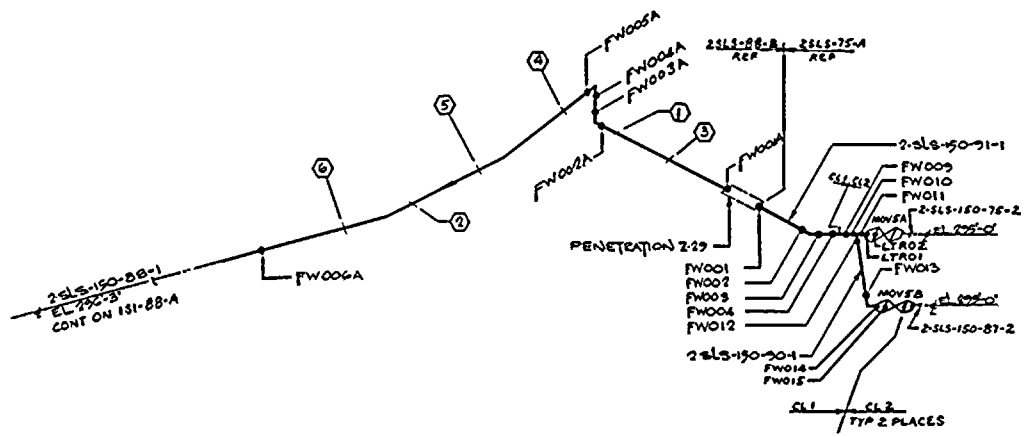

LEGEND

○ - INDICATES PIPE SUPPORT

• - INDICATES NON-EXEMPT WELD

NOTES:

1. SCALE: NONE
2. THIS DRAWING IDENTIFIES PIPING AND COMPONENTS SUBJECT TO PRESERVICE AND/OR INSERVICE INSPECTION EXAMINATIONS AS REQUIRED BY ASME SECT XI AS DEFINED IN THE NMPC PRESERVICE AND INSERVICE INSPECTION PLAN
3. ALL WELDS PRECEDED BY SLS-0888 OR SLS-075A
4. ALL SUPPORTS PRECEDED BY 2SLS

REFERENCES:

ITT GRINNELL INDUSTRIAL PIPING
ISOMETRIC N/A
ASME CONTROL DWG 2SLS-88-B-0
2SLS-75-A-0
PID-30A-1 (ZONE ZK-3)

THIS DRAWING IS INTENDED FOR USE IN PRESERVICE AND INSERVICE INSPECTION PROGRAMS ONLY

ALL VALVE AND EQUIPMENT NUMBERS PRECEDED BY 2SLS #

NO	DATE	REVISION	BY	CHKD	APPR
0	9/23/85	SWEC RELEASED FOR PRESERVICE INSPECTION			

NMP2
WELD & COMPONENT
IDENTIFICATION DIAGRAM
NINE MILE POINT NUCLEAR STATION — UNIT 2
NIAGARA MOHAWK POWER CORPORATION

CLASS 1
DWG NO 1S1-88-B

DRAWN BY B.P. GEORGE
CHKD BY S. HEIMOVITZ

SECTION 9

COMPONENT DETAIL DRAWINGS

A list of components selected for PSI, as indicated in Appendix A, is provided in Table 9-1. The applicable vendor drawing or installation and operation manual showing the component details reviewed for selection is also provided. Each drawing has been labeled with the component/weld name uniquely assigned and as listed in Appendix A. In addition, an ISI Sketch No. has been assigned to each drawing in order that these drawings are retained in the Unit 2 ISI department files after the completion of PSI. These drawings shall be made available for use at Unit 2.

TABLE 9-1

COMPONENT DETAIL DRAWINGS

ISI Sketch No.	Component	Vendor Drawing/Manual
001	2CSH*HCV120	5.321-052-152
002	2CSH*MOV107	16.330-001-067/068
003	2CSH*AOV108	5.360-170-103/104
004A	2CSH*P1	16.330-001-049
004B	2CSH*P1	16.330-001-050
004C	2CSH*P1	16.330-001-051
006	2CSH*STRT1	5.420-065-016
007	2CSL*HCV117	5.321-052-072
008	2CSL*MOV104	5.321-122-038
009	2CSL*AOV101	5.360-170-097/098
010A	2CSL*P1	16.330-001-037
010B	2CSL*P1	16.330-001-038
011	2CSL*STRT1	5.420-065-016
012	2CSL*FV114	7.161-906-002
013	2CSL*HCV118	5.360-923-201
014	2CSL*HCV119	5.360-923-202
015 Rev 1	2CSL*MOV112	5.360-923-139
016	2CSL*V121	5.360-923-252
017	2FWS*AOV23A	5.360-170-089
018	2FWS*AOV23B	5.360-170-091
019	2FWS*HCV54A	5.321-175-062
020	2FWS*HCV54B	5.321-175-062
021	2FWS*MOV21A	5.321-122-075
022	2FWS*MOV21B	5.321-122-075
023	2FWS*V12A	5.360-170-092
024	2FWS*V12B	5.360-170-092
025	2ICS*MOV126	5.321-122-074
026	2ICS*AOV156	5.360-170-099/100
027	2ICS*AOV157	5.360-170-101/102
028	2ICS*MOV121	5.321-122-089
029	2ICS*MOV128	5.321-122-089
030	2ICS*MOV122	5.321-122-038
031	2MSS*PSV120	16.020-001-043
032	2MSS*PSV121	16.020-001-043
033	2MSS*PSV122	16.020-001-043
034	2MSS*PSV123	16.020-001-043
035	2MSS*PSV124	16.020-001-043

TABLE 9-1 (Cont)

ISI Sketch No.	Component	Vendor Drawing/Manual
036	2MSS*PSV125	16.020-001-043
037	2MSS*PSV126	16.020-001-043
038	2MSS*PSV127	16.020-001-043
039	2MSS*PSV128	16.020-001-043
040	2MSS*PSV129	16.020-001-043
041	2MSS*PSV130	16.020-001-043
042	2MSS*PSV131	16.020-001-043
043	2MSS*PSV132	16.020-001-043
044	2MSS*PSV133	16.020-001-043
045	2MSS*PSV134	16.020-001-043
046	2MSS*PSV135	16.020-001-043
047	2MSS*PSV136	16.020-001-043
048	2MSS*PSV137	16.020-001-043
049	2MSS*MOV111	5.321-122-190
050	2MSS*MOV112	5.321-122-320
051	2MSS*MOV207	5.321-122-309
052	2MSS*HYV7A	5.360-180-173
053	2MSS*HYV7B	5.360-180-173
054	2MSS*HYV7C	5.360-180-173
055	2MSS*HYV7D	5.360-180-173
056	2MSS*HYV6A	5.360-180-172
057	2MSS*HYV6B	5.360-180-172
058	2MSS*HYV6C	5.360-180-172
059	2MSS*HYV6D	5.360-180-172
060	2RCS*P1A	16.030-001-109
061	2RCS*P1B	16.030-001-109
062	2RCS*HYV17A	16.030-001-113
063	2RCS*HYV17B	16.030-001-113
064	2RCS*MOV10A	16.030-001-068
065	2RCS*MOV10B	16.030-001-068
066	2RCS*MOV18A	16.030-001-080
067	2RCS*MOV18B	16.030-001-080
068	2RHS*AOV16A	5.360-170-095/096
069	2RHS*AOV16B	5.360-170-095/096
070	2RHS*AOV16C	5.360-170-095/096
071	2RHS*AOV39A	5.360-170-093/094
072	2RHS*AOV39B	5.360-170-093/094
073	2RHS*HCV131	5.321-052-021
074	2RHS*HCV53A	5.321-052-072
075	2RHS*HCV53B	5.321-052-072
076	2RHS*HCV53C	5.321-052-072
077	2RHS*HCV54A	5.321-052-152
078	2RHS*HCV54B	5.321-052-152

TABLE 9-1 (Cont)

ISI Sketch No.	Component	Vendor Drawing/Manual
079	2RHS*MOV104	5.321-122-151
080	2RHS*MOV112	5.321-122-075
081	2RHS*MOV113	5.321-122-075
082	2RHS*MOV24A	5.321-122-089
083	2RHS*MOV24B	5.321-122-089
084	2RHS*MOV24C	5.321-122-089
085	2RHS*MOV40A	5.321-122-121
086	2RHS*MOV40B	5.321-122-121
087	2RHS*V143	5.321-052-006
088A	2RHS*P1A	16.330-001-018
088B	2RHS*P1A	16.330-001-019
089A	2RHS*P1B	16.330-001-018
089B	2RHS*P1B	16.330-001-019
090A	2RHS*P1C	16.330-001-018
090B	2RHS*P1C	16.330-001-019
091	2RHS*E1A	16.310-001-011
092	2RHS*E1B	16.310-001-011
093 Rev 1	2RHS*DIFF1	16.310-825-044
094 Rev 1	2RHS*DIFF2	16.310-825-044
095	2RHS*STRT1A	5.420-065-017
096	2RHS*STRT1B	5.420-065-017
097	2RHS*STRT1C	5.420-065-017
098	2RHS*FV38A	7.161-906-001
099	2RHS*FV38B	7.161-906-001
100	2RHS*FV38C	7.161-906-001
101	2RHS*MOV1C	5.360-923-200
102	2RHS*MOV12A	5.360-923-115
103	2RHS*MOV12B	5.360-923-115
104	2RHS*MOV2A	5.360-923-111
105	2RHS*MOV2B	5.360-923-110
107	2RHS*MOV30B	5.360-923-235
108	2RHS*MOV8A	5.360-923-112
109	2RHS*MOV8B	5.360-923-112
110	2RHS*MOV9A	5.360-923-113
111	2RHS*MOV9B	5.360-923-114
112	2RHS*PV21A	7.169-906-044
113	2RHS*PV21B	7.169-906-044
114	2RHS*V309	5.323-053-030
115	2RHS*V376	5.360-923-253
116	2RHS*V377	5.360-923-253
117	2RHS*V378	5.360-923-253
118	RPV	16.010-001-090
119	RPV	16.010-001-091
120	RPV	16.010-001-092

TABLE 9-1 (Cont)

ISI Sketch No.	Component	Vendor Drawing/Manual
121	RPV	16.010-001-094
122	RPV	16.010-001-096
123	RPV	16.010-001-097
124	RPV	16.010-001-098
125	RPV	16.010-001-099
126	RPV	16.010-001-100
127	RPV	16.010-001-101
128	RPV	16.010-001-103
129	RPV	16.010-001-104
130	RPV	16.010-001-105
131	RPV	16.010-001-106
132	RPV	16.010-001-109
133	RPV	16.010-001-110
134	RPV	16.010-001-111
135	RPV	16.010-001-112
136	RPV	16.010-001-113
137	RPV	16.010-001-114
138	RPV	16.010-001-119
139	RPV	16.010-001-120
140	RPV	16.010-001-121
141	RPV	16.010-001-129
142	RPV	16.010-001-130
143	RPV	16.010-001-131
144	RPV	16.010-001-135
145	RPV	16.010-001-136
146	RPV	16.010-001-137
147	RPV	16.010-001-138
148	RPV	16.010-001-139
149	RPV	16.010-001-140
150	RPV	16.010-001-141
151	RPV	16.010-001-142
152	RPV	16.010-001-143
153	RPV	16.010-001-144
154	RPV	16.010-001-145
155	RPV	16.010-001-146
156	RPV	16.010-001-147
157	RPV	16.010-001-148
158	RPV	16.010-001-149
159	RPV	16.010-001-153
160	RPV	16.010-001-154
161	RPV	16.010-001-155
162	RPV	16.010-001-158
163	RPV	16.010-001-159
164	RPV	16.010-001-160
165	RPV	16.010-001-162

TABLE 9-1 (Cont)

ISI Sketch No.	Component	Vendor Drawing/Manual
166	RPV	16.010-001-163
167	RPV	16.010-001-164
168	RPV	16.010-001-165
169	RPV	16.010-001-167
170	RPV	16.010-001-168
171	RPV	16.010-001-169
172	RPV	16.010-001-170
173	RPV	16.010-001-171
174	RPV	16.010-001-172
175	RPV	16.010-001-173
176	RPV	16.010-001-174
177	RPV	16.010-001-175
178	RPV	16.010-001-176
179	RPV	16.010-001-177
180	RPV	16.010-001-178
181	RPV	16.010-001-179
182	RPV	16.010-001-180
183	RPV	16.010-001-181
184	RPV	16.010-001-187
185	RPV	16.010-001-188
186	RPV	16.010-001-189
187	RPV	16.010-001-190
188	RPV	16.010-001-191
189 Rev 1	RPV	16.010-001-192
190	RPV	16.010-001-193
191	RPV	16.010-001-194
192	RPV	16.010-001-195
193	RPV	16.010-001-196
194	RPV	16.010-001-197
195 Rev 1	RPV	16.010-001-198
196 Rev 1	RPV	16.010-001-199
197	RPV	16.010-001-200
198	RPV	16.010-001-201
199 Rev 1	RPV	16.010-001-202
200	RPV	16.010-001-203
201	RPV	16.010-001-204
202	RPV	16.010-001-205
203	RPV	16.010-001-206
204	RPV	16.010-001-207
205	RPV	16.010-001-208
206	RPV	16.010-001-209
207	RPV	16.010-001-210
208	RPV	16.010-001-211
209	RPV	16.010-001-212
210	RPV	16.010-001-213

TABLE 9-1 (Cont)

ISI Sketch No.	Component	Vendor Drawing/Manual
211	RPV	16.010-001-214
212	RPV	16.010-001-218
213	RPV	16.010-001-226
214	RPV	16.010-001-227
215	RPV	16.010-001-231
216	RPV	16.010-001-232
217	RPV	16.010-001-233
218	RPV	16.010-001-234
219	RPV	16.010-001-235
220	RPV	16.010-001-236
221	RPV	16.010-001-237
222	RPV	16.010-001-238
223	RPV	16.010-001-239
224	RPV	16.010-001-240
225	RPV	16.010-001-241
226	RPV	16.010-001-242
227	RPV	16.010-001-243
228	RPV	16.010-001-244
229	RPV	16.010-001-245
230	RPV	16.010-001-251
231	RPV	16.010-001-253
232	RPV	16.010-001-254
233	RPV	16.010-001-255
234	RPV	16.010-001-257
235	RPV	16.010-001-258
236	RPV	16.010-001-266
237	RPV	16.010-001-267
238	RPV	16.010-001-269
239	RPV	16.010-001-270
240	RPV	16.010-001-271
241	RPV	16.010-001-272
242	RPV	16.010-001-273
243	RPV	16.010-001-274
274	RPV	16.010-001-275
275	RPV	16.010-001-276
276	RPV	16.010-001-286
277	RPV	16.010-001-287
278	RPV	16.010-001-289
279	RPV	16.010-001-290
280	RPV	16.010-001-291
281	RPV	16.010-001-344
282	RPV	16.010-001-345
283	RPV	16.010-001-353
284	RPV	16.010-001-366
285	RPV	16.010-001-368

TABLE 9-1 (Cont)

ISI Sketch No.	Component	Vendor Drawing/Manual
286	RPV	16.010-001-370
287	RPV	16.010-001-371
288	RPV	16.010-001-441
289	RPV	16.010-001-442
290	RPV	16.010-001-444
291	RPV	16.010-001-482
292	RPV	16.010-001-496
293	RPV	16.010-001-497
294 Rev 1	RPV	16.010-001-498
295	RPV	16.010-001-564
297	2WCS*MOV101	5.321-122-023
298	2WCS*MOV102	5.321-122-102
299	2WCS*MOV103	5.321-122-102
300	2WCS*MOV104	5.321-122-033
301	2WCS*MOV105	5.321-122-033
302	2WCS*MOV112	5.321-122-102
303	2WCS*MOV200	5.321-122-077
306	2FWS*FTG1A,1B	5.500-942-069
307	2RCS*P1A	VPF3726-49-3
308	2RCS*P1B	VPF3726-49-3

SECTION 10

PIPING AND COMPONENT SUPPORT DRAWINGS

A list of piping supports selected for PSI examination in accordance with IWF-2510(a) is provided in Table 10-1.

The examination of these supports shall be addressed in the Preservice Inspection Plan for Nuclear Piping System and Component Supports for Unit 2.

Nomenclature for Table 10-1 is provided below:

System

Applicable piping system designation.

Isometric Drawing

Applicable piping isometric, (i.e., ISI-25-01) is found in Section 8 of this Plan. Class 3 supports found on piping contractor isometric drawing are not part of this Plan.

Item No.

Applicable support number is indicated on the ISI isometric drawing for Class 1 and 2 or piping contractor isometric drawing for Class 3.

Pipe Support No.

A pipe support number is a uniquely assigned number for each support within a particular system. Pipe support nomenclature is defined as shown in the following example:

2CSLPSSP081A2

Where:

2 = Unit 2
CSL = Low Pressure Core Spray System
PSSP = Type of support
081 = Support number
A = Scope of design and analysis
2 = ASME Code Class 2

Types of supports are defined as:

PSSP = Snubber
PSSH = Springer Hanger
PSA = Anchor
PSR = Restraint
PSST = Strut

Pipe Support Drawing

Number assigned to each pipe support detail drawing (i.e., BZ-76EE).

TABLE 10-1

PIPING AND COMPONENT SUPPORT DRAWINGS

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
ASS	20-01	1	2ASS-PSSP132B4	BZ-15G-104
		2	2ASS-PSSH133B4	BZ-15G-105
CSH	25-01	3	2CSH-PSR220A2	BZ-108QG
		4	2CSH-PSR221A2	BZ-108QJ
		5	2CSH-PSR222A2	BZ-108QL
		6	2CSH-PSR226A2	BZ-108QR
		7	2CSH-PSR223A2	BZ-108QP
		8	2CSH-PSR224A2	BZ-108QS
		9	2CSH-PSR225A2	BZ-108QT
		10	2CSH-PSST289A2	BZ-108RN
		11	2CSH-PSST281A2	BZ-108RN
		12	2CSH-PSST290A2	BZ-108RP
		13	2CSH-PSST282A2	BZ-108RP
	25-03	1	2CSH-PSST006A2	BZ-78M
		2	2CSH-PSST007A2	BZ-78N
		3	2CSH-PSR008A2	BZ-78P
		4	2CSH-PSR009A2	BZ-78Q
		5	2CSH-PSSP010A2	BZ-78R
		6	2CSH-PSST011A2	BZ-78S
		7	2CSH-PSR012A2	BZ-78T
		8	2CSH-PSR013A2	BZ-78U

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		9	2CSH-PSR014A2	BZ-78V
		10	2CSH-PSR015A2	BZ-78W
		11	2CSH-PSA016A2	BZ-78X
		12	2CSH-PSR283A2	BZ-108RS
	25-04	1	2CSH-PSA005A2	BZ-78L
		2	2CSH-PSST004A2	BZ-78K
		3	2CSH-PSST003A2	BZ-78J
		4	2CSH-PSST002A2	BZ-78AE
		5	2CSH-PSA001A2	BZ-78H
		6	2CSH-PSST075A2	BZ-78CG
		7	2CSH-PSST074A2	BZ-78CF
		8	2CSH-PSST073A2	BZ-78CF
		9	2CSH-PSR030A2	BZ-78AN
		10	2CSH-PSST071A2	BZ-78CD
		11	2CSH-PSSH031A2	BZ-78AP
		12	2CSH-PSST072A2	BZ-78CE
		13	2CSH-PSST070A2	BZ-78CC
	25-05	1	2CSH-PSSH025A2	BZ-78AG
		2	2CSH-PSR029A2	BZ-78AM
		3	2CSH-PSST207A2	BZ-78HW
		4	2CSH-PSSH027A2	BZ-78AJ
		5	2CSH-PSST068A2	BZ-78CA

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		6	2CSH-PSST067A2	BZ-78BZ
		7	2CSH-PSSP066A2	BZ-78BY
		8	2CSH-PSSH026A2	BZ-78AH
	25-08	1	2CSH-PSR018A2	BZ-78Z
		2	2CSH-PSST063A2	BZ-78BV
		3	2CSH-PSSP064A2	BZ-78BW
		4	2CSH-PSSH017A2	BZ-78Y
		5	2CSH-PSSP065A2	BZ-78BX
		6	2CSH-PSR019A2	BZ-78AA
		7	2CSH-PSA215A2	BZ-78JE
		8	2CSH-PSST198A2	BZ-78HM
		9	2CSH-PSST197A2	BZ-78HL
	25-09	1	2CSH-PSSP196A2	BZ-78HK
		2	2CSH-PSST195A2	BZ-78HJ
		3	2CSH-PSSP194A2	BZ-78HH
		4	2CSH-PSSP193A2	BZ-78HG
		5	2CSH-PSR191A2	BZ-78HE
		6	2CSH-PSA192A2	BZ-78HF
		7	2CSH-PSR079A2	BZ-78CL
		8	2CSH-PSA078A2	BZ-78CK
		9	2CSH-PSST077A2	BZ-78CJ
		10	2CSH-PSSP104A2	BZ-78DM

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		11	2CSH-PSSH076A2	BZ-78CH
	25-10	1	2CSH-PSSP092A1	BZ-78CZ
		2	2CSH-PSSH091A1	BZ-78CY
		3	2CSH-PSSP090A1	BZ-78CX
		4	2CSH-PSSP089A1	BZ-78CW
		5	2CSH-PSSH088A1	BZ-78CV
		6	2CSH-PSSP087A1	BZ-78CU
		7	2CSH-PSSP086A1	BZ-78CT
		8	2CSH-PSSP085A1	BZ-78CS
		9	2CSH-PSSP084A1	BZ-78CR
		10	2CSH-PSSH083A1	BZ-78CQ
		11	2CSH-PSSP082A1	BZ-78CP
		12	2CSH-PSSP081A1	BZ-78CN
	25-13	1	2CSH-PSSP199A2	BZ-78HN
		2	2CSH-PSSP205A2	BZ-78HU
		3	2CSH-PSST200A2	BZ-78HP
		4	2CSH-PSSP201A2	BZ-78HQ
		5	2CSH-PSST202A2	BZ-78HR
		6	2CSH-PSST203A2	BZ-78HS
		7	2CSH-PSR2042A	BZ-78HT

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	25-17	1	2CSH-PSST187A2	BZ-78HA
		2	2CSH-PSSH190A2	BZ-78HD
		3	2CSH-PSSP185A2	BZ-78GX
		4	2CSH-PSSP189A2	BZ-78HC
		5	2CSH-PSR188A2	BZ-78HB
		6	2CSH-PSST186A2	BZ-78GZ
	25-18	1	2CSH-PSSP184A2	BZ-78GW
		2	2CSH-PSSH183A2	BZ-78GV
		3	2CSH-PSSP182A2	BZ-78GU
		4	2CSH-PSSP181A2	BZ-78GT
		5	2CSH-PSST180A2	BZ-78GS
		6	2CSH-PSST179A2	BZ-78GR
		7	2CSH-PSST178A2	BZ-78GQ
		8	2CSH-PSR177A2	BZ-78GP
		9	2CSH-PSST176A2	BZ-78GN
		10	2CSH-PSST175A2	BZ-78GM
		11	2CSH-PSST174A2	BZ-78GL
		12	2CSH-PSST173A2	BZ-78GK
		13	2CSH-PSSP172A2	BZ-78GJ
		14	2CSH-PSSP171A2	BZ-78GH
		15	2CSH-PSSP170A2	BZ-78GG
		16	2CSH-PSSH169A2	BZ-78GF
		17	2CSH-PSST168A2	BZ-78GE

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		18	2CSH-PSSP167A2	BZ-78GD
		19	2CSH-PSST166A2	BZ-78GC
		20	2CSH-PSSH165A2	BZ-78GB
		21	2CSH-PSSP164A2	BZ-78GA
		22	2CSH-PSR163A2	BZ-78FZ
		23	2CSH-PSSH162A2	BZ-78FY
		24	2CSH-PSST161A2	BZ-78FX
	25-19	2	2CSH-PSA103A2	BZ-78DL
		3	2CSH-PSST102A2	BZ-78DK
		4	2CSH-PSST218A2	BZ-78DK
		5	2CSH-PSST101A2	BZ-78DJ
		6	2CSH-PSSP100A2	BZ-78DH
		7	2CSH-PSSP099A2	BZ-78DG
		8	2CSH-PSST098A2	BZ-78DF
		9	2CSH-PSSH097A2	BZ-78DE
		10	2CSH-PSSP096A2	BZ-78DD
		11	2CSH-PSSP095A2	BZ-78DC
CSL	26-01	1	2CSL-PSSP081A2	BZ-130CP
		2	2CSL-PSST040A2	BZ-130AY
		3	2CSL-PSST082A2	BZ-130CQ
		5	2CSL-PSST084A2	BZ-130CS
		6	2CSL-PSST085A2	BZ-130CT

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		7	2CSL-PSR002A2	BZ-130J
		8	2CSL-PSSP056A2	BZ-130BP
		12	2CSL-PSR091A2	BZ-130CY
		13	2CSL-PSR093A2	BZ-130CY
	26-02	1	2CSL-PSR035A2	BZ-130AT
		2	2CSL-PSR010A2	BZ-130S
		3	2CSL-PSSP036A2	BZ-130AU
		4	2CSL-PSR-012A2	BZ-130U
		5	2CSL-PSSP037A2	BZ-130AV
		6	2CSL-PSST038A2	BZ-130AW
		7	2CSL-PSSH003A2	BZ-130K
		8	2CSL-PSA011A2	BZ-130T
		9	2CSL-PSSP092A2	BZ-130CZ
	26-03	1	2CSL-PSSP060A2	BZ-130BT
		2	2CSL-PSSH024A2	BZ-130AG
		3	2CSL-PSSH006A2	BZ-130N
		4	2CSL-PSST045A2	BZ-130BD
		5	2CSL-PSST044A2	BZ-130BC
		6	2CSL-PSSP043A2	BZ-130BB
		7	2CSL-PSSH007A2	BZ-130P
		8	2CSL-PSST005A2	BZ-130M
		9	2CSL-PSSP042A2	BZ-130BA

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		10	2CSL-PSR009A2	BZ-130R
		11	2CSL-PSST041A2	BZ-130AZ
		12	2CSL-PSST004A2	BZ-130L
		13	2CSL-PSA008A2	BZ-130Q
		14	2CSL-PSST033A2	BZ-130AR
		15	2CSL-PSA034A2	BZ-130AS
		16	2CSL-PSR026A2	BZ-130AJ
	26-04	1	2CSL-PSST013A2	BZ-130V
		2	2CSL-PSST032A2	BZ-130AQ
		3	2CSL-PSST031A2	BZ-130AP
		4	2CSL-PSST030A2	BZ-130AN
		5	2CSL-PSST023A2	BZ-130AF
		6	2CSL-PSST029A2	BZ-130AM
		7	2CSL-PSST022A2	BZ-130AE
		8	2CSL-PSR028A2	BZ-130AL
		9	2CSL-PSA077A2	BZ-130CK
		10	2CSL-PSR076A2	BZ-130CJ
		11	2CSL-PSSH073A2	BZ-130CF
		12	2CSL-PSSP075A2	BZ-130CH
		13	2CSL-PSSP072A2	BZ-130CE
		14	2CSL-PSSH071A2	BZ-130CD

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	26-05	1	2CSL-PSSP078A2	BZ-130CL
		2	2CSL-PSSP074A2	BZ-130CG
		3	2CSL-PSSH070A2	BZ-130CC
		4	2CSL-PSSP090A1	BZ-130CX
		5	2CSL-PSSP054A1	BZ-130BN
		6	2CSL-PSSP053A1	BZ-130BM
		7	2CSL-PSSP052A1	BZ-130BL
		8	2CSL-PSSH051A1	BZ-130BK
		9	2CSL-PSSP050A1	BZ-130BJ
		10	2CSL-PSSP049A1	BZ-130BH
		11	2CSL-PSSP048A1	BZ-130BG
		12	2CSL-PSSH047A1	BZ-130BF
		13	2CSL-PSSP046A1	BZ-130BE
	26-06	1	2CSL-PSSP057A2	BZ-130BQ
		2	2CSL-PSR059A2	BZ-130BS
		3	2CSL-PSR014A2	BZ-130W
		4	2CSL-PSST015A2	BZ-130X
		5	2CSL-PSR016A2	BZ-130Y
		6	2CSL-PSR017A2	BZ-130Z
		7	2CSL-PSR018A2	BZ-130AA
		8	2CSL-PSR019A2	BZ-130AB
		9	2CSL-PSR020A2	BZ-130AC
		10	2CSL-PSST021A2	BZ-130AD

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
DER	07-A	1	2DER-PSSP1433A1	BZ-85CP
		2	2DER-PSSP1435A1	BZ-85CR
		3	2DER-PSSP1436A1	BZ-85CR
		4	2DER-PSSP1434A1	BZ-85CQ
		5	2DER-PSSH1437A1	BZ-85CT
EGA	38-05	1	2EGA-PSST040B3	BZ-60G-040
		2	2EGA-PSST039B3	BZ-60G-039
		3	2EGA-PSST071B3	BZ-60G-071
		4	2EGA-PSST004A3	BZ-60K
		5	2EGA-PSST016A3	BZ-60K
		6	2EGA-PSSP013A3	BZ-60T
		7	2EGA-PSSP008A3	BZ-60N
		9	2EGA-PSST064B3	BZ-60G-064
		12	2EGA-PSR045B3	BZ-60G-045
		14	2EGA-PSST047B3	BZ-60G-047
		15	2EGA-PSST022A3	BZ-60AB
		16	2EGA-PSST028A3	BZ-60AH
		17	2EGA-PSSH029A3	BZ-60AH
	38-06	1	2EGA-PSST042B3	BZ-60G-042
		2	2EGA-PSST041B3	BZ-60G-041
		3	2EGA-PSCT072B3	BZ-60G-072
		4	2EGA-PSST007A3	BZ-60M

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		5	2EGA-PSST017A3	BZ-60M
		6	2EGA-PSSP015A3	BZ-60V
		7	2EGA-PSSP009A3	BZ-60P
		9	2EGA-PSST065B3	BZ-60G-065
		12	2EGA-PSR052B3	BZ-60G-052
		14	2EGA-PSST054B3	BZ-60G-054
		15	2EGA-PSST023A3	BZ-60AC
		16	2EGA-PSSH031A3	BZ-60AJ
		17	2EGA-PSST030A3	BZ-60AJ
	38-07	1	2EGA-PSST061B3	BZ-60G-061
		2	2EGA-PSR060B3	BZ-60G-060
		3	2EGA-PSST059B3	BZ-60G-059
		4	2EGA-PSSP058B3	BZ-60G-058
		5	2EGA-PSST066B3	BZ-60G-066
		6	2EGA-PSST057B3	BZ-60G-057
		7	2EGA-PSA063B3	BZ-60G-063
		8	2EGA-PSST062B3	BZ-60G-062
		9	2EGA-PSST070B3	BZ-60G-070
		10	2EGA-PSST067B3	BZ-60G-067
		11	2EGA-PSST068B3	BZ-60G-068
		12	2EGA-PSST069B3	BZ-60G-069
		13	2EGA-PSST073B3	BZ-60G-073

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
FWS	47-13	3	2FWS-PSST044A1	BZ-17BW
		4	2FWS-PSSH032A1	BZ-17BH
		5	2FWS-PSR369A1	BZ-17PD
		6	2FWS-PSR368A1	BZ-17PC
		7	2FWS-PSSH192A1	BZ-17JB
		8	2FWS-PSSP191A1	BZ-17JA
		9	2FWS-PSST190A1	BZ-17HZ
		10	2FWS-PSSP189A1	BZ-17HY
		11	2FWS-PSSH188A1	BZ-17HX
		12	2FWS-PSSP187A1	BZ-17HW
		13	2FWS-PSSP185A1	BZ-17HU
		14	2FWS-PSSP186A1	BZ-17HV
		15	2FWS-PSSP372A1	BZ-17HT
		16	2FWS-PSSP184A1	BZ-17HT
	47-14	1	2FWS-PSSP183A1	BZ-17HS
		2	2FWS-PSSP182A1	BZ-17HR
		3	2FWS-PSSH181A1	BZ-17HQ
		4	2FWS-PSSP180A1	BZ-17HP
		5	2FWS-PSSH179A1	BZ-17HN
		6	2FWS-PSSP178A1	BZ-17HM
		7	2FWS-PSSP177A1	BZ-17HL
		8	2FWS-PSSP176A1	BZ-17HK
		9	2FWS-PSSP175A1	BZ-17HJ

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		10	2FWS-PSSH174A1	BZ-17HG
		11	2FWS-PSSP173A1	BZ-17HF
		12	2FWS-PSSP172A1	BZ-17HE
		13	2FWS-PSSP171A1	BZ-17HD
		14	2FWS-PSSP365A1	BZ-17HD
		15	2FWS-PSSP170A1	BZ-17HC
		16	2FWS-PSSH169A1	BZ-17HD
	47-15	1	2FWS-PSSP194A1	BZ-17JC
		2	2FWS-PSSP193A1	BZ-17JC
		3	2FWS-PSSP195A1	BZ-17JE
		4	2FWS-PSSP196A1	BZ-17JF
		5	2FWS-PSSP197A1	BZ-17JG
		6	2FWS-PSSP198A1	BZ-17JH
		7	2FWS-PSSH199A1	BZ-17JJ
		8	2FWS-PSSP374A1	BZ-17PF
		9	2FWS-PSSP200A1	BZ-17JK
		10	2FWS-PSSH201A1	BZ-17JL
		11	2FWS-PSSP203A1	BZ-17JN
		12	2FWS-PSSP202A1	BZ-17JM
		13	2FWS-PSSP204A1	BZ-17JP
		14	2FWS-PSSP205A1	BZ-17JQ
		15	2FWS-PSSP364A1	BZ-17JQ

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	47-16	4	2FWS-PSST033A1	BZ-17BJ
		5	2FWS-PSSH043A1	BZ-17BV
		6	2FWS-PSR366A1	BZ-17PA
		7	2FWS-PSSH233A1	BZ-17KU
		8	2FWS-PSSP232A1	BZ-17KT
		9	2FWS-PSR231A1	BZ-17KS
		10	2FWS-PSSP230A1	BZ-17KR
		11	2FWS-PSSH229A1	BZ-17KQ
		12	2FWS-PSSP228A1	BZ-17KP
		13	2FWS-PSSP227A1	BZ-17KN
		14	2FWS-PSSP226A1	BZ-17KM
		15	2FWS-PSSP225A1	BZ-17KL
		16	2FWS-PSR367A1	BZ-17PB
	47-17	1	2FWS-PSSH207A1	BZ-17JS
		2	2FWS-PSSP208A1	BZ-17JT
		3	2FWS-PSSP210A1	BZ-17JV
		4	2FWS-PSSP211A1	BZ-17JW
		5	2FWS-PSSH212A1	BZ-17JX
		6	2FWS-PSSP213A1	BZ-17JY
		7	2FWS-PSSP214A1	BZ-17JZ
		8	2FWS-PSSP215A1	BZ-17KA
		9	2FWS-PSSP216A1	BZ-17KB
		10	2FWS-PSSP217A1	BZ-17KC

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		11	2FWS-PSSH218A1	BZ-17KD
		12	2FWS-PSSP219A1	BZ-17KE
		13	2FWS-PSSP220A1	BZ-17KF
		14	2FWS-PSSP221A1	BZ-17KG
		15	2FWS-PSSP209A1	BZ-17JU
		16	2FWS-PSSH223A1	BZ-17KJ
		17	2FWS-PSSP224A1	BZ-17KK
	47-18	1	2FWS-PSSP235A1	BZ-17KW
		2	2FWS-PSSP234A1	BZ-17KV
		3	2FWS-PSSP236A1	BZ-17KX
		4	2FWS-PSSP237A1	BZ-17KY
		5	2FWS-PSSP238A1	BZ-17KZ
		6	2FWS-PSSP239A1	BZ-17LA
		7	2FWS-PSSH240A1	BZ-17LB
		8	2FWS-PSSP273A1	BZ-17PE
		9	2FWS-PSSP241A1	BZ-17LC
		10	2FWS-PSSH242A1	BZ-17LD
		11	2FWS-PSSP244A1	BZ-17LF
		12	2FWS-PSSP243A1	BZ-17LE
		13	2FWS-PSSP245A1	BZ-17LG
		14	2FWS-PSSP246A1	BZ-17LH
		15	2FWS-PSSP363A1	BZ-17LH

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
ICS	57-05	1	21CS-PSSP233A2	BZ-76CN
		2	21CS-PSSH190A2	BZ-76AS
		3	21CS-PSST204A2	BZ-76BJ
		4	21CS-PSSP232A2	BZ-76CM
		5	21CS-PSR191A2	BZ-76AT
		6	21CS-PSCT189A2	BZ-76AR
		7	21CS-PSR192A2	BZ-76AU
		8	21CS-PSR234A2	BZ-76CP
		9	21CS-PSA205A2	BZ-76BK
	57-06	1	21CS-PSR186A2	BZ-76AM
		2	21CS-PSR254A2	BZ-76DK
		3	21CS-PSSH182A2	BZ-76AH
		4	21CS-PSSH181A2	BZ-76AG
		5	21CS-PSR253A2	BZ-76DJ
		6	21CS-PSR252A2	BZ-76DH
		7	21CS-PSR183A2	BZ-76AJ
		8	21CS-PSR251A2	BZ-76DG
		9	21CS-PSR250A2	BZ-76DF
		10	21CS-PSST249A2	BZ-76DE
		11	21CS-PSSH024A2	BZ-76AF
		12	21CS-PSST248A2	BZ-76DD
		13	21CS-PSST311A2	BZ-76DD
		14	21CS-PSR247A2	BZ-76DC

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		15	21CS-PSSH023A2	BZ-76AE
		16	21CS-PSR245A2	BZ-76DA
		17	21CS-PSR296A2	BZ-76FA
		18	21CS-PSSH299A2	BZ-76FD
		19	21CS-PSSP298A2	BZ-76FC
		20	21CS-PSST299A2	BZ-76FB
	57-07	1	21CS-PSR292A1	BZ-76EW
		2	21CS-PSST288A1	BZ-76ET
		3	21CS-PSST293A1	BZ-76EX
		4	21CS-PSR291A1	BZ-76EV
		5	21CS-PSR287A1	BZ-76ES
		6	21CS-PSR286A1	BZ-76ER
		7	21CS-PSSP285A1	BZ-76EQ
		8	21CS-PSR284A1	BZ-76EP
		9	21CS-PSSP289A1	BZ-76EU
		10	21CS-PSSP290A1	BZ-76EU
		11	21CS-PSSP307A1	BZ-76FN
		12	21CS-PSSH308A1	BZ-76FP
		13	21CS-PSSP309A1	BZ-76FQ
		14	21CS-PSSP310A1	BZ-76FQ
		15	21CS-PSSP312A1	BZ-76FR
		16	21CS-PSSH313A1	BZ-76FS
		17	21CS-PSSP314A1	BZ-76FT

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		18	21CS-PSSH319A1	BZ-76FY
		19	21CS-PSSP317A1	BZ-76FZ
		20	21CS-PSSP320A1	BZ-76FZ
		21	21CS-PSSP316A1	BZ-76FV
		22	21CS-PSSP318A1	BZ-76FV
		23	21CS-PSSH315A1	BZ-76FU
		24	21CS-PSSP322A1	BZ-76GB
		25	21CS-PSSP323A1	BZ-76GB
		26	21CS-PSSP321A1	BZ-76GA
	57-08	1	21CS-PSR273A2	BZ-76EC
		2	21CS-PSST240A2	BZ-76CV
		3	21CS-PSST022A2	BZ-76AD
		4	21CS-PSR014A2	BZ-76W
		5	21CS-PSSH010A2	BZ-76S
		6	21CS-PSR238A2	BZ-76CT
		7	21CS-PSA237A2	BZ-76CS
		8	21CS-PSST001A2	BZ-76H
		9	21CS-PSST236A2	BZ-76CR
		10	21CS-PSSP306A2	BZ-76FM
		11	21CS-PSST235A2	BZ-76CQ
		12	21CS-PSSP230A2	BZ-76CK
		13	21CS-PSSH003A2	BZ-76K
		14	21CS-PSST228A2	BZ-76CH

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		15	21CS-PSSH002A2	BZ-76J
	57-09	1	21CS-PSSH260A1	BZ-76DR
		2	21CS-PSSP261A1	BZ-76DS
		3	21CS-PSSP262A1	BZ-76DT
		4	21CS-PSSP263A1	BZ-76DU
		5	21CS-PSSP264A1	BZ-76DV
		6	21CS-PSSH265A1	BZ-76DW
		7	21CS-PSSP270A1	BZ-76DX
		8	21CS-PSSP266A1	BZ-76DX
		9	21CS-PSST267A1	BZ-76DY
		10	21CS-PSSP271A1	BZ-76DZ
		11	21CS-PSSP268A1	BZ-76DZ
		12	21CS-PSSP269A1	BZ-76EA
		13	21CS-PSR295A1	BZ-76EZ
		14	21CS-PSSP301A2	BZ-76FF
		15	21CS-PSR300A2	BZ-76FE
		16	21CS-PSSH275A2	BZ-76EE
		17	21CS-PSSP276A2	BZ-76EF
		18	21CS-PSSP277A2	BZ-76EG
		19	21CS-PSR278A2	BZ-76EH
		20	21CS-PSSH279A2	BZ-76EJ
		21	21CS-PSSP280A2	BZ-76EK
		22	21CS-PSST281A2	BZ-76EL

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		23	21CS-PSST282A2	BZ-76EM
		24	21CS-PSSP283A2	BZ-76EN
MSS	01-03	1	2MSS-PSSP073A4	BZ-2AS
		2	2MSS-PSSP217A4	BZ-2CD
		3	2MSS-PSSR216A4	BZ-2CC
		4	2MSS-PSSH508A4	BZ-2GD
		5	2MSS-PSSP210A4	BZ-2BZ
		6	2MSS-PSSP209A4	BZ-2BY
	01-04	1	2MSS-PSSP066A4	BZ-2AL
		2	2MSS-PSSP065A4	BZ-2AL
		3	2MSS-PSSH219A4	BZ-2CE
		4	2MSS-PSSP227A4	BZ-2CM
		5	2MSS-PSSH075A4	BZ-2BS
		6	2MSS-PSSP064A4	BZ-2AP
		7	2MSS-PSSP063A4	BZ-2AP
		8	2MSS-PSSH220A4	BZ-2CE
		9	2MSS-PSSP229A4	BZ-2CN
		10	2MSS-PSSP228A4	BZ-2CN
		11	2MSS-PSSP062A4	BZ-2AN
		12	2MSS-PSSP061A4	BZ-2AN
		13	2MSS-PSSH221A4	BZ-2CE
		14	2MSS-PSSP231A4	BZ-2CE

II of II

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		15	2MSS-PSSP230A4	BZ-2CP
		16	2MSS-PSSP059A4	BZ-2AL
		17	2MSS-PSSP060A4	BZ-2AL
		18	2MSS-PSSH218A4	BZ-2CE
		19	2MSS-PSSP226A4	BZ-2CL
		20	2MSS-PSSH074A4	BZ-2AT
	01-05	1	2MSS-PSSP378A4	BZ-2AR
		2	2MSS-PSSP071A4	BZ-2AR
		3	2MSS-PSR070A4	BZ-2AR
		4	2MSS-PSSR005A4	BZ-2AJ
		5	2MSS-PSSP052A4	BZ-2CS
		6	2MSS-PSSP051A4	BZ-2CS
		7	2MSS-PSSH003A4	BZ-2K
		8	2MSS-PSSP054A4	BZ-2CQ
		9	2MSS-PSSP053A4	BZ-2CQ
		10	2MSS-PSSP069A4	BZ-2AQ
		11	2MSS-PSSP068A4	BZ-2AQ
		12	2MSS-PSR067A4	BZ-2AQ
		13	2MSS-PSSH004A4	BZ-2L
		14	2MSS-PSSP056A4	BZ-2AH
		15	2MSS-PSSP055A4	BZ-2AH
		16	2MSS-PSSH006A4	BZ-2AK
		17	2MSS-PSSP058A4	BZ-2CR

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		18	2MSS-PSSP057A4	BZ-2CR
		19	2MSS-PSR072A4	BZ-2AS
		20	2MSS-PSSP379A4	BZ-2AS
	01-06	16	2MSS-PSSP122A4	BZ-2BC
		17	2MSS-PSSP120A4	BZ-2BL
		18	2MSS-PSSP121A4	BZ-2BM
	01-07	1	2MSS-PSSH107A4	BZ-2EG
		2	2MSS-PSSP141A4	BZ-2H
		3	2MSS-PSSP143A4	BZ-2K
		4	2MSS-PSSH154A4	BZ-2W
		5	2MSS-PSSH106A4	BZ-2EF
		6	2MSS-PSSP146A4	BZ-2N
		7	2MSS-PSSP148A4	BZ-2Q
		8	2MSS-PSSH105A4	BZ-2EE
		9	2MSS-PSSP147A4	BZ-2P
		10	2MSS-PSSP144A4	BZ-2L
		11	2MSS-PSSH101A4	BZ-2EA
		12	2MSS-PSSP142A4	BZ-2J
		13	2MSS-PSSH102A4	BZ-2EB
		14	2MSS-PSSP149A4	BZ-2R
		15	2MSS-PSSH103A4	BZ-2EC
		16	2MSS-PSSP150A4	BZ-2S

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		17	2MSS-PSSP426A4	BZ-2U
		18	2MSS-PSSP152A4	BZ-2U
		19	2MSS-PSSP151A4	BZ-2T
		20	2MSS-PSSH104A4	BZ-2ED
		21	2MSS-PSSP145A4	BZ-2M
	01-13	1	2MSS-PSSH337A1	BZ-2DS
		2	2MSS-PSSH338A1	BZ-2DS
		3	2MSS-PSR339A1	BZ-2DS
		4	2MSS-PSSP335A1	BZ-2DR
		5	2MSS-PSSP336A1	BZ-2DR
		6	2MSS-PSSP332A1	BZ-2DQ
		7	2MSS-PSSP333A1	BZ-2DQ
		8	2MSS-PSSP334A1	BZ-2DQ
		9	2MSS-PSSP330A1	BZ-2DP
		10	2MSS-PSSP331A1	BZ-2DP
		11		BZ-425LJ
		12	2MSS-PSSP427A1	BZ-2EE
		13	2MSS-PSSP348A1	BZ-2EE
		14	2MSS-PSSH349A1	BZ-2EE
		15	2MSS-PSR363A1	BZ-2EL
		16	2MSS-PSR364A1	BZ-2EM

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	01-14	1	2MSS-PSSP080A1	BZ-2DT
		2	2MSS-PSSH081A1	BZ-2DU
		3	2MSS-PSR340A1	BZ-2DW
		4	2MSS-PSSH341A1	BZ-2DX
		5	2MSS-PSSH352A1	BZ-2DX
		6	2MSS-PSSP353A1	BZ-2DY
		7	2MSS-PSSP342A1	BZ-2DY
		8	2MSS-PSSP343A1	BZ-2DZ
		9	2MSS-PSSP354A1	BZ-2DZ
		10	2MSS-PSSP344A1	BZ-2EA
		11	2MSS-PSSP345A1	BZ-2EB
		12	2MSS-PSSP355A1	BZ-2EF
		13	2MSS-PSSP346A1	BZ-2EC
		14	2MSS-PSSP082A1	BZ-2DV
		15	2MSS-PSSH347A1	BZ-2ED
		16	2MSS-PSR365A1	BZ-2EN
		17	2MSS-PSR366A1	BZ-2EP
		18		BZ-424ED
	01-15	1	2MSS-PSSH083A1	BZ-2CT
		2	2MSS-PSSP084A1	BZ-2CU
		3	2MSS-PSSP262A1	BZ-2CU
		4	2MSS-PSR085A1	BZ-2CV
		5	2MSS-PSSP251A1	BZ-2CW

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		6	2MSS-PSSP260A1	BZ-2CW
		7	2MSS-PSSH252A1	BZ-2CX
		8	2MSS-PSSH263A1	BZ-2CX
		9	2MSS-PSSP253A1	BZ-2CY
		10	2MSS-PSSP261A1	BZ-2CY
		11	2MSS-PSSP254A1	BZ-2CZ
		12	2MSS-PSSP255A1	BZ-2DA
		13	2MSS-PSSP256A1	BZ-2DB
		14	2MSS-PSSP257A1	BZ-2DC
		15	2MSS-PSSP259A1	BZ-2DE
		16	2MSS-PSSP267A1	BZ-2DE
		17	2MSS-PSSH258A1	BZ-2DD
		18	2MSS-PSSH266A1	BZ-2DD
		19	2MSS-PSR361A1	BZ-2EJ
		20	2MSS-PSR362A1	BZ-2EK
		21		BZ-424MC
	01-16	1	2MSS-PSSH308A1	BZ-2DF
		2	2MSS-PSSH318A1	BZ-2DF
		3	2MSS-PSSP309A1	BZ-2DG
		4	2MSS-PSR310A1	BZ-2DH
		5	2MSS-PSSP311A1	BZ-2DJ
		6	2MSS-PSSP312A1	BZ-2DJ
		7	2MSS-PSSP313A1	BZ-2DK

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		8	2MSS-PSSP314A1	BZ-2DK
		9	2MSS-PSSP315A1	BZ-2DK
		10	2MSS-PSSP316A1	BZ-2DL
		11	2MSS-PSSP320A1	BZ-2DL
		12	2MSS-PSSP317A1	BZ-2EE
		13	2MSS-PSSH319A1	BZ-2EE
		14	2MSS-PSR359A1	BZ-2EG
		15	2MSS-PSR360A1	BZ-2EH
		16		BZ-425LK
	01-17	1	2MSS-PSR368A4	BZ-2ER
		2	2MSS-PSR369A4	BZ-2GH
		3	2MSS-PSR370A4	BZ-2GJ
		4	2MSS-PSR371A4	BZ-2GK
	01-19			
	01-20	1	2MSS-PSR385A4	BZ-139BM
	01-21	1	2MSS-PSSP281A1	BZ-139Z
		2	2MSS-PSSP296A1	BZ-139AN
		3	2MCS-PSR279A1	BZ-139W
		4	2MSS-PSST328A1	BZ-139BH
		5	2MSS-PSSP264A1	BZ-139H
		6	2MSS-PSR278A1	BZ-139BK

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		7	2MSS-PSR277A1	BZ-139U
		8	2MSS-PSSP321A1	BZ-139BA
		9	2MSS-PSSP284A1	BZ-139AC
		10	2MSS-PSST272A1	BZ-139P
		11	2MSS-PSSP283A1	BZ-139AB
		12	2MSS-PSR290A1	BZ-139AG
		13	2MSS-PSST273A1	BZ-139Q
		14	2MSS-PSSP268A1	BZ-139K
		15	2MSS-PSST274A1	BZ-139R
	47-A	1	2MSS-PSSP301A1	BZ-139AT
		2	2MSS-PSR306A1	BZ-139AY
		3	2MSS-PSSP302A1	BZ-139AU
		4	2MSS-PSST307A1	BZ-139AZ
		5	2MSS-PSSP304A1	BZ-139AW
		6	2MSS-PSST297A1	BZ-139AP
		7	2MSS-PSST323A1	BZ-139BC
		8	2MSS-PSSP291A1	BZ-139AH
	106-A	1	2MSS-PSSP428A1	BZ-2FT
		2	2MSS-PSST429A1	BZ-2FU
		3	2MSS-PSSH430A1	BZ-2FV
		4	2MSS-PSST425A1	BZ-2FS
		5	2MSS-PSST424A1	BZ-2FS

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		6	2MSS-PSSH423A1	BZ-2FR
		7	2MSS-PSSP422A1	BZ-2FR
		8	2MSS-PSR416A1	BZ-2FQ
		9	2MSS-PSSP414A1	BZ-2FP
		10	2MSS-PSSP413A1	BZ-2FP
	107-A	1	2MSS-PSSP382A1	BZ-2EY
		2	2MSS-PSST380A1	BZ-2EW
		3	2MSS-PSSP383A1	BZ-2EZ
		4	2MSS-PSST399A1	BZ-2EX
		5	2MSS-PSSP392A1	BZ-2FB
		6	2MSS-PSSH394A1	BZ-2FC
		7	2MSS-PSSP390A1	BZ-2FA
		8	2MSS-PSSP391A1	BZ-2FA
		9	2MSS-PSSP412A1	BZ-2FN
		10	2MSS-PSSP396A1	BZ-2FD
		11	2MSS-PSSH397A1	BZ-2FE
		12	2MSS-PSSH408A1	BZ-2FJ
		13	2MSS-PSSP400A1	BZ-2FF
		14	2MSS-PSSP411A1	BZ-2FM
		15	2MSS-PSSP402A1	BZ-2FG
		16	2MSS-PSSH409A1	BZ-2FK
		17	2MSS-PSSP410A1	BZ-2FL
		18	2MSS-PSST398A1	BZ-2EW

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		19	2MSS-PSST381A1	BZ-2EX
		20	2MSS-PSSP393A1	BZ-2FB
		21	2MSS-PSSP395A1	BZ-2FD
		22	2MSS-PSSP401A1	BZ-2FF
		23	2MSS-PSSP403A1	BZ-2FG
	110-A	1	2MSS-PSST303A1	BZ-139AV
		2	2MSS-PSSP305A1	BZ-139AX
		3	2MSS-PSSP271A1	BZ-139N
		4	2MSS-PSSP440A1	BZ-139CF
		5	2MSS-PSR439A1	BZ-139CE
		6	2MSS-PSST438A1	BZ-139CD
		8	2MSS-PSR435A1	BZ-139CA
		11	2MSS-PSSP443A1	BZ-139CG
		12	2MSS-PSSP442A1	BZ-139CG
		13	2MSS-PSR433A1	BZ-139BY
		14	2MSS-PSST432A1	BZ-139BX
		15	2MSS-PSST431A1	BZ-139BW
		16	2MSS-PSSP298A1	BZ-139AQ
		17	2MSS-PSSP292A1	BZ-139AJ
		18	2MSS-PSST326A1	BZ-139BF

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	110-B	1	2MSS-PSSP294A1	BZ-139AL
		2	2MSS-PSST289A1	BZ-139AF
		3	2MSS-PSST276A1	BZ-139T
		4	2MSS-PSST327A1	BZ-139BG
		5	2MSS-PSST450A1	BZ-139CH
		6	2MSS-PSST275A1	BZ-139S
		7	2MSS-PSSP280A1	BZ-139Y
		8	2MSS-PSST287A1	BZ-139AE
		9	2MSS-PSST285A1	BZ-139AD
		10	2MSS-PSST441A1	BZ-139CH
		11	2MSS-PSST288A1	BZ-139AE
		12	2MSS-PSST286A1	BZ-139AD
RCS	64-00, Sht 1 of 6	1	2RCS-PSSP029A1	BZ-70Q
		2	2RCS-PSSP030A1	BZ-70Q
		3	2RCS-PSSH005A1	BZ-70J
		4	2RCS-PSSP055A1	BZ-70AB
		5	2RCS-PSSP056A1	BZ-70AB
		6	2RCS-PSSP044A1	BZ-70V
		7	2RCS-PSSP042A1	BZ-70T
		8	2RCS-PSSP046A1	BZ-70X
		9	2RCS-PSSH011A1	BZ-70L
		10	2RCS-PSSH012A1	BZ-70L
		11	2RCS-PSSH010A1	BZ-70L

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		12	2RCS-PSSH009A1	BZ-70L
		13	2RCS-PSSP061A1	BZ-70AF
		14	2RCS-PSSP063A1	BZ-70AH
		15	2RCS-PSSP062A1	BZ-70AG
		16	2RCS-PSSH006A1	BZ-70K
		17	2RCS-PSSP021A1	BZ-70P
		18	2RCS-PSSP022A1	BZ-70P
		19	2RCS-PSST059A1	BZ-70AD
		20	2RCS-RA2A1	Note 5
	64-00, Sht 2 of 6	1	2RCS-PSSP049A1	BZ-70AA
		2	2RCS-PSSP053A1	BZ-70AA
		3	2RCS-PSSH018A1	BZ-70M
		4	2RCS-PSSP047A1	BZ-70Y
		5	2RCS-PSSP019A1	BZ-70N
		6	2RCS-PSSP051A1	BZ-70N
		7	2RCS-PSSP023A1	BZ-70P
		8	2RCS-PSSP024A1	BZ-70P
		9	2RCS-PSSH001A1	BZ-70H
		10	2RCS-PSSH002A1	BZ-70H
		11	2RCS-PSSP031A1	BZ-70Q
		12	2RCS-PSSP032A1	BZ-70Q
	64-00, Sht 3 of 6	1	2RCS-PSSP037A1	BZ-70R

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		2	2RCS-PSSP067A1	BZ-70R
		3	2RCS-PSSP038A1	BZ-70R
		4	2RCS-PSSP029A1	BZ-70R
	64-00, Sht 4 of 6	1	2RCS-PSSP033A1	BZ-70Q
		2	2RCS-PSSP034A1	BZ-70Q
		3	2RCS-PSSH003A1	BZ-70J
		4	2RCS-PSSH004A1	BZ-70J
		5	2RCS-PSSP025A1	BZ-70P
		6	2RCS-PSSP026A1	BZ-70P
		7	2RCS-PSSP057A1	BZ-70AC
		8	2RCS-PSSP058A1	BZ-70AC
		9	2RCS-PSSP043A1	BZ-70U
		10	2RCS-PSSP045A1	BZ-70W
		11	2RCS-PSSP041A1	BZ-70S
		12	2RCS-PSSH015A1	BZ-70L
		13	2RCS-PSSH016A1	BZ-70L
		14	2RCS-PSSH014A1	BZ-70L
		15	2RCS-PSSH013A1	BZ-70L
		16	2RCS-PSSP065A1	BZ-70AK
		17	2RCS-PSSP063A1	BZ-70AH
		18	2RCS-PSSP064A1	BZ-70AJ
		19	2RCS-PSST060A1	BZ-70AE
		20	2RCS-RB2A1	Note 5

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	64-00, Sht 5 of 6	1	2RCS-PSSP054A1	BZ-70AA
		2	2RCS-PSSP050A1	BZ-70AA
		3	2RCS-PSSP048A1	BZ-70Z
		4	2RCS-PSSH017A1	BZ-70M
		5	2RCS-PSSP020A1	BZ-70N
		6	2RCS-PSSP052A1	BZ-70N
		7	2RCS-PSSP027A1	BZ-70P
		8	2RCS-PSSP028A1	BZ-70P
		9	2RCS-PSSH007A1	BZ-70H
		10	2RCS-PSSH008A1	BZ-70H
		11	2RCS-PSSP035A1	BZ-70Q
		12	2RCS-PSSP036A1	BZ-70Q
	64-00, Sht 6 of 6	1	2RCS-PSSP040A1	BZ-70R
		2	2RCS-PSSP070A1	BZ-70R
		3	2RCS-PSSP068A1	BZ-70R
		4	2RCS-PSSP039A1	BZ-70R
RDS	65-00, Sht 1 of 2	1	SP-1A	
		2	SP-3A	
		3	SP-4A	
		4	SP-6A	
		5	SP-8A	
		6	SP-9A	

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		7	SP-11A	
		8	SP-12A	
		9	SP-14A	
		10	SP-15A	
		11	SP-16A	
		12	SP-18A	
		13	SP-22A	
		14	SP-24A	
		15	SP-26A	
		16	SP-31A	
	65-00, Sht 2 of 2	1	SP-1B	
		2	SP-2B	
		3	SP-3B	
		4	SP-4B	
		5	SP-5B	
		6	SP-7B	
		7	SP-8B	
		8	SP-10B	
		9	SP-12B	
		10	SP-13B	
		11	SP-15B	
		12	SP-16B	
		13	SP-18B	

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		14	SP-19B	
		15	SP-23B	
		16	SP-25B	
		17	SP-31B	
RHS	66-05	1	2RHS-PSST705A2	BZ-13BT
		2	2RHS-PSST235A2	BZ-13BT
		3	2RHS-PSSH697A2	BZ-13CW
		4	2RHS-PSST234A2	BZ-13BS
		5	2RHS-PSST698A2	BZ-13CX
		6	2RHS-PSSH233A2	BZ-13BL
		7	2RHS-PSSP699A2	BZ-13CY
		8	2RHS-PSST700A2	BZ-13CZ
		9	2RHS-PSSH232A2	BZ-13BR
		10	2RHS-PSST231A2	BZ-13BQ
		11	2RHS-PSSP280A2	BZ-13BP
		12	2RHS-PSST229A2	BZ-13BN
		13	2RHS-PSSP228A2	BZ-13BM
		14	2RHS-PSA194A2	BZ-13BA
		15	2RHS-PSR192A2	BZ-13AY
		16	2RHS-PSR1027A2	BZ-13ALV
		17	2RHS-PSSH171A2	BZ-13Y
		18	2RHS-PSSP172A2	BZ-13Z
		19	2RHS-PSST190A2	BZ-13AW

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		20	2RHS-PSR173A2	BZ-13AA
	66-06	1	2RHS-PSST996A2	BZ-13DJ
		2	2RHS-PSST997A2	BZ-13DK
		3	2RHS-PSR174A2	BZ-13AB
		4	2RHS-PSSP998A2	BZ-13DL
		5	2RHS-PSST175A2	BZ-13AC
		6	2RHS-PSST189A2	BZ-13AV
		7	2RHS-PSST188A2	BZ-13AU
		8	2RHS-PSST185A2	BZ-13AS
		9	2RHS-PSST186A2	BZ-13AS
		10	2RHS-PSR196A2	BZ-13J
		11	2RHS-PSA195A2	BZ-13BB
		12	2RHS-PSST875A2	BZ-13DG
		13	2RHS-PSST871A2	BZ-13DF
		14	2RHS-PSST855A2	BZ-13DE
	66-07	1	2RHS-PSA128A2	BZ-13R
		2	2RHS-PSR119A2	BZ-13J
		3	2RHS-PSR129A2	BZ-13S
		4	2RHS-PSR118A2	BZ-13H
		5	2RHS-PSST120A2	BZ-13K
		6	2RHS-PSR121A2	BZ-13L
		7	2RHS-PSSP122A2	BZ-13BC

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		8	2RHS-PSR123A2	BZ-13M
		9	2RHS-PSR124A2	BZ-13N
		10	2RHS-PSSH125A2	BZ-13P
		11	2RHS-PSSP126A2	BZ-13BD
		12	2RHS-PSSP127A2	BZ-13Q
	66-09	1	2RHS-PSSP257A2	BZ-13BX
		2	2RHS-PSSP258A2	BZ-13BY
		3	2RHS-PSSH259A2	BZ-13BZ
		4	2RHS-PSST702A2	BZ-13CC
		5	2RHS-PSST262A2	BZ-13CC
		6	2RHS-PSST682A2	BZ-13CF
		7	2RHS-PSR633A2	BZ-13CG
		8	2RHS-PSST733A2	BZ-13CH
		9	2RHS-PSST684A2	BZ-13CH
		10	2RHS-PSSP685A2	BZ-13CT
		11	2RHS-PSST686A2	BZ-13CU
		12	2RHS-PSSH687A2	BZ-13CV
		13	2RHS-PSSP688A2	BZ-13DA
		14	2RHS-PSSP689A2	BZ-13DB
		15	2RHS-PSSP690A2	BZ-13DC
		16	2RHS-PSSP691A2	BZ-13DD
		17	2RHS-PSST692A2	BZ-13CR
		18	2RHS-PSST693A2	BZ-13CR

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		19	2RHS-PSST694A2	BZ-13CS
		20	2RHS-PSST695A2	BZ-13CS
		21	2RHS-PSA876A2	BZ-13DH
		22	2RHS-PSR163A2	BZ-13AF
		23	2RHS-PSST1012A2	BZ-13DM
		24	2RHS-PSST1013A2	BZ-13DN
		25	2RHS-PSST1014A2	BZ-13DP
		26	2RHS-PSSP675A2	BZ-13CE
		27	2RHS-PSSH674A2	BZ-13CD
	66-10	1	2RHS-PSSP1028A2	BZ-13ALW
		2	2RHS-PSR164A2	BZ-13AG
		3	2RHS-PSR179A2	BZ-13AL
		4	2RHS-PSST165A2	BZ-13AH
		5	2RHS-PSR166A2	BZ-13AJ
		6	2RHS-PSR178A2	BZ-13AK
		7	2RHS-PSA750A2	BZ-13CP
		8	2RHS-PSSH745A2	BZ-13CN
		9	2RHS-PSSP737A2	BZ-13CK
		10	2RHS-PSSH736A2	BZ-13CJ
		11	2RHS-PSSP738A2	BZ-13CL
	66-11	1	2RHS-PSR180A2	BZ-13AM
		2	2RHS-PSR181A2	BZ-13AN

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		3	2RHS-PSST182A2	BZ-13AP
		4	2RHS-PSST183A2	BZ-13AQ
		5	2RHS-PSR184A2	BZ-13AR
		6	2RHS-PSST759A2	BZ-13CM
		7	2RHS-PSA765A2	BZ-13CQ
	66-13	1	2RHS-PSSH877A2	BZ-71AFT
		2	2RHS-PSR878A2	BZ-71AFU
		3	2RHS-PSSP885A2	BZ-71AGB
		4	2RHS-PSSP880A2	BZ-71AFW
		5	2RHS-PSSP879A2	BZ-71AFV
		6	2RHS-PSSH052A2	BZ-71BL
		7	2RHS-PSSP313A2	BZ-71KE
		8	2RHS-PSSP886A2	BZ-71AGC
		9	2RHS-PSSH053A2	BZ-71BM
		10	2RHS-PSSP314A2	BZ-71KF
		11	2RHS-PSSP315A2	BZ-71KF
		12	2RHS-PSSP881A2	BZ-71AFX
		13	2RHS-PSSP887A2	BZ-71AGD
		14	2RHS-PSSP884A2	BZ-71AGA
		16	2RHS-PSSP316A2	BZ-71KH
		17	2RHS-PSSP890A2	BZ-71AGG
		18	2RHS-PSSH054A2	BZ-71RN
		20	2RHS-PSSP321A2	BZ-71KN

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		21	2RHS-PSSP882A2	BZ-71AFY
		22	2RHS-PSSP883A2	BZ-71AFZ
		23	2RHS-PSSH055A2	BZ-71BP
		24	2RHS-PSA312A2	BZ-71KD
	66-14	1	2RHS-PSSP626A2	BZ-71WH
		2	2RHS-PSSH625A2	BZ-71WG
		3	2RHS-PSSP719A2	BZ-71ZZ
		4	2RHS-PSSP718A2	BZ-71ZY
		5	2RHS-PSSP707A2	BZ-71ZM
		6	2RHS-PSSP715A2	BZ-71ZV
		7	2RHS-PSSH092A2	BZ-71DC
		8	2RHS-PSSP716A2	BZ-71ZW
		9	2RHS-PSSH091A2	BZ-71DB
		10	2RHS-PSSP094A2	BZ-71DE
		11	2RHS-PSST162A2	BZ-71FJ
		12	2RHS-PSST131A2	BZ-71EF
		13	2RHS-PSST709A2	BZ-71ZP
		14	2RHS-PSSH751A2	BZ-71ABD
		15	2RHS-PSSP767A2	BZ-71ABP
		16	2RHS-PSSP743A2	BZ-71AAW
		17	2RHS-PSSP744A2	BZ-71AAW
		18	2RHS-PSSP739A2	BZ-71AAS
		19	2RHS-PSSP746A2	BZ-71AAY

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		20	2RHS-PSSH095A2	BZ-71DF
		21	2RHS-PSSP754A2	BZ-71ABF
		22	2RHS-PSST748A2	BZ-71ABA
		23	2RHS-PSSP724A2	BZ-71AAE
	66-15	1	2RHS-PSSH088A2	BZ-71CY
		2	2RHS-PSSH089A2	BZ-71CZ
		3	2RHS-PSSH090A2	BZ-71DA
		10	2RHS-PSST711A2	BZ-71ZR
		11	2RHS-PSST712A2	BZ-71ZS
		12	2RHS-PSST713A2	BZ-71ZT
		13	2RHS-PSSP714A2	BZ-71ZU
		14	2RHS-PSST717A2	BZ-71ZX
	66-16	1	2RHS-PSST721A2	BZ-71AAB
		2	2RHS-PSST130A2	BZ-71EE
		3	2RHS-PSA768A2	BZ-71ABQ
		4	2RHS-PSST137A2	BZ-71EM
		5	2RHS-PSST138A2	BZ-71EN
		6	2RHS-PSST279A2	BZ-71HW
		7	2RHS-PSSP280A2	BZ-71HX
		8	2RHS-PSSP281A2	BZ-71HY
		9	2RHS-PSSH075A2	BZ-71CK
		10	2RHS-PSR278A2	BZ-71HV

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		11	2RHS-PSA291A2	BZ-71JH
		12	2RHS-PSR290A2	BZ-71JG
		13	2RHS-PSST289A2	BZ-71JF
		14	2RHS-PSST292A2	BZ-71JF
		15	2RHS-PSSH288A2	BZ-71JE
	66-17	1	2RHS-PSST272A2	BZ-71HP
		2	2RHS-PSA015A2	BZ-71X
		3	2RHS-PSST016A2	BZ-71Y
		4	2RHS-PSST464A2	BZ-71QZ
		5	2RHS-PSST472A2	BZ-71RH
		6	2RHS-PSR019A2	BZ-71AB
		7	2RHS-PSST469A2	BZ-71RE
		8	2RHS-PSST020A2	BZ-71AC
		9	2RHS-PSSP021A2	BZ-71AD
		10	2RHS-PSST022A2	BZ-71AE
		11	2RHS-PSST024A2	BZ-71AG
		12	2RHS-PSR025A2	BZ-71AH
		13	2RHS-PSST471A2	BZ-71RG
	66-18	1	2RHS-PSR287A2	BZ-71JD
		2	2RHS-PSR286A2	BZ-71JD
		3	2RHS-PSA285A2	BZ-71JB
		4	2RHS-PSR392A2	BZ-71NG

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		5	2RHS-PSSH388A2	BZ-71NC
		6	2RHS-PSSP389A2	BZ-71ND
		7	2RHS-PSSH377A2	BZ-71MR
		8	2RHS-PSR404A2	BZ-71NV
		9	2RHS-PSR327A2	BZ-71KU
		10	2RHS-PSSP326A2	BZ-71KT
		11	2RHS-PSSH325A2	BZ-71KS
		12	2RHS-PSSP324A2	BZ-71KR
		13	2RHS-PSSH323A2	BZ-71KQ
	66-19	1	2RHS-PSSP391A2	BZ-71NF
		2	2RHS-PSST393A2	BZ-71NH
		3	2RHS-PSA322A2	BZ-71KP
		4	2RHS-PSSP1001A2	BZ-71ALD
		5	2RHS-PSR158A2	BZ-71FD
		6	2RHS-PSR394A2	BZ-71NJ
		7	2RHS-PSR403A2	BZ-71NT
		8	2RHS-PSST390A2	BZ-71NE
		9	2RHS-PSSH378A2	BZ-71MS
		10	2RHS-PSSP1063A2	BZ-71ANC
	66-20	1	2RHS-PSR1036A2	BZ-71AME
		2	2RHS-PSR1034A2	BZ-71AMC
		3	2RHS-PSR244A2	BZ-71GR

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		4	2RHS-PSR243A2	BZ-71GQ
		5	2RHS-PSSP242A2	BZ-71GP
		6	2RHS-PSR161A2	BZ-71FH
		7	2RHS-PSSH160A2	BZ-71FG
		8	2RHS-PSSP241A2	BZ-71GN
		9	2RHS-PSSP282A2	BZ-71GN
		10	2RHS-PSR240A2	BZ-71GM
		11	2RHS-PSA239A2	BZ-71GL
		12	2RHS-PSST056A2	BZ-71BQ
		13	2RHS-PSR057A2	BZ-71BR
		14	2RHS-PSST889A2	BZ-71AGF
		15	2RHS-PSSP319A2	BZ-71KL
		16	2RHS-PSSP888A2	BZ-71AGE
		17	2RHS-PSSP317A2	BZ-71KJ
		18	2RHS-PSSP318A2	BZ-71KK
		19	2RHS-PSSH058A2	BZ-71BS
	66-21	1	2RHS-PSSH153A2	BZ-71EY
		2	2RHS-PSSP152A2	BZ-71EX
		3	2RHS-PSSP263A2	BZ-71HE
		4	2RHS-PSSP264A2	BZ-71HF
		5	2RHS-PSSP1030A2	BZ-71ALY
		6	2RHS-PSSP265A2	BZ-71HG
		7	2RHS-PSST266A2	BZ-71HH

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		8	2RHS-PSSH157A2	BZ-71FC
		9	2RHS-PSSP267A2	BZ-71HJ
		10	2RHS-PSSP268A2	BZ-71HK
		11	2RHS-PSSH156A2	BZ-71FB
		12	2RHS-PSSP1054A2	BZ-71AMV
		13	2RHS-PSSP269A2	BZ-71HL
		14	2RHS-PSSP270A2	BZ-71HM
		15	2RHS-PSA920A2	BZ-71AHE
		16	2RHS-PSST499A2	BZ-71SH
		17	2RHS-PSSH080A2	BZ-71CQ
		18	2RHS-PSSP922A2	BZ-71AHG
		19	2RHS-PSSP497A2	BZ-71SF
		20	2RHS-PSSP501A2	BZ-71SK
		21	2RHS-PSSP937A2	BZ-71AHW
		22	2RHS-PSSP918A2	BZ-71AHC
		23	2RHS-PSST139A2	BZ-71EP
		24	2RHS-PSSP919A2	BZ-71AHD
		25	2RHS-PSSP500A2	BZ-71SJ
		26	2RHS-PSSH087A2	BZ-71CX
		27	2RHS-PSSP912A2	BZ-71AHA
	66-22	1	2RHS-PSSP915A2	BZ-71AHB
		2	2RHS-PSSP916A2	BZ-71AHB
		3	2RHS-PSSP917A2	BZ-71AHB

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		4	2RHS-PSSH082A2	BZ-71CS
		5	2RHS-PSST519A2	BZ-71TA
		6	2RHS-PSSP505A2	BZ-71SN
		7	2RHS-PSSP516A2	BZ-71SX
		8	2RHS-PSSP726A2	BZ-71AAH
		9	2RHS-PSSP725A2	BZ-71AAG
		10	2RHS-PSSH081A2	BZ-71CR
		11	2RHS-PSSP515A2	BZ-71SW
		12	2RHS-PSSP518A2	BZ-71SZ
		13	2RHS-PSSH078A2	BZ-71CN
		14	2RHS-PSSP727A2	BZ-71AAJ
		15	2RHS-PSSP728A2	BZ-71AAJ
		16	2RHS-PSSP730A2	BZ-71AAL
		17	2RHS-PSST729A2	BZ-71AAL
		18	2RHS-PSSH079A2	BZ-71CP
		19	2RHS-PSSP913A2	BZ-71AHA
	66-23	1	2RHS-PSSP513A2	BZ-71SU
		2	2RHS-PSSP509A2	BZ-71SR
		3	2RHS-PSSP909A2	BZ-71AGX
		4	2RHS-PSSH086A2	BZ-71CW
		5	2RHS-PSSP911A2	BZ-71AGZ
		6	2RHS-PSSP910A2	BZ-71AGY
		7	2RHS-PSSP514A2	BZ-71SV

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		8	2RHS-PSSP507A2	BZ-71SP
		9	2RHS-PSSP506A2	BZ-71SP
		10	2RHS-PSSH085A2	BZ-71CV
		11	2RHS-PSSP732A2	BZ-71AAP
		12	2RHS-PSSP908A2	BZ-71AAP
		13	2RHS-PSSP508A2	BZ-71SQ
		14	2RHS-PSSH084A2	BZ-71CU
		15	2RHS-PSSP491A2	BZ-71RS
		16	2RHS-PSST473A2	BZ-71RJ
		17	2RHS-PSSP511A2	BZ-71SM
		18	2RHS-PSSP510A2	BZ-71SS
		19	2RHS-PSSP502A2	BZ-71SL
		20	2RHS-PSSP503A2	BZ-71SL
		21	2RHS-PSSH083A2	BZ-71CT
	66-24	1	2RHS-PSSH066A2	BZ-71CA
		2	2RHS-PSST818A2	BZ-71AEK
		3	2RHS-PSSP872A2	BZ-71AFQ
		5	2RHS-PSSH065A2	BZ-71BZ
		6	2RHS-PSSP817A2	BZ-71ADN
		7	2RHS-PSSP777A2	BZ-71ABW
		8	2RHS-PSSH064A2	BZ-71BY
		9	2RHS-PSSP771A2	BZ-71ABT
		10	2RHS-PSSP772A2	BZ-71ABT

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		11	2RHS-PSSH073A2	BZ-71BX
		12	2RHS-PSST773A2	BZ-71ABU
		13	2RHS-PSST774A2	BZ-71ABU
		14	2RHS-PSSH062A2	BZ-71BW
		15	2RHS-PSSP704A2	BZ-71ZJ
		16	2RHS-PSSP778A2	BZ-71ABX
		17	2RHS-PSST841A2	BZ-71AEL
		18	2RHS-PSSH061A2	BZ-71BV
		19	2RHS-PSSP775A2	BZ-71ABV
		20	2RHS-PSSP776A2	BZ-71ABV
		21	2RHS-PSSP847A2	BZ-71AEM
		22	2RHS-PSST770A2	BZ-71ABS
		23	2RHS-PSSH059A2	BZ-71BT
		24	2RHS-PSST819A2	BZ-71ADP
		25	2RHS-PSSP785A2	BZ-71ACE
	66-25	1	2RHS-PSSH068A2	BZ-71CC
		2	2RHS-PSST678A2	BZ-71ZE
		3	2RHS-PSSP868A2	BZ-71AFM
		4	2RHS-PSSH069A2	BZ-71CD
		5	2RHS-PSSP837A2	BZ-71AEH
		6	2RHS-PSSP838A2	BZ-71AEH
		7	2RHS-PSSH070A2	BZ-71CE
		8	2RHS-PSSH071A2	BZ-71CF

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		9	2RHS-PSST791A2	BZ-71ACL
		10	2RHS-PSST072A2	BZ-71AG
		11	2RHS-PSA048A2	BZ-71BG
		12	2RHS-PSST047A2	BZ-71BF
		13	2RHS-PSST046A2	BZ-71BE
		14	2RHS-PSSP045A2	BZ-71BD
		15	2RHS-PSSP044A2	BZ-71BC
		16	2RHS-PSR043A2	BZ-71BB
		17	2RHS-PSR042A2	BZ-71BA
		18	2RHS-PSSP041A2	BZ-71AZ
	66-26	1	2RHS-PSST040A2	BZ-71AY
		2	2RHS-PSST039A2	BZ-71AX
		3	2RHS-PSSH038A2	BZ-71AW
		4	2RHS-PSSH037A2	BZ-71AV
		5	2RHS-PSST036A2	BZ-71AU
		6	2RHS-PSSH035A2	BZ-71AT
		7	2RHS-PSSP034A2	BZ-71AS
		8	2RHS-PSSP033A2	BZ-71AR
		9	2RHS-PSSP032A2	BZ-71AQ
		10	2RHS-PSSP031A2	BZ-71AP
		11	2RHS-PSA030A2	BZ-71AN
		12	2RHS-PSSP991A2	BZ-71AKX
		13	2RHS-PSR225A2	BZ-71HC

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		14	2RHS-PSSP992A2	BZ-71AKY
		15	2RHS-PSR254A2	BZ-71HB
		16	2RHS-PSR253A2	BZ-71HA
		17	2RHS-PSSH252A2	BZ-71GZ
		18	2RHS-PSST251A2	BZ-71GY
		19	2RHS-PSST250A2	BZ-71GX
		20	2RHS-PSST249A2	BZ-71GW
		21	2RHS-PSSP248A2	BZ-71GV
		22	2RHS-PSR247A2	BZ-71GU
		23	2RHS-PSSH246A2	BZ-71GT
		24	2RHS-PSSP245A2	BZ-71GS
	66-27	1	2RHS-PSSP049A2	BZ-71BH
		2	2RHS-PSSH050A2	BZ-71BJ
		3	2RHS-PSA051A2	BZ-71BK
		4	2RHS-PSSP552A2	BZ-71TX
		5	2RHS-PSST492A2	BZ-71SA
		6	2RHS-PSST483A2	BZ-71RT
		7	2RHS-PSSH100A2	BZ-71DL
		8	2RHS-PSST487A2	BZ-71RX
		9	2RHS-PSSP495A2	BZ-71SD
		10	2RHS-PSSH107A2	BZ-71DT
		11	2RHS-PSSP480A2	BZ-71RQ
		12	2RHS-PSST554A2	BZ-71TZ

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		13	2RHS-PSST132A2	BZ-71EG
		14	2RHS-PSA788A2	BZ-71ACH
		15	2RHS-PSST538A2	BZ-71TP
		16	2RHS-PSR151A2	BZ-71EW
	66-28	1	2RHS-PSR029A2	BZ-71AM
		2	2RHS-PSSP525A2	BZ-71TE
		3	2RHS-PSST524A2	BZ-71TD
		4	2RHS-PSR027A2	BZ-71AK
		5	2RHS-PSST856A2	BZ-71AFB
		6	2RHS-PSST028A2	BZ-71AL
		7	2RHS-PSST533A2	BZ-71TI
		8	2RHS-PSST541A2	BZ-71TK
		9	2RHS-PSST753A2	BZ-71TR
		10	2RHS-PSSH026A2	BZ-71AJ
		11	2RHS-PSST530A2	BZ-71TJ
		12	2RHS-PSST527A2	BZ-71TG
	66-29	1	2RHS-PSSH099A2	BZ-71DK
		2	2RHS-PSSP801A2	BZ-71ADX
		3	2RHS-PSSP827A2	BZ-71ADX
		4	2RHS-PSSP825A2	BZ-71ADW
		5	2RHS-PSSH098A2	BZ-71DJ
		6	2RHS-PSSP802A2	BZ-71ACX

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		7	2RHS-PSST735A3	BZ-71AAR
		8	2RHS-PSST117A3	BZ-71ED
		9	2RHS-PSSP159A3	BZ-71FE
		10	2RHS-PSSP803A2	BZ-71ACY
		11	2RHS-PSST114A2	BZ-71EA
		12	2RHS-PSST810A2	BZ-71ADF
		13	2RHS-PSSP839A2	BZ-71AEJ
		14	2RHS-PSSP840A2	BZ-71AEJ
		15	2RHS-PSA805A2	BZ-71ADA
		16	2RHS-PSSH097A2	BZ-71DH
		17	2RHS-PSSP807A2	BZ-71ADC
		18	2RHS-PSST101A2	BZ-71DM
		19	2RHS-PSSP809A2	BZ-71ADE
	66-30	1	2RHS-PSST115A2	BZ-71EB
		2	2RHS-PSST116A2	BZ-71EC
		3	2RHS-PSST821A2	BZ-71ADR
		4	2RHS-PSA672A2	BZ-71ZB
		5	2RHS-PSST555A2	BZ-71UA
		6	2RHS-PSST556A2	BZ-71UA
		7	2RHS-PSST474A2	BZ-71RK
		8	2RHS-PSST478A2	BZ-71RN
		9	2RHS-PSSP479A2	BZ-71RN

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	66-31	1	2RHS-PSSH102A2	BZ-71DN
		2	2RHS-PSA823A2	BZ-71ADT
		3	2RHS-PSSP822A2	BZ-71ADS
		4	2RHS-PSST824A2	BZ-71ADU
		5	2RHS-PSSP830A2	BZ-71ADZ
		6	2RHS-PSST925A2	BZ-71AHK
		7	2RHS-PSST926A2	BZ-71AHK
		8	2RHS-PSST927A2	BZ-71AHM
		9	2RHS-PSSP710A2	BZ-71ZQ
		10	2RHS-PSSP800A2	BZ-71ACV
		11	2RHS-PSST928A2	BZ-71AHN
		12	2RHS-PSSH794A2	BZ-71ACP
		13	2RHS-PSSP793A2	BZ-71ACN
		14	2RHS-PSR930A2	BZ-71AHQ
		15	2RHS-PSST867A2	BZ-71AFN
		16	2RHS-PSR931A2	BZ-71AHR
		17	2RHS-PSSP864A2	BZ-71AFK
		18	2RHS-PSSH865A2	BZ-71AFL
		19	2RHS-PSSH851A2	BZ-71AEP
		20	2RHS-PSSP852A2	BZ-71AEQ
		21	2RHS-PSSP929A2	BZ-71AHP
		22	2RHS-PSSH891A2	BZ-71AGH
		23	2RHS-PSSP906A2	BZ-71AGV

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		24	2RHS-PSST990A2	BZ-71AKW
		25	2RHS-PSSP989A2	BZ-71AKV
	66-32	1	2RHS-PSST481A2	BZ-71RR
		2	2RHS-PSST476A2	BZ-71RL
		3	2RHS-PSA571A2	BZ-71UL
		4	2RHS-PSST400A2	BZ-71NQ
		5	2RHS-PSR399A2	BZ-71NP
		6	2RHS-PSSH398A2	BZ-71NN
		7	2RHS-PSSP397A2	BZ-71NM
		8	2RHS-PSST396A2	BZ-71NL
	66-34	1	2RHS-PSST766A2	BZ-71ABN
		2	2RHS-PSSH096A2	BZ-71DG
		3	2RHS-PSST722A2	BZ-71AAC
		4	2RHS-PSST133A2	BZ-71EH
		5	2RHS-PSA769A2	BZ-71ABR
		6	2RHS-PSR136A2	BZ-71EL
		7	2RHS-PSST277A2	BZ-71HLL
		8	2RHS-PSR135A2	BZ-71EK
		9	2RHS-PSSH073A2	BZ-71CH
		10	2RHS-PSST134A2	BZ-71EJ
	66-42	1	2RHS-PSSH108A2	BZ-71DU
		2	2RHS-PSSP708A2	BZ-71ZN

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		3	2RHS-PSSP870A2	BZ-71AFP
		4	2RHS-PSR111A2	BZ-71DX
		5	2RHS-PSST113A2	BZ-71DZ
		6	2RHS-PSST112A2	BZ-71DY
		7	2RHS-PSSP811A2	BZ-71ADG
		8	2RHS-PSST812A2	BZ-71ADH
		9	2RHS-PSST067A2	BZ-71CB
		10	2RHS-PSR806A2	BZ-71HDD
		11	2RHS-PSA808A2	BZ-71ADD
		12	2RHS-PSR498A2	BZ-71SG
		13	2RHS-PSST490A2	BZ-71RZ
		14	2RHS-PSSP489A2	BZ-71RZ
	66-47	1	2RHS-PSSP892A2	BZ-71AGN
		2	2RHS-PSSH932A2	BZ-71AHS
		3	2RHS-PSSP780A2	BZ-71ABZ
		4	2RHS-PSA921A2	BZ-71AHF
		5	2RHS-PSSP1016A2	BZ-71ALQ
		6	2RHS-PSST1011A2	BZ-71ALP
		7	2RHS-PSR1010A1	BZ-71ALN
		8	2RHS-PSR1009A1	BZ-71ALM
		9	2RHS-PSSP1008A1	BZ-71ALL
		10	2RHS-PSST1007A1	BZ-71ALK
		11	2RHS-PSSH1006A1	BZ-71ALJ

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	66-48	1	2RHS-PSA418A2	BZ-71PK
		2	2RHS-PSR421A2	BZ-71PN
		3	2RHS-PSR422A2	BZ-71PP
		4	2RHS-PSST460A2	BZ-71QU
		5	2RHS-PSR405A2	BZ-71NW
		6	2RHS-PSR420A2	BZ-71PM
		7	2RHS-PSA419A2	BZ-71PL
		8	2RHS-PSR463A2	BZ-71QY
		9	2RHS-PSSP425A2	BZ-71PT
		10	2RHS-PSR470A2	BZ-71RF
		11	2RHS-PSST427A2	BZ-71PW
		12	2RHS-PSST426A2	BZ-71PW
		13	2RHS-PSSH423A2	BZ-71PR
		14	2RHS-PSST424A2	BZ-71PS
		15	2RHS-PSR429A2	BZ-71PY
		16	2RHS-PSST462A2	BZ-71QX
		17	2RHS-PSR461A2	BZ-71QW
	66-49	1	2RHS-PSST375A2	BZ-71MQ
		2	2RHS-PSST374A2	BZ-71MQ
		3	2RHS-PSSH359A2	BZ-71MB
		4	2RHS-PSSP360A2	BZ-71MC
		5	2RHS-PSST361A2	BZ-71MD
		6	2RHS-PSSP376A2	BZ-71ME

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		7	2RHS-PSSP362A2	BZ-71ME
		8	2RHS-PSST363A2	BZ-71MF
		9	2RHS-PSA328A2	BZ-71KV
		10	2RHS-PST329A2	BZ-71KW
		11	2RHS-PSSP330A2	BZ-71KX
		12	2RHS-PSSP331A2	BZ-71KY
		13	2RHS-PSST332A2	BZ-71KZ
		14	2RHS-PSA333A2	BZ-71LA
		15	2RHS-PSST364A2	BZ-71MG
		16	2RHS-PSSP366A2	BZ-71MH
		17	2RHS-PSSP365A2	BZ-71MH
		18	2RHS-PSST367A2	BZ-71MJ
		19	2RHS-PSST368A2	BZ-71MK
		20	2RHS-PSST369A2	BZ-71ML
		21	2RHS-PSSP370A2	BZ-71MM
		22	2RHS-PSSP371A2	BZ-71MM
		23	2RHS-PSSH372A2	BZ-71MN
		24	2RHS-PSSP373A2	BZ-71MP
	66-50	1	2RHS-PSSH345A1	BZ-71LM
		2	2RHS-PSSP346A1	BZ-71LN
		3	2RHS-PSSP347A1	BZ-71LP
		4	2RHS-PSSP348A1	BZ-71LQ
		5	2RHS-PSSP349A1	BZ-71LR

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		6	2RHS-PSSP350A1	BZ-71LS
		7	2RHS-PSSH351A1	BZ-71LT
		8	2RHS-PSSP988A1	BZ-71AKU
		9	2RHS-PSSP352A1	BZ-71LU
		10	2RHS-PSSP354A1	BZ-71LW
		11	2RHS-PSSH938A1	BZ-71AHX
		12	2RHS-PSSP355A1	BZ-71LX
		13	2RHS-PSSP356A1	BZ-71LY
		14	2RHS-PSSP357A1	BZ-71LZ
		15	2RHS-PSSP987A1	BZ-71AKT
		16	2RHS-PSSP358A1	BZ-71MA
	66-51	1	2RHS-PSSP295A1	BZ-71JM
		2	2RHS-PSSP296A1	BZ-71JN
		3	2RHS-PSSP298A1	BZ-71JP
		4	2RHS-PSSP297A1	BZ-71JQ
		5	2RHS-PSSP309A1	BZ-71KA
		6	2RHS-PSSP310A1	BZ-71KB
		7	2RHS-PSSP311A1	BZ-71KC
		8	2RHS-PSSH1029A1	BZ-71ALX
		9	2RHS-PSSP301A1	BZ-71JS
		10	2RHS-PSSP302A1	BZ-71JT
		11	2RHS-PSSP304A1	BZ-71JV
		12	2RHS-PSSP305A1	BZ-71JW

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		13	2RHS-PSSP307A1	BZ-71JY
		14	2RHS-PSSP308A1	BZ-71JZ
		15	2RHS-PSSH428A1	BZ-71PX
		16	2RHS-PSSH534A1	BZ-71TM
	66-52	1	2RHS-PSSP893A1	BZ-71AGK
		2	2RHS-PSSH895A1	BZ-71AGL
		3	2RHS-PSSP939A1	BZ-71ANY
		4	2RHS-PSSP896A1	BZ-71AGM
		5	2RHS-PSSH897A1	BZ-71AGN
		6	2RHS-PSSP924A1	BZ-71AHJ
		7	2RHS-PSSP899A1	BZ-71AGP
		8	2RHS-PSSP900A1	BZ-71AGQ
		9	2RHS-PSSP901A1	BZ-71AGR
		10	2RHS-PSSP902A1	BZ-71AGR
		11	2RHS-PSSH903A1	BZ-71AGS
		12	2RHS-PSSP905A1	BZ-71AGU
		13	2RHS-PSSP904A1	BZ-71AGT
	66-53	1	2RHS-PSSP985A1	BZ-71AKS
		2	2RHS-PSSP986A1	BZ-71AKS
		3	2RHS-PSSH984A1	BZ-71AKR
		4	2RHS-PSSP983A1	BZ-71AKQ
		5	2RHS-PSSP982A1	BZ-71AKP

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		6	2RHS-PSSH993A1	BZ-71AKZ
		7	2RHS-PSSP836A1	BZ-71AEG
		8	2RHS-PSSP1057A1	BZ-71AMY
		10	2RHS-PSSP979A1	BZ-71AKN
	66-54	1	2RHS-PSSP1045A1	BZ-71AMN
		2	2RHS-PSSP386A1	BZ-71MZ
		3	2RHS-PSSP1044A1	BZ-71AMM
		4	2RHS-PSSP385A1	BZ-71MY
		5	2RHS-PSSH383A1	BZ-71MW
		6	2RHS-PSSP387A1	BZ-71NA
		7	2RHS-PSSP382A1	BZ-71MV
		8	2RHS-PSSP834A1	BZ-71AEE
		9	2RHS-PSSH384A1	BZ-71MX
		10	2RHS-PSSP380A1	BZ-71MU
		11	2RHS-PSSP381A1	BZ-71NB
	66-55	1	2RHS-PSSP940A1	BZ-71AHZ
		2	2RHS-PSSH941A1	BZ-71AJA
		3	2RHS-PSSP942A1	BZ-71AJB
		4	2RHS-PSSP943A1	BZ-71AJC
		5	2RHS-PSSP970A1	BZ-71AKD
		6	2RHS-PSSP971A1	BZ-71AKE
		7	2RHS-PSSP972A1	BZ-71AKF

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		8	2RHS-PSSH973A1	BZ-71AKG
		9	2RHS-PSSP1055A1	BZ-71AMW
		10	2RHS-PSSP975A1	BZ-71AKJ
		11	2RHS-PSSH976A1	BZ-71AKK
		12	2RHS-PSSP977A1	BZ-71AKL
		13	2RHS-PSSP978A1	BZ-71AKM
		14	2RHS-PSSP1056A1	BZ-71AMX
	66-57	1	2RHS-PSR1058A2	BZ-71AMZ
		2	2RHS-PSA344A2	BZ-71LL
		3	2RHS-PSR343A2	BZ-71LK
		4	2RHS-PSR342A2	BZ-71LJ
		5	2RHS-PSSH341A2	BZ-71LH
		6	2RHS-PSST340A2	BZ-71LG
		7	2RHS-PSSH339A2	BZ-71LF
		8	2RHS-PSSP338A2	BZ-71LE
		9	2RHS-PSST1053A2	BZ-71AMT
		10	2RHS-PSST1051A2	BZ-71AMT
		11	2RHS-PSR335A2	BZ-71LC
		12	2RHS-PSSP1035A2	BZ-71AMD
		13	2RHS-PSST334A2	BZ-71LB
		14	2RHS-PSST1032A2	BZ-71AMA
		15	2RHS-PSST1033A2	BZ-71AMB

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	66-58	1	2RHS-PSR1017A2	BZ-71ALR
		2	2RHS-PSSH1018A2	BZ-71ALS
		3	2RHS-PSSP1021A2	BZ-71ALT
		4	2RHS-PSSP1020A2	BZ-71ALT
		5	2RHS-PSA402A2	BZ-71NS
	66-60	1	2RHS-PSSP999A2	BZ-71ALC
		2	2RHS-PSSP1000A2	BZ-71ALC
		3	2RHS-PSR1002A2	BZ-71ALE
		4	2RHS-PSA1003A2	BZ-71ALF
	66-177A	1	2RHS-PSSP1043A1	BZ-71AMK
		2	2RHS-PSSH1042A1	BZ-71AMK
		3	2RHS-PSSH1049A1	BZ-71AMR
		4	2RHS-PSSP1048A1	BZ-71AMR
		5	2RHS-PSSP1040A1	BZ-71AMJ
		6	2RHS-PSSP1041A1	BZ-71AMJ
		7	2RHS-PSSP1046A1	BZ-71AMP
		8	2RHS-PSSP1047A1	BZ-71AMP
SFC	07-10	1	2SFC-PSR679A3	BZ-77UC
		2	2SFC-PSR394A3	BZ-77JU
		3	2SFC-PSR395A3	BZ-77JV
		4	2SFC-PSST382A3	BZ-77JG
		5	2SFC-PSR383A3	BZ-77JH

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		6	2SFC-PSST385A3	BZ-77JK
	07-14	1	2SFC-PSR215A3	BZ-77BV
		2	2SFC-PSR057A3	BZ-77BP
		3	2SFC-PSAD58A3	BZ-77BQ
		4	2SFC-PSR359A3	BZ-77HR
		5	2SFC-PSR363A3	BZ-77HU
	07-15	1	2SFC-PSST031A3	BZ-77AP
		2	2SFC-PSR027A3	BZ-77AK
		3	2SFC-PSR026A3	BZ-77AJ
		4	2SFC-PSST025A3	BZ-77AH
		5	2SFC-PSST024A3	BZ-77AG
		6	2SFC-PSST023A3	BZ-77AF
		7	2SFC-PSST021A3	BZ-77AD
		8	2SFC-PSST022A3	BZ-77AE
		9	2SFC-PSST055A3	BZ-77BM
		10	2SFC-PSST056A3	BZ-77BN
	07-16	1	2SFC-PSST037A3	BZ-77AV
		2	2SFC-PSST043A3	BZ-77BA
		3	2SFC-PSST047A3	BZ-77BE
		4	2SFC-PSR041A3	BZ-77AY
		5	2SFC-PSR036A3	BZ-77AU
		6	2SFC-PSST034A3	BZ-77AS

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		7	2SFC-PSST220A3	BZ-77BZ
		8	2SFC-PSA216A3	BZ-77BW
		9	2SFC-PSST001A3	BZ-77H
	07-17	1	2SFC-PSST032A3	BZ-77AQ
		2	2SFC-PSSP030A3	BZ-77AN
		3	2SFC-PSSH028A3	BZ-77AL
		4	2SFC-PSA212A3	BZ-77BS
		5	2SFC-PSR267A3	BZ-77DY
		6	2SFC-PSR268A3	BZ-77DZ
	07-19	1	2SFC-PSA035A3	BZ-77AT
		2	2SFC-PSST719A3	BZ-77VQ
		3	2SFC-PSST230A3	BZ-77CK
		4	2SFC-PSR231A3	BZ-77CL
		5	2SFC-PSR233A3	BZ-77CN
		6	2SFC-PSR234A3	BZ-77CP
	07-22	1	2SFC-PSR255A3	BZ-77DH
		2	2SFC-PSST254A3	BZ-77DG
		3	2SFC-PSR250A3	BZ-77U
		4	2SFC-PSR249A3	BZ-77S
		5	2SFC-PSR248A3	BZ-77R
		6	2SFC-PSR244A3	BZ-77CZ
		7	2SFC-PSR247A3	BZ-77P

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		8	2SFC-PSR246A3	BZ-77M
		9	2SFC-PSR240A3	BZ-77CV
		10	2SFC-PSST239A3	BZ-77CU
		11	2SFC-PSST238A3	BZ-77CT
	07-29	1	2SFC-PSA228A3	BZ-77CH
		90	2SFC-PSR353A3	BZ-77HL
		86	2SFC-PSR227A3	BZ-77CG
	07-30	1	2SFC-PSST352A3	BZ-77HK
		2	2SFC-PSST328A3	BZ-77GL
		3	2SFC-PSST329A3	BZ-77GM
		4	2SFC-PSST358A3	BZ-77GM
		5	2SFC-PSST330A3	BZ-77GN
		6	2SFC-PSST332A3	BZ-77GQ
		7	2SFC-PSST335A3	BZ-77GT
		8	2SFC-PSST336A3	BZ-77GU
		9	2SFC-PSST338A3	BZ-77GW
		10	2SFC-PSST343A3	BZ-77HB
		11	2SFC-PSR344A3	BZ-77HC
		12	2SFC-PSR345A3	BZ-77HD
	07-31	1	2SFC-PSSH323A3	BZ-77GF
		2	2SFC-PSR695A3	BZ-77UT
		3	2SFC-PSR696A3	BZ-77UV

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		4	2SFC-PSSP334A3	BZ-77GS
		5	2SFC-PSST325A3	BZ-77GH
		6	2SFC-PSST327A3	BZ-77GK
		7	2SFC-PSST676A3	BZ-77UA
		8	2SFC-PSSH355A3	BZ-77HN
		9	2SFC-PSA356A3	BZ-77HP
		10	2SFC-PSST428A3	BZ-77KZ
	07-40	1	2SFC-PSSH396A3	BZ-77JW
		2	2SFC-PSR713A3	BZ-77VL
		3	2SFC-PSR399A3	BZ-77JY
		4	2SFC-PSR400A3	BZ-77JZ
		5	2SFC-PSST401A3	BZ-77KA
	07-49	1	2SFC-PSST261A3	BZ-77DP
		2	2SFC-PSST264A3	BZ-77DR
		3	2SFC-PSST263A3	BZ-77DR
		4	2SFC-PSA245A3	BZ-77DA
		5	2SFC-PSR260A3	BZ-77DN
SLS	88-A	1	2SLS-PSSP103A1	BZ-75CB
		2	2SLS-PSSH100A1	BZ-75CB
		3	2SLS-PSST078A1	BZ-75BL
		4	2SLS-PSSP092A1	BZ-75BU
		5	2SLS-PSST077A1	BZ-75BK

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		6	2SLS-PSST076A1	BZ-75BK
		7	2SLS-PSST099A1	BZ-75CA
		8	2SLS-PSSP075A1	BZ-75BJ
		9	2SLS-PSSH074A1	BZ-75BJ
		10	2SLS-PSR072A1	BZ-75BH
		11	2SLS-PSR070A1	BZ-75BG
		12	2SLS-PSR068A1	BZ-75BF
		13	2SLS-PSR066A1	BZ-75BE
		14	2SLS-PSSP106A1	BZ-75CC
		15	2SLS-PSSH113A1	BZ-75CH
		16	2SLS-PSSP114A1	BZ-75CH
	88-B	1	2SLS-PSST093A1	BZ-75BV
		2	2SLS-PSR062A1	BZ-75BC
		3	2SLS-PSST054A1	BZ-75AY
		4	2SLS-PSST116A1	BZ-75CK
		5	2SLS-PSR060A1	BZ-75BB
		6	2SLS-PSR064A1	BZ-75BD
SVV	73-03	1	2SVV-PSSP404A3	BZ-11MC
		2	2SVV-PSSP405A3	BZ-11MB
		3	2SVV-PSA012A3	BZ-11MZ
		4	2SVV-PSR253A3	BZ-11JC
		5	2SVV-PSSP025A3	BZ-11AA

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		6	2SVV-PSSP026A3	BZ-11AA
		7	2SVV-PSSP059A3	BZ-11BB
		8	2SVV-PSSP060A3	BZ-11YD
		9	2SVV-PSR265A3	BZ-11LF
		10	2SVV-PSSP058A3	BZ-11BA
		11	2SVV-PSSH030A3	BZ-11AD
		12	2SVV-PSSP028A3	BZ-11AC
		13	2SVV-PSSP029A3	BZ-11AR
	73-04	1	2SVV-PSSP039A3	BZ-11AN
		2	2SVV-PSSP038A3	BZ-11AM
		3	2SVV-PSSP037A3	BZ-11AL
		4	2SVV-PSSH027A3	BZ-11AB
		5	2SVV-PSSP023A3	BZ-11Z
		6	2SVV-PSSP024A3	BZ-11Z
		7	2SVV-PSSP057A31	BZ-11AZ
		8	2SVV-PSR280A3	BZ-11LF
		9	2SVV-PSSP407A3	BZ-11MD
		10	2SVV-PSA013A3	BZ-11NA
		11	2SVV-PSSP062A3	BZ-11VE
		12	2SVV-PSSP077A3	BZ-11AZ
		13	2SVV-PSSP061A3	BZ-11BB
		14	2SVV-PSR255A3	BZ-11JC
		15	2SVV-PSSP406A3	BZ-11LT

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	73-07	1	2SVV-PSR049A3	BZ-11AG
		2	2SVV-PSSP048A3	BZ-11AF
		3	2SVV-PSSP050A3	BZ-11AJ
		4	2SVV-PSST051A3	BZ-11AW
		5	2SVV-PSSH175A3	BZ-11FB
		6	2SVV-PSR174A3	BZ-11FB
		7	2SVV-PSSP394A3	BZ-11LU
		8	2SVV-PSA007A3	BZ-11EH
		9	2SVV-PSSP395A3	BZ-11LV
	73-10	1	2SVV-PSSP066A3	BZ-11BF
		2	2SVV-PSSH067A3	BZ-11BG
		3	2SVV-PSSP068A3	BZ-11BH
		4	2SVV-PSSP069A3	BZ-11BH
		5	2SVV-PSSP070A3	BZ-11BJ
		6	2SVV-PSSP071A3	BZ-11BJ
		7	2SVV-PSSP072A3	BZ-11BK
		8	2SVV-PSSP167A3	BZ-11EW
		9	2SVV-PSSH127A3	BZ-11DH
		10	2SVV-PSSP168A3	BZ-11EX
		11	2SVV-PSA276A3	BZ-11MR
		12	2SVV-PSSP379A3	BZ-11LJ
		13	2SVV-PSSH378A3	BZ-11LH
		14	2SVV-PSSP376A3	BZ-11LG

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		15	2SVV-PSSP377A3	BZ-11LG
	73-14	1	2SVV-PSSP111A3	BZ-11CS
		2	2SVV-PSR110A3	BZ-11CR
		3	2SVV-PSSP106A3	BZ-11CM
		4	2SVV-PSR102A3	BZ-11CH
		5	2SVV-PSST256A3	BZ-11DY
		6	2SVV-PSST145A3	BZ-11DY
		7	2SVV-PSSP391A3	BZ-11LR
		8	2SVV-PSSP101A3	BZ-11CG
		9	2SVV-PSSP154A3	BZ-11EJ
		10	2SVV-PSSP155A3	BZ-11EJ
		11	2SVV-PSSP156A3	BZ-11EK
		12	2SVV-PSA279A3	BZ-11MU
		13	2SVV-PSSH390A3	BZ-11LL
		14	2SVV-PSSP389A3	BZ-11LQ
		15	2SVV-PSSP388A3	BZ-11LQ
	73-16	1	2SVV-PSSP266A3	BZ-11MF
		2	2SVV-PSSP267A3	BZ-11MG
		3	2SVV-PSA001A3	BZ-11H
		4	2SVV-PSR157A3	BZ-11EL
		5	2SVV-PSSP158A3	BZ-11EM
		6	2SVV-PSSH149A3	BZ-11EC

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		7	2SVV-PSSP147A3	BZ-11EA
		8	2SVV-PSSP475A3	BZ-11EA
		9	2SVV-PSSP152A3	BZ-11EF
		10	2SVV-PSSP151A3	BZ-11EE
		11	2SVV-PSR080A3	BZ-11V
	73-17	1	2SVV-PSSP269A3	BZ-11MJ
		2	2SVV-PSSP268A3	BZ-11MH
		3	2SVV-PSA002A3	BZ-11J
		4	2SVV-PSSP140A3	BZ-11DV
		5	2SVV-PSR139A3	BZ-11DU
		6	2SVV-PSSP138A3	BZ-11DT
		7	2SVV-PSSH137A3	BZ-11DS
		8	2SVV-PSSP118A3	BZ-11CZ
		9	2SVV-PSR115A3	BZ-11CW
		10	2SVV-PSSP117A3	BZ-11CY
		11	2SVV-PSSP116A3	BZ-11CX
SWP	21-02	1	2SWP-PSR135A3	BZ-108BH
		2	2SWP-PSR141A3	BZ-108BJ
		3	2SWP-PSR143A3	BZ-108BL
		4	2SWP-PSR149A3	BZ-108BM
		5	2SWP-PSR165A3	BZ-108BS
		6	2SWP-PSR182A3	BZ-108CA

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		7	2SWP-PSR197A3	BZ-108CA
		8	2SWP-PSR205A3	BZ-108CJ
		9	2SWP-PSR341A3	BZ-108EB
		10	2SWP-PSR298A3	BZ-108EB
	21-03	1	2SWP-PSR134A3	BZ-108BH
		2	2SWP-PSR145A3	BZ-108BL
		3	2SWP-PSR151A3	BZ-108BM
		4	2SWP-PSR168A3	BZ-108BT
		5	2SWP-PSSH248A3	BZ-108CX
		6	2SWP-PSSP252A3	BZ-108CY
		7	2SWP-PSR171A3	BZ-108BU
		8	2SWP-PSSH175A3	BZ-108BW
		9	2SWP-PSR139A3	BZ-108BJ
	21-04	1	2SWP-PSR133A3	BZ-108BH
		2	2SWP-PSR146A3	BZ-108BL
		3	2SWP-PSR152A3	BZ-108BM
		4	2SWP-PSR169A3	BZ-108BT
		5	2SWP-PSSH249A3	BZ-108CX
		6	2SWP-PSSP251A3	BZ-108CY
		7	2SWP-PSR444A3	BZ-108BU
		8	2SWP-PSSH172A3	BZ-108BU
		9	2SWP-PSR174A3	BZ-108BV

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		10	2SWP-PSR177A3	BZ-108BX
		11	2SWP-PSR138A3	BZ-108BJ
	21-06	8	2SWP-PSR1226A3	BZ-108RF
		7	2SWP-PSA1235A3	BZ-108SD
		6	2SWP-PSST1236A3	BZ-108PD
		5	2SWP-PSR061B3	BZ-108TP-357
		4	2SWP-PSR062B3	BZ-108TP-360
		3	2SWP-PSR565A3	BZ-108HP
		2	2SWP-PSR550A3	BZ-108HK
		1	2SWP-PSR664A3	BZ-108JK
	21-07	1	2SWP-PSR570A3	BZ-108HR
		2	2SWP-PSR567A3	BZ-108HQ
		3	2SWP-PSR566A3	BZ-108HQ
		4	2SWP-PSST1253A3	BZ-108SU
		5	2SWP-PSST1256A3	BZ-108SX
		6	2SWP-PSA1237A3	BZ-108SE
		7	2SWP-PSST060A3	BZ-108MC
		8	2SWP-PSR089B3	BZ-108TP-392
		9	2SWP-PSR072B3	BZ-108TP-371
		10	2SWP-PSST1218A3	BZ-108QX
		11	2SWP-PSR088B3	BZ-108TP-391
		12	2SWP-PSST059A3	BZ-108ME

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		13	2SWP-PSR087B3	BZ-108TP-390
		14	2SWP-PSST073A3	BZ-108MD
		15	2SWP-PSSP1218A3	BZ-108QW
		16	2SWP-PSSP1217A3	BZ-108QW
		17	2SWP-PSST1231A3	BZ-108RV
		18	2SWP-PSST132A3	BZ-108NZ
		19	2SWP-PSSP1219A4	BZ-108QY
		20	2SWP-PSSP1220A4	BZ-108QZ
		21	2SWP-PSSP1212A3	BZ-108QU
		22	2SWP-PSSP1213A3	BZ-108QU
		24	2SWP-PSSP1627A3	BZ-108VY
		25	2SWP-PSSP1628A3	BZ-108VY
	21-08	1	2SWP-PSR1229A3	BZ-108RJ
		2	2SWP-PSR551A3	BZ-108HL
		3	2SWP-PSR1230A3	BZ-108RK
		4	2SWP-PSR130B3	BZ-108TP-367
		6	2SWP-PSR031B3	BZ-108TP-375
		7	2SWP-PSR084B3	BZ-108TP-353
		8	2SWP-PSR584A3	BZ-108HW
		10	2SWP-PSR038B3	BZ-108TP-116
		11	2SWP-PSR585A3	BZ-108HW
		12	2SWP-PSR586A3	BZ-108HW
		13	2SWP-PSR587A3	BZ-108HW

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		14	2SWP-PSR043A3	BZ-108SC
		15	2SWP-PSA045A3	BZ-108NB
		16	2SWP-PSR589A3	BZ-108HW
		17	2SWP-PSR590A3	BZ-108HW
		18	2SWP-PSR050A3	BZ-108MU
		19	2SWP-PSR591A3	BZ-108HW
		20	2SWP-PSR592A3	BZ-108HW
		21	2SWP-PSR200A3	BZ-108PX
		22	2SWP-PSR759A3	BZ-108PW
		23	2SWP-PSR195A3	BZ-108KG
	21-09	1	2SWP-PSR029A3	BZ-108NS
		2	2SWP-PSR090A3	BZ-108TP-124
		3	2SWP-PSA059A3	BZ-108RW
		4	2SWP-PSR087B3	BZ-108TP-112
		5	2SWP-PSR084B3	BZ-108TP-107
		6	2SWP-PSR1234A3	BZ-108SC
		7	2SWP-PSR081A3	BZ-108MX
		8	2SWP-PSR078B3	BZ-108TP-090
		9	2SWP-PSSP1160A3	BZ-108MT
		10	2SWP-PSR046A3	BZ-108MU
		11	2SWP-PSR051A3	BZ-108MW
		12	2SWP-PSR764A3	BZ-108PW
		13	2SWP-PSSP1173A3	BZ-108PZ

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		14	2SWP-PSR198A3	BZ-108PX
		15	2SWP-PSR1055A3	BZ-108JW
	21-10	1	2SWP-PSR194A3	BZ-108KG
		2	2SWP-PSR199A3	BZ-108PX
		3	2SWP-PSR758A3	BZ-108PW
		4	2SWP-PSR599A3	BZ-108HW
		5	2SWP-PSR598A3	BZ-108HW
		6	2SWP-PSR049A3	BZ-108MU
		7	2SWP-PSR597A3	BZ-108HW
		8	2SWP-PSR596A3	BZ-108HW
		9	2SWP-PSR042A3	BZ-108SC
		10	2SWP-PSR595A3	BZ-108HW
		11	2SWP-PSR594A3	BZ-108HW
		12	2SWP-PSA044A3	BZ-108NJ
		13	2SWP-PSR593A3	BZ-108HW
		14	2SWP-PSR037B3	BZ-108TP-115
		15	2SWP-PSR588A3	BZ-108HW
		16	2SWP-PSR083B3	BZ-108TP-352
		17	2SWP-PSR030B3	BZ-108TP-374
		18	2SWP-PSR1471A3	BZ-108VB
	21-11	1	2SWP-PSR111A3	BZ-108KE
		3	2SWP-PSR002B3	BZ-108TQ-707

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		4	2SWP-PSR193A3	BZ-108KG
		5	2SWP-PSA118A3	BZ-108TT
		6	2SWP-PSST1426A3	BZ-108UX
		7	2SWP-PSST1425A3	BZ-108UX
	21-12	1	2SWP-PSR001B3	BZ-108TQ-705
		2	2SWP-PSR116A3	BZ-108KR
		3	2SWP-PSR115B3	BZ-108TP-468
		4	2SWP-PSR114A3	BZ-108KF
		5	2SWP-PSR113B3	BZ-108TP-449-1
		6	2SWP-PSR112A3	BZ-108KF
		7	2SWP-PSA117A3	BZ-108TE
	21-13	1	2SWP-PSR1180A3	BZ-108QA-1
		2	2SWP-PSR1245A3	BZ-108SM
	21-14	1	2SWP-PSSP1317A3	BZ-108TM-1
		2	2SWP-PSR1177A3	BZ-108QA-1
		3	2SWP-PSSP1247A3	BZ-108SM-1
		4	2SWP-PSR1246A3	BZ-108SM-1
	21-16	1	2SWQ-PSR197A3	BZ-108PX-1
		2	2SWR-PSR763A3	BZ-108PW-1
		3	2SWP-PSSP1172A3	BZ-108PY-1
		4	2SWP-PSR052A3	BZ-108MW-1

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		5	2SWP-PSR047A3	BZ-108MU-1
		6	2SWP-PSR080A3	BZ-108MX-1
		7	2SWP-PSSP1162A3	BZ-108MZ-1
		8	2SWP-PSR040A3	BZ-108SC-1
		9	2SWP-PSR1225A3	BZ-108RE-1
		10	2SWP-PSR028A3	BZ-108NS-1
		11	2SWP-PSR1228A3	BZ-108RN-1
		12	2SWP-PSR1227A3	BZ-108RG-1
		15	2SWR-PSR757A3	BZ-108PW-1
		22	2SWP-PSA1222A3	BZ-108RA-1
		25	2SWP-PSR1054A3	BZ-108JW
		27	2SWP-PSR077B3	BZ-108TP-089
		29	2SWP-PSR083B3	BZ-108TP-106
		31	2SWP-PSR086B3	BZ-108TP-111
		33	2SWP-PSR089B3	BZ-108TP-123
	21-17	1	2SWP-PSR215A3	BZ-19W
		3	2SWP-PSR254A3	BZ-19AB
		4	2SWP-PSST223A3	BZ-19AH
		5	2SWP-PSSH224A3	BZ-19AJ
		6	2SWP-PSST225A3	BZ-19AK
		7	2SWP-PSR226A3	BZ-19AL
		8	2SWP-PSSP228A3	BZ-19AN
		9	2SWP-PSSH214A3	BZ-19AY

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		10	2SWP-PSR216A3	BZ-19AZ
		11	2SWP-PSST217A3	BZ-19BA
		12	2SWP-PSSH256A3	BZ-19BW
		13	2SWP-PSSH229B3	BZ-19G-037
		14	2SWP-PSSH227A3	BZ-19XU
		15	2SWP-PSR543B3	BZ-19G-103
		16	2SWP-PSSH544B3	BZ-19G-104
		17	2SWP-PSST545B3	BZ-19G-105
	21-18	1	2SWP-PSST240A3	BZ-19Z
		2	2SWP-PSSH239A3	BZ-19AY
		3	2SWP-PSR241A3	BZ-19BB
		4	2SWP-PSSP242A3	BZ-19BC
		5	2SWP-PSST549B3	BZ-19G-109
		6	2SWP-PSSH243B3	BZ-19G-053
		7	2SWP-PSSH244B3	BZ-19G-054
		8	2SWP-PSR550B3	BZ-19G-110
	21-19	1	2SWP-PSR218A3	BZ-19AC
		2	2SWP-PSSH219A3	BZ-19AD
		3	2SWP-PSST220A3	BZ-19AE
		5	2SWP-PSSH222B3	BZ-19G-035
		6	2SWQ-PSSP538B3	BZ-19G-098
		7	2SWQ-PSSP539B3	BZ-19G-099

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	21-20	1	2SWP-PSR253A3	BZ-19AA
		3	2SWP-PSSH208A3	BZ-19BY
		4	2SWP-PSST207A3	BZ-19BZ
		5	2SWP-PSST1636A3	BZ-19CC
		6	2SWP-PSST211A3	BZ-19CB
		7	2SWP-PSST212A3	BZ-19CC
		8	2SWP-PSSH257A3	BZ-19CD
		9	2SWP-PSSH255A3	BZ-19BV
		10	2SWQ-PSSP540B3	BZ-19G-100
		11	2SWQ-PSST541B3	BZ-19G-101
		12	2SWQ-PSSH542B3	BZ-19G-102
	21-21	1	2SWP-PSSH237B3	BZ-19G-039
		2	2SWP-PSSH236B3	BZ-19G-038
		3	2SWP-PSSP235A3	BZ-19AV
		4	2SWP-PSR234A3	BZ-19AU
		5	2SWP-PSST233A3	BZ-19AT
		6	2SWP-PSST232A3	BZ-19AS
		7	2SWP-PSST231A3	BZ-19AR
		8	2SWP-PSSH230A3	BZ-19AQ
		9	2SWQ-PSSH546B3	BZ-19G-106
		10	2SWQ-PSSP547B3	BZ-19G-107
		11	2SWQ-PSSP548B3	BZ-19G-108

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	21-22	1	2SWP-PSSH258A3	BZ-19CE
		2	2SWP-PSSP259A3	BZ-19CF
		3	2SWP-PSSP1035A3	BZ-19XF
		4	2SWP-PSSP1038A3	BZ-19CJ
		5	2SWP-PSSP262A3	BZ-19CJ
		6	2SWP-PSSP263A3	BZ-19CK
		7	2SWP-PSSH265A3	BZ-19CM
		8	2SWP-PSSP266A3	BZ-19CN
		9	2SWP-PSSH1052A3	BZ-19XN
		10	2SWP-PSSP1053A3	BZ-19XP
		11	2SWP-PSSH267A3	BZ-19CP
		12	2SWP-PSSP1036A3	BZ-19XG
		13	2SWP-PSSP1037A3	BZ-19XG
	21-23	1	2SWP-PSR299A3	BZ-108EB
		2	2SWP-PSR342A3	BZ-108EB
		3	2SWP-PSR206A3	BZ-108CJ
		4	2SWP-PSR196A3	BZ-108CA
		5	2SWP-PSR183A3	BZ-108CA
		6	2SWP-PSR166A3	BZ-108BS
		7	2SWP-PSR150A3	BZ-108BM
		8	2SWP-PSR144A3	BZ-108BL
		9	2SWP-PSR140A3	BZ-108BJ
		10	2SWP-PSR136A3	BZ-108BH

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	21-24	14	2SWP-PSR806B3	BZ-108TR-151
		13	2SWP-PSR1224A3	BZ-108RC
		12	2SWP-PSR1168A3	BZ-108PV
		11	2SWP-PSR106B3	BZ-108TP-830
		10	2SWP-PSR105B3	BZ-108TP-829
		9	2SWP-PSR102B3	BZ-108TP-774
		8	2SWP-PSR189A3	BZ-108PP
		7	2SWP-PSA100A3	BZ-108TA
		6	2SWP-PSR109A3	BZ-108NP
		5	2SWP-PSR098A3	BZ-108PQ
		4	2SWP-PSR1167A3	BZ-108PL
		3	2SWP-PSR120A3	BZ-108PU
		2	2SWP-PSR123A3	BZ-108PT
		1	2SWP-PSR122A3	BZ-108MF
	21-25	1	2SWP-PSSP1316A3	BZ-108TL-1
		2	2SWP-PSR124A3	BZ-108PT-1
		3	2SWP-PSSP1171A3	BZ-108PT-1
		4	2SWP-PSR119A3	BZ-108PU
		5	2SWP-PSSP1252A3	BZ-108SR-1
		7	2SWP-PSR125A3	BZ-108PL-1
		8	2SWP-PSSP1257A3	BZ-108SY-1
		9	2SWP-PSR099A3	BZ-108PQ-1
		10	2SWP-PSSP1169A3	BZ-108PQ

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		11	2SWP-PSR101A3	BZ-108TB
		12	2SWP-PSR793B3	BZ-108TP-775
		13	2SWP-PSR104B3	BZ-108TP-826
		14	2SWP-PSR107B3	BZ-108TP-831
		15	2SWQ-PSST524B3	BZ-108TR-136
		16	2SWP-PSR1176A3	BZ-108NL-1
		17	2SWP-PSSP1254A3	BZ-108SV-1
		18	2SWQ-PSST525B3	BZ-108TR-137
		19	2SWQ-PSST525B3	BZ-108TR-137
		20	2SWQ-PSST526B3	BZ-108TR-138
		21	2SWQ-PSST526B3	BZ-108TR-138
		22	2SWQ-PSST527B3	BZ-108TR-139
		23	2SWQ-PSST527B3	BZ-108TR-139
		24	2SWQ-PSST528B3	BZ-108TR-140
		25	2SWQ-PSST530B3	BZ-108TR-142
		26	2SWP-PSST1367A3	BZ-108TU
		27	2SWP-PSST1369A3	BZ-108TU
	21-26	14	2SWP-PSA1423A3	BZ-19ABK
		13	2SWP-PSR1427A3	BZ-108UY
		12	2SWP-PSST1214A3	BZ-108JZ
		11	2SWP-PSR047B3	BZ-108TQ-853
		10	2SWP-PSR043B3	BZ-108TQ-845
		9	2SWP-PSR039B3	BZ-108TQ-836

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		8	2SWP-PSR035B3	BZ-108JY
		7	2SWP-PSR030	BZ-108KD
		6	2SWP-PSR026	BZ-108-797
		5	2SWP-PSR022	BZ-108JZ
		4	2SWP-PSR018	BZ-108-770
		3	2SWP-PSR014	BZ-108-756
		2	2SWP-PSR010	BZ-108-742
		1	2SWP-PSR007	BZ-108-733
	21-27	13	2SWP-PSR1431A3	BZ-108VA
		12	2SWP-PSST1215A3	BZ-108JZ
		11	2SWQ-PSR046B3	BZ-108TQ-852
		10	2SWQ-PSR042B3	BZ-108TQ-844
		9	2SWQ-PSR038B3	BZ-108TQ-835
		8	2SWQ-PSR034A3	BZ-108JY
		7	2SWQ-PSR031A3	BZ-108KD
		6	2SWQ-PSR027B3	BZ-108TQ-798
		5	2SWQ-PSR023A3	BZ-108JZ
		4	2SWQ-PSR019B3	BZ-108TQ-771
		3	2SWQ-PSR015B3	BZ-108TQ-757
		2	2SWQ-PSR011B3	BZ-108TQ-743
		1	2SWQ-PSR006B3	BZ-108TQ-732
		14	2SWP-PSSP1632A3	BZ-108VC

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	21-28	11	2SWQ-PSR045B3	BZ-108TQ-849
		10	2SWQ-PSR041B3	BZ-108TQ-841
		9	2SWQ-PSR037B3	BZ-108TQ-831
		8	2SWQ-PSR033A3	BZ-108JY
		7	2SWQ-PSR029A3	BZ-108KD
		6	2SWQ-PSR025B3	BZ-108TQ-796
		5	2SWQ-PSR021A3	BZ-108JZ
		4	2SWQ-PSR017B3	BZ-108TQ-769
		3	2SWQ-PSR013B3	BZ-108TQ-755
		2	2SWQ-PSR009B3	BZ-108TQ-741
		1	2SWQ-PSR005B3	BZ-108TQ-726
		13	2SWP-PSSP1490A3	BZ-108VC
		14	2SWP-PSR1430A3	BZ-108VA
	21-29	1	2SWQ-PSR004B3	BZ-108TQ-725
		2	2SWQ-PSR008B3	BZ-108TQ-740
		3	2SWQ-PSR012B3	BZ-108TQ-754
		4	2SWQ-PSR016B3	BZ-108TQ-768
		5	2SWQ-PSR020A3	BZ-108JZ
		6	2SWQ-PSR024B3	BZ-108JZ-795
		7	2SWQ-PSR032A3	BZ-108JY
		8	2SWQ-PSR036B3	BZ-108JY-830
		9	2SWQ-PSR040B3	BZ-108JY-840
		10	2SWQ-PSR044B3	BZ-108JY-848

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		11	2SWQ-PSR048B3	BZ-108JY-856
		12	2SWP-PSR1431A3	BZ-108VA
		13	2SWP-PSSP1489A3	BZ-108VC
		14	2SWP-PSSP1595A3	BZ-108VD
		15	2SWP-PSR028A3	BZ-108KD
	21-32	1	2SWP-PSA1130A3	BZ-108SB
		2	2SWP-PSR1223A3	BZ-108RB
		3	2SWP-PSR1244A3	BZ-108SL
		4	2SWP-PSR1239A3	BZ-108SF
		5	2SWP-PSR1251A3	BZ-108SQ
		6	2SWP-PSR1258A3	BZ-108SZ
		7	2SWP-PSR1249A3	BZ-108SN
		8	2SWP-PSR1242A3	BZ-108SH
		9	2SWP-PSSH975A3	BZ-108JS
		10	2SWP-PSA1131A3	BZ-108KJ
		11	2SWP-PSR1243A3	BZ-108SL
		12	2SWP-PSR1238A3	BZ-108SF
		13	2SWP-PSR1250A3	BZ-108SQ
		14	2SWP-PSSP1260A3	BZ-108SZ
		15	2SWP-PSR1259A3	BZ-108SZ
		16	2SWP-PSR1248A3	BZ-108SN
		17	2SWP-PSR1241A3	BZ-108SH
		25	2SWP-PSSP264A3	BZ-19CL

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	21-39	1	2SWP-PSSH949A3	BZ-19TA
		2	2SWP-PSST893A3	BZ-19HJ
		3	2SWP-PSSH892A3	BZ-19HH-1
		4	2SWP-PSR891A3	BZ-19HG
		5	2SWP-PSR890A3	BZ-19HF
		6	2SWP-PSR889A3	BZ-19HE
		7	2SWP-PSR888A3	BZ-19HD
		8	2SWP-PSST887A3	BZ-19HC
		9	2SWP-PSST886A3	BZ-19HB
		10	2SWP-PSST885A3	BZ-19HA
		11	2SWP-PSST884A3	BZ-19GZ
		12	2SWP-PSST883A3	BZ-19GY
		13	2SWP-PSSH876A3	BZ-19GR
		14	2SWP-PSST877A3	BZ-19GS
		15	2SWP-PSA872A3	BZ-19GN-3
		16	2SWP-PSST878A3	BZ-19GT
		17	2SWP-PSST879A3	BZ-19GU
		18	2SWP-PSST880A3	BZ-19GV
		19	2SWP-PSR881A3	BZ-19GW
	21-45	1	2SWP-PSST689A3	BZ-19BU
		2	2SWP-PSSH688A3	BZ-19BT
		3	2SWP-PSST687A3	BZ-19BS
		4	2SWP-PSST686A3	BZ-19BR

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		5	2SWP-PSST875A3	BZ-19GQ
		6	2SWP-PSST685A3	BZ-19BQ
		7	2SWP-PSST684A3	BZ-19BP
		8	2SWP-PSST682A3	BZ-19BM
		9	2SWP-PSST683A3	BZ-19BN
		10	2SWP-PSSP437A3	BZ-19ND
		11	2SWP-PSSP436A3	BZ-19ND
		12	2SWP-PSSH434A3	BZ-19NC
			2SWP-PSSH435A3	
		13	2SWP-PSR433A3	BZ-19NB
		15	2SWP-PSA439A3	BZ-19NE
	21-46	1	2SWP-PSR843A3	BZ-19FJ
		2	2SWP-PSR846A3	BZ-19FM
		3	2SWP-PSR847A3	BZ-19FN
		4	2SWP-PSST850A3	BZ-19FQ
		5	2SWP-PSR860A3	BZ-19GA
		6	2SWP-PSR549A3	BZ-19RW
		7	2SWP-PSR553A3	BZ-19RY
		8	2SWP-PSR548A3	BZ-19RV
		9	2SWP-PSR312A3	BZ-19UC
		10	2SWP-PSSH313A3	BZ-19UD
		11	2SWP-PSA862A3	BZ-19GC

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	21-47	1	2SWP-PSR845A3	BZ-19FL
		2	2SWP-PSR851A3	BZ-19FR
		3	2SWP-PSR245A3	BZ-19JP
		4	2SWP-PSR246A3	BZ-19JQ
		5	2SWP-PSA314A3	BZ-19UE
		6	2SWP-PSR475A3	BZ-19PC
		7	2SWP-PSR474A3	BZ-19PB
		8	2SWP-PSA864A3	BZ-19GE
		9	2SWP-PSST476A3	BZ-19PD
	21-48	1	2SWP-PSR809A3	BZ-19DY
		2	2SWP-PSR810A3	BZ-19DZ
		3	2SWP-PSST811A3	BZ-19EA
		4	2SWP-PSST812A3	BZ-19EB
		5	2SWP-PSST813A3	BZ-19EC
		6	2SWP-PSR814A3	BZ-19ED
		7	2SWP-PSR815A3	BZ-19EE
		8	2SWP-PSR808A3	BZ-19DX
		9	2SWP-PSA1001A3	BZ-19WK
	21-49	2	2SWP-PSR816A3	BZ-19EF
		3	2SWP-PSR817A3	BZ-19EG
		4	2SWP-PSA818A3	BZ-19EH
		5	2SWP-PSSH874A3	BZ-19GP

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	21-50	1	2SWP-PSSH844A3	BZ-19FK
		2	2SWP-PSST849A3	BZ-19FP
		3	2SWP-PSST861A3	BZ-19GB
		4	2SWP-PSR863A3	BZ-19GD
		5	2SWP-PSST867A3	BZ-19GH
		6	2SWP-PSST868A3	BZ-19GJ
		7	2SWP-PSSH869A3	BZ-19GK
		8	2SWP-PSST870A3	BZ-19GL
		9	2SWP-PSST402A3	BZ-19MC
		10	2SWP-PSST403A3	BZ-19MC
		11	2SWP-PSST401A3	BZ-19MB
		12	2SWP-PSR374A3	BZ-19LE
		13	2SWP-PSR379A3	BZ-19LK
		14	2SWP-PSR555A3	BZ-19SA
		15	2SWP-PSST556A3	BZ-19SB
		16	2SWP-PSST554A3	BZ-19RZ
		17	2SWP-PSST1366A3	BZ-19ABE
	21-51	1	2SWP-PSR821A3	BZ-19EM
		2	2SWP-PSR822A3	BZ-19EN
		3	2SWP-PSST823A3	BZ-19EP
		4	2SWP-PSST824A3	BZ-19EQ
		5	2SWP-PSA825A3	BZ-19ER
		6	2SWP-PSR855A3	BZ-19FV

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		7	2SWP-PSR856A3	BZ-19FW
	21-52	1	2SWP-PSR857A3	BZ-19FX
		2	2SWP-PSST858A3	BZ-19FY
	21-53	1	2SWP-PSR833A3	BZ-19EY
		2	2SWP-PSST834A3	BZ-19EZ
		3	2SWP-PSR839A3	BZ-19FE
		4	2SWP-PSST840A3	BZ-19FF
		5	2SWP-PSST852A3	BZ-19FS
		6	2SWP-PSST837A3	BZ-19FC
		7	2SWP-PSR865A3	BZ-19GF
		8	2SWP-PSR835A3	BZ-19FA
		9	2SWP-PSR836A3	BZ-19FB
		10	2SWP-PSST838A3	BZ-19FD
		11	2SWP-PSR841A3	BZ-19FG
		12	2SWP-PSST407A3	BZ-19ME
		13	2SWP-PSST408A3	BZ-19ME
		14	2SWP-PSR404A3	BZ-19MD
		15	2SWP-PSSH451A3	BZ-19NM
		16	2SWP-PSA842A3	BZ-19FH
		17	2SWP-PSST901A3	BZ-19EZ
		18	2SWP-PSA832A3	BZ-19EX
	21-54	1	2SWP-PSR992A3	BZ-19WD

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		2	2SWP-PSR1085A3	BZ-19YG
		3	2SWP-PSSP1086A3	BZ-19YG
		4	2SWP-PSR1026A3	BZ-19XA
		5	2SWP-PSSH1027A3	BZ-19XA
		6	2SWP-PSST643A3	BZ-19VG
		7	2SWP-PSST647A3	BZ-19VF
		8	2SWP-PSST640A3	BZ-19UZ
		9	2SWP-PSA315A3	BZ-19UT
		10	2SWP-PSR897A3	BZ-19HN
		11	2SWP-PSR996A3	BZ-19WH
		12	2SWP-PSR1000A3	BZ-19WJ
		13	2SWP-PSST641A3	BZ-19VA
	21-55	1	2SWP-PSST498A3	BZ-19QB
		2	2SWP-PSST535A3	BZ-19RH
		3	2SWP-PSR496A3	BZ-19PZ
		4	2SWP-PSR493A3	BZ-19PW
		5	2SWP-PSR520A3	BZ-19QW
		6	2SWP-PSR628A3	BZ-19UJ
		7	2SWP-PSR531A3	BZ-19RE
		8	2SWP-PSST526A3	BZ-19RB
		9	2SWP-PSST563A3	BZ-19SJ
		10	2SWP-PSR524A3	BZ-19RA
		11	2SWP-PSR509A3	BZ-19QM

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		12	2SWP-PSR505A3	BZ-19QJ
	21-56	1	2SWP-PSST518A3	BZ-19QT
		2	2SWP-PSST504A3	BZ-19QH
		3	2SWP-PSST497A3	BZ-19QA
		4	2SWP-PSST484A3	BZ-19PM
		5	2SWP-PSST481A3	BZ-19PJ
		6	2SWP-PSST480A3	BZ-19PH
		7	2SWP-PSR487A3	BZ-19PE
		8	2SWP-PSST471A3	BZ-19PA
		9	2SWP-PSST472A3	BZ-19PA
		10	2SWP-PSST466A3	BZ-19NX
		11	2SWP-PSST465A3	BZ-19NX
		12	2SWP-PSST464A3	BZ-19NW
		13	2SWP-PSST461A3	BZ-19NT
		14	2SWP-PSST460A3	BZ-19NS
		15	2SWP-PSSP457A3	BZ-19NP
		16	2SWP-PSST486A3	BZ-19PP
		18	2SWP-PSST495A3	BZ-19PY
		19	2SWP-PSST500A3	BZ-19QD
		20	2SWP-PSR508A3	BZ-19QL
		21	2SWP-PSST502A3	BZ-19QF
		22	2SWP-PSA541A3	BZ-19RN
		23	2SWP-PSSH654A3	BZ-19VJ

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		24	2SWP-PSSP655A3	BZ-19VK
		25	2SWP-PSSP656A3	BZ-19VL
		26	2SWP-PSP489A3	BZ-19PR
	21-57	1	2SWP-PSST643A3	BZ-19VB
		2	2SWP-PSST644A3	BZ-19VC
		3	2SWP-PSST645A3	BZ-19VD
		4	2SWP-PSST646A3	BZ-19VE
		5	2SWP-PSA1084A3	BZ-19YF
		6	2SWP-PSR991A3	BZ-19WD
		7	2SWP-PSR995A3	BZ-19WH
		8	2SWP-PSR999A3	BZ-19WJ
		9	2SWP-PSA1134A3	BZ-108KN
	21-58	1	2SWP-PSST490A3	BZ-19PT
		2	2SWP-PSST536A3	BZ-19RJ
		3	2SWP-PSR485A3	BZ-19PN
		4	2SWP-PSR491A3	BZ-19PU
		5	2SWP-PSR627A3	BZ-19UJ
		7	2SWP-PSR532A3	BZ-19RE
		8	2SWP-PSST527A3	BZ-19RB
		9	2SWP-PSST564A3	BZ-19SK
		10	2SWP-PSR525A3	BZ-19RA
		11	2SWP-PSR510	BZ-19QM

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		12	2SWP-PSR506A3	BZ-19QJ
		13	2SWP-PSST517A3	BZ-19QT
	21-59	1	2SWP-PSST511A3	BZ-19QN
		2	2SWP-PSST503A3	BZ-19QG
		3	2SWP-PSST483A3	BZ-19PL
		5	2SWP-PSST479A3	BZ-19PG
		6	2SWP-PSR477A3	BZ-19PE
		7	2SWP-PSST469A3	BZ-19NZ
		8	2SWP-PSST470A3	BZ-19NZ
		9	2SWP-PSST468A3	BZ-19NY
		10	2SWP-PSST467A3	BZ-19NY
		11	2SWP-PSST463A3	BZ-19NY
		12	2SWP-PSST462A3	BZ-19NU
		13	2SWP-PSST459A3	BZ-19NR
		14	2SWP-PSSP458A3	BZ-19NQ
		15	2SWP-PSST487A3	BZ-19PQ
		16	2SWP-PSST488A3	BZ-19PR
		17	2SWP-PSST494A3	BZ-19PX
		18	2SWP-PSST499A3	BZ-19QC
		19	2SWP-PSR540A3	BZ-19QL
		20	2SWP-PSST501A3	BZ-19QE
		21	2SWP-PSST507A3	BZ-19QK
		22	2SWP-PSR523A3	BZ-19QZ

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		23	2SWP-PSA512A3	BZ-19QP
		24	2SWP-PSSP635A3	BZ-19UR
		25	2SWP-PSSP636A3	BZ-19UR
		26	2SWP-PSST637A3	BZ-19US
		27	2SWP-PSSP634A3	BZ-19UQ
		28	2SWP-PSSP630A3	BZ-19UL
		29	2SWP-PSSH562A3	BZ-19SH
		32	2SWP-PSST482A3	BZ-19PJ
	21-60	1	2SWP-PSST819A3	BZ-19EJ
		2	2SWP-PSST820A3	BZ-19EK
		3	2SWP-PSA559A3	BZ-19SE
		4	2SWP-PSR653A3	BZ-19VH
		5	2SWP-PSR663A3	BZ-19VQ
		6	2SWP-PSR970A3	BZ-19VX
		7	2SWP-PSR972A3	BZ-19VY
		8	2SWP-PSSH1076A3	BZ-19ZM
		9	2SWP-PSR1016A3	BZ-19WT
		10	2SWP-PSSP1075A3	BZ-19WT
		11	2SWP-PSR1025A3	BZ-19WZ
		12	2SWP-PSST1032A3	BZ-19XD
		13	2SWP-PSST1034A3	BZ-19XE
	21-62	1	2SWP-PSST1031A3	BZ-19XC

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		2	2SWP-PSST1030A3	BZ-19XC
		3	2SWP-PSA1152A3	BZ-19AA-F
		4	2SWP-PSST1153A3	BZ-19AA-G
		5	2SWR-PSST1151A3	BZ-19AA-E
		8	2SWP-PSSP1147A3	BZ-19AA-B
		9	2SWP-PSSH1148A3	BZ-19AA-C
		10	2SWP-PSSP1170A3	BZ-19AA-S
		11	2SWP-PSST1155A3	BZ-19AA-J
		12	2SWP-PSR984A3	BZ-19WD
	21-63	2	2SWP-PSR998A3	BZ-19WJ-1
		3	2SWP-PSR994A3	BZ-19WH-1
		4	2SWP-PSR989A3	BZ-19WG-1
		5	2SWP-PSR988A3	BZ-19WF-1
		6	2SWP-PSR985A3	BZ-19WE-1
		7	2SWP-PSST980A3	BZ-19WB-1
		8	2SWP-PSST979A3	BZ-19WB-1
		9	2SWP-PSST977A3	BZ-19WA-1
		10	2SWP-PSST978A3	BZ-19WA-1
		11	2SWP-PSR1067A3	BZ-19XX-1
		12	2SWP-PSR1072A3	BZ-19YA-1
		14	2SWP-PSR1057A3	BZ-19XQ-1
		15	2SWP-PSR1003A3	BZ-19WL

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	21-64	1	2SWP-PSA361A3	BZ-19KS
		2	2SWP-PSST660A3	BZ-19VP
		3	2SWP-PSST659A3	BZ-19VP
		4	2SWP-PSR969A3	BZ-19VQ
		5	2SWP-PSR971A3	BZ-19VX
		6	2SWP-PSR973A3	BZ-19VY
		7	2SWP-PSSH1078A3	BZ-19ZN
		8	2SWP-PSR1017A3	BZ-19WT
		9	2SWP-PSSP1077A3	BZ-19WT
		10	2SWP-PSR1024A3	BZ-19WZ
		11	2SWP-PSST1033A3	BZ-19XD
		12	2SWP-PSST1051A3	BZ-19XM
	21-65	3	2SWP-PSST1136A3	BZ-19ZS
		4	2SWP-PSST1139A3	BZ-19ZT
		5	2SWP-PSA1141A3	BZ-19ZV
		6	2SWP-PSST1029A3	BZ-19XB
		7	2SWP-PSST1028A3	BZ-19XB
		8	2SWP-PSR983A3	BZ-19WD
		9	2SWP-PSST1311A3	BZ-19AAX
		10	2SWP-PSST1312A3	BZ-19AAY
		11	2SWP-PSR1313A3	BZ-19AAZ
		12	2SWP-PSST1314A3	BZ-19ABA
		13	2SWP-PSR1315A3	BZ-19ABC

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	21-104	1	2SWP-PSR751A3	BZ-111AZ
		2	2SWP-PSR752A3	BZ-111W
		3	2SWP-PSR753A3	BZ-111X
		4	2SWP-PSR754A3	BZ-111Y
		5	2SWP-PSR755A3	BZ-111Z
		6	2SWP-PSR756A3	BZ-111AA
		7	2SWP-PSR757A3	BZ-111AJ
		8	2SWP-PSR758A3	BZ-111AC
		9	2SWP-PSR759A3	BZ-111AD
		10	2SWP-PSR760A3	BZ-111AE
		11	2SWP-PSR761A3	BZ-111AF
		12	2SWP-PSR762A3	BZ-111AG
		13	2SWP-PSR763A3	BZ-111AH
		14	2SWP-PSR764A3	BZ-111AR
		15	2SWP-PSR765A3	BZ-111AK
		16	2SWP-PSR766A3	BZ-111AL
		17	2SWP-PSR767A3	BZ-111AM
		18	2SWP-PSR768A3	BZ-111AN
		19	2SWP-PSR769A3	BZ-111AP
		20	2SWP-PSR770A3	BZ-111AQ
		21	2SWP-PSST771A3	BZ-111BP
		22	2SWP-PSR772A3	BZ-111AT
		23	2SWP-PSR773A3	BZ-111AV

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		24	2SWP-PSR774A3	BZ-111BA
		25	2SWP-PSR775A3	BZ-111BB
		26	2SWP-PSST776A3	BZ-111BC
		27	2SWP-PSR777A3	BZ-111BD
	21-105	1	2SWP-PSR734A3	BZ-111BE
		2	2SWP-PSR736A3	BZ-111BG
		3	2SWP-PSR737A3	BZ-111BH
		4	2SWP-PSR738A3	BZ-111BJ
		5	2SWP-PSR739A3	BZ-111BK
		6	2SWP-PSR740A3	BZ-111H
		7	2SWP-PSR741A3	BZ-111J
		8	2SWP-PSR742A3	BZ-111K
		9	2SWP-PSR743A3	BZ-111L
		10	2SWP-PSR744A3	BZ-111M
		11	2SWP-PSR745A3	BZ-111N
		12	2SWP-PSR746A3	BZ-111P
		13	2SWP-PSR747A3	BZ-111Q
		14	2SWP-PSR748A3	BZ-111S
		15	2SWP-PSR749A3	BZ-111T
		16	2SWP-PSR750A3	BZ-111U
		17	2SWP-PSSP873A3	BZ-111BN
		18	2SWP-PSST735A3	BZ-111V

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	21-106	1	2SWP-PSR708A3	BZ-111AB
		2	2SWP-PSSP848A3	BZ-111BL
		3	2SWP-PSR709A3	BZ-111W
		4	2SWP-PSR710A3	BZ-111X
		5	2SWP-PSR711A3	BZ-111Y
		6	2SWP-PSR712A3	BZ-111Z
		7	2SWP-PSR713A3	BZ-111AA
		8	2SWP-PSR714A3	BZ-111AJ
		9	2SWP-PSR715A3	BZ-111AC
		10	2SWP-PSR716A3	BZ-111AD
		11	2SWP-PSR717A3	BZ-111AE
		12	2SWP-PSR718A3	BZ-111AF
		13	2SWP-PSR719A3	BZ-111AG
		14	2SWP-PSR720A3	BZ-111AH
		15	2SWP-PSR721A3	BZ-111AR
		16	2SWP-PSR722A3	BZ-111AK
		17	2SWP-PSR723A3	BZ-111AL
		18	2SWP-PSR724A3	BZ-111AM
		19	2SWP-PSR725A3	BZ-111AN
		20	2SWP-PSR726A3	BZ-111AP
		21	2SWP-PSR727A3	BZ-111AQ
		22	2SWP-PSST728A3	BZ-111AS
		23	2SWP-PSR729A3	BZ-111AT

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		24	2SWP-PSR730A3	BZ-111AU
		25	2SWP-PSR731A3	BZ-111AV
		26	2SWP-PSR732A3	BZ-111AW
		27	2SWP-PSR733A3	BZ-111AX
	21-107	1	2SWP-PSR690A3	BZ-111BE
		2	2SWP-PSR692A3	BZ-111BF
		3	2SWP-PSR693A3	BZ-111BG
		4	2SWP-PSR694A3	BZ-111BH
		5	2SWP-PSR695A3	BZ-111BJ
		6	2SWP-PSR696A3	BZ-111BK
		7	2SWP-PSR697A3	BZ-111H
		8	2SWP-PSR698A3	BZ-111J
		9	2SWP-PSR699A3	BZ-111K
		10	2SWP-PSR700A3	BZ-111L
		11	2SWP-PSR701A3	BZ-111M
		12	2SWP-PSR702A3	BZ-111N
		13	2SWP-PSR703A3	BZ-111P
		14	2SWP-PSR704A3	BZ-111Q
		15	2SWP-PSR705A3	BZ-111S
		16	2SWP-PSR706A3	BZ-111T
		17	2SWP-PSR707A3	BZ-111U
		18	2SWP-PSSP854A3	BZ-111BM
		19	2SWP-PSR853A3	BZ-111AY

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		20	2SWP-PSST691A3	BZ-111R
		21	2SWP-PSSP1646A3	BZ-111BF
	21-117	1	2SWQ-PSR532B3	BZ-19G-092
		3	2SWQ-PSST534B3	BZ-19G-094
		4	2SWQ-PSST537B3	BZ-19G-097
		5	2SWQ-PSST533B3	BZ-19G-093
		6	2SWQ-PSST536B3	BZ-19G-096
	21-118	1	2SWQ-PSST175B3	BZ-19G-055
		15	2SWP-PSR1615A4	BZ-19ACV
	21-121	1	2SWP-PSST127B3	BZ-581G-152
		2	2SWP-PSST126B3	BZ-581G-151
		3	2SWQ-PSST124B3	BZ-581G-149
		4	2SWQ-PSST125B3	BZ-581G-150
		5	2SWR-PSR782B3	BZ-581G-148
		6	2SWR-PSR781B3	BZ-581G-147
		7	2SWR-PSR780B3	BZ-581G-146
		8	2SWR-PSR779B3	BZ-581G-145
		9	2SWR-PSR778B3	BZ-581G-144
	21-127	4	2SWQ-PSR117B3	BZ-581G-113
		5	2SWQ-PSST116B3	BZ-581G-112
		6	2SWR-PSR777B3	BZ-581G-111

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		7	2SWR-PSR776B3	BZ-581G-110
		8	2SWR-PSR775B3	BZ-581G-109
		9	2SWR-PSR774B3	BZ-581G-108
		10	2SWR-PSR773B3	BZ-581G-107
		11	2SWP-PSA1462A3	BZ-581J
	21-131	4	2SWQ-PSST060B3	BZ-581G-004
		5	2SWQ-PSST061B3	BZ-581G-005
		6	2SWQ-PSST062B3	BZ-581G-006
		7	2SWR-PSR753B3	BZ-581G-007
		8	2SWR-PSR001A3	BZ-581G-008
		9	2SWR-PSR755B3	BZ-581G-009
		10	2SWR-PSR756B3	BZ-581G-010
		12	2SWP-PSA1461A3	BZ-581H
	21-134	4	2SWQ-PSST066B3	BZ-581G-017
		5	2SWQ-PSST067B3	BZ-581G-018
		6	2SWQ-PSST068B3	BZ-581G-019
		7	2SWQ-PSST069B3	BZ-581G-020
		8	2SWQ-PSST757B3	BZ-581G-021
		9	2SWQ-PSR758B3	BZ-581G-022
		10	2SWQ-PSR759B3	BZ-581G-023
		11	2SWQ-PSR760B3	BZ-581G-024
		13	2SWP-PSA1463A3	BZ-581J

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
	21-146	3	2SWP-PSST662A3	BZ-108JQ
		4	2SWP-PSR650A3	BZ-108JM
	21-151	1	2SWP-PSR1004A3	BZ-19WL
		2	2SWP-PSST1008A3	BZ-19WP
		3	2SWP-PSST1009A3	BZ-19WP
		9	2SWP-PSST1605A3	BZ-19AC-M
	21-155	1	2SWP-PSR1005A3	BZ-19WL
		2	2SWP-PSST1014A3	BZ-19WS
		3	2SWP-PSST1015A3	BZ-19WS
		4	2SWP-PSR1088A3	BZ-19YJ
		6	2SWP-PSST1606A3	BZ-19AC-M
		8	2SWP-PSST1607A3	BZ-19AC-N
	21-156	1	2SWP-PSR997A3	BZ-19WJ
		2	2SWP-PSR1002A3	BZ-19WL
		3	2SWP-PSST1012A3	BZ-19WR
		4	2SWP-PSST1013A3	BZ-19WR
		5	2SWP-PSST1093A3	BZ-19YN
		6	2SWP-PSR1044A3	BZ-19XJ
		7	2SWP-PSR1045A3	BZ-19XK
	21-158	1	2SWP-PSR1050A3	BZ-19XL
		2	2SWP-PSST1058A3	BZ-19XT

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		3	2SWP-PSST1059A3	BZ-19XT
	21-159	1	2SWP-PSR1049A3	BZ-19XL
		2	2SWP-PSR1047A3	BZ-19XK
		3	2SWP-PSR1043A3	BZ-19XJ
		4	2SWP-PSST1040A3	BZ-19XH
		5	2SWP-PSST1092A3	BZ-19YM
		6	2SWP-PSST1011A3	BZ-19WQ
		7	2SWP-PSST1010A3	BZ-19WQ
		8	2SWP-PSST1062A3	BZ-19XT
	21-160	1	2SWP-PSR1110A3	BZ-19YW
	21-190	1	2SWP-PSR1311B3	BZ-19G-168
		2	2SWP-PSR1306B3	BZ-19G-163
		3	2SWP-PSR1303B3	BZ-19G-159
		4	2SWP-PSR1304B3	BZ-19G-160
		5	2SWP-PSST1355B3	BZ-19G-161
		6	2SWP-PSST1350B3	BZ-19G-177
		7	2SWP-PSST1305B3	BZ-19G-162
		8	2SWP-PSST1334B3	BZ-19G-169
	21-191	1	2SWP-PSST1344B3	BZ-19G-171
		2	2SWP-PSR1335B3	BZ-19G-170
	21-192	1	2SWP-PSST1351B3	BZ-19G-178

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		2	2SWP-PSST1301B3	BZ-19G-157
		3	2SWP-PSR1302B3	BZ-19G-158
	21-193	2	2SWP-PSST1299B3	BZ-19G-155
		4	2SWP-PSST1298B3	BZ-19G-154
		5	2SWP-PSST1345B3	BZ-19G-172
		6	2SWP-PSST1297B3	BZ-19G-153
		7	2SWP-PSST1354B3	BZ-19G-181
		8	2SWP-PSR1296B3	BZ-19G-152
		9	2SWP-PSST1295B3	BZ-19G-151
		10	2SWP-PSR1294B3	BZ-19G-150
		11	2SWP-PSST1300B3	BZ-19G-156
		12	2SWP-PSST1349B3	BZ-19G-176
		13	2SWP-PSR1293B3	BZ-19G-149
	21-194	1	2SWP-PSR1291B3	BZ-19G-147
		2	2SWP-PSR1290B3	BZ-19G-146
		3	2SWP-PSR1289B3	BZ-19G-145
		4	2SWP-PSR1288B3	BZ-19G-144
		5	2SWP-PSR1287B3	BZ-19G-143
		6	2SWP-PSA1424A3	BZ-19ABL
		7	2SWP-PSST1308B3	BZ-19G-165
		8	2SWP-PSR1307B3	BZ-19G-164
	21-195	1	2SWP-PSST1310B3	BZ-19G-167

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		2	2SWP-PSR1309B3	BZ-19G-166
	21-196	1	2SWP-PSA1421A3	BZ-19ABH
		2	2SWP-PSR1261B3	BZ-19G-111
		3	2SWP-PSR1262B3	BZ-19G-112
		4	2SWP-PSST1279B3	BZ-19G-129
		5	2SWP-PSST1348B3	BZ-19G-175
		6	2SWP-PSR1280B3	BZ-19G-130
	21-197	1	2SWP-PSR1263B3	BZ-19G-113
		2	2SWP-PSR1264B3	BZ-19G-114
		3	2SWP-PSR1265B3	BZ-19G-115
		4	2SWP-PSR1266B3	BZ-19G-116
		5	2SWP-PSST1267B3	BZ-19G-117
		6	2SWP-PSST1285B3	BZ-19G-133
	21-198	1	2SWP-PSST1277B3	BZ-19G-127
		2	2SWP-PSST1353B3	BZ-19G-186
		3	2SWP-PSR1276B3	BZ-19G-126
		4	2SWP-PSST1275B3	BZ-19G-125
		5	2SWP-PSR1274B3	BZ-19G-124
		6	2SWP-PSST1273B3	BZ-19G-123
		7	2SWP-PSR1268B3	BZ-19G-118
		8	2SWP-PSR1269B3	BZ-19G-119
		9	2SWP-PSSP1270B3	BZ-19G-120

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		10	2SWP-PSSP1286B3	BZ-19G-134
		11	2SWP-PSSP1271B3	BZ-19G-121
		12	2SWP-PSSH1272B3	BZ-19G-122
	21-199	1	2SWP-PSA1422A3	BZ-19ABJ
		2	2SWP-PSST1281B3	BZ-19G-131
		3	2SWP-PSST1347B3	BZ-19G-174
		4	2SWP-PSR1282B3	BZ-19G-132
		5	2SWP-PSR1278B3	BZ-19G-128
WCS	09-05	1	2WCS-PSSP626A1	BZ-74HJ
		2	2WCS-PSSP568A1	BZ-74LY
		3	2WCS-PSSH625A1	BZ-74HH
		4	2WCS-PSSP624A1	BZ-74HG
		5	2WCS-PSSP623A1	BZ-74HF
		6	2WCS-PSSP622A1	BZ-74HE
		7	2WCS-PSSH621A1	BZ-74HD
		8	2WCS-PSSP569A1	BZ-74EZ
		9	2WCS-PSSP620A1	BZ-74HC
		10	2WCS-PSSH619A1	BZ-74HB
		11	2WCS-PSSP618A1	BZ-74HA
		12	2WCS-PSSP617A1	BZ-74GZ
		13	2WCS-PSSH616A1	BZ-74GY
		14	2WCS-PSSP615A1	BZ-74GX

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		15	2WCS-PSSP614A1	BZ-74GW
		16	2WCS-PSSH613A1	BZ-74GV
		17	2WCS-PSSP612A1	BZ-74GU
		18	2WCS-PSST611A1	BZ-74GT
		19	2WCS-PSST570A1	BZ-74FA
		20	2WCS-PSSH610A1	BZ-74GS
		21	2WCS-PSSP609A1	BZ-74GR
		22	2WCS-PSSP608A1	BZ-74GQ
		23	2WCS-PSR660A1	BZ-74JU
		24	2WCS-PSSP562A1	BZ-74ES
		25	2WCS-PSSP601A1	BZ-74GH
		26	2WCS-PSSH602A1	BZ-74GJ
		27	2WCS-PSSP603A1	BZ-74GK
		28	2WCS-PSSP604A1	BZ-74GL
		29	2WCS-PSSH605A1	BZ-74GM
		30	2WCS-PSSP606A1	BZ-74GN
		31	2WCS-PSSP607A1	BZ-74GP
	09-06	2	2WCS-PSSP593A1	BZ-74FZ
		3	2WCS-PSSP565A1	BZ-74EV
		4	2WCS-PSST574A1	BZ-74FE
		5	2WCS-PSSP580A1	BZ-74FL
		6	2WCS-PSSP581A1	BZ-74FN
		7	2WCS-PSSH561A1	BZ-74ER

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		8	2WCS-PSR582A1	BZ-74FM
		9	2WCS-PSSP583A1	BZ-74FP
		10	2WCS-PSSP584A1	BZ-74FQ
		11	2WCS-PSST585A1	BZ-74FR
		12	2WCS-PSSP579A1	BZ-74FK
		13	2WCS-PSST575A1	BZ-74FF
		14	2WCS-PSSP586A1	BZ-74FS
		15	2WCS-PSST587A1	BZ-74FT
		16	2WCS-PSR588A1	BZ-74FU
		17	2WCS-PSR634A1	BZ-74HS
		18	2WCS-PSSH566A1	BZ-74EW
		19	2WCS-PSSP573A1	BZ-74FD
		20	2WCS-PSSH590A1	BZ-74FW
		21	2WCS-PSSP589A1	BZ-74FV
		22	2WCS-PSSP591A1	BZ-74FX
		23	2WCS-PSSH572A1	BZ-74FC
		24	2WCS-PSSP592A1	BZ-74FY
		25	2WCS-PSSP567A1	BZ-74EX
		26	2WCS-PSR635A1	BZ-74HT
		27	2WCS-PSSP594A1	BZ-74GA
		28	2WCS-PSSP595A1	BZ-74GB
		29	2WCS-PSSP596A1	BZ-74GC
		30	2WCS-PSSH599A1	BZ-74GF

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		31	2WCS-PSSP597A1	BZ-74GD
		32	2WCS-PSSP598A1	BZ-74GE
		33	2WCS-PSSP600A1	BZ-74GG
		34	2WCS-PSR571A1	BZ-74FB
		35	2WCS-PSR661A1	BZ-74JV
		36	2WCS-PSSP1116A1	BZ-74ABJ
		37	2WCS-PSSP1121A1	BZ-74ABN
		38	2WCS-PSSP862A1	BZ-74SE
	09-14	17	2WCS-PSSP707A1	BZ-74LT
		18	2WCS-PSSP712A1	BZ-74LX
		19	2WCS-PSSP713A1	BZ-74LY
		20	2WCS-PSSP714A1	BZ-74LZ
		21	2WCS-PSSP715A1	BZ-74MA
		22	2WCS-PSSH716A1	BZ-74MB
		23	2WCS-PSSP720A1	BZ-74MF
		24	2WCS-PSSP719A1	BZ-74ME
		25	2WCS-PSSP721A1	BZ-74MG
		26	2WCS-PSSP722A1	BZ-74MH
		27	2WCS-PSSP705A1	BZ-74LR
		28	2WCS-PSSP704A1	BZ-74LQ
		29	2WCS-PSST703A1	BZ-74LP
		30	2WCS-PSSP701A1	BZ-74LM
		31	2WCS-PSSP699A1	BZ-74LK

TABLE 10-1 (Cont)

System	ISI Isometric Drawing	Item No.	Pipe Support No.	Pipe Support Drawing
		32	2WCS-PSSH698A1	BZ-74LJ
		33	2WCS-PSSP697A1	BZ-74LH
		34	2WCS-PSSH696A1	BZ-74LG
		35	2WCS-PSSP695A1	BZ-74LF
	12-A	1	2WCS-PSSP928A1	BZ-74UX
	94-A	7	2WCS-PSSP886A1	BZ-74TE
		8	2WCS-PSSH891A1	BZ-74TK
	100-A	1	2WCS-PSSP874A1	BZ-74SS
		2	2WCS-PSSH878A1	BZ-74SW