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2000 SECOND AVENUE
DETROIT, MICHIGAN 48226

INSERVICE INSPECTION-NONDESTRUCTIVE
EXAMINATION (ISI-NDE) PROGRAM (PLAN)
FOR FERMI 2 POWER PLANT
DOCUMENT NO. ISI-NDE PROGRAM

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INTRODUCTION

The Inservice Inspection (ISI Program (Plan)) contained herein describes the Nondestructive Examinations to be applied to Detroit Edison's Fermi 2 Power Plant (EF-2) for the first ten year (120 month) inspection interval. EF-2 is an 1154 MW Boiling Water Reactor (BWR). This program (plan) complies with the applicable requirements set forth in 10CFR50 and Section XI of the ASME Boiler and Pressure Vessel Code, "Rules for Inservice Inspection of Nuclear Power Plant Components".

As stated in 10CFR50.55a(g)(4), throughout the service life of EF-2, components (including supports), which are classified as ASME Code Class 1, 2, and 3, shall meet the requirements, except design and access provisions, set forth in Section XI of editions of the ASME Boiler and Pressure Vessel Code, that subsequently become effective and are incorporated by reference in 10CFR50.55a(b) on the date 12 months prior to the date of issuance of the operating license. The date of issuance of the Operating License for Fermi-2 is July 15, 1985. The Code in effect 12 months prior to this date is the 1980 Edition, through and including Winter 1981 Addenda.

The first 120-month inspection interval began with the start of commercial operation in January 1988 and will be completed in 1998.

This document is a summary of the Fermi 2 Inservice Inspection Program (Plan) and has been submitted to the Nuclear Regulatory Commission in accordance with the requirements of 10CFR50.55a(g)(4)(i).

This ISI-NDE Program (Plan) is subject to change. Changes will be effected via relief request or document revisions. The EF-2 ISI-NDE Program (Plan) will be updated every ten years, plus or minus one year, per 10CFR50.55a or more frequently to reflect optional Owner upgrades or regulatory commitments.

This ISI - NDE Program (Plan) is intended to be a reference document and includes all those components and their associated supports selected for inspection and testing. The items in each category will be scheduled for inspection in accordance with the rules of ASME Section XI and as augmented by specific commitments. Future revisions of this program (plan) shall be issued for each period to show the specific examinations to be performed during the specific period as well as examinations completed during previous periods.

This document does not include the Inservice Testing (IST) Pump and Valve Program (IWP and RWV) commitments.

PART - A

**INSERVICE INSPECTION-NONDESTRUCTIVE
EXAMINATION (ISI-NDE) PROGRAM (PLAN)
FOR
PIPING, COMPONENTS, AND INTEGRAL ATTACHMENTS**

1.0 Applicable Code

The Inservice Inspection Program (Plan) for Nondestructive Examination (NDE) of Class 1, 2 and 3 components is implemented in accordance with the requirements and intent of Subsections IWA, IWB, IWC, IWD, and IWE Section XI, Division 1 of the ASME Boiler and Pressure Vessel Code, 1980 Edition through the Winter 1981 Addenda. All references in this document (Part A) to Section XI, - the Code, Categories, Item Numbers, etc. - refer to the 1980 Edition through the Winter 1981 Addenda unless otherwise noted.

2.0 Program Description

The NDE Program (Plan) developed herein will utilize Inspection Program B, (IWA-2420), Tables IWB-2412-1 and IWC-2412-1 for the first 120 month inspection interval. Per 10CFR50.55a(g)(5)(iii), where the requirements of the governing Code Edition or Addenda are determined to be impractical, within the limitations of design, geometry and materials of construction of the components, specific relief requests have been written. These are referenced in the applicable NDE Program Tables and included in section 4.0 of this part. If during the course of implementation the need for additional relief is identified, it will be requested at a later date.

In accordance with 10CFR50.55a (b)(2)(iv), the extent of examination (the number of welds required to be examined) for Code Class-2 pipe welds included in the Residual Heat Removal System (RHR), Emergency Core Cooling Systems (ECC), and Containment Heat Removal Systems (CHR) was determined by the requirements of paragraph IWC-1220, Table IWC-2520 Category C-F and C-G, and paragraph IWC-2411 in the 1974 Edition, including Addenda through the Summer 1975, of Section XI of the ASME B of PV Code. For all other class 2 systems either the 1974 Edition, including Addenda through the Summer 1975, or the 1980 Edition, including Addenda through the Winter 1981, of ASME Section XI may be used. For consistency, the 1974 Edition, including Addenda through the Summer 1975 was used. This includes the Head Spray and Standby Liquid Control Systems added to the Class-2 Inservice Inspection Program by Detroit Edison Letter EF2-53873, transmitted to the NRC on June 24, 1981.

The selection of the individual welds to be examined on each Class 2 system is based on the inspection philosophy identified in the 1980 Edition, Winter 1981 Addenda of ASME Section XI. The selection philosophy contained in the 1975 Summer Addenda is based on a random selection of welds and results in examining a particular weld only once in the plants 40-year operational life. No trending of data is possible under the 1975 Summer rules. The 1981 Winter Addenda identifies a

selection philosophy that concentrates the examinations on those welds that historically have a greater probability of failure; namely, high-stress welds, welds at terminal ends, and dissimilar metal welds. In addition, the 1981 Winter Addenda requires examinations of the same welds in each 10-year interval so that meaningful data trending can be accomplished. There is general agreement in the industry that the 1981 Winter Addenda philosophy is superior to the random selection approach identified in the 1975 Summer Addenda.

The criteria used for the selection of specific welds to be examined for the inservice inspection program are based on the following:

- 2.1 All high stress welds defined as loading stresses greater than $0.8(1.2S_H + S_B)$ as per the 1981 Winter Addenda.
- 2.2 All moderately stressed welds defined as loading stresses greater than $0.7(1.2S_H + S_B)$ and less than or equal to $0.8(1.2S_H + S_B)$. Inclusion of these moderately stressed welds in the Fermi 2, Class 2, Inservice Inspection Program, is an added conservatism that exceeds the requirements of the ASME Section XI, 1980 Edition, Winter 1981 Addenda.
- 2.3 All dissimilar metal welds. (There are none)
- 2.4 One terminal end of each type of terminal end within a system. (Note: This is a modified version of the ASME Section XI, 1980 Edition, Winter 1981 Addenda, Table IWC-2500-1, Category C-F, Footnote (1)(b).) Edison has taken this approach to prevent skewing the weld examination sample to this particular type of weld. For example, the core spray system has four pumps, each with a terminal end at the pump suction and discharge. To examine all eight terminal ends would be redundant. Therefore, to enable a more representative sample to be taken, only one pump suction terminal end weld and one pump discharge terminal end weld would be selected for examination.
- 2.5 Additional random selections such that the total number of welds examined meets the number required by paragraph IWC-2411 of ASME Section XI, 1974 Edition, Summer 1975 Addenda.

The Class-2 examination philosophy described above has previously been presented to the NRC in the EF-2 FSAR and subsequently accepted by the NRC in the SER.

For further details on the Class 1 and Class 2 weld selection process, refer to Part-E of this document, Appendix-A and Appendix-B respectively.

Section 5.0 contains copies of Fermi 2's Inservice Inspection Isometric Drawings which have been developed for all vessels, piping pumps and valves which require volumetric and/or surface examination by this program.

The system inservice inspection classifications, developed specifically to define the extent to which ASME Section XI requirements will be applied, differ somewhat from the ASME Section III design classifications. Primarily, these differences occur because systems, or portions of systems, have been optionally upgraded in design. In addition, ISI classifications are limited to systems important to safety, which contain water, steam, or radioactive materials.

3.0 Exemptions

Certain components (or parts of components) are exempt from the examination requirements of ASME Section XI, Table IWB-2500-1, per provisions contained in the Code. This section lists those "Code Allowed Exemptions" as applicable to the Fermi 2 inservice Inspection Program.

3.1 Class-1 Components exempt from volumetric and surface examination requirements of IWB-2500 of the Code:

Exemption EX-A1-1

ASME Section XI Code Paragraph: IWB-1220(a)

"Components that are connected to the reactor coolant system and part of the reactor coolant pressure boundary and that are of such size and shape so that upon postulated rupture the resulting flow of coolant from the reactor coolant system under normal plant operating conditions is within the capacity of makeup systems which are operable from on-site emergency power."

Justification:

The maximum size line break that can be made up by the reactor coolant makeup system has been calculated to be 1.44 inches inside diameter for liquid carrying lines and 2.88 inches inside diameter for steam carrying lines.

Exemption EX-A1-2

ASME Section XI Code Paragraph: IWB-1220(b)(1) and (2)

"Piping of 1 inch nominal pipe size and smaller and components and their connections in piping of 1 inch nominal pipe size and smaller."

Exemption EX-A1-3

ASME Section XI Code Paragraph: IWB-1220(c)

"Reactor Vessel head connections and associated piping, 2 inches nominal pipe size and smaller, made inaccessible by control rod drive penetrations."

Exemption EX-A1-4

ASME Section XI Code Table:

IWB-2500-1, Examination Category
B-H, Footnote No. 1.

Integral welded attachments with a base material design thickness less than
5/8 inch and weld buildup on nozzles that serve as supports.

Exemption EX-A1-5

ASME Section XI Code Table:

IWB-2500-1, Examination Category
B-K-1, Footnote No. 3.

Integral welded attachments with a base material design thickness less than
5/8 inch.

3.2 Class-2 Components exempt from the inservice examination requirements of IWC-2500 of the Code:

Exemption EX-A2-1

ASME Section XI Code Paragraph: IWC-1220(a)

"Components of systems or portions of systems that during normal plant operating conditions are not required to operate to perform a system function but remain flooded under static conditions at a pressure of at least 80% of the pressure that the component or system will be subjected to when required to operate.

Exemption EX-A2-2

ASME Section XI Code Paragraph: IWC-1220(b)

"Components of systems or portions of systems, other than residual heat removal systems and emergency core cooling systems, that are not required to operate above a pressure of 275 psig or above a temperature of 200 degrees F.

Exemption EX-A2-3

ASME Section XI Code Paragraph: IWC-1220(c)

"Component connections (including nozzles in vessels and pumps), piping and associated valves, and vessels and their attachments that are 4 inches nominal pipe size and smaller."

Exemption EX-A2-4

ASME Section XI Code Paragraph: IWC-5222(d)

"For open ended portions of discharge lines beyond the last shutoff valve in nonclosed systems, demonstration of an open flow path test shall be performed in lieu of the system hydrostatic test."

Exemption EX-A2-5

ASME Section XI Code Table: IWC-2500-1, Examination Category C-C, Footnote No. 1.

Integral welded attachments with a base material design thickness less than 3/4 inch.

3.3 Class-3 Components exempt from the inservice inspection requirements of IWD-2600 of the Code:

Exemption EX-A3-1

ASME Section XI Code Paragraph: IWD-1220.1

"Integral attachments to supports and restraints to components that are 4 inches nominal pipe size and smaller within the system boundaries of examination categories D-A, D-B, and D-C of Table IWD-2500-1 shall be exempt from the visual examination VT-3."

Exemption EX-A3-2

ASME Section XI Code Paragraph: IWD-1220.2(a) and (b)

"Integral attachments of supports and restraints to components exceeding 4 inches nominal pipe size may be exempted from the visual examination VT-3 of Table IWD-2500-1 provided:

- (a) The components are located in systems (or portions of system) whose function is not required in support of reactor residual heat removal, containment heat removal, and emergency core cooling."
- (b) The components operate at a pressure of 275 psig or less and at a temperature of 200 degrees F or less."

Exemption EX-A3-3

ASME Section XI Code Paragraph: IWD-5223(d)

"For open ended portions of discharge lines beyond the last shutoff valve in nonclosed system (e.g., service water systems), confirmation of adequate flow during system operation shall be acceptable in lieu of system hydrostatic test."

Exemption EX-A3-4

ASME Section XI Code Paragraph: IWD-5223(e)

"Open ended vent and drain lines from components extending beyond the last shutoff valve and open ended safety of relief valve discharge lines shall be exempt from hydrostatic test."

4.0 Relief Requests

Relief Requests are included where specific requirements of ASME Section XI are determined to be impractical. Each Relief Request is written in accordance with the format guidelines provided in Section 4.1. Individual Relief Requests are included in Section 4.2. As noted in the INTRODUCTION, Section 4.2 is subject to change throughout the inspection interval. If examination requirements in this program plan are determined to be impractical during the course of the interval, additional or modified Relief Requests will be submitted in accordance with 10 CFR 50.55a (g) (5) (iii).

4.1 Relief Request Format

Each Relief Request will include the following sections:

- 4.1.1 **COMPONENT DESCRIPTION:** The component description will include:
- o A general description of the component(s) addressed by the Relief Request.
 - o The applicable Plant Identification System (PIS) number(s) which uniquely identify the plant system and specific component(s) within the system, and
 - o A quantity of components if the Relief Request covers more than ten (10) components.
- 4.1.2 **ASME CODE CLASS:** The ISI classification, Class 1, 2, 3, E1, E2, or E3, as identified on the ISI Classification Boundary Drawings will be listed.
- 4.1.3 **ASME SECTION XI REQUIREMENT:** The impractical ASME Section XI requirement(s) will be listed. To the extent possible, subparagraphs, individual footnotes, or specific Item Numbers will be cited.
- 4.1.4 **BASIS FOR RELIEF:** Information to support Detroit Edison's determination that the Code requirement is impractical will be provided. The following data will be provided, if applicable:
- o A physical sketch if the component(s) are not accessible for examination.
 - o Detailed technical information (an engineering justification) supporting proposed alternate scope of examination, examination method, or acceptance standard.

- o A description of the proposed alternative examination's impact on plant safety and justification of any change in the overall level of plant safety.
- o A justification of any change in the overall level of plant safety if it is not possible to perform alternative examination(s).

4.1.5 **ALTERNATE EXAMINATION:** Any alternate examination(s) that are proposed will be identified. Both alternate examination(s) that are performed in lieu of the Section XI examination requirement(s) and alternate examination(s) that supplement partially completed Section XI examination requirement(s) will be identified. The description of the alternate examination(s) will include a statement describing the extent and frequency of examination, the acceptance standard, and whether deferral of inspection to the end of the interval is requested.

4.1.6 **APPLICABLE TIME PERIOD:** A statement identifying the time period during the inspection interval for which relief is requested will be included.

4.2 Relief Request(s)

The following Relief Request(s) are included in this section:

RELIEF REQUEST NUMBER	GENERAL DESCRIPTION
RR-A1	RPV shell and head welds are only partially accessible to mechanized examination equipment.
RR-A2	RPV bottom head welds in the center of the head are inaccessible due to CRD housing interferences.
RR-A3	A Class 1 moderate stress circumferential piping weld (pipe to flued head weld SW-PS-2-X7D-W1) in the guard pipe is inaccessible.
RR-A4	Reactor recirculation pump internal visual examinations solely for the purpose of satisfying the requirements of Examination Category B-M-2 are impractical. If the pump is disassembled for maintenance, the examination will be performed.
RR-A5-R1	Class 1 valve internal visual examinations solely for the purpose of satisfying the requirements of Examination Category B-L-2 are impractical. If a Class 1 valve is disassembled for maintenance, the examination will be performed.
RR-A6	RPV feedwater nozzles N4A and N4D are partially inaccessible since instrument nozzles N11A and N11B are too close to feedwater nozzles N4A and N4D.
RR-A7	Control rod drive and instrumentation nozzle partial penetration welds are inaccessible to direct visual examination.
RR-A8	Main steam piping lugs near the inboard main steam isolation valve are impractical to examine.
RR-A9-R1	Integrally welded attachments (piping lugs) Class 1.
RR-A10	Integrally welded attachments (piping lugs) Primary Containment Penetrations.

- RR-A11 Reactor recirculation pump integrally welded attachments are impractical to examine.
- RR-A12 Integrally welded attachments (piping lugs) Class 2.
- RR-A13 The design of component supports E11-3146-G30 and E11-3151-G20 makes the integrally welded attachments associated with these guides inaccessible.
- RR-A14 The weld on the bottom side of the RHR heat exchanger support ring is surrounded by structural steel and is inaccessible to examination.

RELIEF REQUEST - RR-A1

COMPONENT DESCRIPTION:

Reactor Pressure Vessel (RPV). See Table 1 (attached)

ASME CODE CLASS

Class 1 Vessel

ASME CODE SECTION XI REQUIREMENTS: Subsection IWB, Table IWB-2500-1, Examination Category B-A, Item No's. B1.10 and B1.20, require volumetric examination of the regions described in figures IWB-2500-1 through 3 for pressure retaining welds in the reactor pressure vessel each inspection interval.

BASIS FOR RELIEF: Due to mechanized examination equipment limitations and nozzle interferences, a 100% volumetric examination is not possible for certain shell and lower head welds. Coverage of the affected examination areas will be reduced depending on the physical limitations of the equipment and interferences encountered on a given examination.

The Fermi 2 RPV Perservice (PSI) nondestructive examinations were conducted in accordance with ASME Code Section XI, 1971 Edition with Addenda through Winter 1971, and Section III, 1968 Edition "with Addenda" through Summer 1969. Subsequent to the RPV PSI, a pole track system was designed to allow remote ultrasonic (mechanized) examination of the RPV Welds. The design allowed for maximum weld coverage possible with the equipment available at that time. The code in effect at the time, Section XI 1974 Edition required that 10% of the length of each longitudinal weld and 5% of the length of each circumferential weld be examined, the designed pole track system exceeded the examination requirements in effect at that time.

Performance of the limited ultrasonic examinations and the leakage tests will provide the maximum assurance practicable that the vessel is structurally sound for plant operation.

ALTERNATE EXAMINATION: No alternative examinations are proposed at this time. However, each listed weld will be examined to the extent indicated with possible additional coverage when equipment design allows. In addition to these examinations, leakage testing will be conducted at each refueling outage in accordance with Section XI, Examination Category B-P Item No. B15.10 and once every ten years in accordance with Section XI Examination Category B-P, Item No. B15.11.

APPLICABLE TIME PERIOD: Relief is requested for the first 120 month interval.

RR-A1 Cont'd

ENRICO FERMI 2

Weld Coverage Using Mechanized Ultrasonic Examination
 Source - Southwest Research Institute

Weld Identification	% Coverage *
Circumferential Welds:	
6-306	100
9-307	26
1-313	35
4-308B	25
4-308A	22
13-308**	17
Longitudinal Welds:	
2-307A	14
2-307B	62
2-307C	73
15-308A	100
15-308B	100
15-308C	100
15-308D	100
2-308A	100
2-308B	100
2-308C	100
1-308A	72
1-308B	72
1-308C	72
1-308D	72
Meridional Welds:	
1-306A	76
1-306B	76
1-306C	76
1-306D	76
1-306E	76
1-306F	76
1-306G	76
1-306H	76
1-306J	76
1-306K	76

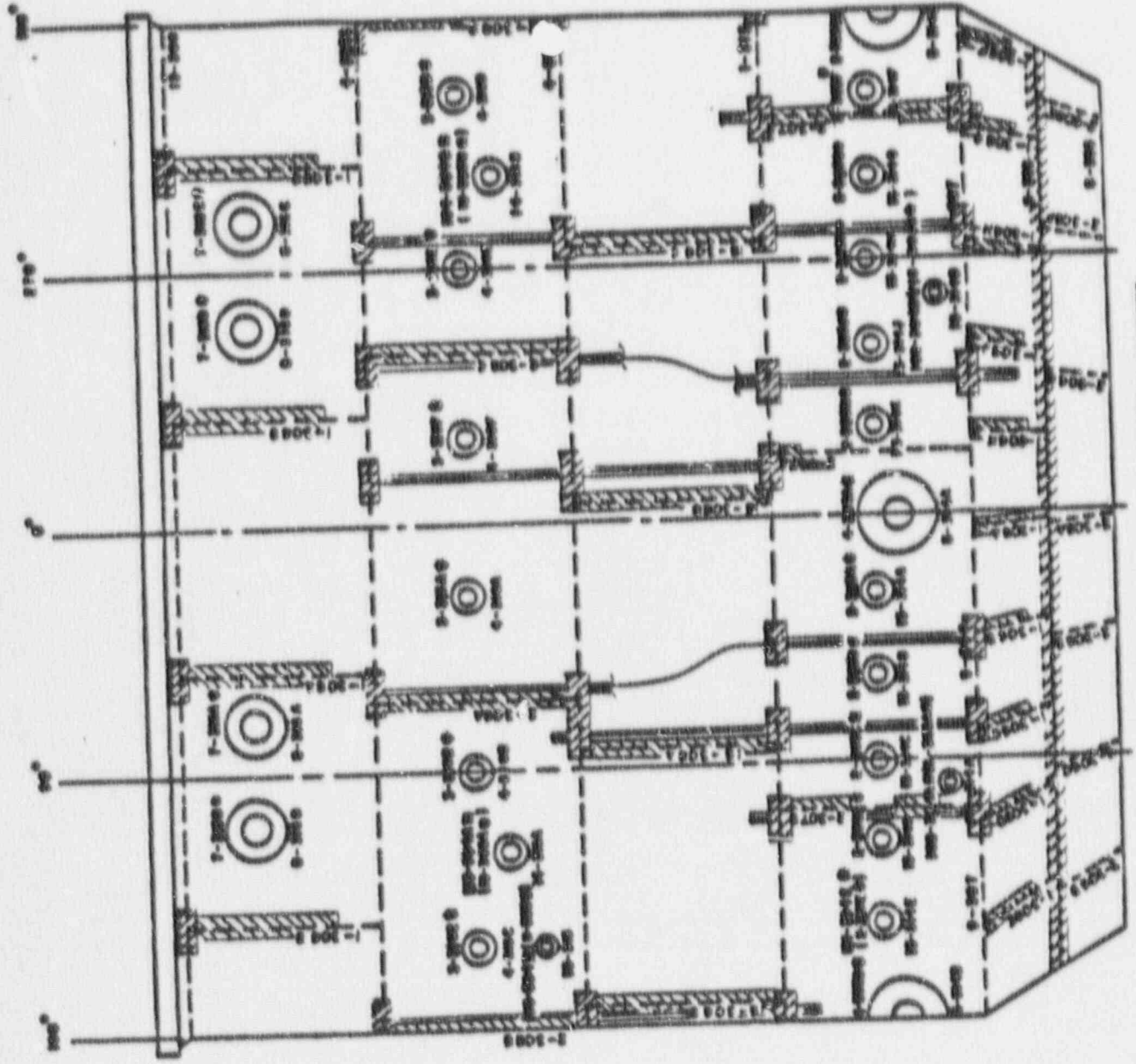
*Examination coverage of less than 100% due to nozzle interference and examination device mechanical limitations.

**A supplemental Manual ultrasonic examination will be conducted for weld 13-308, shell-to-flange. This examination will be conducted from the flange seal surface and will include 100% of the weld.

RR-A1 Cont'd

PERMANENT POLE
TRACK LOCATION

AREAS OF
EXAMINATION
COVERAGE



FERMI 2 REACTOR PRESSURE VESSEL
MECHANIZED ULTRASONIC EXAMINATION POLE TRACK SYSTEM

RELIEF REQUEST RR-A2

COMPONENT DESCRIPTION:

Reactor Pressure Vessel (RPV) - Bottom Head Welds

Weld Identification	Type
5-306	Circumferential
2-306 A thru G	Meridional

ASME CODE CLASS:

ASME SECTION XI REQUIREMENTS: Subsection IWB, Table WB-2500-1, Examination Category B-A, Item No. B1.20 requires volumetric examination of the regions described in figure IWB-2500-3. Examination of these pressure retaining welds in the reactor pressure vessel are required each inspection interval.

BASIS FOR RELIEF: Control Rod Drive (CRD) housings in the lower head prevent access to vessel welds in this area. See figure 1.

Due to the cluster of CRD drive housings in the lower head, access to the 7 meridional welds and 1 circumferential weld depicted in figure 1 is not possible. Volumetric examinations can not be conducted.

Performance of the leakage tests will provide assurance to the extent practicable, that the vessel is structurally sound for plant operation.

ALTERNATE EXAMINATION: No alternative examinations are proposed at this time. However, leakage testing will be conducted each refueling outage in accordance with ASME Section XI, Table IWB-2500-1 Examination Category B-P, Item No. B15.10 and once every ten years in accordance with Section XI, Examination Category B-P, Item No. B15.11.

APPLICABLE TIME PERIOD: Relief is requested for the first 120 month interval.

RR-A2 Cont'd

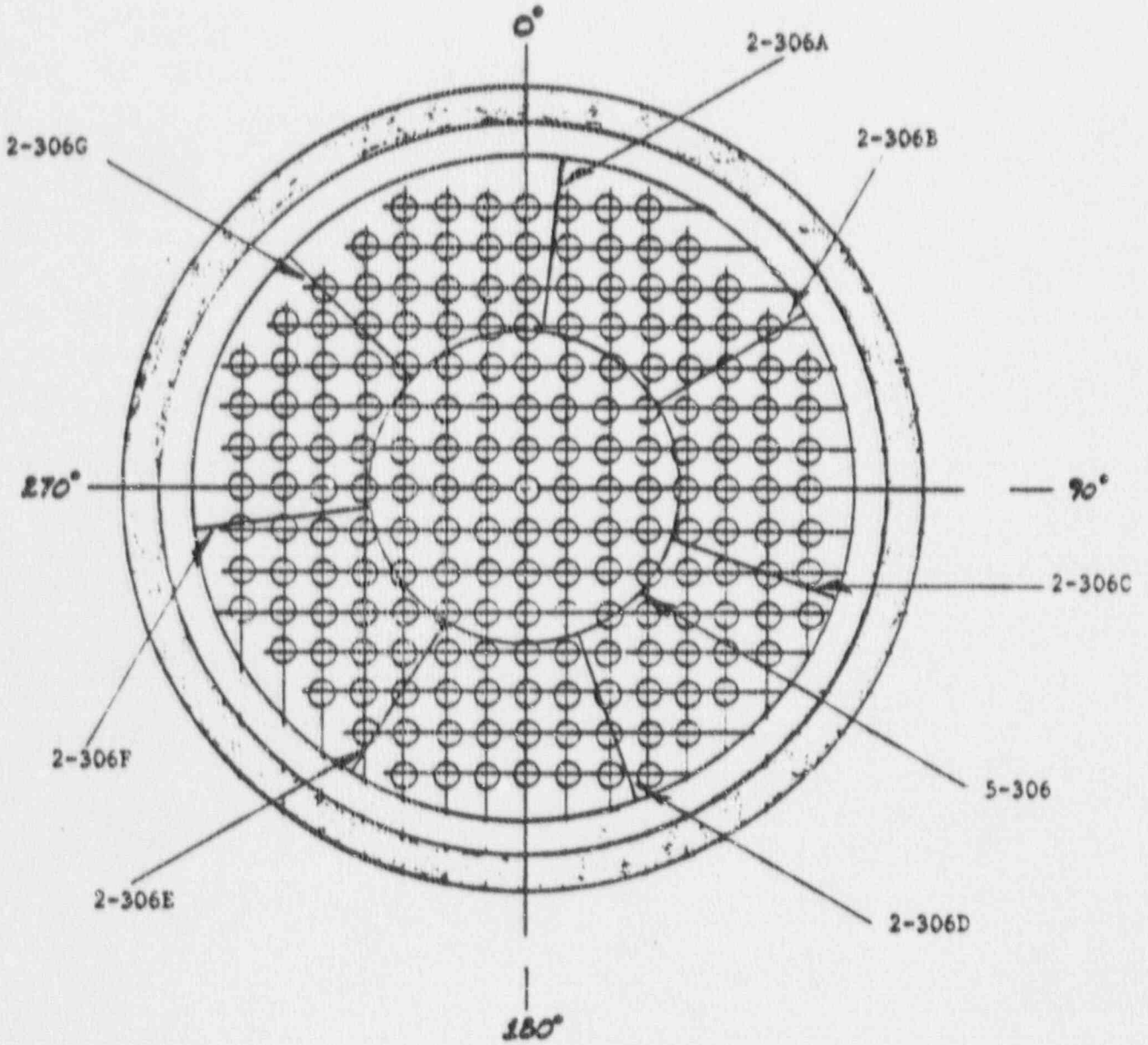


FIGURE 1
LOWER HEAD WELDS AND CRD PENETRATIONS

RELIEF REQUEST RR-A3

COMPONENT DESCRIPTION:

Circumferential Piping Weld
SW-PS-2-X7D-W1, Pipe to Flued Head

ASME CODE CLASS

Class 1, Piping

ASME SECTION XI REQUIREMENTS: Subsection IWb Table (WB-2500-1, Examination Category B-J, Item No. B9.11, requires surface and volumetric examinations of Welds where the stress level exceeds $2.4 S_m$. In addition to this requirement, The Detroit Edison Company has supplemented this requirement to include those Welds which exceed $2.1 S_m$. Welds which meet this stress level, between $2.1 S_m$ and $2.4 S_m$, are designated moderate stress Welds.

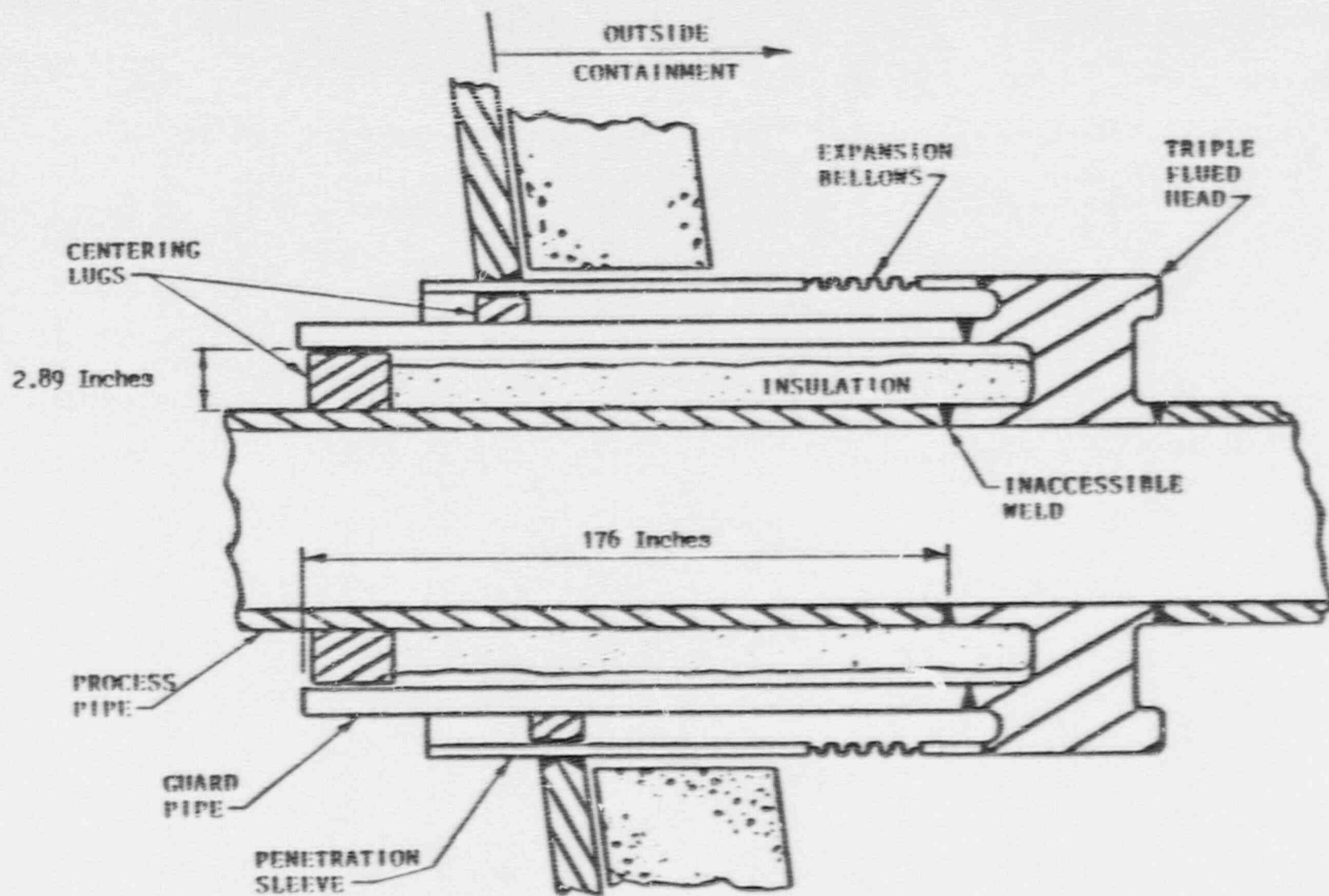
BASIS FOR RELIEF: Due to the design of the primary containment penetration assemblies, the circumferential weld at the process pipe-to-flued head (See figure 1) is not accessible. The clearance available between the process pipe and guard pipe is not large enough to allow examination equipment access to the Weld area. In addition, the open end side of the penetration assembly is obstructed by construction centering lugs, as shown in the figure, and the installed insulation.

The examination of the subject weld is a self imposed requirement beyond the requirements of the code. Due to the design limitations which prevent reasonable access to the weld area, a significant design and development program would be required to fabricate the required examination equipment. A program of this nature is not feasible. Only one selected Weld is affected by this situation. Because of these factors and the fact that the code does not require the examination of this weld, relief is requested from the commitment made by Detroit Edison to examine this moderate stress weld.

Performance of the leakage tests will provide assurance that the piping is structurally sound for plant operation.

ALTERNATE EXAMINATION: No alternative examinations are proposed at this time. However, leakage testing will be conducted each refueling outage in accordance with Section XI, Examination Category B-P, Item No. B15.50 and once every ten years in accordance with Section XI Examination Category B-P, Item No. B15.11.

APPLICABLE TIME PERIOD: Relief is requested for the first 120 month interval.



MR-A3 Cont'd

FIGURE 1
 TYPICAL DESIGN OF PRIMARY CONTAINMENT PENETRATION

RELIEF REQUEST RR-A4

COMPONENT DESCRIPTION:

Recirculation Pumps (B3101C001A and B3101C001B)
Pump Casings

ASME CODE CLASS

Class 1, Pumps

ASME SECTION XI REQUIREMENTS: Subsection IWB, Table IWB-2500-1, Examination Category B-L-2, Item No. B12.20 requires that the internal surfaces of one recirculation pump casing be visually examined (VT-3) each inspection interval. Specifically, the area of examination includes all pump casing internal pressure boundary surfaces.

BASIS FOR RELIEF: Access to the recirculation pump casing internal surfaces can only be accomplished when the pump has been disassembled. At this time, there are no other requirements to disassemble the pump on a scheduled basis. Disassembly of a recirculation pump for performance of a VT-3 visual examination would require significant labor and radiation exposure. It is expected that approximately 1000 man-hours and 50 man-rem exposure would be required to disassemble, inspect, and reassemble one pump. Performing this visual examination under adverse conditions such as high dose rate (30-40 R/hr) and poor as-cast surface condition, realistically provides little additional information as to pump casing integrity.

The recirculation pumps at Fermi 2 are Byron Jackson, type DVSS. The pump casing is primarily a single piece design of cast stainless steel (ASTM A-351, grade CF8M) and is widely used in the nuclear industry. Operating histories of recirculation pumps do not warrant concern for casing failure or inservice growth of manufacturing flaws. The presence of some delta ferrite (typically 5% or more) imparts substantially increased resistance to intergranular stress corrosion cracking. The delta ferrite also results in improved pitting corrosion resistance in chloride containing environments.

Detroit Edison Company feels that adequate safety margins are inherent in the basic pump design and that the health and safety of the public will not be adversely affected by performing the visual examination of the pump internal pressure boundary surfaces only when the pumps are required to be disassembled for maintenance. In addition both pumps will be VT-2 examined every refueling outage during leakage tests and once in the interval during hydrostatic testing.

RR-A4 Cont'd

ALTERNATE EXAMINATION: No alternative examinations are proposed at this time. In accordance with Section XI, Examination Category B-P, Item No's. B15.60 and B15.61, a system leakage test will be conducted each refueling outage and a system hydrostatic test conducted once during the interval. Also, whenever these pumps are disassembled for maintenance or for any other reason which would provide access to the internal surfaces, a visual examination of the internal surfaces shall be performed.

APPLICABLE TIME PERIOD: Relief is requested for the first 120 month interval.

RELIEF REQUEST RR-A5-R1

COMPONENT DESCRIPTION:

The Fermi 2 unit Class-1 systems contain 62 valves which are greater than four (4) inches nominal pipe size. These valves vary in size, design and manufacturer but all are manufactured from either cast or forged stainless steel or carbon steel. None of the valve bodies are welded. Of these 62 valves, 22 are subject to visual examination (VT-3) per Table IWB-2500-1, Category B-M-2, Item B12.50. The 62 valves to which this Relief Request applies are listed below:

B21 F022A (V17-2003)	E11 F008 (V8-2092)	G33 F001 (V8-2252)
B21 F022B (V17-2001)	E11 F009 (V8-2091)	G33 F004 (V8-2253)
B21 F022C (V17-2002)	E11 F015A (V8-2161)	G33 F100 (V8-2250)
B21 F022D (V17-2004)	E11 F015B (V8-2162)	G33 F102 (V8-2251)
B21 F028A (V17-2007)	E11 F022 (V8-2172)	G33 F106 (V8-2249)
B21 FC28B (V17-2005)	E11 F023 (V8-2171)	
B21 F028C (V17-2006)	E11 F050A (V8-2163)	N21 F010A (V8-2008)
B21 F028D (V17-2008)	E11 F050B (V8-2164)	N21 F010B (V12-2007)
	E11 F060A (V8-2165)	N21 F011A (V12-2006)
B21 F013A (V22-2071)	E11 F060B (V8-2166)	N21 F011B (V12-2005)
B21 F013B (V22-2068)	E11 F067 (V8-2090)	N21 F032A (V12-2004)
B21 F013C (V22-2060)	E11 F608 (V8-3407)	N21 F032B (V12-2003)
B21 F013D (V22-2054)		N21 F076A (V12-2002)
B21 F013E (V22-2056)		N21 F076B (V12-2001)
B21 F013F (V22-2050)	E21 F005A (V8-2021)	
B21 F013G (V22-2066)	E21 F005B (V8-2022)	
B21 F013H (V22-2058)	E21 F006A (V8-2023)	
B21 F013J (V22-2064)	E21 F006B (V8-2024)	
B21 F013K (V22-2062)	E21 F007A (V8-2025)	
B21 F013L (V22-2052)	E21 F007B (V8-2026)	
B21 F013M (V22-2046)		
B21 F013N (V22-2047)	E41 F002 (V17-2020)	
B21 F013P (V22-2070)	E41 F003 (V17-2021)	
B21 F013R (V22-2048)	E41 F006 (V8-2194)	
B31 F031A (V8-2003)	F21 F013 (V8-2228)	
B31 F031B (V8-2004)		
B31 F023A (V8-2001)		
B31 F023B (V8-2002)		

RR-A5 Cont'd

ASME CODE CLASS

Class 1, Valves

ASME SECTION XI REQUIREMENTS: Subsection IWB, Table IWB-2500-1, Category B-M-2, Item B12.50, requires that the internal surfaces of valve bodies exceeding 4 inches nominal pipe size be visually examined (VT-3). Per Table IWB-2500-1 Examination Category B-M-2, Note 3, one valve within each group of valves that are of the same constructional design will be examined each inspection interval.

BASIS FOR RELIEF: Access to valve internal surfaces can only be accomplished when the valve is disassembled. Disassembly of valves for reasons other than required maintenance will require additional labor and associated radiation exposure.

Disassembly of valves for visual examination with no other requirement for maintenance, will increase exposure to plant personnel. In some cases, radiation fields as high as 10 R/hr could be experienced. In addition, further labor and radiation exposure would occur for those valves which can not be isolated from reactor fluid. This is the case for approximately 20% of the subject valves (12 total) and would require unloading of the RPV core and vessel draining.

Performing these visual examinations on poor as-cast surfaces provides little additional information as to valve body integrity.

The valves at Fermi 2 are cast stainless steel and cast or forged carbon steel. Historically these materials have excellent service records and there is little reason to expect service related flaws in these valve bodies.

ALTERNATE EXAMINATION: No alternate examinations are proposed at this time. In accordance with Section XI, Category B-P, Items B15.60 and B15.61, a system leakage test will be conducted at each refueling outage and a system hydrostatic test will be conducted once during the interval. Also, whenever these valves are disassembled for maintenance, or for any other reason which would provide access to the internal surfaces, a visual examination of the internal surfaces shall be performed.

APPLICABLE TIME PERIOD: Relief is requested for the first 120 month interval.

RELIEF REQUEST RR-A6

COMPONENT DESCRIPTION:

Reactor Pressure Vessel (RPV)
4-316A, Feedwater nozzle at 30°
4-316D, Feedwater nozzle at 210°

ASME CODE CLASS

Class 1

ASME SECTION XI REQUIREMENTS: Subsection IWB, Table IWB-2500-1, Category B-D, Item B3.90, requires volumetric examination of the nozzle-to-vessel welds. The required examination volume is shown in figure IWB-2500-7(b).

BASIS FOR RELIEF: As shown in the attached figure 1, two N4 (feedwater) nozzle penetrations have adjacent N11 (Instrumentation) nozzle penetrations which will interfere with the mechanized ultrasonic scanning of the required examination volume. The limitations will prevent examination of 12.8% of the nozzle-to-vessel weld.

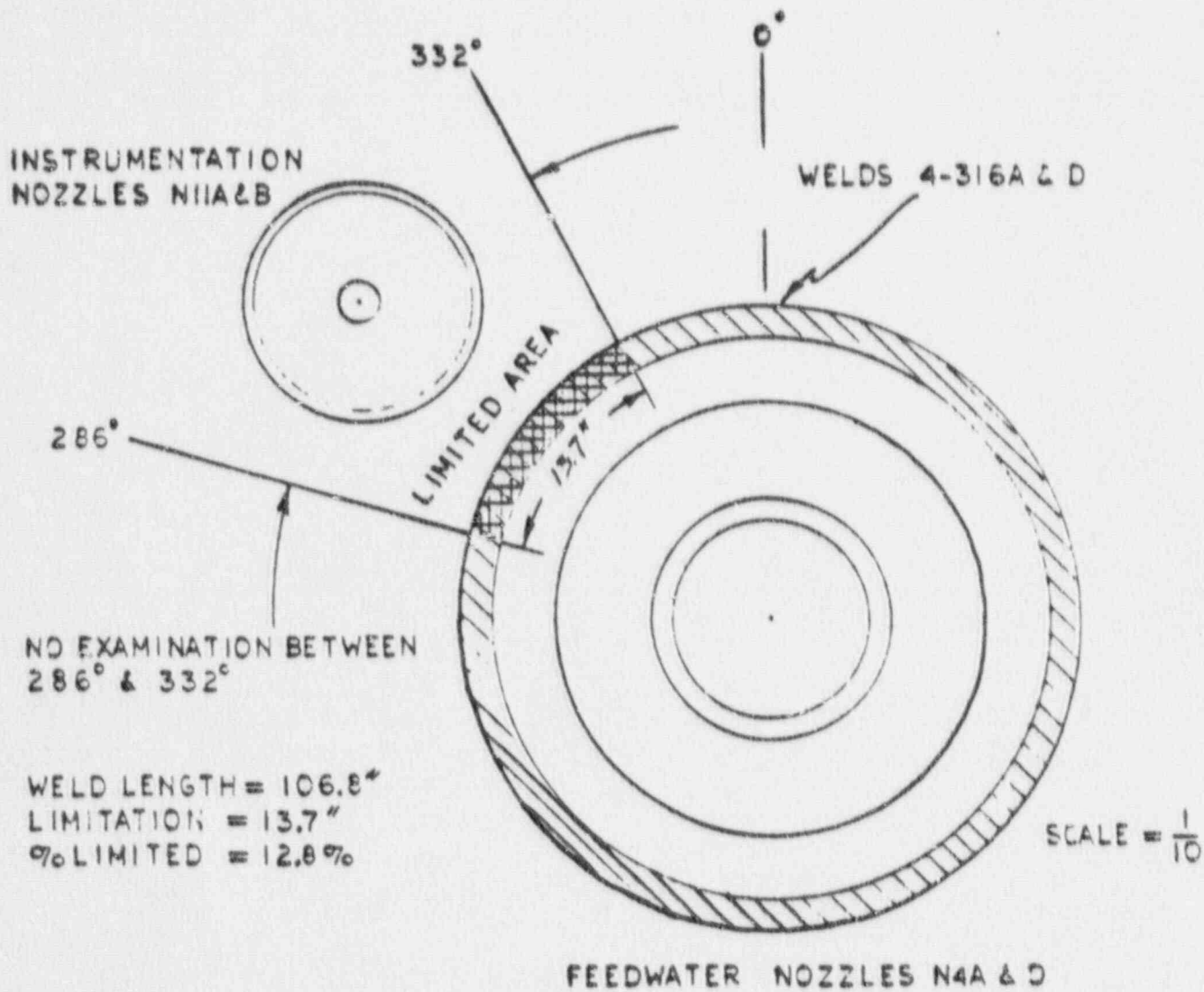
The relative location of the N11 instrumentation nozzles prevent the positioning of the mechanized ultrasonic search unit between the azimuth locations shown in figure 1. Because of the equipment's design, only the area outside of the limited area can be scanned.

Performance of the limited ultrasonic examinations and the leakage tests will provide the maximum assurance practicable that the vessel is structurally sound for plant operation.

ALTERNATE EXAMINATION: No alternative examinations are proposed at this time. However, each listed weld will be examined to the maximum extent possible. In addition, leakage testing will be conducted each refueling outage in accordance with Section XI, Examination Category B-P, Item B15.10, and once every ten years in accordance with Section XI Examination Category B-P, Item No. B15.11.

APPLICABLE TIME PERIOD: Relief is requested for the first 120 month interval.

RR-A6 Cont'd



FEEOWATER NOZZLE EXAMINATION LIMITATIONS

RELIEF REQUEST RR-A7

COMPONENT DESCRIPTION:

Reactor Pressure Vessel (Control Rod Drives)
all control rod drive and instrumentation nozzles. (240 nozzles total)

ASME CODE CLASS

Class 1

ASME SECTION XI REQUIREMENTS: Subsection IWB, Table IWB-2500-1, Category B-E, Items 4.12 and 4.13, requires visual (VT-2) examination of the control rod drive nozzles and instrumentation nozzle external surfaces. 25% of the nozzles are to be examined during each inspection interval.

BASIS FOR RELIEF: Due to the location of these components, these partial penetration welds are not accessible for direct visual examination. The welds, located in the tightly clustered instrumentation and control rod drive housings inside the vessel, can not be directly accessed inside or outside the vessel.

The physical location of these nozzles prevent access for direct visual examination.

Visual (VT-2) examination for evidence of leakage will ensure the integrity of these components.

ALTERNATE EXAMINATION: A visual (VT-2) examination will be conducted from below the housing location under the vessel lower head during the system leakage test and the hydrostatic test performed once every ten years.

APPLICABLE TIME PERIOD: Relief is requested for the first 120 month interval.

RELIEF REQUEST RR-A8

COMPONENT DESCRIPTION:

Integrally Welded Attachments (Main Steam Piping Lugs)

Lug/Weld Ident

FW-PS-2-A4-GA1
FW-PS-2-A4-GA2
FW-PS-2-A4-GA3
FW-PS-2-A4-GA4

FW-PS-2-B4-GB1
FW-PS-2-B4-GB2
FW-PS-2-B4-GB3
FW-PS-2-B4-GB4

FW-PS-2-C4-GC1
FW-PS-2-C4-GC2
FW-PS-2-C4-GC3
FW-PS-2-C4-GC4

FW-PS-2-D4-GD1
FW-PS-2-D4-GD2
FW-PS-2-D4-GD3
FW-PS-2-D4-GD4

ASME CODE CLASS

Class 1

ASME SECTION XI REQUIREMENTS: Subsection IWB, Table IWB 2500-1, Category B-K-1, Item B10.10, requires a surface examination of integrally welded attachments for piping. Attachments whose base material design thickness is 5/8 in. and greater will be examined.

BASIS FOR RELIEF: The guide lugs located on main steam piping immediately preceding the inboard isolation valves are surrounded by support components. These support components require considerable labor to remove in order to allow examination access to these lugs.

RR-A8 Cont'd

Access to the examination areas require the significant labor be expended in the removal of the associated support components. The estimated time for removal of one support is 112 man-hours.

The significant labor required along with the accompanying radiation exposure can not be justified. No structural changes to the welds is anticipated due to inservice operation.

ALTERNATE EXAMINATION: No alternative test methods are proposed at this time. However, should the support component be removed for any reason, the required examination will be conducted on the exposed lugs.

APPLICABLE TIME PERIOD: Relief is requested for the first 120 month interval.

RELIEF REQUEST RR-A9-R1

COMPONENT DESCRIPTION:

Integrally Welded Attachments (Piping Lugs)

FW-RS-2-A2-AL1
FW-RS-2-A2-AL2
FW-RS-2-A2-AL3
FW-RS-2-A2-AL4

SW-RD-2-B2-W16
SW-RD-2-B2-W17
SW-RD-2-B2-W18
SW-RD-2-B2-W19

SW-RD-2-A2-W16
SW-RD-2-A2-W17
SW-RD-2-A2-W18
SW-RD-2-A2-W19

ASME CODE CLASS

Class 1

ASME SECTION XI REQUIREMENTS: Subsection IWB, Table IWB-2500-1, Category B-K-1, Item B10.10, requires a surface examination of integrally welded attachments for piping. Attachments whose base material design thickness is 5/8 in. and greater will be examined.

BASIS FOR RELIEF: Various abandoned lugs exist on piping components within the class 1 system boundaries. There are no support components associated with these lugs and the lugs are not required for any function. Examination of these lugs will increase radiation exposure without benefit to plant safety.

Access to these examination areas will increase radiation exposure to plant personnel. The attachment welds are not full penetration welds and their integrity is not required as they serve no functional purpose. The lugs are not loaded and no structural change in the welds are expected due to inservice operation. In addition ASME Code Case N-343, paragraph 2.0, "Examination Category B-K-1, sub item (b), allows this exemption.

ALTERNATE EXAMINATION: None proposed.

APPLICABLE TIME PERIOD: Relief is requested for the first 120 month interval.

RELIEF REQUEST RR-A10

COMPONENT DESCRIPTION:

Integrally Welded Attachments (Piping Lugs) Primary Containment Penetrations.

SW-E51-2182-X10-W2A
SW-E51-2182-X10-W2B
SW-E51-2182-X10-W2C

SW-E21-3053-X16A-W2A
SW-E21-3053-X16A-W2B
SW-E21-3053-X16A-W2C

SW-E41-2297-X11-W2A
SW-E41-2297-X11-W2B
SW-E41-2297-X11-W2C

SW-E21-3519-X17-W2A
SW-E21-3519-X17-W2B
SW-E21-3519-X17-W2C

SW-E11-2298-X13B-W2A
SW-E11-2298-X13B-W2B
SW-E11-2298-X13B-W2C

SW-X7A-W2A
SW-X7A-W2B
SW-X7A-W2C

SW-E11-2299-X12-W2A
SW-E11-2299-X12-W2B
SW-E11-2299-X12-W2C

SW-X7B-W2A
SW-X7B-W2B
SW-X7B-W2C

SW-E11-2327-X13A-W2A
SW-E11-2327-X13A-W2B
SW-E11-2327-X13A-W2C

SW-X7C-W2A
SW-X7C-W2B
SW-X7C-W2C

SW-E21-3052-X16B-W2A
SW-E21-3052-X16B-W2B
SW-E21-3052-X16B-W2C

SW-X7D-W2A
SW-X7D-W2B
SW-X7D-W2C

SW-N21-2336-X9A-W2A
SW-N21-2336-X9A-W2B
SW-N21-2336-X9A-W2C

SW-N21-2336-X9B-W2A
SW-N21-2336-X9B-W2B
SW-N21-2336-X9B-W2C

ASME CODE CLASS:

Class 1

ASME SECTION XI REQUIREMENTS: Subsection IWB, Table IWB-2500-1, Category B-K-1, Item B10.10, requires a surface examination of integrally welded attachments for piping. Attachments whose base material design thickness is 5/8 in. and greater will be examined.

RR-A10 Cont'd

BASIS FOR RELIEF: Due to the design of the Primary Containment Penetration Assemblies, the centering lugs installed in the penetrations are not accessible for examination. The clearance between the guard pipe and process pipe is not large enough to allow for inspection of these areas.

The lugs are installed inside the penetrations and examinations can not be performed. The attachment welds are not full penetration welds and their integrity is not required as they serve no functional purpose. The lugs are not loaded, and no structural change in the welds are expected due to inservice operation. In addition, ASME Code Case N343, paragraph 2.0, "Examination Category B-K-1, sub item (B), allows this exemption.

ALTERNATE EXAMINATION: None proposed.

APPLICABLE TIME PERIOD: Relief is requested for the first 120 month interval.

RELIEF REQUEST RA-A11

COMPONENT DESCRIPTION:

Integrally Welded Attachments (Pumps)

Insulation Lugs
Pump A:

Pump B:

Hanger Brackets

Pump A:

SW-B31-5365-PUMPA-WA
SW-B31-5365-PUMPA-WB
SW-B31-5365-PUMPA-WC

Pump B:

SW-B31-5365-PUMPB-WA
SW-B31-5365-PUMPB-WB
SW-B31-5365-PUMPB-WC

ASME CODE CLASS:

Class 1

ASME SECTION XI REQUIREMENTS: Subsection IWB, Table IWB-2500-1, Category B-K-1, Item B10.20, requires a surface examination of integrally welded attachments for pumps. Attachments whose base material design thickness is 5/8 in. and greater will be examined.

BASIS FOR RELIEF: The reactor recirculation pump insulation lugs and hanger brackets are covered by insulation. To gain access to the examination areas, the pump insulation requires removal.

AFFECTED EXAMINATION AREAS: Removal and replacement of the recirculation pump insulation will result in an excessive amount of radiation exposure for plant personnel. A significant amount of labor would be required to remove the insulation needed to provide access to the examination areas.

Based upon discussions with the contract personnel responsible for the installation of the mirror insulation, a calculation of radiation exposure was made. It was estimated that a total of 12,800 mR would be expected for this task. This assumes a radiation field of 100 mR and 9 man-days for removal and replacement of insulation. The operating records of other plants do not show that pump lugs have a record of significant problems. In addition industry field data does not indicate that cast stainless steel pump casings are susceptible to service induced flaws. Also ASME Code Case N343, paragraph 2.0, "Examination Category B-K-1", sub item (b), allows this exemption.

ALTERNATE EXAMINATION: No alternative test methods are proposed at this time. However, should the insulation be removed for other reasons, the required examinations will be conducted.

APPLICABLE TIME PERIOD: Relief is requested for the first 120 month interval.

RELIEF REQUEST RR-A12

COMPONENT DESCRIPTION:

Integrally Welded Attachments (Piping Lugs)

SW-E11-3146-2WE	SW-E11-3158-1WC	SW-E11-3158-2WM
SW-E11-3146-2WF	SW-E11-3158-1WD	SW-E11-3158-2WN
SW-E11-3146-2WG	SW-E11-3158-1WE	SW-E11-3158-2WO
SW-E11-3146-2WH	SW-E11-3158-1WF	SW-E11-3158-2WP
SW-E11-3146-2WJ	SW-E11-3158-1WG	SW-E11-3158-2WQ
SW-E11-3146-2WK	SW-E11-3158-1WH	SW-E11-3158-2WR
SW-E11-3146-7WG	SW-N30-3259-10WB	SW-E11-3158-5WC
SW-E11-3146-7WH	SW-N30-3259-10WC	SW-E11-3158-5WD
SW-E11-3146-7WJ	SW-N30-3259-10WD	SW-E11-3158-5WE
SW-E11-3146-7WK	SW-N30-3259-10WE	SW-E11-3158-5WF
SW-E11-3146-7WL	SW-N30-3259-10WF	SW-E11-3158-5WG
SW-E11-3146-7WM	SW-N30-3259-10WG	SW-E11-3158-5WH
PSFW-E11-3146-255A	SW-N30-3259-10WH	
	SW-N30-3259-10WJ	
	SW-N30-3259-10WK	SW-E21-3148-EXPJT-W8
SW-E11-3157-5WD	SW-N30-3259-10WL	SW-E21-3148-EXPJT-W9
SW-E11-3157-5WE	SW-N30-3259-10WM	
SW-E11-3157-5WF	SW-N30-3259-10WN	SW-E21-3149-EXPJT-W8
SW-E11-3157-5WG		SW-E21-3148-EXPJT-W9
SW-E11-3157-5WH		
SW-E11-3157-5WJ		

ASME CODE CLASS:

Class 2

ASME SECTION XI REQUIREMENTS: Subsection IWC, Table IWC-2500-1, Category C-C, Item C5.30, requires a surface examination of integrally welded attachments for piping. Attachments whose base material thickness is 3/4" and greater will be examined.

BASIS FOR RELIEF: Various abandoned lugs exist on piping components within the Class 2 system boundaries. There are no support components associated with these lugs and the lugs are not required for any function. Examination of these lugs will increase radiation exposure without benefit to plant safety.

Access to these examination areas will increase radiation exposure to plant personnel. The attachment welds are not full penetration welds and their integrity is not required as they serve no functional purpose. The lugs are non load bearing and no structural change in the welds is anticipated due to inservice operation. Also ASME Code Case N343, paragraph 2.0, "Examination Category B-K-1", sub item (b), allows this exemption.

RR-A12 Cont'd

ALTERNATE EXAMINATION: No alternative examinations are proposed at this time. However, leakage testing will be conducted in accordance with Section XI, Category C-H, Item C7.30 and C7.40.

APPLICABLE TIME PERIOD: Relief is requested for the first 120 month interval.

RELIEF REQUEST RR-A13

COMPONENT DESCRIPTION:

Integrally Welded Attachments (Piping Lugs)

PSFW-E11-3146-148A
PSFW-E11-3146-148B
PSFW-E11-3146-148C
PSFW-E11-3146-148D

PSFW-E11-3151-145A
PSFW-E11-3151-145B
PSFW-E11-3151-145C
PSFW-E11-3151-145D

ASME CODE CLASS

Class 2

ASME SECTION CI REQUIREMENTS: Subsection IWC, Table IWC-2500-1, Category C-C, Item C5.30, requires surface examination of integrally welded attachments for piping. Attachments whose base material thickness is 3/4" and greater will be examined.

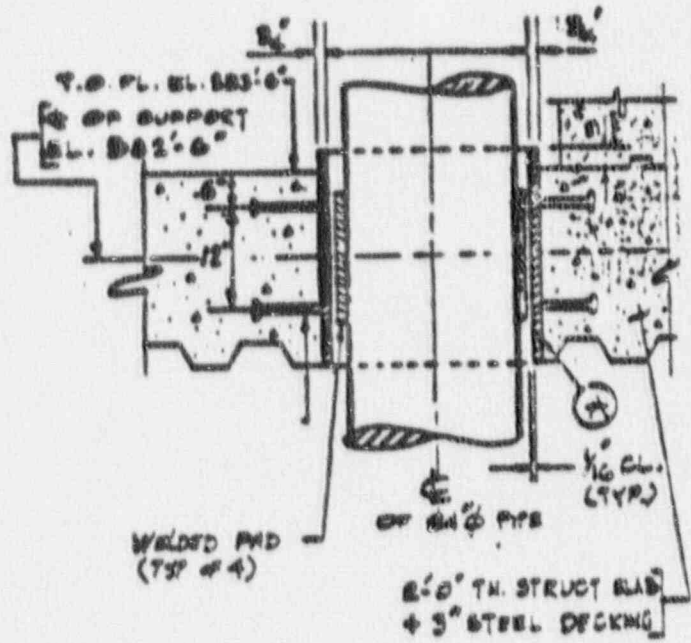
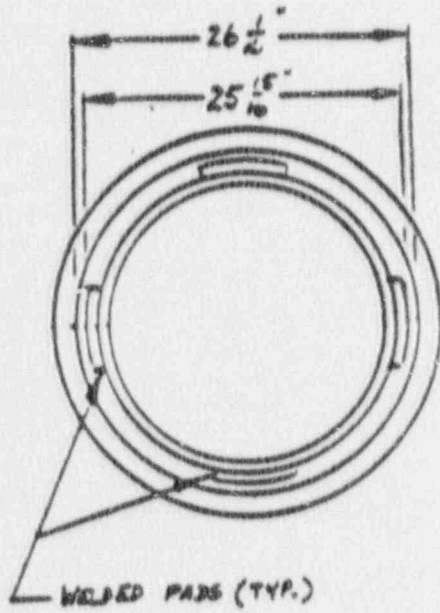
BASIS FOR RELIEF: Several pads installed on Class 2 piping are inaccessible for examination. The pads are located in floor penetrations and serve to restrict movement of the process pipe in the penetration. Clearance between the welded pads and the floor penetration pipe is approx 1/16". Examination of these pads is not possible due to their location in the floor penetrations. See attached sketch.

Access to the area of the pads is extremely limited. Clearances between process pipe and floor penetration are not sufficient to allow for examination of pads. The pads are not under constant loading and no structural change in the welds is anticipated due to operation.

ALTERNATE EXAMINATION: No alternative examinations are proposed at this time. However, leakage testing will be conducted in accordance with Section XI, Category C-H, Item C7.30 and C7.40.

APPLICABLE TIME PERIOD: Relief is requested for the first 120 month interval.

RR-A13 Cont'd



SKETCH

RELIEF REQUEST A14

COMPONENT DESCRIPTION:

Integrally Welded Attachments (Vessels) SW-E11-D2-HXS-08

ASME CODE CLASS:

Class 2

ASME SECTION XI REQUIREMENTS: Subsection IWC, Table IWC-2500-1, Category C-C, Item C3.10, requires a surface examination of integrally welded attachments for vessels. Attachments whose base material design thickness is 3/4" and greater will be examined.

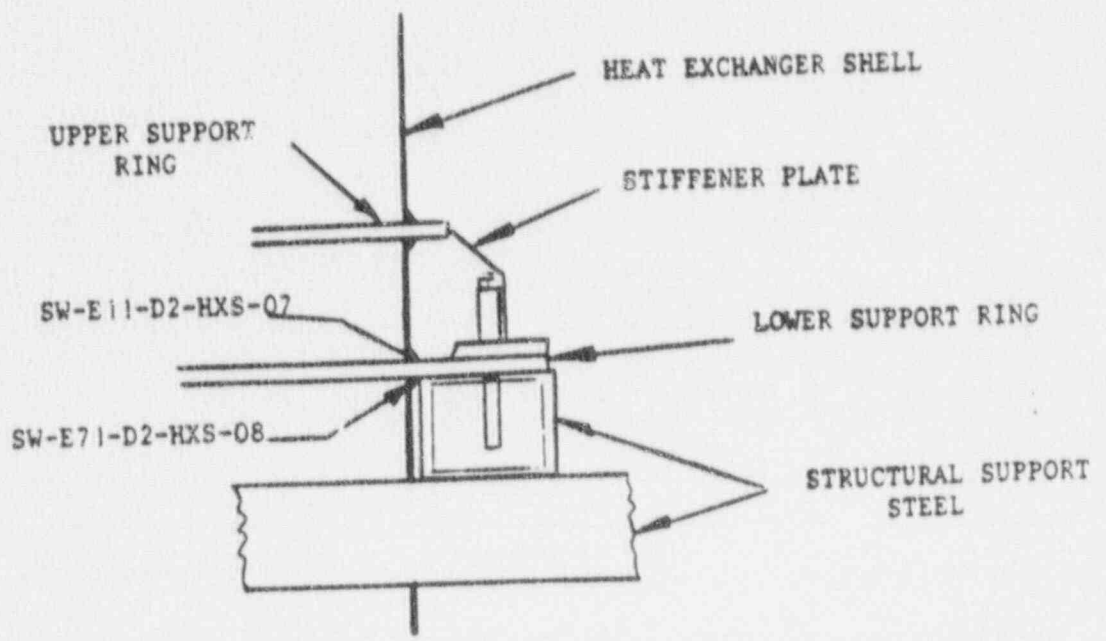
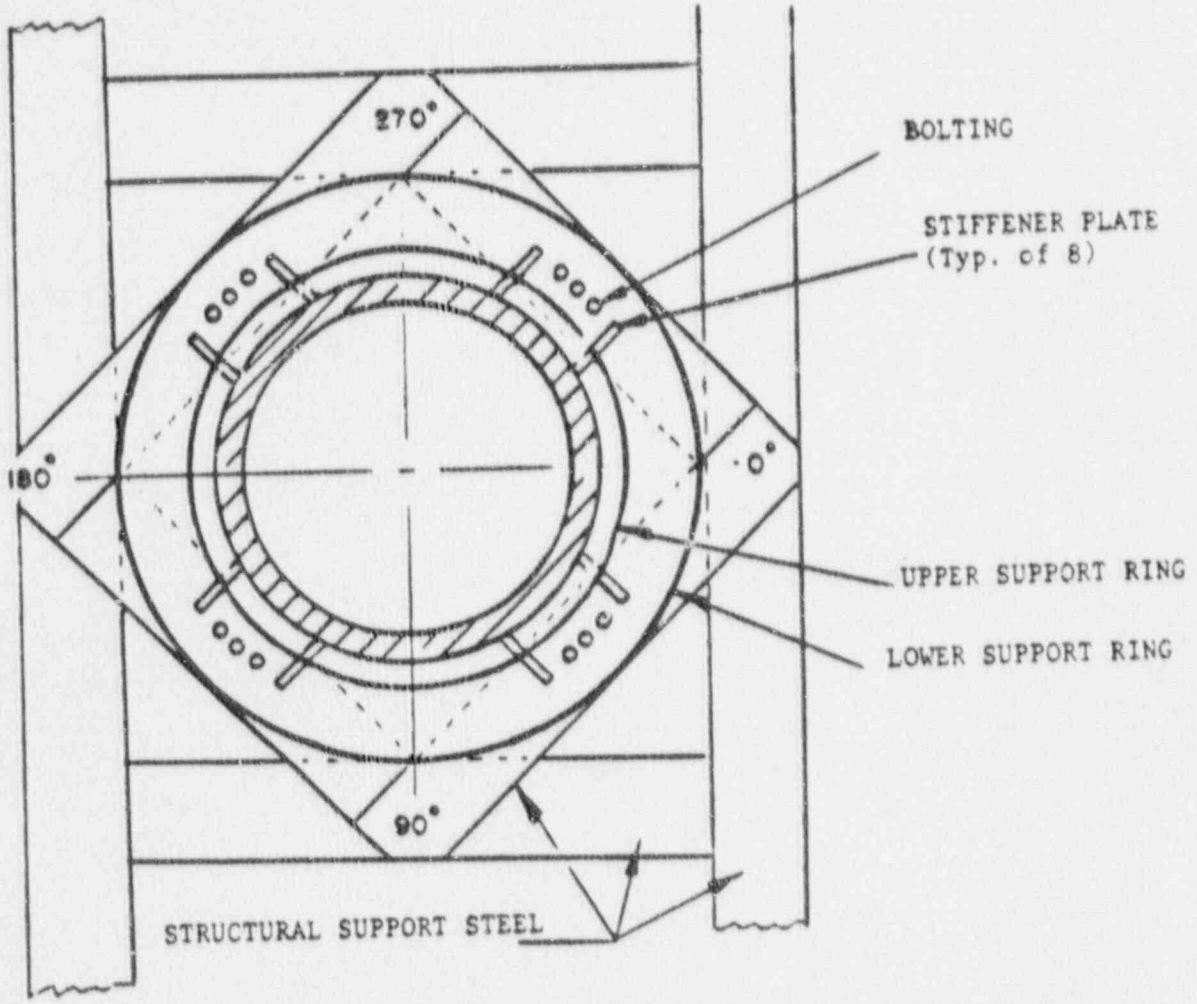
BASIS FOR RELIEF: The RHR Heat Exchanger has two 1" thick support rings welded to the heat exchanger shell. The bottom support ring rests on, and is bolted to, the structural support steel for the heat exchanger. The weld on the bottom side of the support ring is encased by structural steel making the weld inaccessible for examination.

The lower support ring is bolted to the structural steel support member for the heat exchanger. Access to the weld area is obscured by structural steel. The weld is a fillet weld and as such not a full penetration weld. The fillet weld on the top side of the lower support ring (SW-E11-D2-HXS-07) will receive a surface examination.

ALTERNATE EXAMINATION: No alternative examinations are proposed at this time. However, the fillet welds on both sides of the top support ring, the stiffener plates connecting the top and bottom support rings, and the weld on the top side of the lower support ring will be examined. In addition, leakage testing will be conducted in accordance with Section XI, Category C-H, Item C7.10 and C7.20.

APPLICABLE TIME PERIOD: Relief is requested for the first 120 month interval.

RR-A14 Cont'd



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5.0 Program Support Drawings-

5.1 Inservice Inspection Classification Boundary Drawings

The systems or portions of systems subject to the examination requirements of the ISI-NDE Program for Fermi 2 and the associated Class 1, 2, and 3 boundaries are documented on **ISI Classification Boundary Drawings**. The **ISI Classification Boundary Drawings**, which form a part of the ISI-NDE Program are listed in Table A-5-5.1.

The system Inservice Inspection classifications, developed specifically to define the extent to which Section XI requirements will be applied, differ somewhat from the ASME Section III design classifications. These differences occur because systems, or portions of systems, have been optionally upgraded in design and because ISI classifications are limited to safety related systems which contain water, steam, or radioactive materials. NUREG 0800, Regulatory Guide 1.26, and 10CFR50 were the documents used in identifying these boundaries.

5.2 Inservice Inspection (ISI) Isometric Drawings for Class 1 and 2 Components and their Supports

The drawings contained in this manual identify the ASME Section XI, Class 1 and 2 isometrics which contain components subject to inservice inspection. Drawing 6M721-2000-5 provides a listing of the piping isometrics and associated code classifications. Drawings are updated to conform to as-built configuration of Plant following modifications.

TABLE A-5-5.1

FERMI-2 ISI CLASSIFICATION BOUNDARY DRAWINGS

Drawing Title	Dwg. No.	PIS No's Associated with Dwg.	ISI Code Class
Nuclear Boiler System	6M721-5808-1	B21	1
	6M721-5808-2		1
Main Steam Isolation Valve Leakage Control System	6M721-5808-1	B21-06	1
			2
Main and Reheat Steam Systems	6M721-5808-1	B21	1
	6M721-5822	W11/N30	2
Reactor Recirculation System-Nuclear Boiler System	6M721-5809	B31	1
Control Rod Drive System	6M721-5810-1	C11	2
			2
CRD Scram Discharge System	6M721-5810-2	C11	2
Stand-By-Liquid Control System	6M721-5811	C41	1
			2
Residual Heat Removal (RHR) Division I	6M721-5813-2	E11	1
			2
Residual Heat Removal (RHR) Division II	6M721-5813-1	E11	1
			2
RHR Service Water Make Up Decant and Overflow Systems	6M721-5813-3	E11 P45 R30	3
			3
			3
Core Spray System	6M721-5814	E21	1
			2
High Pressure Coolant Injection System (HPCI)	6M721-5815	E41	1
			2
Reactor Core Isolation Cooling System (RCIC)	6M721-5816	E51	1
Reactor Water Clean-Up	6M721-5818	G33	1

TABLE A-5-5.1 (Cont'd)
 FERMI-2 ISI CLASSIFICATION BOUNDARY DRAWINGS

Drawing Title	Dwg. No.	PIS No's associated with Lwg.	ISI Code Class
Fuel Pool Cooling and Clean-Up System	6M721-5819	G41	2
Torus Water Management System	6M721-5820	G51	2
Feedwater System	6M721-5821	N21	1
Sample Line Tie-In And Return Post Accident Sampling System	6M721-5824	P34	1 2
Emergency Equipment Cooling Water Division I	6M721-5825-1	P44	3
Emergency Equipment Cooling Water Division II	6M721-5825-2	P44	3
(Post Loca) Combustible Gas Control System	6M721-5830-2	T48	2

7

6

5

F
E
D
C
B
A

INDEX

ISI ISOMETRIC DRAWING NUMBER	DESCRIPTION
ISI CLASS 1	
6M721-2000-5	INDEX FOR INSERVICE INSPECTION ISOMETRICS
6M721-2001-5	LEGEND & SYMBOLS FOR INSERVICE INSPECTION ISOMETRIC
6M721-2192-5	RCIC STEAM LINE IN DRYWELL
6M721-2297-5	HPCI STEAM LINE IN DRYWELL
6M721-2298-5	RHR RETURN LINE DIV. I (NORTH)
6M721-2299-5	RHR FROM RECIRC. PUMP SUCTION
6M721-2327-5	RHR RETURN LINE DIV. II (SOUTH)
6M721-3052-5	CORE SPRAY PIPING DIV. I (NORTH)
6M721-3053-5	CORE SPRAY PIPING DIV. II (SOUTH)
6M721-3096-5	REACTOR WATER CLEAN-UP SUCTION FROM THE RPV BOTTOM HE
6M721-3519-5	RHR HEAD SPRAY
6M721-3536-5	REACTOR FEEDWATER PIPING (NORTH)
6M721-3537-5	REACTOR FEEDWATER PIPING (SOUTH)
6M721-5001-5	REACTOR WATER CLEAN-UP SUCTION FROM THE RPV RECIRC. LOOP
6M721-5352-5	MAIN STEAM LOOP A
6M721-5353-5	MAIN STEAM LOOP B
6M721-5354-5	MAIN STEAM LOOP C
6M721-5355-5	MAIN STEAM LOOP D
6M721-5356-5	REACTOR RECIRC. LOOP A RING HEADER
6M721-5357-5	REACTOR RECIRC. LOOP A PUMP SUCTION & DISCHARGE
6M721-5358-5	REACTOR RECIRC. LOOP B RING HEADER
6M721-5359-5	REACTOR RECIRC. LOOP B PUMP SUCTION & DISCHARGE
6M721-5360-5	REACTOR VESSEL #1
6M721-5361-5	REACTOR VESSEL #2
6M721-5362-5	REACTOR VESSEL #3
6M721-5363-5	REACTOR VESSEL #4
6M721-5364-5	REACTOR VESSEL #5
6M721-5365-5	RR PUMP #1
ISI CLASS 2	
6M721-2095-5	COMBUSTIBLE GAS CONTROL RETURN HEADER TO TORUS (DRY)
6M721-2097-5	COMBUSTIBLE GAS CONTROL RETURN HEADER TO TORUS (DRY)
6M721-2979-5	STANDBY LIQUID CONTROL EXPLOSIVE VALVES AND LINE TO DRY
6M721-3035-5	RHR HEAD SPRAY FROM RETURN HEADER TO DRYWELL PENETR
6M721-3144-5	NORTH CORE SPRAY PUMP DISCHARGE TO RPV
6M721-3145-5	NORTH CORE SPRAY MIN. LOW-FLOW BY-PASS & TEST LINE
6M721-3146-5	RHR RETURN (NORTH) FROM RHR HX TO DRYWELL PENET. N
6M721-3147-5	CORE SPRAY PUMP (SOUTH) DISCHARGE TO RPV PENET.
6M721-3148-5	CORE SPRAY PUMP (NORTH) SUCTION FROM SUPPRESSION CHA

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INDEX

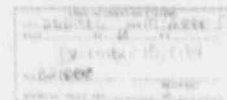
ISI ISOMETRIC DRAWING NUMBER	DESCRIPTION
6M721-349-5	CORE SPRAY PUMP (SOUTH) SUCTION FROM SUPPRESSION CHAMBER
6M721-350-5	SOUTH CORE SPRAY MIN LOW-FLOW BY-PASS & TEST LINE
6M721-351-5	RHR RETURN (SOUTH) FROM RHR HX TO DRYWELL PENET NO X-15A
6M721-353-5	SOUTH RHR PUMP SUCTION FROM SUPPRESSION CHAMBER
6M721-354-5	NORTH RHR PUMP SUCTION FROM SUPPRESSION CHAMBER
6M721-357-5	RHR PUMP DISCHARGE NORTH
6M721-358-5	RHR PUMP (NBS) DISCHARGE TO HEAT EXCHANGER
6M721-359-5	RHR CONTAINMENT SPRAY (NORTH) FROM HEADER TO RPV
6M721-360-5	RHR TEST LINE & SUPPRESSION CHAMBER SPRAY HEADER (NORTH)
6M721-361-5	RHR TEST LINE (SOUTH) FROM 24" HEADER TO SUPPRESSION CHAMBER
6M721-362-5	HPCI TURBINE EXHAUST
6M721-363-5	HPCI BOOSTER PUMP SUCTION FROM SUPPRESSION CHAMBER & COND STORAGE HEADER
6M721-364-5	RHR CONTAINMENT SPRAY (SOUTH) FROM RETURN HDR TO DRYWELL PENET
6M721-367-5	HPCI PUMP DISCHARGE TO SOUTH REACTOR FEEDWATER HEADER
6M721-369-5	HPCI FROM PUMP DISCHARGE TO CONDENSATE STORAGE SYSTEM
6M721-372-5	HPCI STEAM SUPPLY FROM RPV TO HPCI TURBINE STOP VALVE
6M721-377-5	RHR PUMP DISCHARGE (SOUTH)
6M721-384-5	RHR SERVICE WATER SUPPLY & RETURN TO HXs (DIV.2)
6M721-3258-5	MAIN STEAM FROM DRYWELL TO TURBINE MANIFOLD
6M721-3259-5	52" MAIN STEAM MANIFOLD & PIPING IN TURBINE BLDG.
6M721-3361-5	STANDBY LIQUID CONTROL PUMP SUCTION
6M721-3669-5	RHR SUPPLY HEADER TO FPC SYSTEM
6M721-4611-5	RELIEF LINE FROM RHR HEAT EXCHANGER (SOUTH)
6M721-4612-5	RELIEF LINE FROM RHR HEAT EXCHANGER (NORTH)
6M721-5370-5	RHR DIV.2 HEAT EXCHANGER B
6M721-5371-5	RHR DIV.1 HEAT EXCHANGER A
6M721-5372-5	CONTROL ROD DRIVE SCRAM DISCHARGE VOLUME "A" (NORTH)
6M721-5373-5	HPCI BOOSTER TO HPCI MAIN PUMP
6M721-5374-5	STANDBY LIQUID CONTROL PUMP DISCHARGE & TEST TANK LINE
6M721-5375-5	CONTROL ROD DRIVE SCRAM DISCHARGE VOLUME "B" (SOUTH)

APERTURE
CARD

Also Available On
Aperture Card

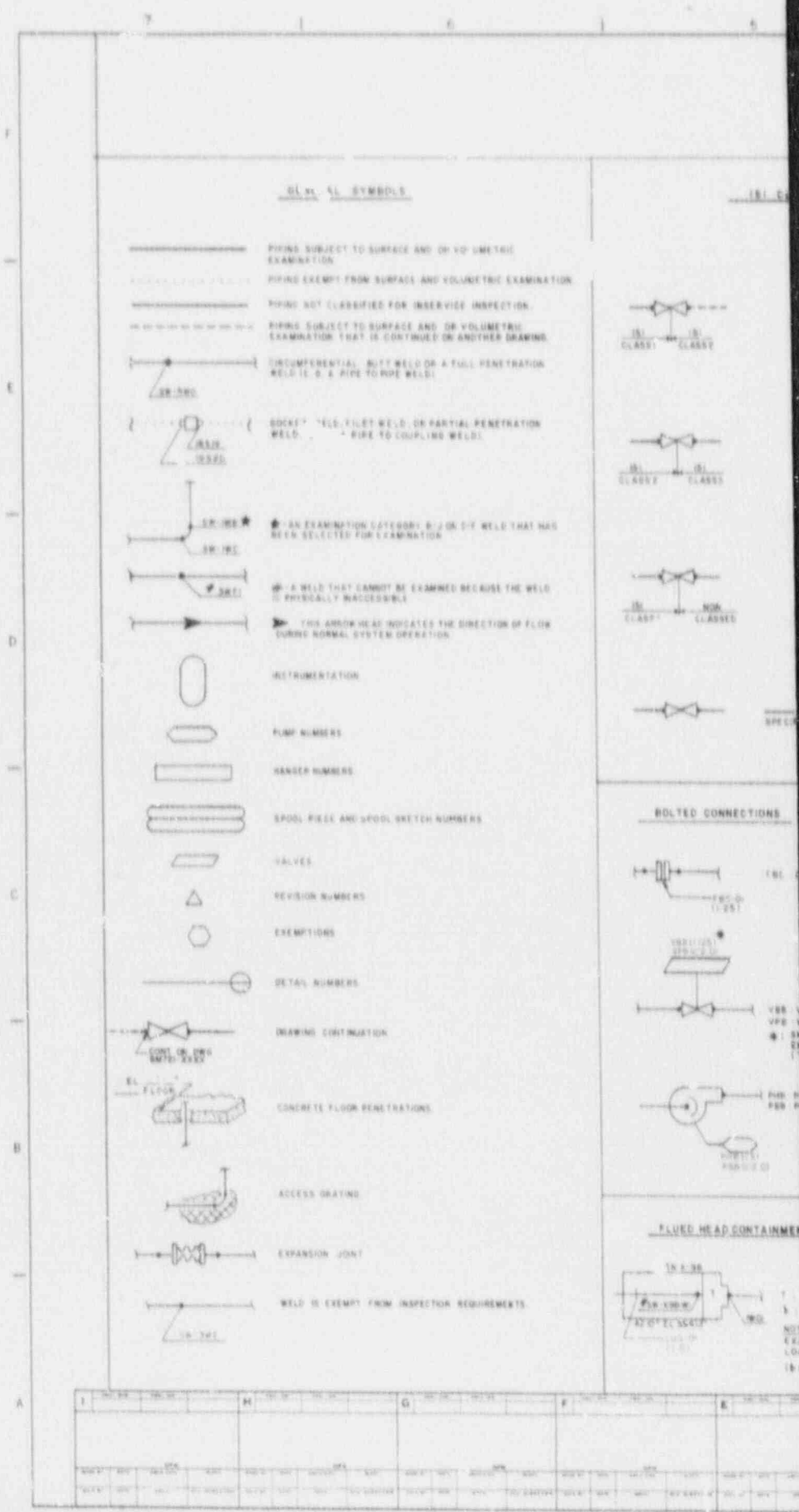
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ISI CLASS 1 & 2 6M721-2000-5
CATEGORY NUMBER



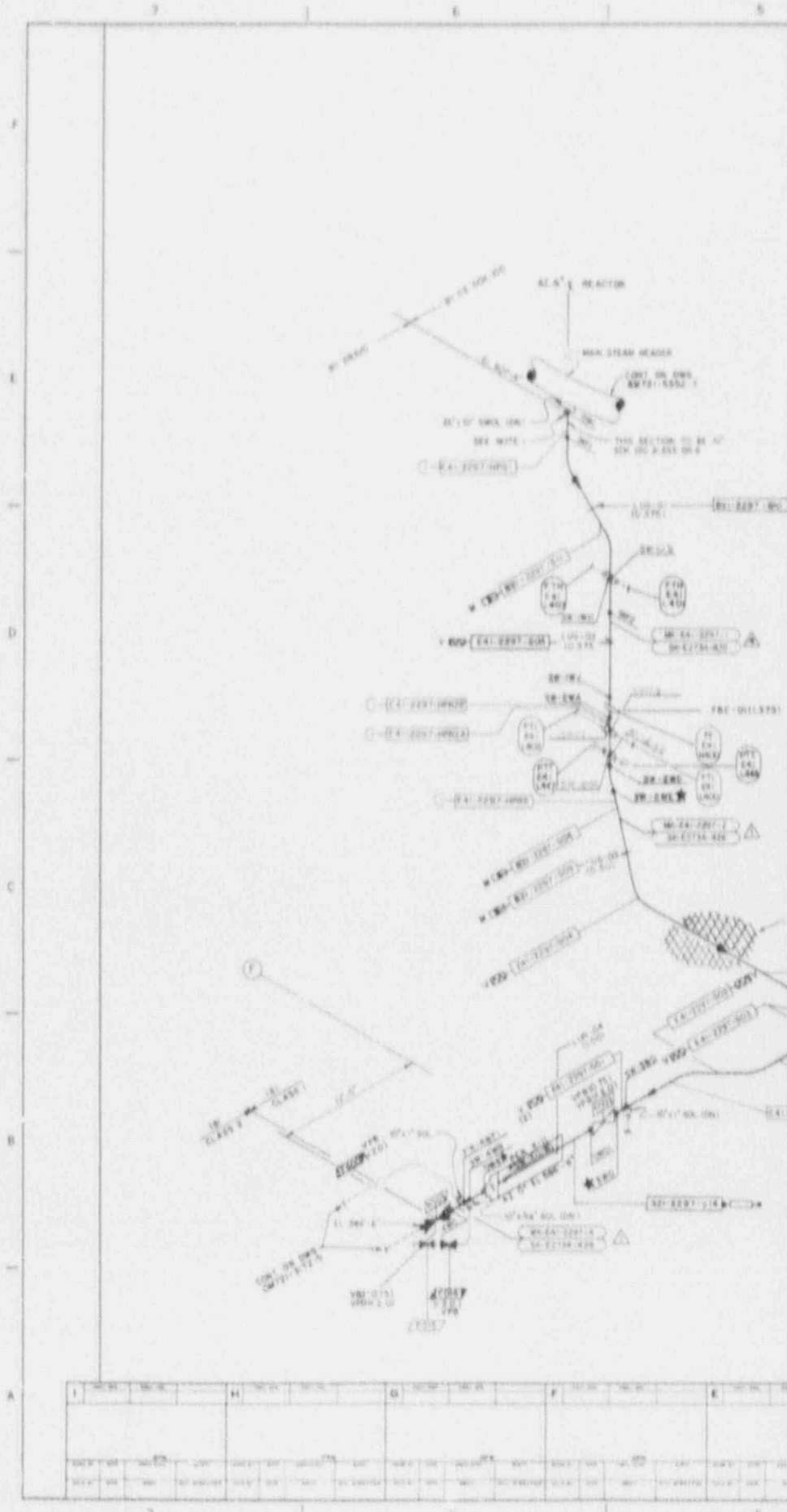
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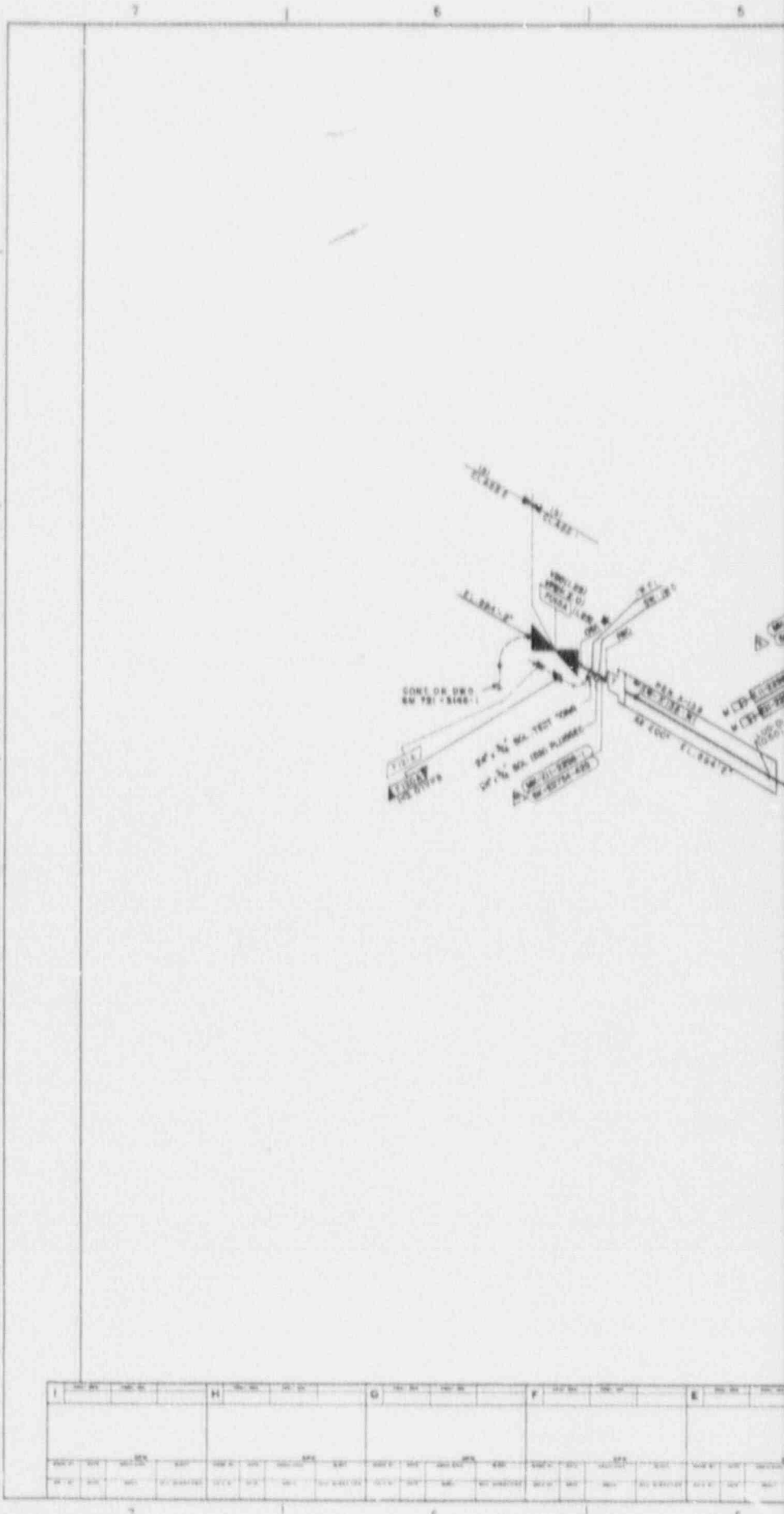


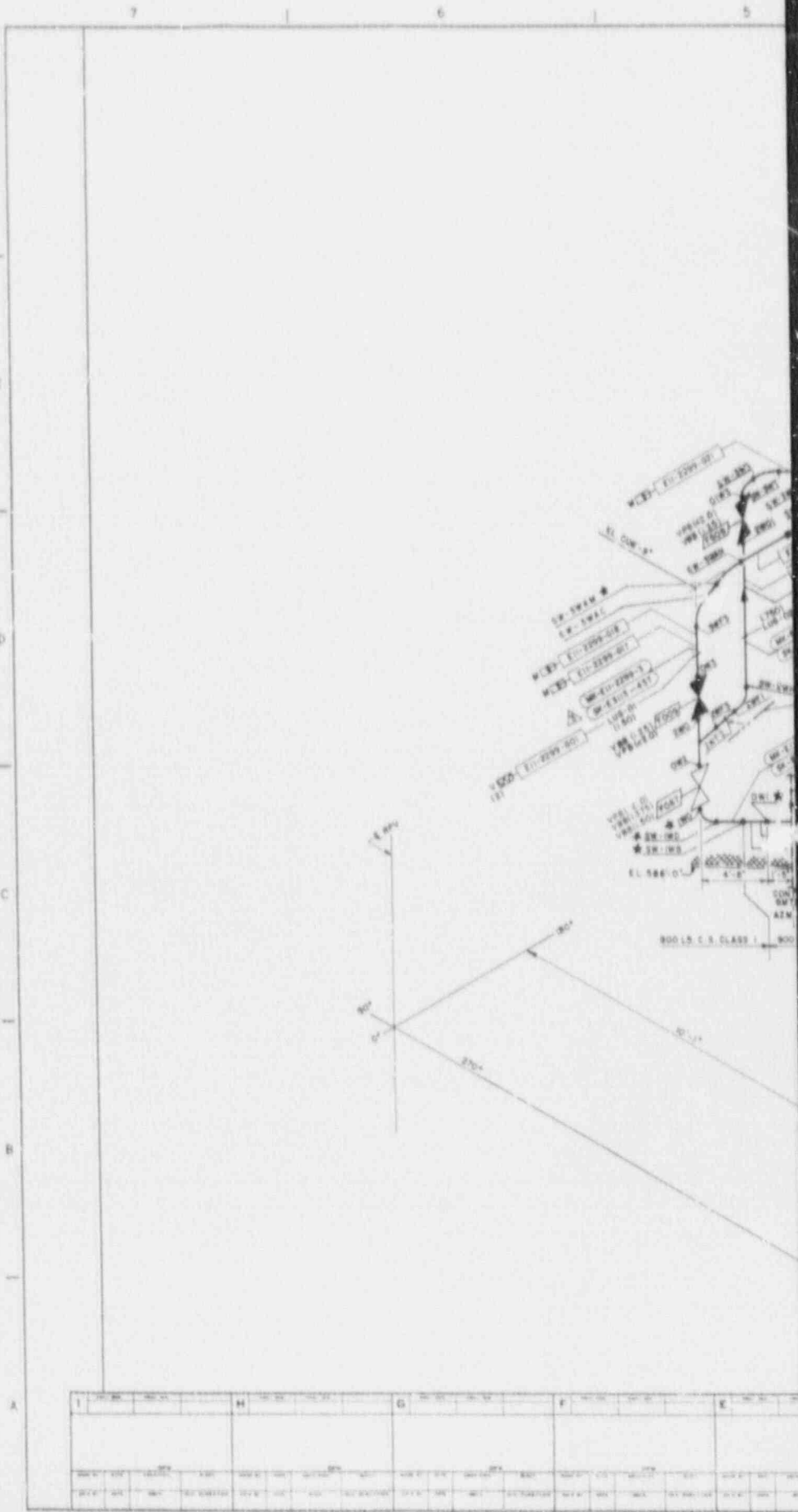


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11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30



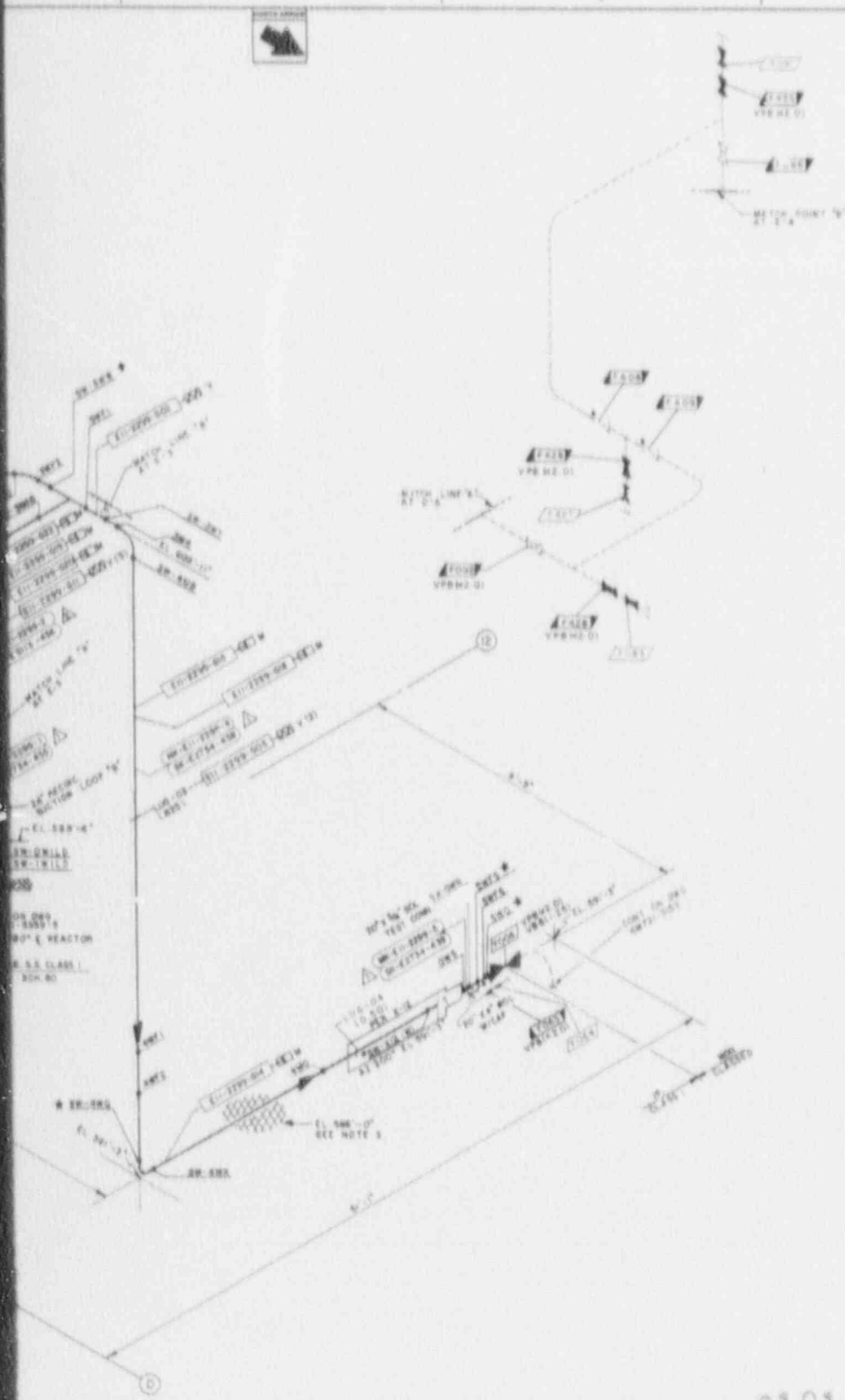
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3					
4					
5					







INTEGRALLY WELDED LOOPS				
LOOP NO.	TYPE OF WELD	COMPONENT NUMBERS	ITEMS IN	REFERENCE
L00-01	W	SW-1, SW-2, SW-3, SW-4, SW-5, SW-6	1, 2, 3, 4	302
L00-02	W	SW-1, SW-2, SW-3, SW-4, SW-5, SW-6	1, 2, 3, 4	310
L00-03	W	SW-1, SW-2, SW-3, SW-4, SW-5, SW-6	1, 2, 3, 4	311
L00-04	W	SW-1, SW-2, SW-3, SW-4, SW-5, SW-6	1, 2, 3, 4	312



SI
APERTURE
CARD

Also Available On
Aperture Card

REFERENCE DRAWINGS

- 6M72-2290 SYSTEM DIAGRAM (RND)
- 6M72-2291 KEY PLAN OF PIPING SECTION & PLAN
- 6M72-2292 PIPE LOOPS
- 6M72-2293-1R PIPING ISOMETRIC
- 6M72-2293-2L SUPPORTS ISOMETRIC
- A2-006-1-1 PENETRATION DETAILS

NOTES

- WELD NUMBERS (E.G. SW-1) ARE ALL FIELD WELDS AND WELDED IN SW-100 ALWAYS HAVE THE SW-100 FILE
- SPALL DWS REVISIONS ARE INDICATED BY A Δ
- DRYWELL GRATING IS LOCATED DIRECTLY BELOW THE PIPE EXTENDING FROM SW-4 AND THROUGH SW-1

IS CLASS 1 6M72-2299-5
LAWRENCE LIVERMORE

APPROVED FOR CONSTRUCTION
DATE: _____
DRAWN BY: _____
CHECKED BY: _____

9101090241-06

THE SYMBOLS SHOWN ON THIS DRAWING ARE DEFINED IN THE DRAWING SPECIFICATIONS											
NO.	SYMBOL	DESCRIPTION	NO.	SYMBOL	DESCRIPTION	NO.	SYMBOL	DESCRIPTION	NO.	SYMBOL	DESCRIPTION
1	[Symbol]	INSPECTOR SIGNATURE	1	[Symbol]	INSPECTOR SIGNATURE	1	[Symbol]	INSPECTOR SIGNATURE	1	[Symbol]	INSPECTOR SIGNATURE
2	[Symbol]	INSPECTOR SIGNATURE	2	[Symbol]	INSPECTOR SIGNATURE	2	[Symbol]	INSPECTOR SIGNATURE	2	[Symbol]	INSPECTOR SIGNATURE
3	[Symbol]	INSPECTOR SIGNATURE	3	[Symbol]	INSPECTOR SIGNATURE	3	[Symbol]	INSPECTOR SIGNATURE	3	[Symbol]	INSPECTOR SIGNATURE
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6	[Symbol]	INSPECTOR SIGNATURE	6	[Symbol]	INSPECTOR SIGNATURE	6	[Symbol]	INSPECTOR SIGNATURE	6	[Symbol]	INSPECTOR SIGNATURE
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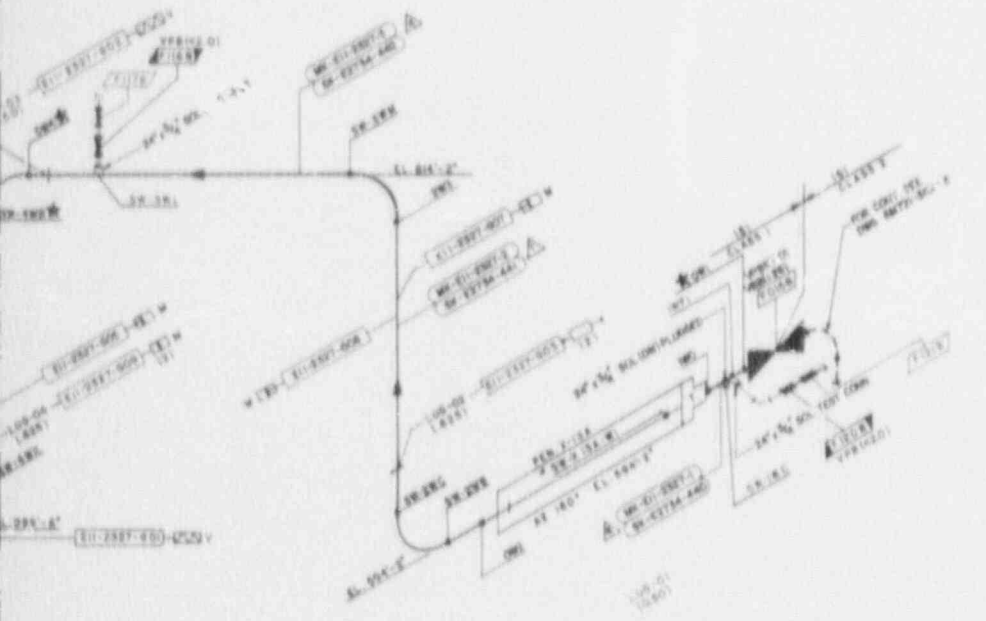
6M72-2299-5



INTEGRALLY WELDED LUGS				
LUG NO.	TYPE OF WELD	COMPONENT NUMBER	ITEM NO.	REFERENCE
LUG-01	W	SW-21-2327-2-134 W24, W38, W39, W40, W41, W42, W43, W44, W45, W46, W47, W48, W49, W50, W51, W52, W53, W54, W55, W56, W57, W58, W59, W60, W61, W62, W63, W64, W65, W66, W67, W68, W69, W70, W71, W72, W73, W74, W75, W76, W77, W78, W79, W80, W81, W82, W83, W84, W85, W86, W87, W88, W89, W90, W91, W92, W93, W94, W95, W96, W97, W98, W99, W100	80	R2-005, NOT SHOWN
LUG-02	W	SW-21-2327-2-134 W24, W38, W39, W40, W41, W42, W43, W44, W45, W46, W47, W48, W49, W50, W51, W52, W53, W54, W55, W56, W57, W58, W59, W60, W61, W62, W63, W64, W65, W66, W67, W68, W69, W70, W71, W72, W73, W74, W75, W76, W77, W78, W79, W80, W81, W82, W83, W84, W85, W86, W87, W88, W89, W90, W91, W92, W93, W94, W95, W96, W97, W98, W99, W100	15	805 N
LUG-03	W	SW-21-2327-2-134 W24, W38, W39, W40, W41, W42, W43, W44, W45, W46, W47, W48, W49, W50, W51, W52, W53, W54, W55, W56, W57, W58, W59, W60, W61, W62, W63, W64, W65, W66, W67, W68, W69, W70, W71, W72, W73, W74, W75, W76, W77, W78, W79, W80, W81, W82, W83, W84, W85, W86, W87, W88, W89, W90, W91, W92, W93, W94, W95, W96, W97, W98, W99, W100	14	80 HORIZONTAL
LUG-04	W	SW-21-2327-2-134 W24, W38, W39, W40, W41, W42, W43, W44, W45, W46, W47, W48, W49, W50, W51, W52, W53, W54, W55, W56, W57, W58, W59, W60, W61, W62, W63, W64, W65, W66, W67, W68, W69, W70, W71, W72, W73, W74, W75, W76, W77, W78, W79, W80, W81, W82, W83, W84, W85, W86, W87, W88, W89, W90, W91, W92, W93, W94, W95, W96, W97, W98, W99, W100	15	805 N

SI APERTURE CARD

Also Available On Aperture Card



- REFERENCE DRAWINGS**
- 6M72-0055 SYSTEM DIAGRAM (RHW)
 - 6M72-0320 KEY PLAN OF PIPING SECTION & PLANT
 - 6M-055 (D) LUGS SIZE
 - 6M72-2327-1 (D) PIPING ISOMETRIC
 - 6M72-2327-2 (D) SUPPORTS ISOMETRIC
 - R2-005 () PENETRATION DETAILS

- NOTES**
- WELD NUMBERS (1 & 6) ARE ALL FIELD WELDS. SHOP WELDS (1 & 6) ALWAYS HAVE THE "S" PREFIX.
 - SPOOF DRAW REVISIONS ARE INDICATED BY A Δ.

CON. ON DWG 6M72-5389-3
 8" REACTOR RECIRCULATION DISCHARGE LINE

CLASS 1 6M72-2327-5
 EXHIBT NUMBER A

91010902411-07

DATE	BY	REVISION

NUCLEAR SAFETY RELATED

THE QUALITY SYSTEM

D	C	B	A	REVISION	DATE	BY	CHKD	APP'D	DESCRIPTION

6M72-2327-5 A

INSERVICE INSPECTION ISOMETRIC (RHW)
 RHW RETURN LINE DIV. II (SOUTH)
 REACTOR BUILDING UNIT 2
 ENRICO PERM. ATOMIC POWER PLANT

DOCUMENT CONTROL NO. 1-1
 6M72-2327-5 A

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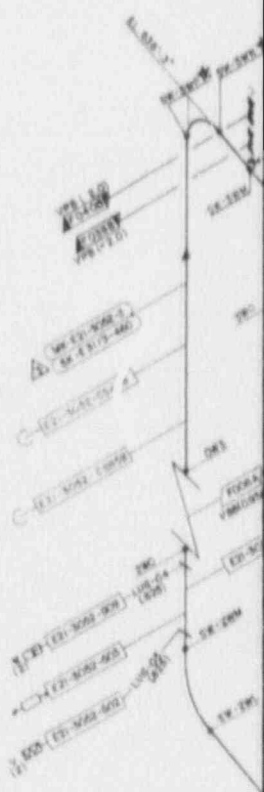
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AZ 240 E
REACTOR

COOL SPRAY NOZZLE
NO. 11-101-01
NO. 11-101-02
NO. 11-101-03
NO. 11-101-04



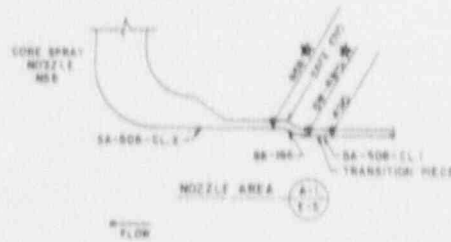
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INTEGRALLY WELDED LIGS					
LIG NO.	TYPE OF WELD	COMPONENT NUMBERS	ITEM UNIT	REFERENCE	
LIG-01	X	SW-ES-3001-3002-3003-3004-3005-3006	3	SA-306-CL-1	1
LIG-02	X	SW-ES-3001-3002-3003-3004-3005-3006	3	SA-306-CL-1	1
LIG-03	X	SW-ES-3001-3002-3003-3004-3005-3006	3	SA-306-CL-1	1
LIG-04	X	SW-ES-3001-3002-3003-3004-3005-3006	3	SA-306-CL-1	1
LIG-05	X	SW-ES-3001-3002-3003-3004-3005-3006	3	SA-306-CL-1	1

SI APERTURE CARD

Also Available On Aperture Card

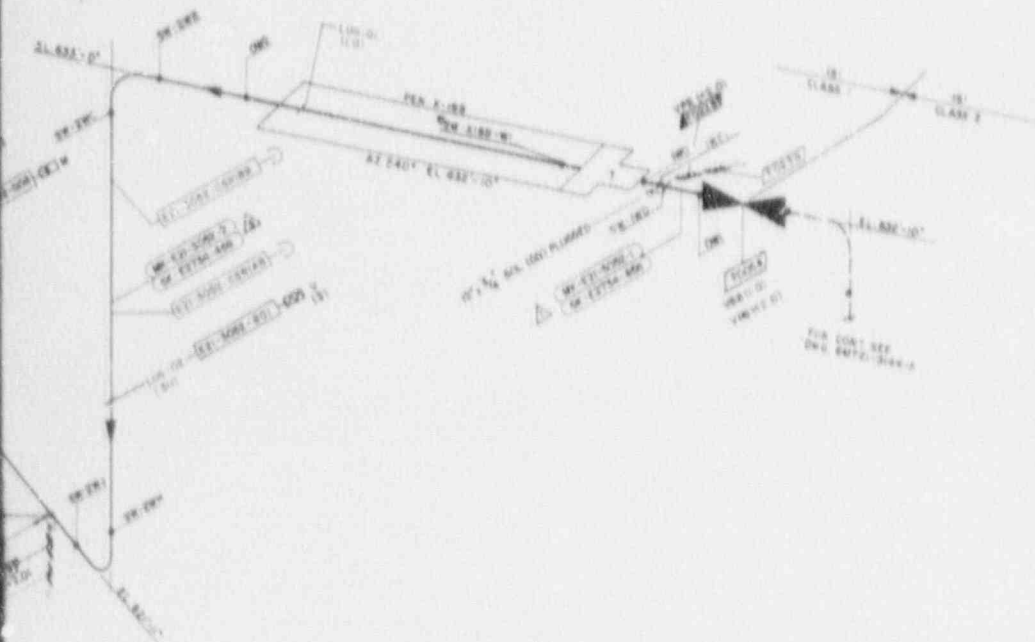


REFERENCE DRAWINGS

- 6M70-0104 SYSTEM DIAGRAM (CS)
- 6M70-0320 KEY PLAN OF PIPING SECTIONS & PLANS
- SM-253 (D) PIPE LINES
- 6M70-0100 (W) PIPING ISOMETRIC
- 6M70-3002 (C) SUPPORTS ISOMETRIC
- ARM-0400 () NPV SAFE END DETAIL
- WE-005 () PENETRATION DETAILS

NOTES

- 1. WELD NUMBERS (E, S, SW) ARE ALL FIELD WELDS. SHOP WELDS (E & SW-SW) ALWAYS HAVE THE SW PRE-FIX.
- 2. SPOOF, DWO REVISIONS ARE INDICATED BY A Δ



(SI) CLASS 1 6M721-3002-5
CARRY REVISION

9101090241-08

REVISIONS

NO.	DATE	DESCRIPTION
1	11-15-68	ISSUED FOR CONSTRUCTION
2	11-15-68	ISSUED FOR CONSTRUCTION
3	11-15-68	ISSUED FOR CONSTRUCTION
4	11-15-68	ISSUED FOR CONSTRUCTION
5	11-15-68	ISSUED FOR CONSTRUCTION
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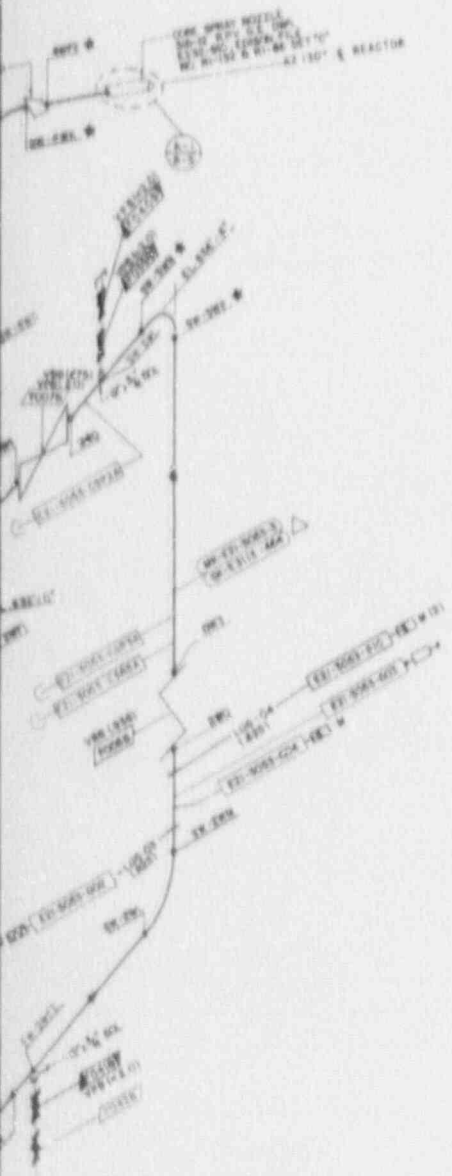
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2	11-15-68	ISSUED FOR CONSTRUCTION			
3	11-15-68	ISSUED FOR CONSTRUCTION			
4	11-15-68	ISSUED FOR CONSTRUCTION			
5	11-15-68	ISSUED FOR CONSTRUCTION			
6	11-15-68	ISSUED FOR CONSTRUCTION			
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8	11-15-68	ISSUED FOR CONSTRUCTION			
9	11-15-68	ISSUED FOR CONSTRUCTION			
10	11-15-68	ISSUED FOR CONSTRUCTION			



INTEGRALLY WELDED LUGS						
LUG NO.	TYPE OF WELD	COMPONENT NUMBERS	ITEM	FINISH	REFERENCE	CLASS
LUG-01	W	29-12-3055 2W1 2W2 2W3 2W4	2	1.0	R2-008, RUT-051E	1
LUG-02	W	29-12-3055 2W1 2W2 2W3 2W4	2	30.0		1
LUG-03	W	29-12-3055 2W1 2W2 2W3 2W4	2	30.0		1
LUG-04	W	29-12-3055 2W1 2W2 2W3 2W4	2	30.0		1
LUG-05	W	29-12-3055 2W1 2W2 2W3 2W4	2	30.0		1

SI APERTURE CARD

Also Available On Aperture Card

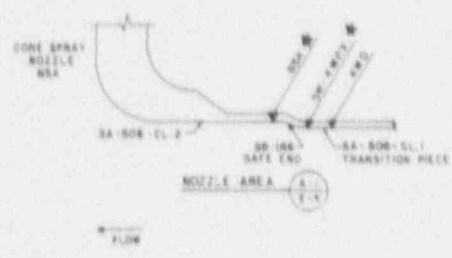


REFERENCE DRAWINGS

- GM72-2051 SYSTEM DIAGRAM (SI)
- GM72-2390 KEY PLAN OF PIPING SECTION 6 PLANS
- SM-2551 (01) PIPE LUGS
- GM72-3053-1 (01) PIPING ISOMETRIC
- GM72-3053-2 (01) SUPPORTS ISOMETRIC
- GM-0402 (1) SPLY. SAFE END DETAIL (AS BUILT RECORD)
- R2-008 (1) PENETRATION DETAILS

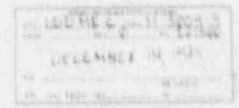
NOTES

- 1. WELD NUMBERS (1 & 2, W1) ARE ALL FIELD WELDS.
- 2. SHOP WELDS (3 & 4, W2) ALWAYS RUT-051E W/ 1.0.
- 3. SPOOL DWG REVISIONS ARE INDICATED BY A Δ

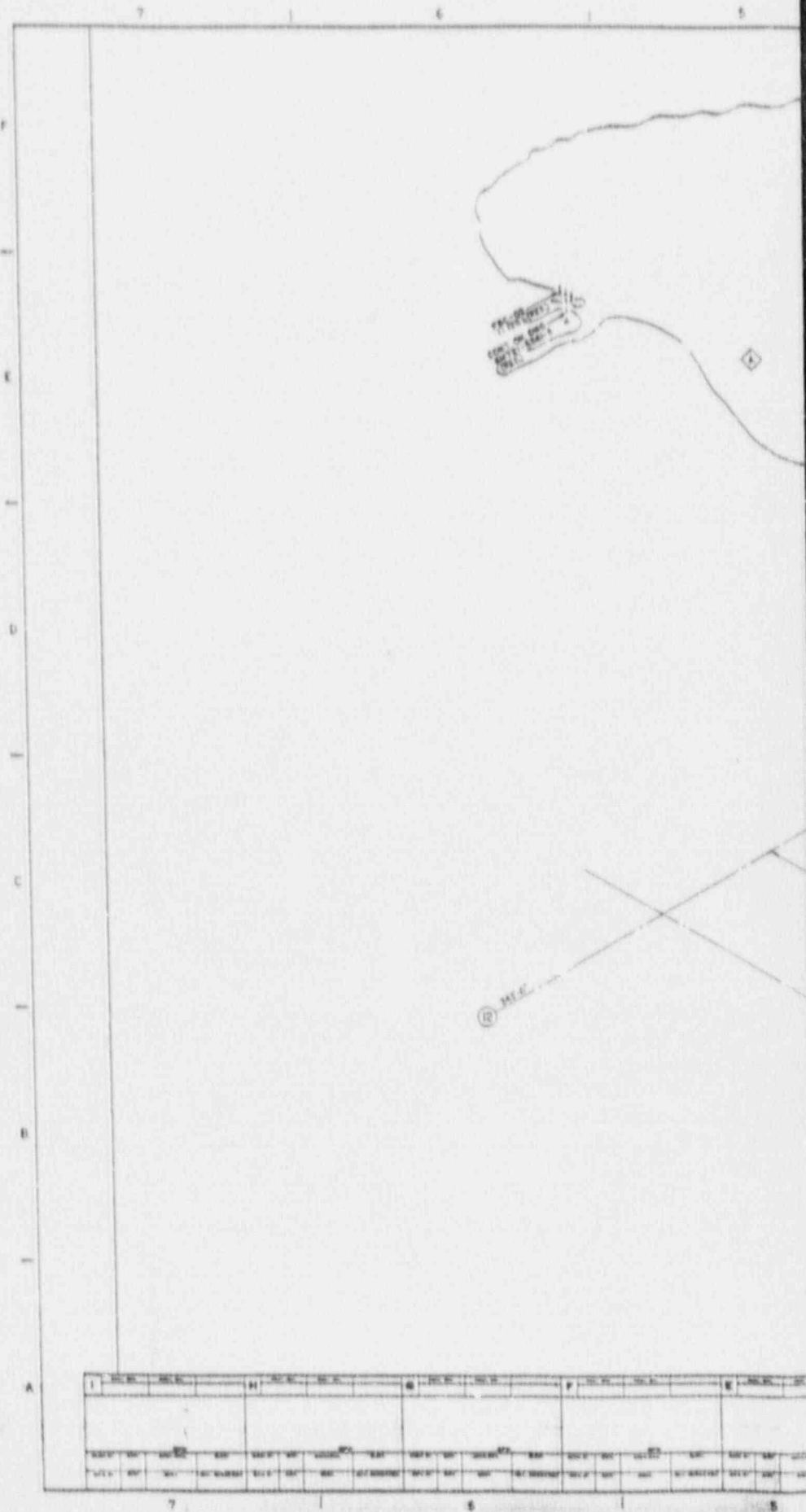


SI CLASS 1 GM72-3053-5
LAYER 001/01

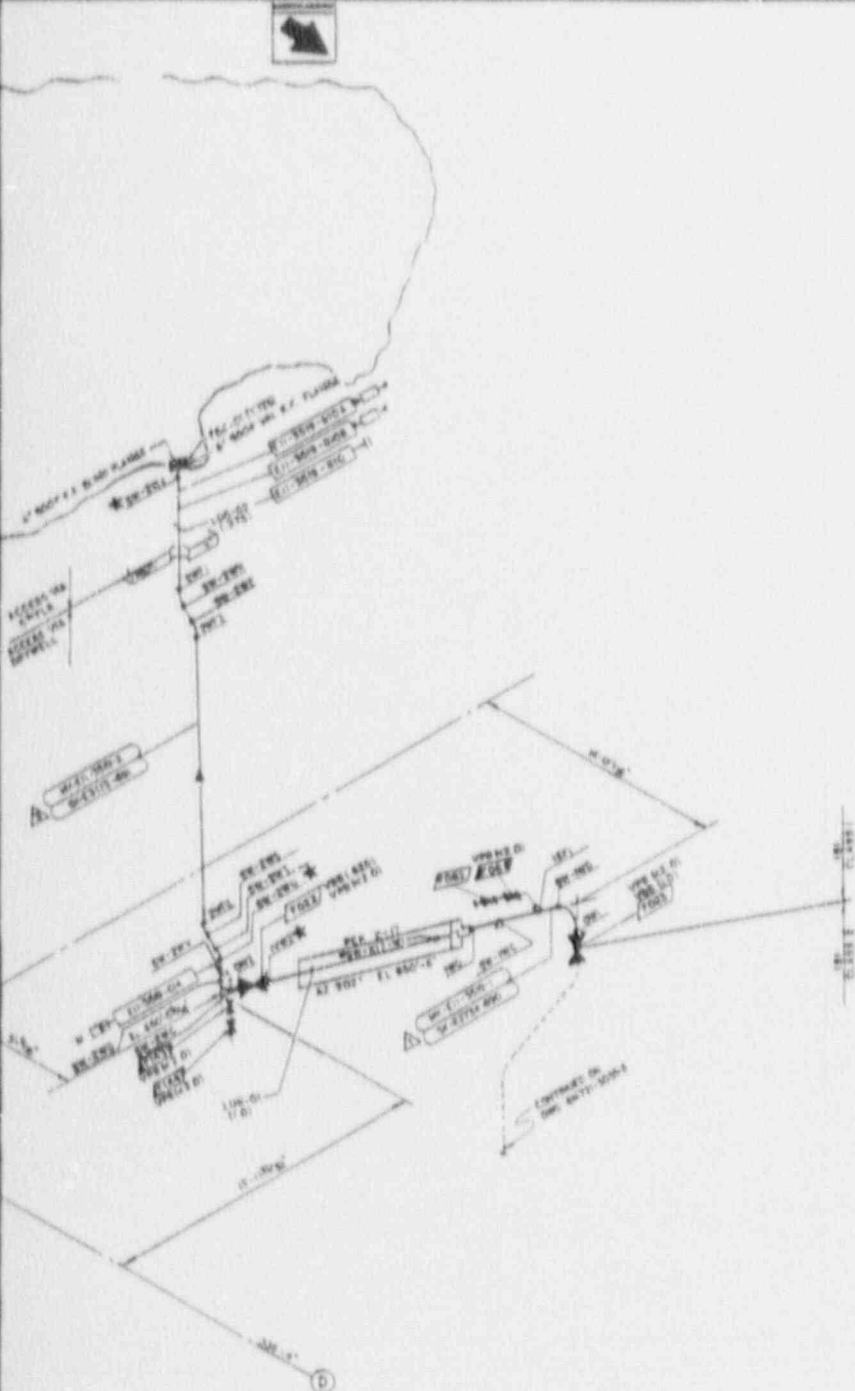
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NO.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
1	11/14/68	ISSUED FOR CONSTRUCTION	J. H. ...		
2	11/14/68	REVISIONS	J. H. ...		



INTEGRALLY WELDED LUGS				
LUG NO.	TYPE OF WELD	COMPONENT NUMBERS	ITEM(TIME)	REFERENCE
LUG-01	X	AW-011-5519-017-WEA, WEA, WEC	1.0	R2-000, DET. WRELL
LUG-02	X	PPW-011-5519-024-030A, 030B, 030C, 030D	3.371	H



SI APERTURE CARD

Also Available On Aperture Card

REFERENCE DRAWINGS

- GM721-3519 SYSTEM DIAGRAM (SHEET)
- SW-0340 PIPE LUGS
- GM721-3519-01 PIPEW GEOMETRIC
- GM721-3519-02 SUPPORTS GEOMETRIC
- R2-000 PENETRATION DETAILS
- SW-0340 SW-SWE DETAILS

NOTES

- 1 WELD NUMBERS (IF GIVEN) ARE ALL FIELD WELDS SHEET WELDS (I.E. SW-0340) ALWAYS HAVE THE SW-0340
- 2 SPOOL END REVISIONS ARE INDICATED BY A Δ

IS CLASS : 6M721-3519-5
LATEST REVISION 1

9101090241-//

A History of This Document's Changes to Its Previous	
NO.	DATE

NUCLEAR SAFETY RELATED

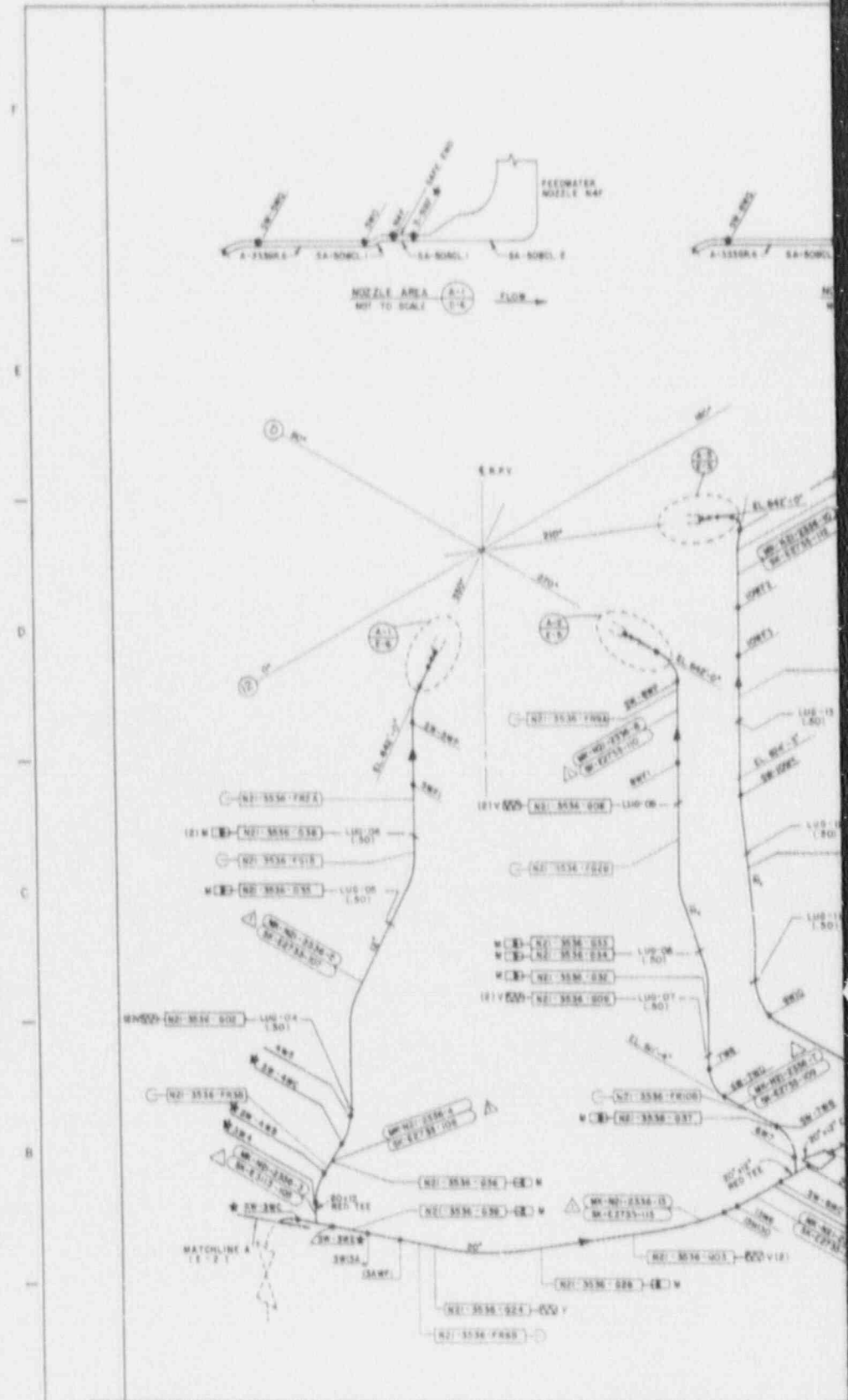
IS CLASS : 6M721-3519-5 A

DOCUMENT CONTROL NO. 1

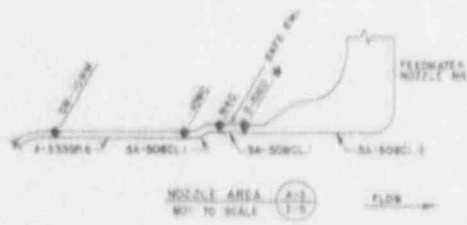
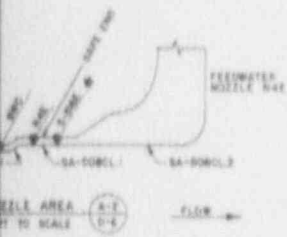
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NO.	DATE	DESCRIPTION	BY	CHKD.	APP'D.	REVISION

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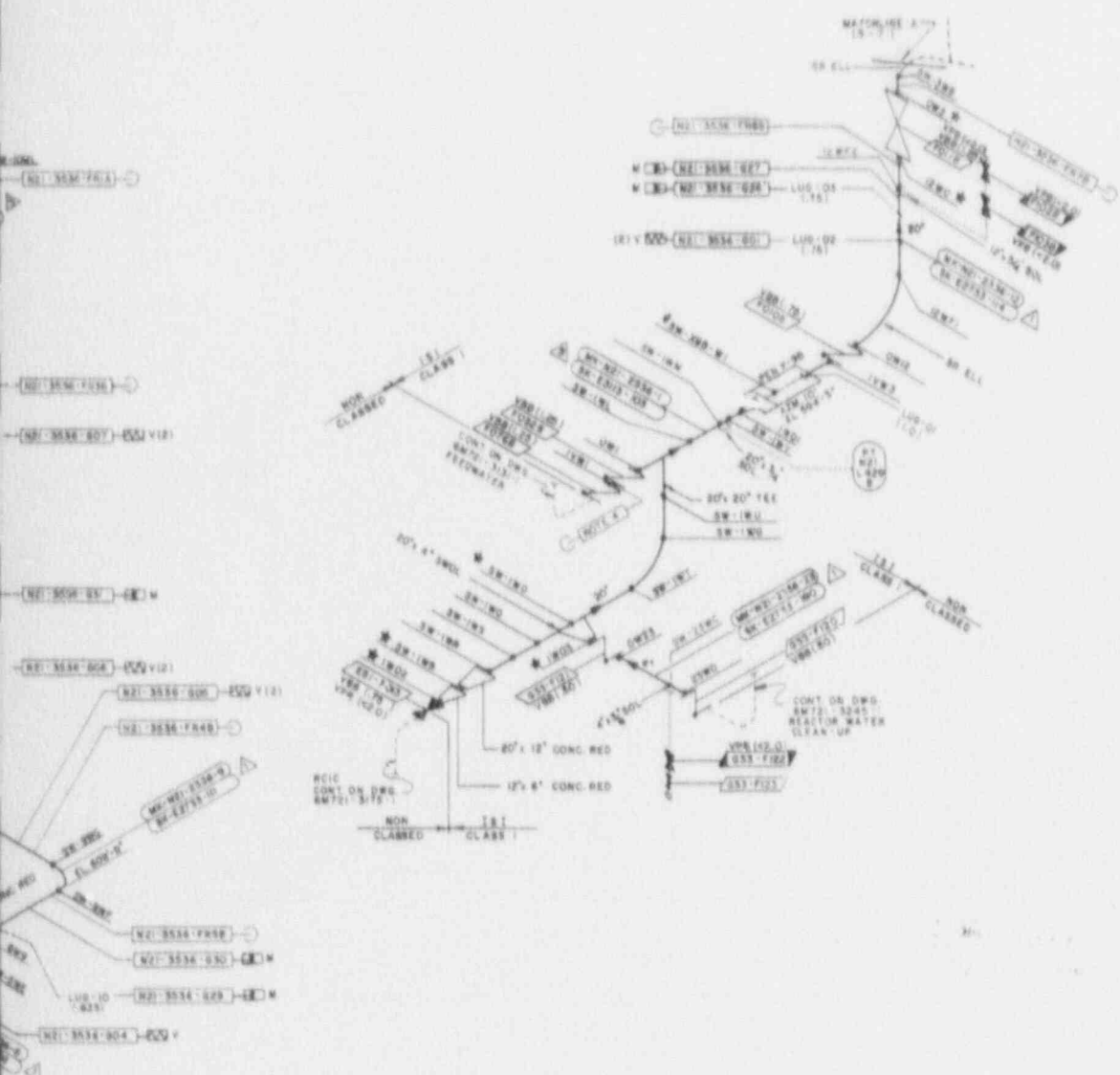


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INTEGRALLY WELDED LUGS					
LUG NO.	TYPE OF WELD	COMPONENT NUMBERS	ITEM CLASS	REFERENCE	L
LUG-01	W	SW-NI-2556-198-WIA, WFR-WIC	1-0	RE-33, NOT USED	
LUG-02	W	SW-NI-2556-198-WIC, WFR-WIC	1-0	75 N	20
LUG-03	W	SW-NI-2556-198-WIC, WFR-WIC	1-0	75 N	0
LUG-04	W	SW-NI-2556-198-WIC, WFR-WIC	1-0	75 N	75
LUG-05	W	SW-NI-2556-198-WIC, WFR-WIC	1-0	75 UP	45
LUG-06	W	SW-NI-2556-198-WIC, WFR-WIC	1-0	75 N	75
LUG-07	W	SW-NI-2556-198-WIC, WFR-WIC	1-0	75 N	45
LUG-08	W	SW-NI-2556-198-WIC, WFR-WIC	1-0	75 N	45
LUG-09	W	SW-NI-2556-198-WIC, WFR-WIC	1-0	75 N	45
LUG-10	W	SW-NI-2556-198-WIC, WFR-WIC	1-0	75 N	45
LUG-11	W	SW-NI-2556-198-WIC, WFR-WIC	1-0	75 UP	45
LUG-12	W	SW-NI-2556-198-WIC, WFR-WIC	1-0	75 N	45
LUG-13	W	SW-NI-2556-198-WIC, WFR-WIC	1-0	75 N, NOT USED	45
LUG-14	W	SW-NI-2556-198-WIC, WFR-WIC	1-0	75 N	25

SI APERTURE CARD
Also Available On Aperture Card



- REFERENCE DRAWINGS**
- 6M72-2003 SYSTEM DIAGRAM (FW)
 - 6M72-2500 KEY PLAN OF PIPING SECTOR B PLANE
 - SM-2551(0) PIPE LUGS
 - 6M72-2556-IV PIPING ISOMETRIC
 - 6M72-3556-III SUPPORTS ISOMETRIC
 - RE-33(34) PENETRATION DETAILS

- NOTES**
- ALL WELD NUMBERS ARE COMPOSED FROMNI-2556-... (SW-NI-2556-...)
 - WELD NUMBERS (S & SW) ARE ALL FIELD WELDS SHOWN ON D1 (L & SW-SW) ALWAYS HAVE THE SW PRE FIX
 - SPOOL DWS REVISIONS ARE INDICATED BY A Δ
 - SEE DRAWING 6C72-2550

IS CLASS I 6M72-3556-5 LAYER REVISION

300000 - 3556-5
20 1 1968
H. L. ...

9101090241-12

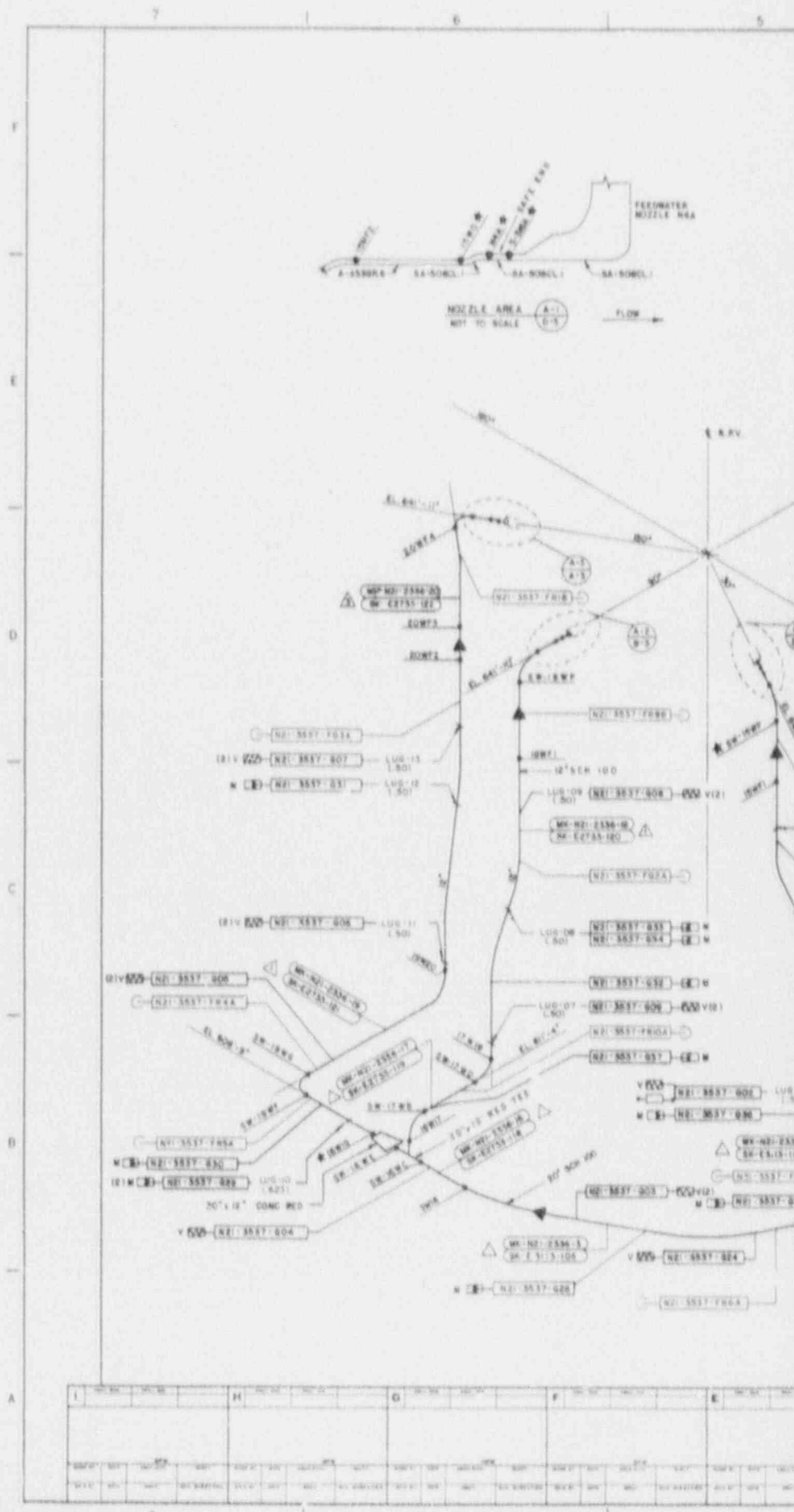
NO.	DATE	BY	CHKD.	DESCRIPTION
1	12-24-67	KONIGSBERG	...	CONFORMANCE
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THE DETROIT ENGINE CO. ENGINEERING DEPARTMENT

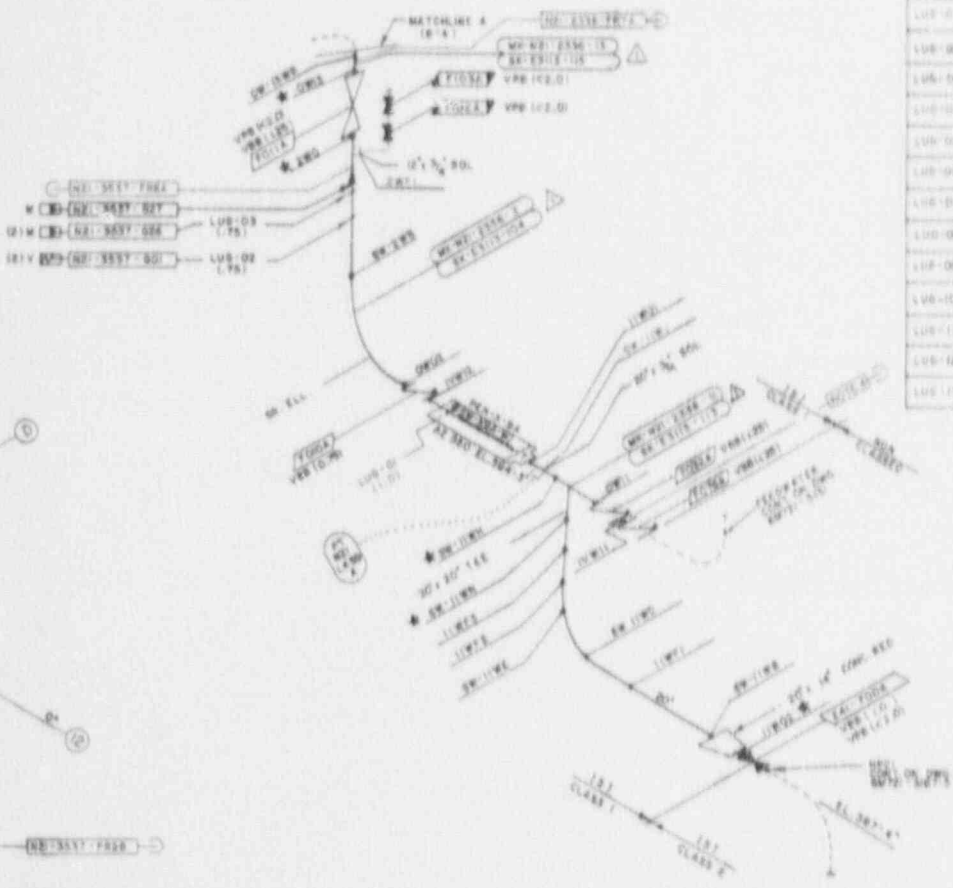
INSERVICE INSPECTION ISOMETRIC
REACTOR FEEDWATER PIPING (INSTR.) INSIDE
DRY WELL - REACTOR BLDG. UNIT #2
ENRICO TERM. ATOMIC POWER PLANT

PROJECT DOCUMENT CONTROL NO. 207
TITLE FOR PIPING INSPECTION, ENRICO

6M72-3556-5 P12



NO.	DESCRIPTION	UNIT	LOCATION	STATUS
1	PG-2580	PG	7	OK
2	PG-2581	PG	7	OK
3	PG-2582	PG	7	OK
4	PG-2583	PG	7	OK
5	PG-2584	PG	7	OK
6	PG-2585	PG	7	OK
7	PG-2586	PG	7	OK
8	PG-2587	PG	7	OK
9	PG-2588	PG	7	OK
10	PG-2589	PG	7	OK
11	PG-2590	PG	7	OK
12	PG-2591	PG	7	OK
13	PG-2592	PG	7	OK
14	PG-2593	PG	7	OK
15	PG-2594	PG	7	OK
16	PG-2595	PG	7	OK
17	PG-2596	PG	7	OK
18	PG-2597	PG	7	OK
19	PG-2598	PG	7	OK
20	PG-2599	PG	7	OK
21	PG-2600	PG	7	OK



INTEGRALLY WELDED LUGS					
LUG NO.	TYPE OF WELD	COMPONENT NUMBERS	ITEM DIM.	REFERENCE	1
LUG 01	*	SW 421 2538 1/4\"/>			
LUG 02	*	SW 421 2538 2\"/>			
LUG 03	*	SW 421 2538 2\"/>			
LUG 04	*	SW 421 2538 2\"/>			
LUG 05	*	SW 421 2538 2\"/>			
LUG 06	*	SW 421 2538 2\"/>			
LUG 07	*	SW 421 2538 2\"/>			
LUG 08	*	SW 421 2538 2\"/>			
LUG 09	*	SW 421 2538 2\"/>			
LUG 10	*	SW 421 2538 2\"/>			
LUG 11	*	SW 421 2538 2\"/>			
LUG 12	*	SW 421 2538 2\"/>			
LUG 13	*	SW 421 2538 2\"/>			

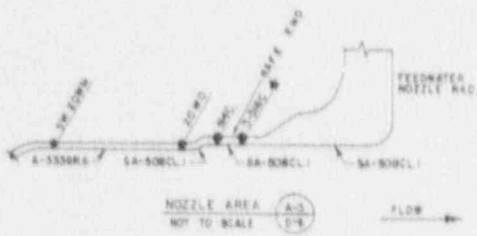
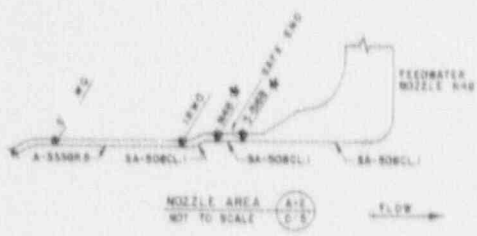
REFERENCE DRAWINGS

- 6M72-2005 SYSTEM DIAGRAM (P/W)
- 6M72-2320 KEY PLAN OF PIPING SECTION & PLANS
- 6M-253 (1) PIPE LUGS
- 6M72-2336 (1 V) PIPING ISOMETRIC
- 6M72-3537-5 (1) SUPPORTS ISOMETRIC
- RE-25 (1A) PENETRATION DETAILS

NOTES

1. ALL WELD NUMBERS ARE COMPOSED FROM: SW 421 2538 (1) SW 421 2537 (1)
2. WELD NUMBERS IN S-SWAGS ARE ALL FIELD WELDS SHOWN WELDED TO C/W SWAGS ALWAYS HAVE THE SW/PRE 21 K
3. SPOOL DMS REV ISOWMS ARE INDICATED BY A Δ
4. SEE DRAWING 6M72-2538

SI APERTURE CARD
Also Available On Aperture Card



CLASS 1 6M72-3537-5
LATEST REVISION

9101090241/3

DATE: 10/15/76
BY: [Signature]
CHECKED BY: [Signature]

NO.	REVISION	DATE	BY	CHECKED	APPROVED	DESCRIPTION
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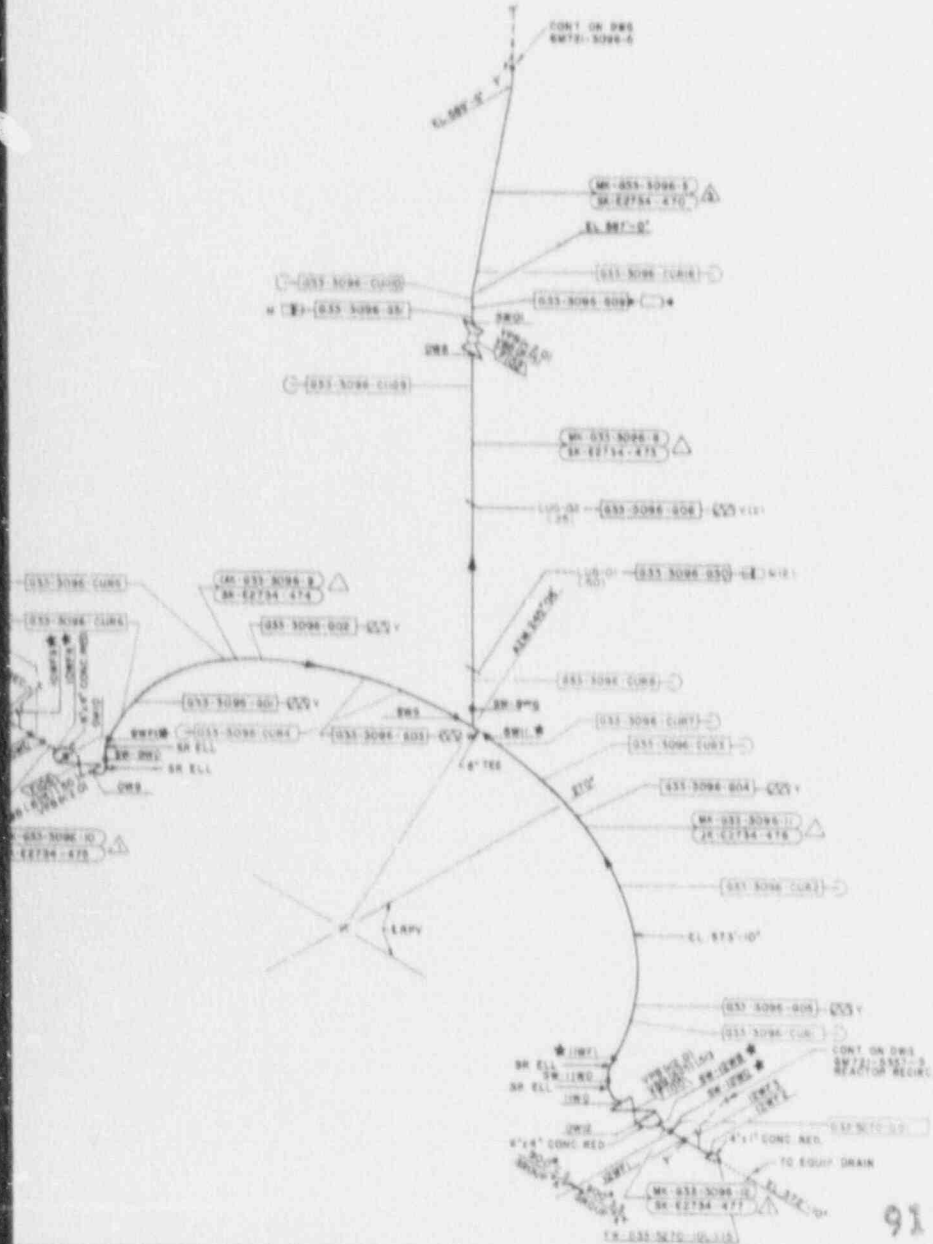
6M72-3537-5



INTEGRALLY WELDED LOOPS					
LOOP NO.	TYPE OF WELD	COMPONENT NUMBERS	ITEMIZATION	REFERENCE	L
LOO-01	*	SW-031-3096-040, 041, 042	6	SW	AL 245
LOO-02	*	SW-031-3096-043, SW-040, 041	2	SW	AL 245

SI
APERTURE
CARD

Also Available On
Aperture Card



- REFERENCE DRAWINGS**
- 0MT2-2020 SET PLAN OF PIPING SECTION & FLANS
 - 0MT2-2048 SYSTEM DIAGRAM (RWCU)
 - 0MT2-3098-111 PIPING ISOMETRIC
 - 0MT2-3098-211 SUPPORTS ISOMETRIC
 - SW-031-3096-040 PIPE LOOPS
 - 0MW-031-5270-01 RWCU TO DRAIN
- NOTES**
- ALL WELD NUMBERS ARE COMPOSED FROM: SW-031-3096-040-041-042-043
 - WELD NUMBERS (E & SW) ARE ALL FIELD WELDS SHOP WELDS (E & SW) ALWAYS HAVE THE SW PRE FIX
 - SPOOL DWG REVISIONS ARE INDICATED BY A Δ

SI CLASS 1 0MT2-535-5
LATEST REVISION

DATE: 11/14/54
BY: G.S. 204
CHECKED: [Signature]

910109024-14

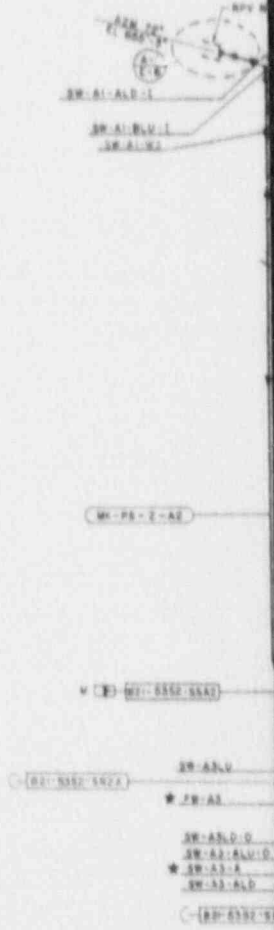
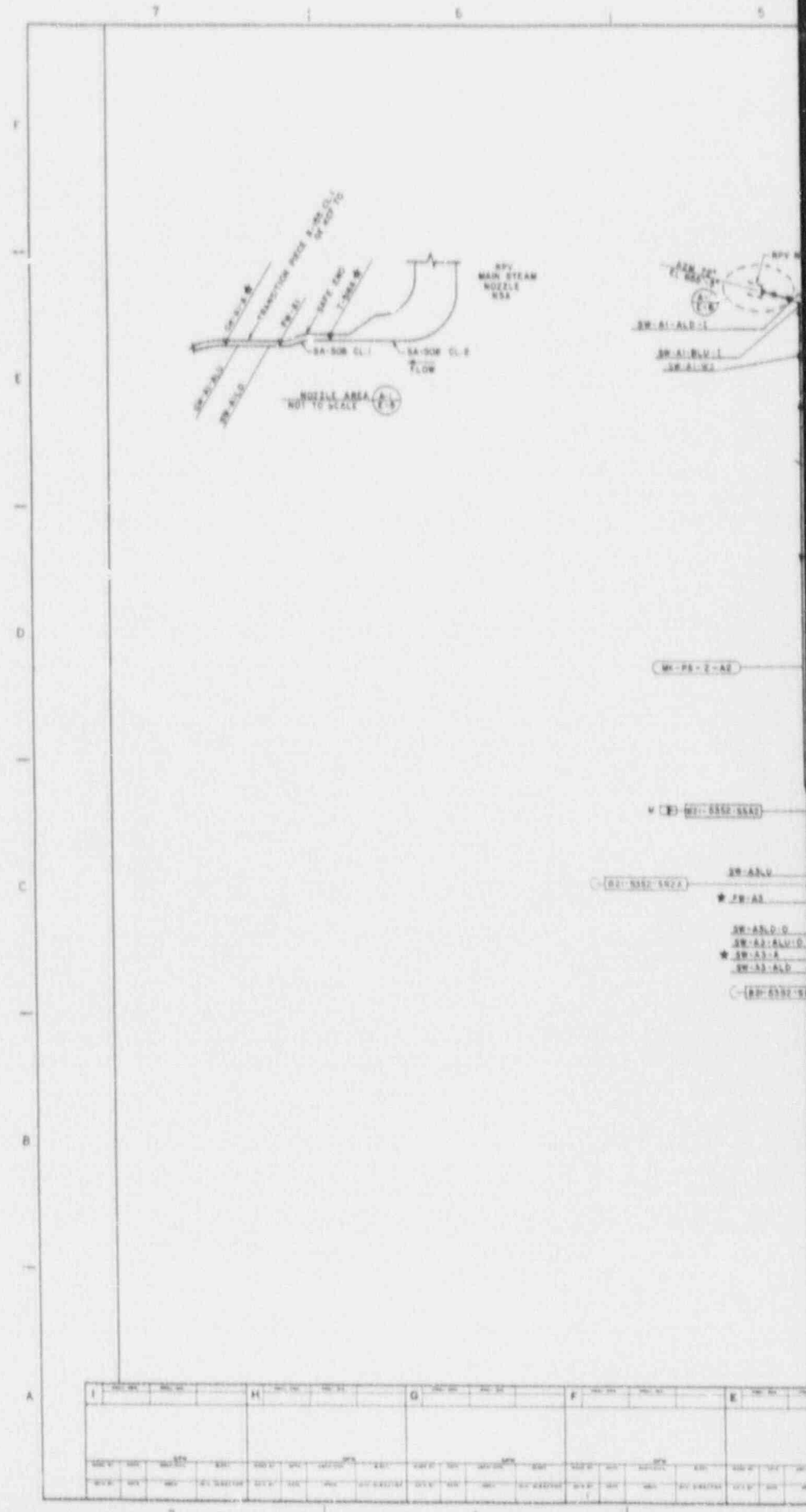
NO.	DATE	BY	CHKD.	DESCRIPTION
1				ISSUED FOR CONSTRUCTION
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3				REVISION
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THE DETROIT Edison CO. DEPARTMENT OF ENGINEERING

INSERVICE INSPECTION ISOMETRIC
REACTOR WATER CLEANUP SECTION
FROM THE RWU REGULATION LOOPS
INTEGRAL WELDED LOOPS

PROJECT: [Project Name]
DRAWING NO: 0MT2-535-5
DATE: 11/14/54
BY: G.S. 204
CHECKED: [Signature]

0MT2-535-5
SI CLASS 1
LATEST REVISION



I		H		G		F		E	
SA-SIB CL-1	SA-SIB CL-2	SA-SIB CL-3	SA-SIB CL-4	SA-SIB CL-5	SA-SIB CL-6	SA-SIB CL-7	SA-SIB CL-8	SA-SIB CL-9	SA-SIB CL-10
SA-SIB CL-11	SA-SIB CL-12	SA-SIB CL-13	SA-SIB CL-14	SA-SIB CL-15	SA-SIB CL-16	SA-SIB CL-17	SA-SIB CL-18	SA-SIB CL-19	SA-SIB CL-20

INTEGRALLY WELDED LUGS			
LUG NO.	TYPE OF WELD	COMPONENT NUMBERS	REFERENCE
LUG-01	●	SW-A2-AA,AA2,AA1,AA4	50 R1-201,5,071,2
LUG-02	●	FW-A4-SA,SA2,SA3,SA4	20 R1-201,5,DET 5
LUG-03	●	SW-A4-WA,WA2,WA3,WA4	100 R2-33,DET 5,DET 6
LUG-04	●	SW-A4-WD,WD1,WD2	050 INSULATION LUGS

SI APERTURE CARD

Also Available On Aperture Card

NOTES

- FOR WELDS IN THE MAIN STEAM LINE (LOOP A), THE COMPLETE WELD IDENTIFICATION CAN BE FORMED BY ADDING PS-214 & SW-A3-A IS SW-PS-2-A3-A.
- HANGER AND WHIP RESTRAINT SKETCHES CAN BE OBTAINED FROM DOCUMENT CONTROL BY LISTING THE FIRST AND LAST PORTION OF THE IDENTIFICATION (i.e. R21-5352-55A2, WOULD BE SUBMITTED AS R21-55A2).
- VALVE BODY TO BONNET (VBB) ROLLING SIZES ARE (1.375), (1.125), (1.00), & (1.315) REFER TO DWG R1-3107.

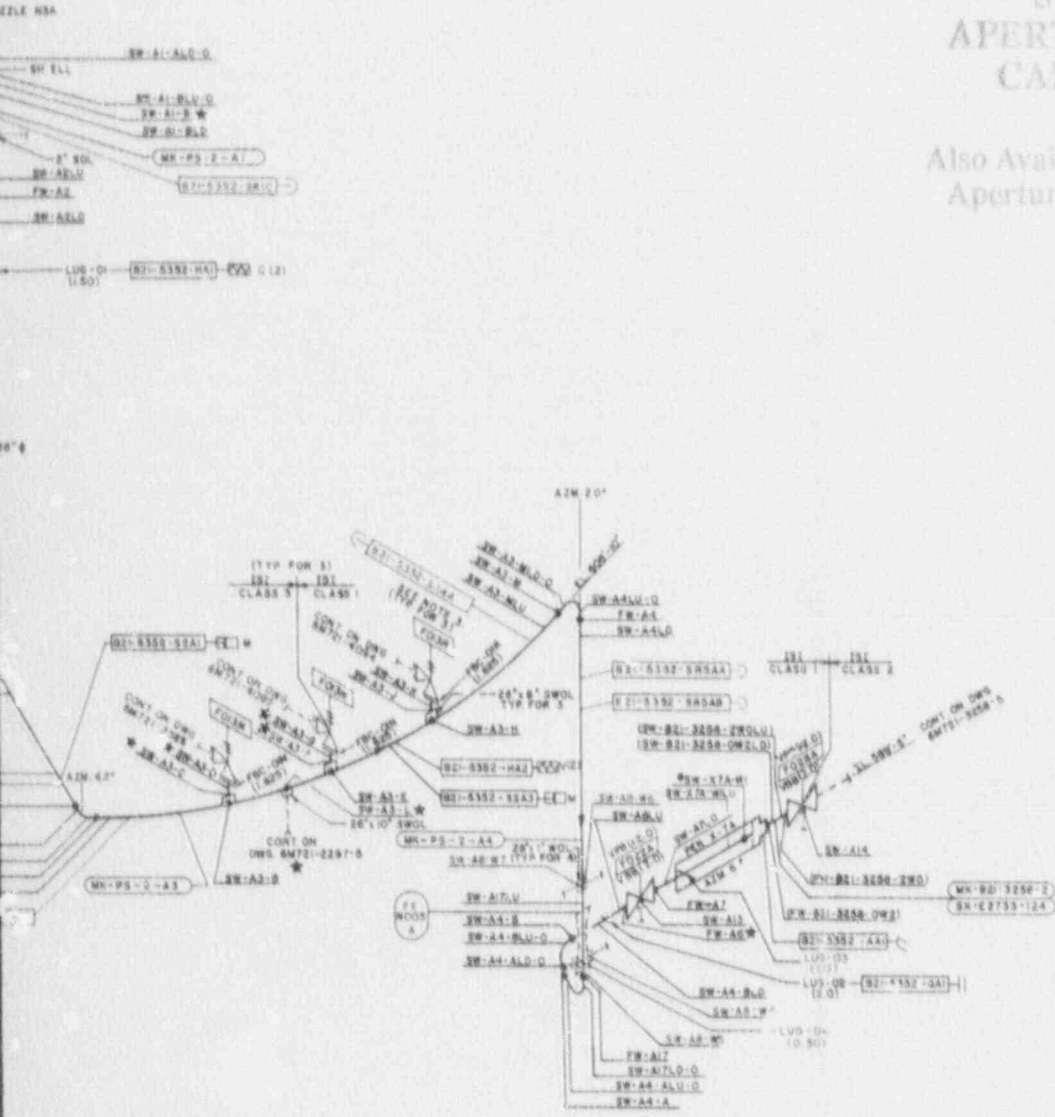
REFERENCE DRAWINGS

- | | |
|---------------|-----------------------------|
| R1-240-1 (3) | STEAM PIPE SUSPENSION |
| R1-240-2 (1) | STEAM PIPE SUSPENSION |
| R1-240-3 (9) | STEAM PIPE SUSPENSION |
| R2-33 (34) | DRYWELL PENETRATION DETAILS |
| R1-201-1 (11) | PRIMARY STEAM PIPING |
| R1-201-2 (11) | PRIMARY STEAM PIPING |
| R1-201-3 (9) | PRIMARY STEAM PIPING |
| 6M721-2089 | SYSTEM DIAGRAM (NS) |
| R1-3107 | SAFETY RELIEF VALVES |
| R1-13 (8) | SAFE END DETAILS |

15: CLASS I 6M721-5352-5
LARRY HUBBARD

DEC 15, 1974
BHP
GENERAL MODEL 37

9101090241-15



NO.	DATE	BY	CHKD.	APP.	REVISION	DESCRIPTION
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THE DETROIT EDISON CO. ENGINEERING DEPARTMENT

CONCOURSE 11-84
DESIGNED BY
CHECKED BY
DATE
PROJECT NO. 6M721-5352-5

LOCATION: SMBCO FERM. ATOMIC POWER PLANT

DOCUMENT CONTROL NO. 371-01

6M721-5352-5

REVISIONS

REVISION NO. 1

DATE

BY

DESCRIPTION

REVISION NO. 2

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REVISION NO. 3

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REVISION NO. 4

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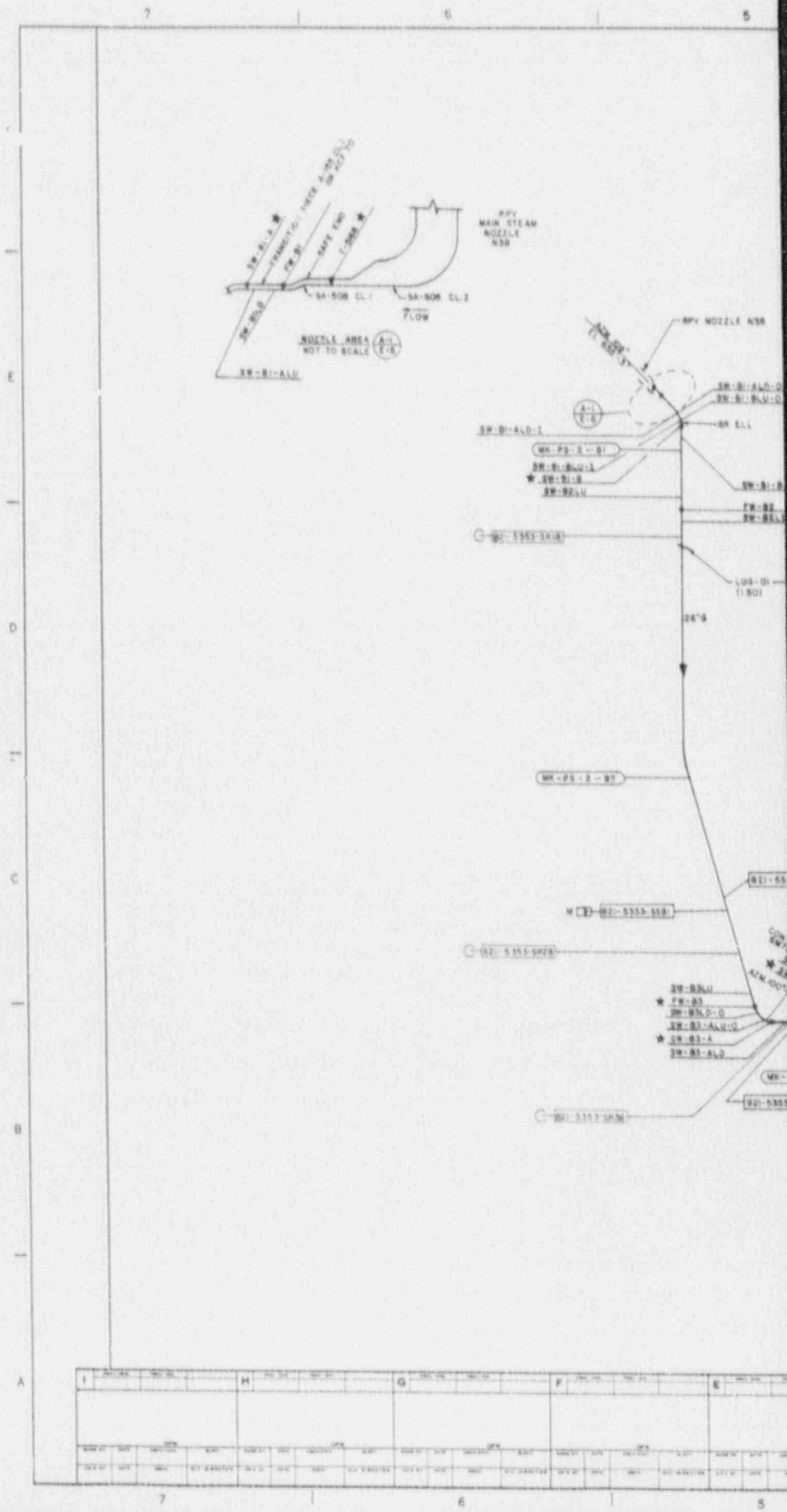
DESCRIPTION

REVISION NO. 20

DATE

BY

DESCRIPTION



REV	DATE	BY	CHKD	APP'D	DESCRIPTION
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INTEGRALLY WELDED LUGS				
LUG NO.	TYPE OF WELD	COMPONENT NUMBERS	TUNING	REFERENCE
LUG-01	*	SW-82-AA1, AA2, AA3, AA4	1.50	R1-201-3, DET 2
LUG-02	*	SW-82-BA1, BA2, BA3, BA4	1.50	R1-201-3, DET 1
LUG-03	*	SW-82-CA1, CA2, CA3, CA4	1.50	R1-201-3, DET W
LUG-04	*	FW-84-A, B, C, D, E, F, G, H, I, J	2.0	R1-201-3, DET 3
LUG-05	*	SW-82-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	1.0	R2-33, NOT USED
LUG-06	*	SW-82-11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50	0.50	INSULATION LUGS

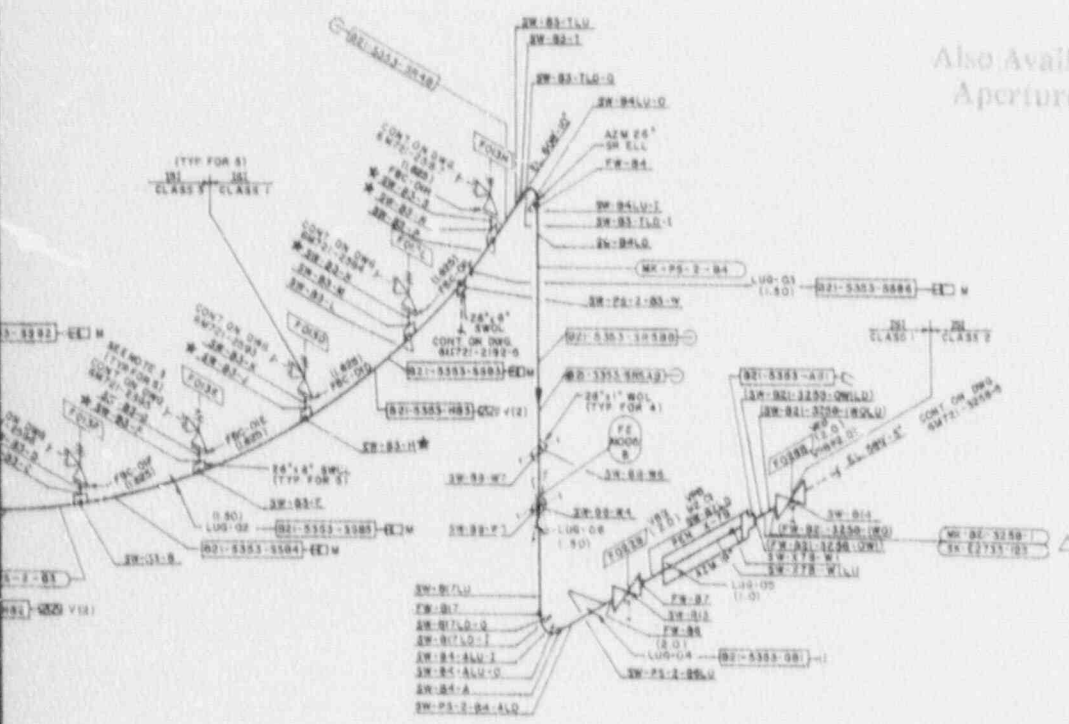
NOTES

- 1. FOR WELDS IN THE MAIN STEAM LINE (LOOP 8), THE COMPLETE WELD IDENTIFICATION CAN BE FORMED BY ADDING PS-2-114 SW-82-A IS SW-PS-2-83-A.)
- 2. HANGER AND WMP RESTRAINT SKETCHES CAN BE OBTAINED FROM DOCUMENT CONTROL BY LISTING THE FIRST AND LAST PORTION OF THE IDENTIFICATION (e.g. SW-5553-5582 WOULD BE SUBMITTED AS SW-5582).
- 3. WELVE BODY TO BONNET (VBI) BOLTING SIZES ARE: (1) 3/16" (1.25), (2) 1/4" (1.375) REFER TO DWG R1-201

SI APERTURE CARD

Also Available On Aperture Card

67-5553-101-028 (1/1)



REFERENCE DRAWINGS

- | | |
|--------------|-----------------------------|
| R1-240-1(15) | STEAM PIPE SUSPENSION |
| R1-240-2(11) | STEAM PIPE SUSPENSION |
| R1-240-3(10) | STEAM PIPE SUSPENSION |
| R2-33(14) | DRYWELL PENETRATION DETAILS |
| R1-201-1(1) | PRIMARY STEAM PIPING |
| R1-201-2(1) | PRIMARY STEAM PIPING |
| R1-201-3(1) | PRIMARY STEAM PIPING |
| 6M721-2089 | SYSTEM DIAGRAM (WB) |
| R1-131-1(1) | SAFE END DETAILS |
| R1-207 | SAFETY RELIEF VALVE |

SI CLASS 1 6M721-5553-5 CANNON MOORE

DATE	10/15/74
DRAWN BY	J. J. J.
CHECKED BY	J. J. J.
APPROVED BY	J. J. J.

910109024 1/1

NO.	REV.	DATE	BY	DESCRIPTION
1	1	10/15/74	J. J. J.	ISSUED FOR CONSTRUCTION

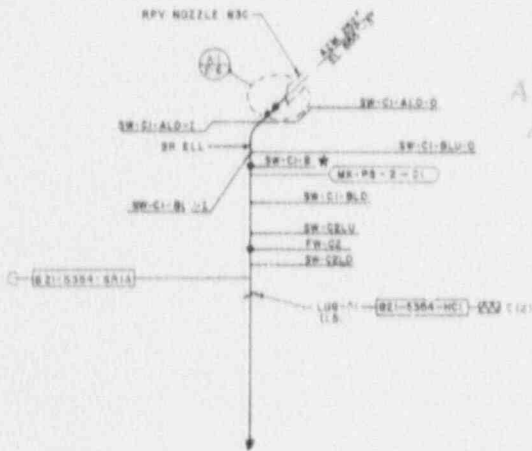
PROJECT NO.	6M721-5553-5
CONTRACT NO.	67-5553-101-028 (1/1)
REVISION NO.	1
DATE OF REVISION	10/15/74
REVISION BY	J. J. J.
REVISION CHECKED BY	J. J. J.
REVISION APPROVED BY	J. J. J.
REVISION DESCRIPTION	ISSUED FOR CONSTRUCTION



INTEGRALLY WELDED LUSS				
LUSS NO	TYPE OF WELD	COMPONENT NUMBERS	UNITS	REFERENCE
LUSS-01	●	SW-02-AA 442, 443, 444	1.50	RI-201-3, DET 2
LUSS-02	●	HSPW-13-B 4, 5, 5588, 5589, 5590	1.50	RI-201-3, DET 1
LUSS-03	●	HSPW-13-B 5570, 5571, 5572	1.50	RI-201-3, DET 1
LUSS-04	●	FW-04-001, 002, 003, 004	2.0	RI-201-3, DET 3
LUSS-05	●	SW-17C-W2A, W, W, W, C	1.0	RZ-93, NOT USED
LUSS-06	●	SW-CF-D10, W11, 12	0.00	INSULATION LUSS

SI APERTURE CARD

Also Available On
Aperture Card



NOTES

1. FOR WELDS IN THE MAIN STEAM LINE (LOOP C), THE COMPLETE WELD IDENTIFICATION CAN BE FORMED BY ADDING PD-2 (e.g. SW-03-A IS SW-PS-2-03-A).
2. HANGER AND WHIP RESTRAINT SKETCHES CAN BE OBTAINED FROM DOCUMENT CONTROL BY LISTING THE FIRST AND LAST PORTION OF THE IDENTIFICATION (e.g. BP-550-5502, WOULD BE SUBMITTED AS R21-5902).
3. VALVE BODY TO BONNET (VBR) BOLTING SIZES ARE:
(1.375), (1.25), (.50), (1.375) REFER TO DWG. R1-3107.

REFERENCE DRAWINGS

R1-240-1 (13)	STEAM PIPE SUSPENSION
R1-240-2 (11)	STEAM PIPE SUSPENSION
R1-240-3 (10)	STEAM PIPE SUSPENSION
R2-33 (54)	DRYWELL PENETRATION DETAILS
R1-201-1 (11)	PRIMARY STEAM PIPING
R1-201-2 (11)	PRIMARY STEAM PIPING
R1-201-3 (9)	PRIMARY STEAM PIPING
SM721-2009	SYSTEM DIAGRAM (SO)
R1-13 (8)	SAFE END DETAILS
R1-3107	SAFETY RELIEF VALVES

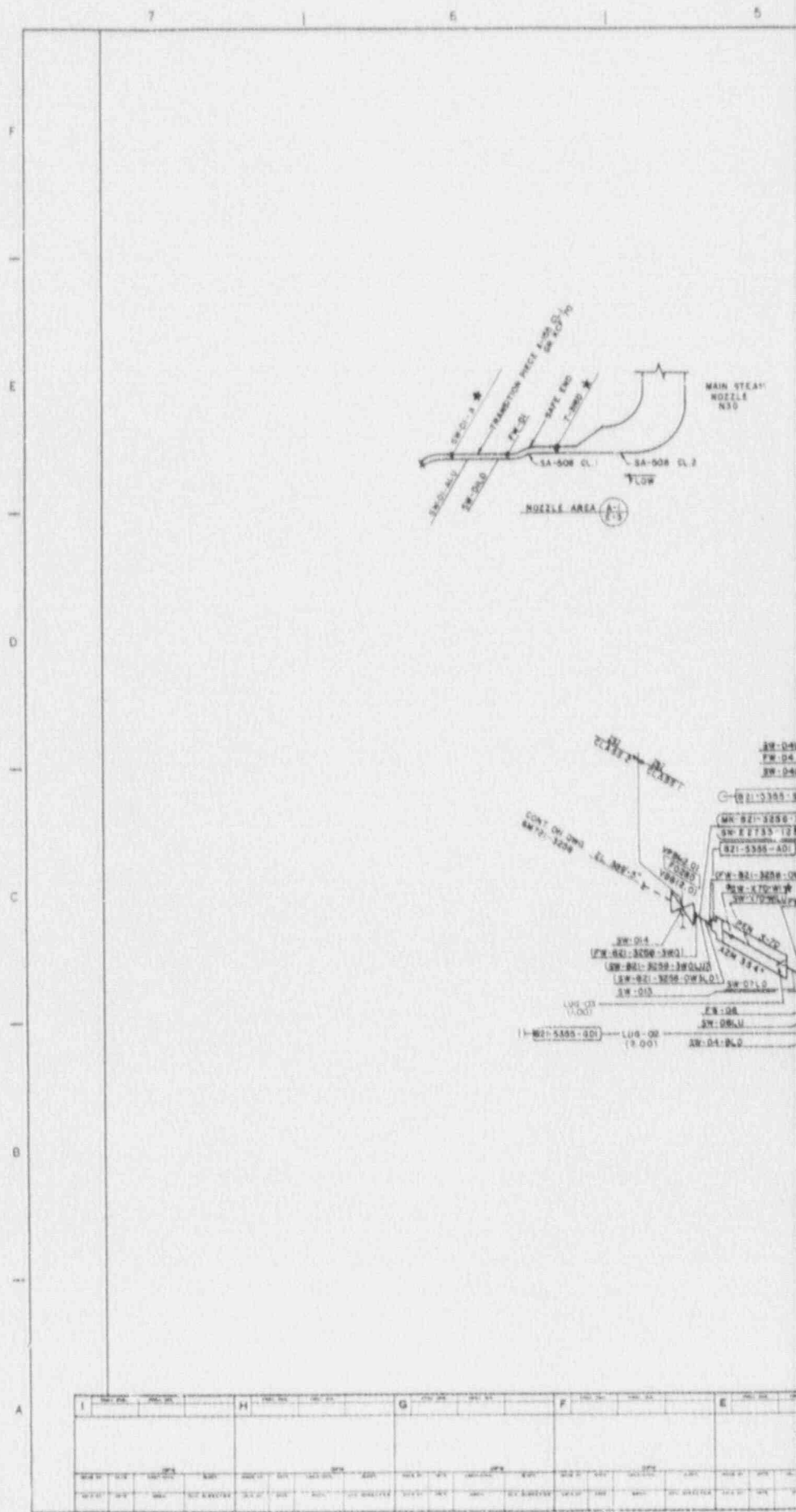
ISI CLASS I SM721-5354-5
LATEST REVISION

APPROVED FOR ISSUANCE	DATE
ISSUED BY	DATE
REVISION NO.	DATE
ISSUE NO.	DATE

DATE: 15, 1974

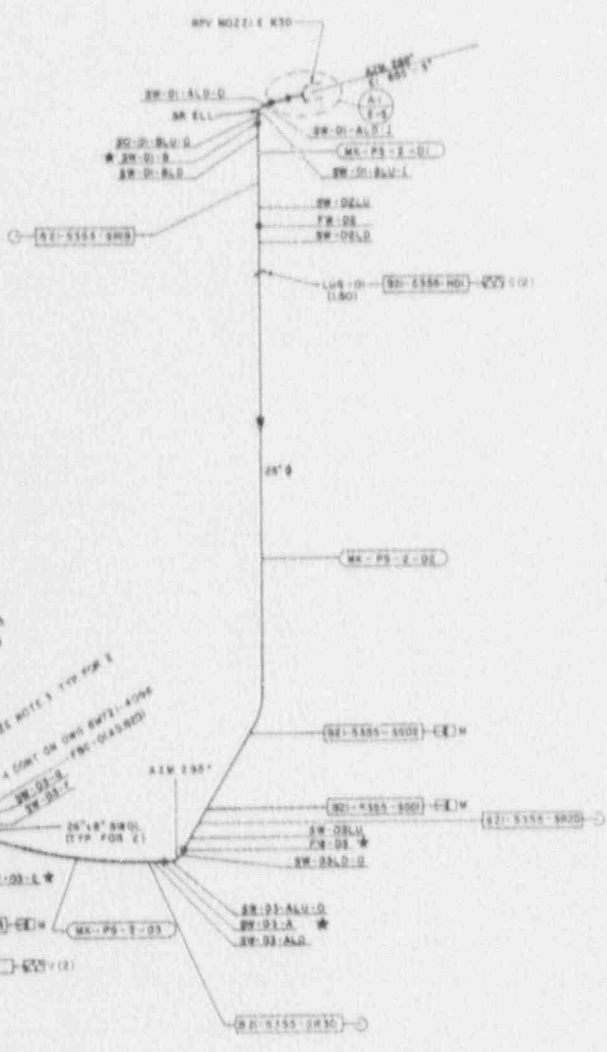
9101090241-17

D	C	B	A	OTHER CONTACTS	CONCOURSE	DATE	FILE	PROJECT
					INSERVICE INSPECTION ISOMETRIC			MAIN STEAM LOOP'S
					REACTOR BLDG.			UNION FERM. ATOM. POWER PLANT
					DOCUMENT CONTROL			SM721-5354-5





INTEGRALLY WELDED LUGS				
LUG NO	TYPE OF WELD	COMPONENT NUMBERS	TYPE	REFERENCE
LUG-01	●	SW-D1-A1, A2, A3, A4	150	R1-201-2, D1-1
LUG-02	●	FW-D4-B1, B2, B3, B4	200	R1-201-2, D1-1
LUG-03	●	SW-D1-B1, B2, B3, B4	150	RE-35, W1-0302
LUG-04	●	SW-D1-W1, W2	150	INSULATION LUGS



NOTES

- FOR WELDS IN THE MAIN STEAM LINE (LOOP D), THE COMPLETE WELD IDENTIFICATION CAN BE FORMED BY ADDING 'PS-2' (4 & SW'D3-A 10 SW'PS-2-D3-A)
- HANGER AND WHIP RESTRAINT SKETCHES CAN BE OBTAINED FROM DOCUMENT CONTROL BY LISTING THE FIRST AND LAST PORTION OF THE IDENTIFICATION (4 & SW'5555-5505 WOULD BE SUBMITTED AS SW'5502)
- VALVE BODY TO BONNET (VBS) BOLTING SIZES ARE (1.375), (1.125), (1.50), & (1.375) REFER TO DWG. R1-3107

SI APERTURE CARD

Also Available On Aperture Card

REFERENCE DRAWINGS

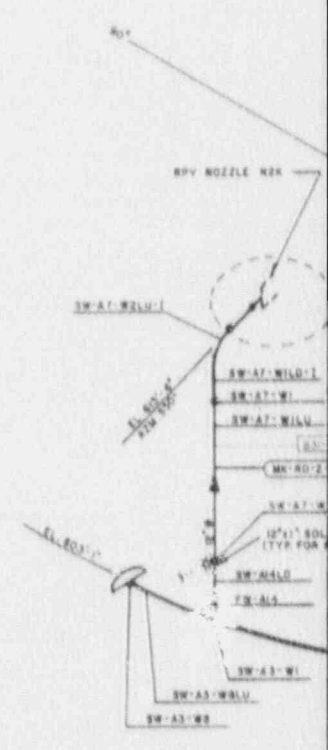
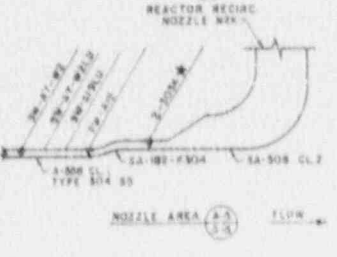
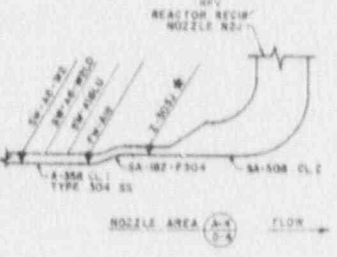
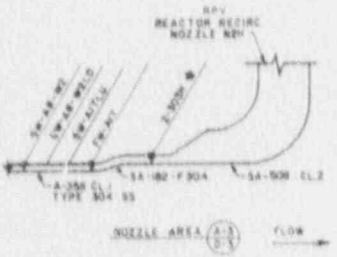
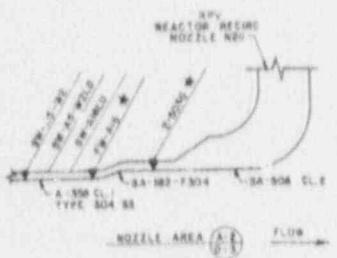
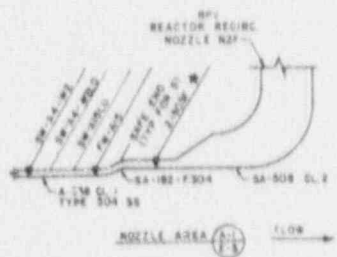
R1-240-1 (1)	STEAM PIPE SUSPENSION
R1-240-2 (1)	STEAM PIPE SUSPENSION
R1-240-3 (2)	STEAM PIPE SUSPENSION
R2-83 (34)	DRYWELL PENETRATION DETAILS
R1-201-1 (1)	PRIMARY STEAM PIPING
R1-201-2 (1)	PRIMARY STEAM PIPING
R1-201-3 (1)	PRIMARY STEAM PIPING
6M721-2089	SYSTEM DIAGRAM (NO)
R1-3106	SAFE END DETAILS
R1-3107	SAFETY RELIEF VALVES

SI CLASS 1 6M721-5155-5 EVERY NUMBER

DATE: 10/15/64
 BY: [Signature]
 CHECKED: [Signature]
 APPROVED: [Signature]

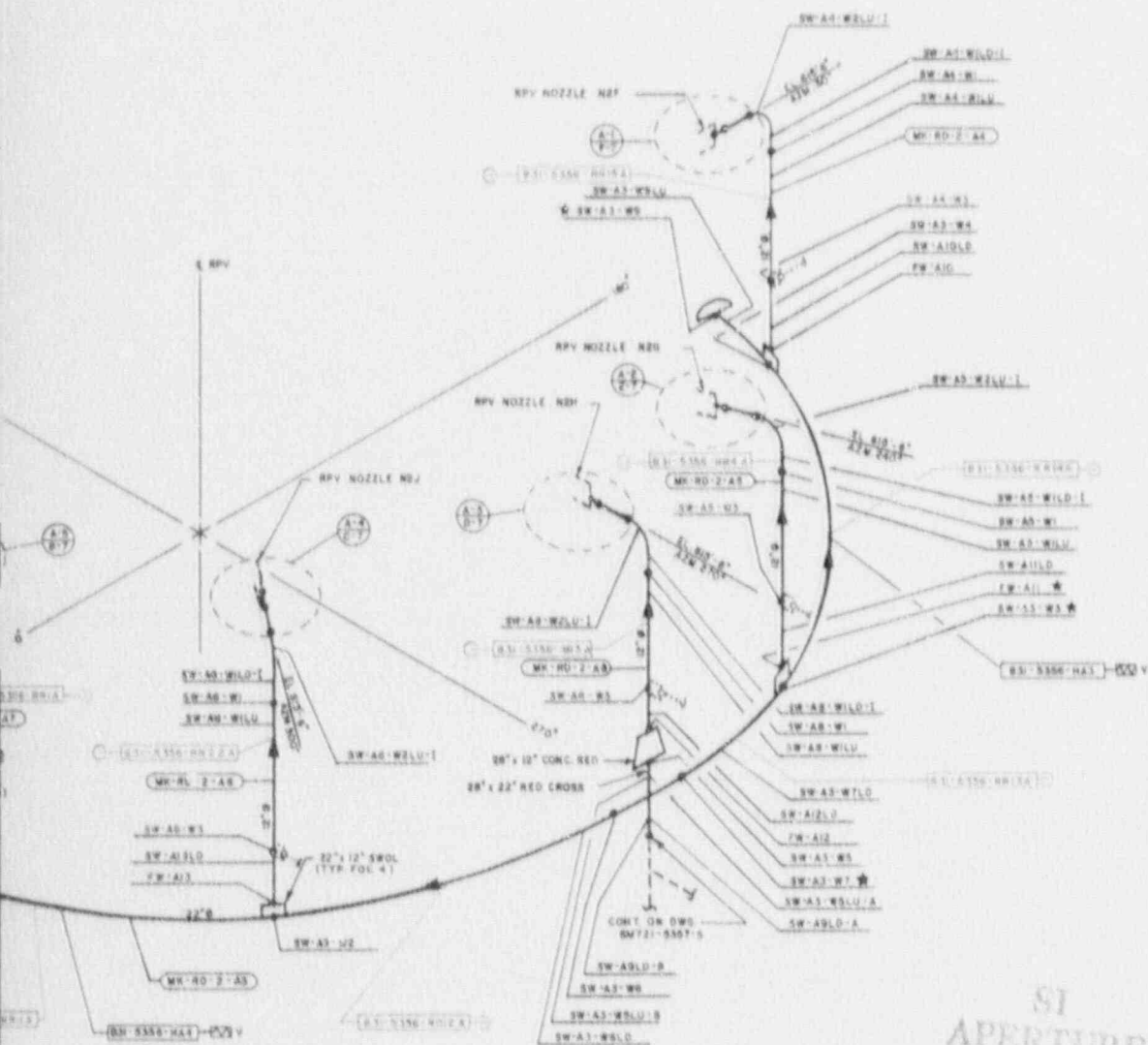
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NO.	REV.	DATE	BY	CHKD.	APP.	DESCRIPTION
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51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

NO INTEGRALLY WELDED LUGS



NOTES

- 1 WELD IDENTIFICATIONS ON THE REACTOR RECIRC. HEADERS ARE DETAILED IN THE LETTER WP 04-504
- 2 FOR WELDS ON THE REACTOR RECIRC. DISCHARGE LINE, THE COMPLETE WELD IDENTIFICATION CAN BE FORMED BY ADDING "RD-2" (e.g. SW-A3-W1 IS SW-RD-2-A3-W1)
- 3 HANGER AND WHIP RESTRAINT BRACKETS CAN BE OBTAINED FROM DOCUMENT CONTROL BY LISTING THE FIRST AND LAST PORTION OF THE IDENTIFICATION (i.e. 831-5356-KH4A, WOULD BE SUBMITTED AS 831-KH4A)

REFERENCE DRAWINGS

- R1-174-1(0) REACTOR LOOP PIPING
- R1-174-2(00) REACTOR LOOP PIPING
- R1-174-3(7) REACTOR LOOP PIPING
- R1-254-1(00) REACTOR LOOP SUSPENSION
- R1-254-2(00) REACTOR LOOP SUSPENSION
- SM72-12833 SYSTEM DIAGRAM (RW)
- R1-15213 RPV SAFE END DETAILS
- R1-1415(8) WHIP RESTRAINTS

SI
APERTURE
CARD

SI CLASS 1 SM72-5356-5
EXEMPT FROM CONTROL

Also Available On
Aperture Card

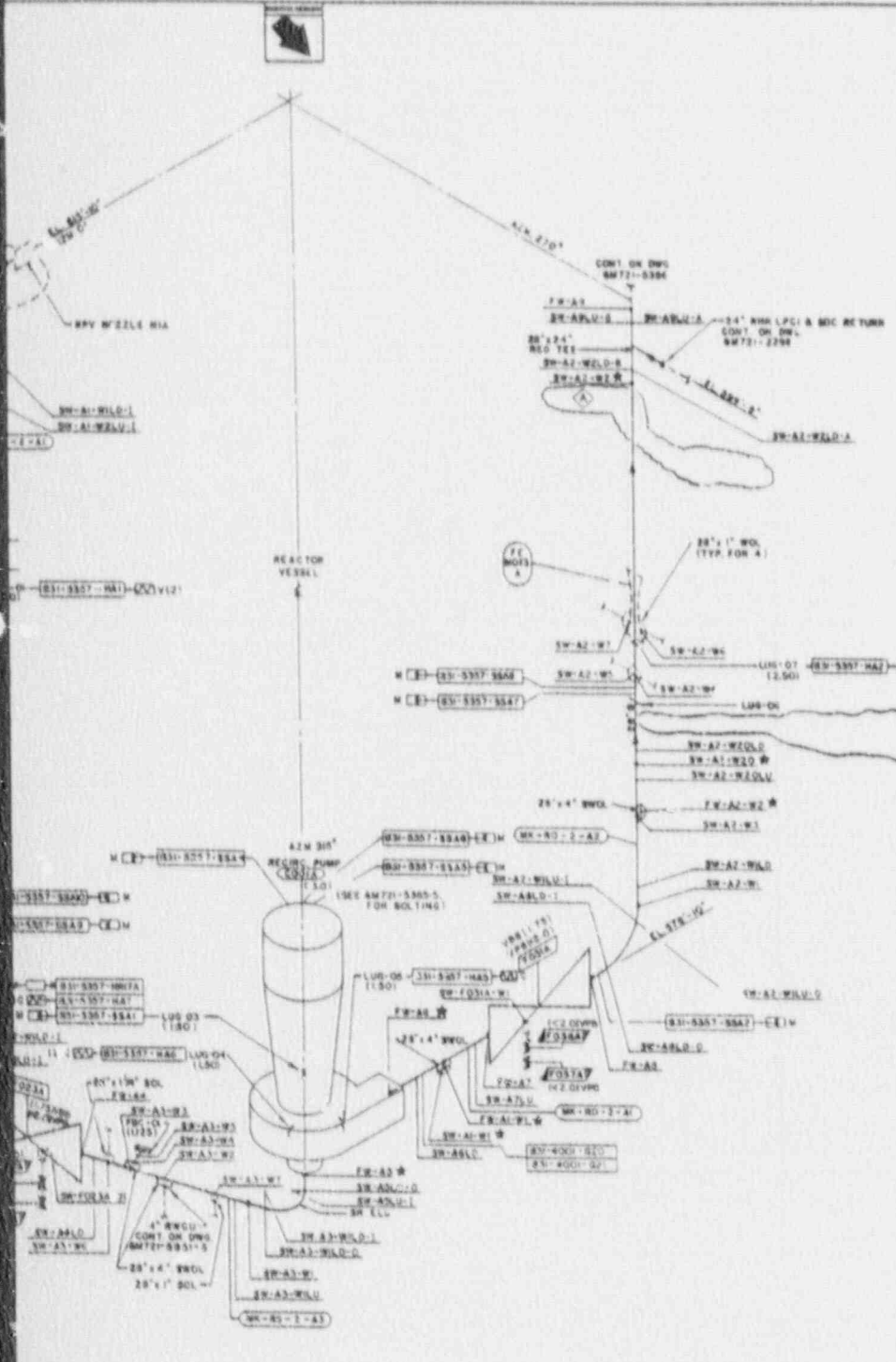
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APR 1964
FBI - MEMPHIS

9101090241-19

NO.	DATE	BY	DESCRIPTION	REVISION
1	11/18/63	J. J. [unclear]	CONCOURSE	1
2	11/18/63	J. J. [unclear]	REACTOR RECIRC. LOOP A - BUNG HEADERS	2
3	11/18/63	J. J. [unclear]	REACTOR RECIRC. LOOP A - BUNG HEADERS	3
4	11/18/63	J. J. [unclear]	REACTOR RECIRC. LOOP A - BUNG HEADERS	4
5	11/18/63	J. J. [unclear]	REACTOR RECIRC. LOOP A - BUNG HEADERS	5
6	11/18/63	J. J. [unclear]	REACTOR RECIRC. LOOP A - BUNG HEADERS	6
7	11/18/63	J. J. [unclear]	REACTOR RECIRC. LOOP A - BUNG HEADERS	7
8	11/18/63	J. J. [unclear]	REACTOR RECIRC. LOOP A - BUNG HEADERS	8
9	11/18/63	J. J. [unclear]	REACTOR RECIRC. LOOP A - BUNG HEADERS	9
10	11/18/63	J. J. [unclear]	REACTOR RECIRC. LOOP A - BUNG HEADERS	10

4 3 2 1

LUG NO.	TYPE OF WELD	COMPONENT NUMBERS	TIME	REFERENCE
LUG-01	2	SW-RD-AZ-WA-W2, W3, W4	3.50	R-174-3, DET. A
LUG-02	2	FR-RS-02-A1, ALZ, ALZAL, ALZAL4	2.00	WOT UNED
LUG-03	2	SEE SW72-5505-5	1.50	R-04
LUG-04	2	SEE SW72-5505-5	1.50	R-04
LUG-05	2	SEE SW72-5505-5	1.50	R-04
LUG-06	2	SW-RD-AZ-WA-W1, W2, W3, W4	3.50	R-174-3, DET. A
LUG-07	2	FR-RD-A1-AL1, ALZ, ALZAL4	2.50	SW72-5, DET. A



NOTES

- FOR WELDS ON THE RECIRC. SUCTION LINE, THE COMPLETE WELD NUMBER CAN BE FORMED BY ADDING "RS-2" (i.e. SW-RS-2-AZ-W1).
- FOR WELDS ON THE RECIRC. DISCHARGE LINE, THE COMPLETE WELD NUMBER CAN BE FORMED BY ADDING "RD-2" (i.e. SW-RD-2-P2-W3).
- HANDED AND WHIP RESTRAINT SKETCHES CAN BE OBTAINED FROM DOCUMENT CONTROL BY LISTING THE FIRST AND LAST PORTION OF THE IDENTIFICATION (i.e. RS-5507-55A10) WOULD BE SUBMITTED AS RS-55A10.

SI
APERTURE
CARD

Also Available On
Aperture Card

REFERENCE DRAWINGS

R-174-1 (1)	RECIRC. LOOP PIPING
R-174-2 (3)	RECIRC. LOOP PIPING
R-174-3 (7)	RECIRC. LOOP PIPING
R-254-1 (3)	RECIRC. LOOP SUSPENSION
R-254-2 (2)	RECIRC. LOOP SUSPENSION
SM72-2853	SYSTEM DIAGRAM (RS)
R-154 (4)	SC-RR PUMP
R-152 (3)	RPV SAFE END
R-415	WHIP RESTRAINTS

SI CLASS 1 6M721-5357-5
CLASSIFICATION

9101090241-20

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NUCLEAR SAFETY RELATED

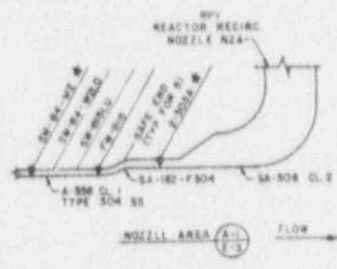
THE BENTON GROUP CO.

REACTOR RECIRC. LOOP A PUMP SECTION A DISMANTLE REACTOR FLOWSHEET

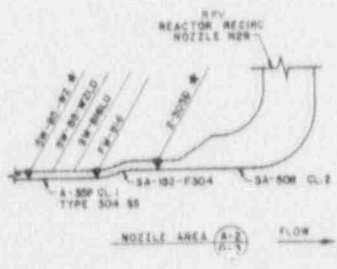
6M721-5357-5 A

NO.	REV.	DESCRIPTION	DATE	BY	CHECKED
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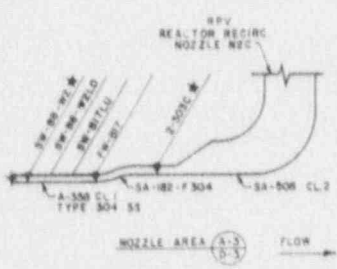
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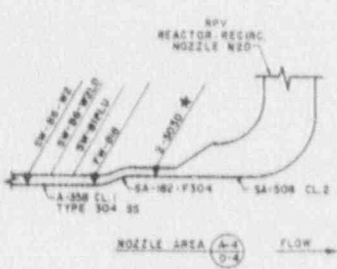
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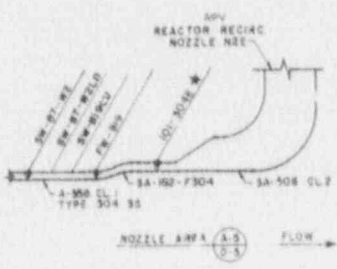
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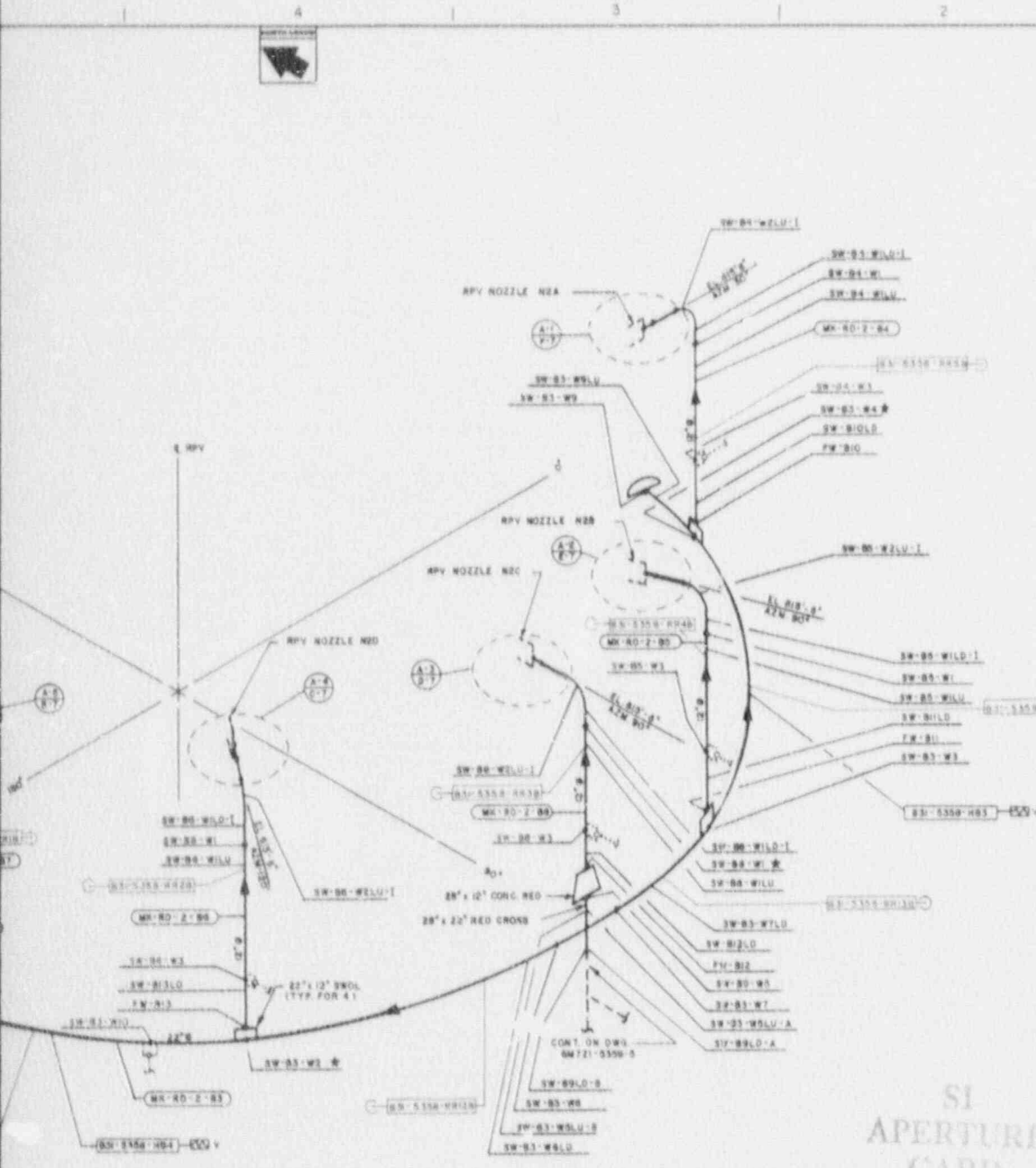


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NO INTEGRALLY WELDED LUSS



NOTES

- WELD IDENTIFICATIONS ON THE REACTOR RECIRCULATION RISERS ARE OBTAINED IN LETTER RP-84-009
- FOR WELDS ON THE REACTOR RECIRCULATION DISCHARGE LINE THE COMPLETE WELD IDENTIFICATION CAN BE FORMED BY ADDING 'RD-2' (e.g. SW-83-W7 IS SW-RD-2-83-W7)
- SHAWNER AND WHP RESTRAINT SKETCHES CAN BE OBTAINED FROM DOCUMENT CONTROL BY LISTING THE FIRST AND LAST PORTION OF THE IDENTIFICATION (e.g. S1-5358-RH48, WOULD BE SUBMITTED AS S1-RR48)

- REFERENCE DRAWINGS**
- R1-174-1(1) RECIRC LOOP PIPING
 - R1-174-2(8) RECIRC LOOP PIPING
 - R1-174-3(7) RECIRC LOOP PIPING
 - R1-254-1(8) RECIRC LOOP SUSPENSION
 - R1-254-2(8) RECIRC LOOP SUSPENSION
 - SM721-2833 SYSTEM DIAGRAM (RR)
 - R1-182(3) RPV SAFE END DETAILS
 - R1-415 WHP RESTRAINTS

S1 APERTURE CARD

Also Available On Aperture Card

(S1 CLASS 1) S1-5358-5 CATEGORY REVISION

REACTOR RECIRCULATION LOOP B

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NO.	REV.	DATE	BY	CHKD.	APP.	DESCRIPTION
1						ISSUED FOR CONSTRUCTION
2						REVISION
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5						REVISION
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INTEGRALLY WELDED LUNGS				
LUNG NO.	TYPE OF WELD	COMPONENT NUMBER	TCN	REFERENCE
LUNG-D	W	SW-81-81-W16, W17, W18, W19	2-80	R1-174-1, DCL 2
LUNG-D1	W	SEE 84771-5345-5	1-80	R1-184
LUNG-D2	W	SEE 84771-5345-5	1-80	R1-184
LUNG-D3	W	SEE 84771-5345-5	1-80	R1-184
LUNG-D4	W	SEE 84771-5345-5	1-80	R1-184
LUNG-D5	W	SW-81-81-W16, W17, W18, W19	2-80	R1-174-1, DCL 4, NOT USED
LUNG-D6	W	FW-81-81-AL1, AL2, AL3, AL4	2-80	R1-174-1, DCL 4

NOTES

- FOR WELDS ON THE RECIRC SUCTION LINE THE COMPLETE WELD NUMBER CAN BE FORMED BY ADDING "R1-1" IN S.W. OR "W" IN S.W. OR "1" IN W.
- FOR WELDS ON THE RECIRC DISCHARGE LINE THE COMPLETE WELD NUMBER CAN BE FORMED BY ADDING "R1-2" IN S.W. OR "D" IN S.W. OR "2" IN W.
- HANGER AND WHP RESTRAINT BRACKETS CAN BE OBTAINED FROM DOCUMENT CONTROL BY LETTING THE FIRST AND LAST PORTION OF THE IDENTIFIER (E.G. SW-81-81-81-81) WOULD BE SUBMITTED AS SW-81-81-81-81.

SI APERTURE CARD

Also Available On Aperture Card

REFERENCE DRAWINGS

- | | |
|--------------|------------------------|
| R1-174-1(11) | RECIRC LOOP PIPING |
| R1-174-2(10) | RECIRC LOOP PIPING |
| R1-174-3(11) | RECIRC LOOP PIPING |
| R1-234-1(2) | RECIRC LOOP SUSPENSION |
| R1-234-2(2) | RECIRC LOOP SUSPENSION |
| 84771-5345-5 | SYSTEM DIAGRAM (SI) |
| R1-184 | SE-81 PUMP |
| R1-152 | RPV SAFE END |
| R1-415 | WHP RESTRAINTS |
| 84771-5345-5 | RECIRC PUMPS |

SI CLASS I 84771-5345-5
EVERETT/NEBRICA A

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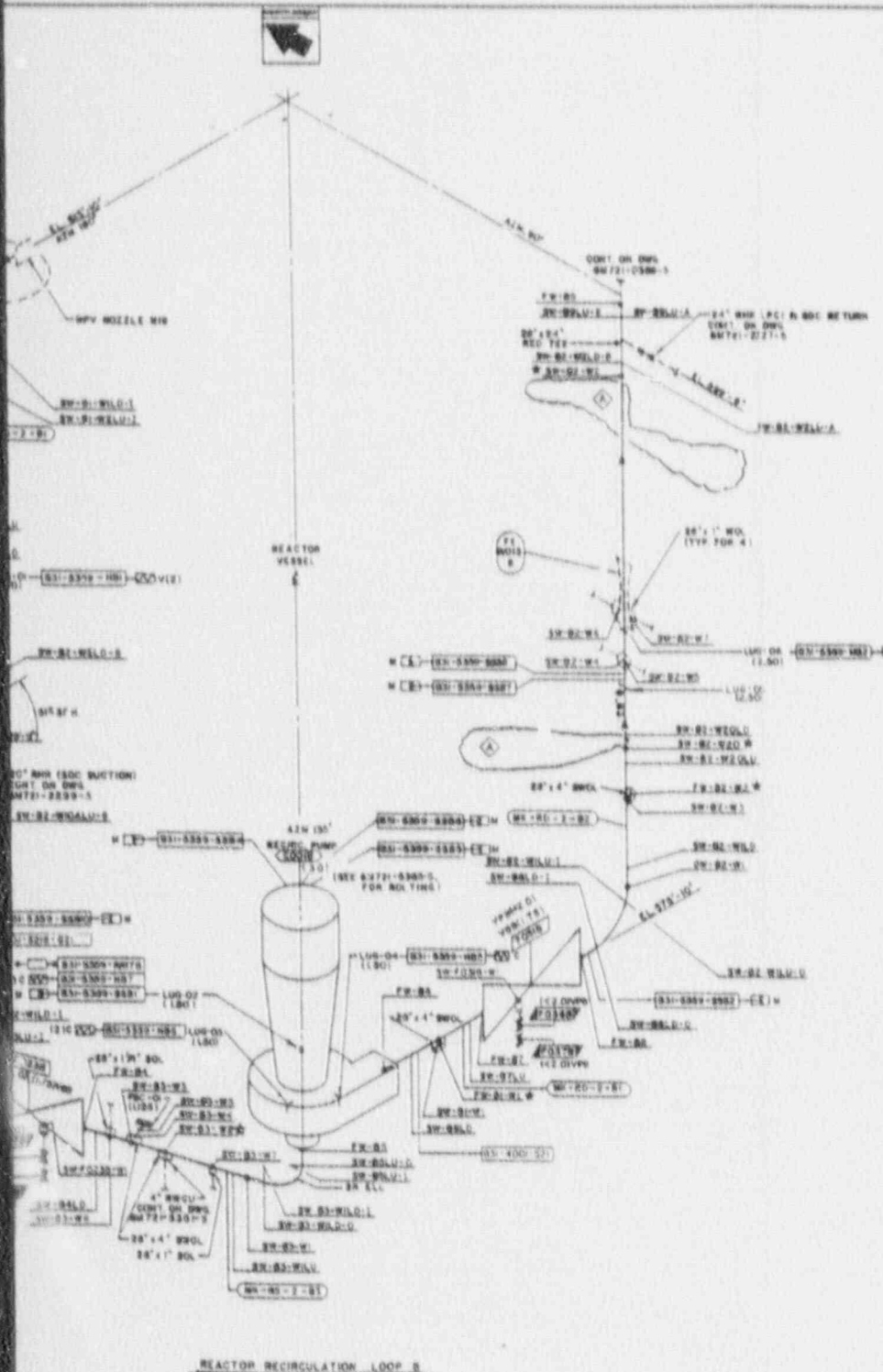
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NO.	DESCRIPTION

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THE DETROIT DESIGN CO. ENGINEERING AND CONSTRUCTION

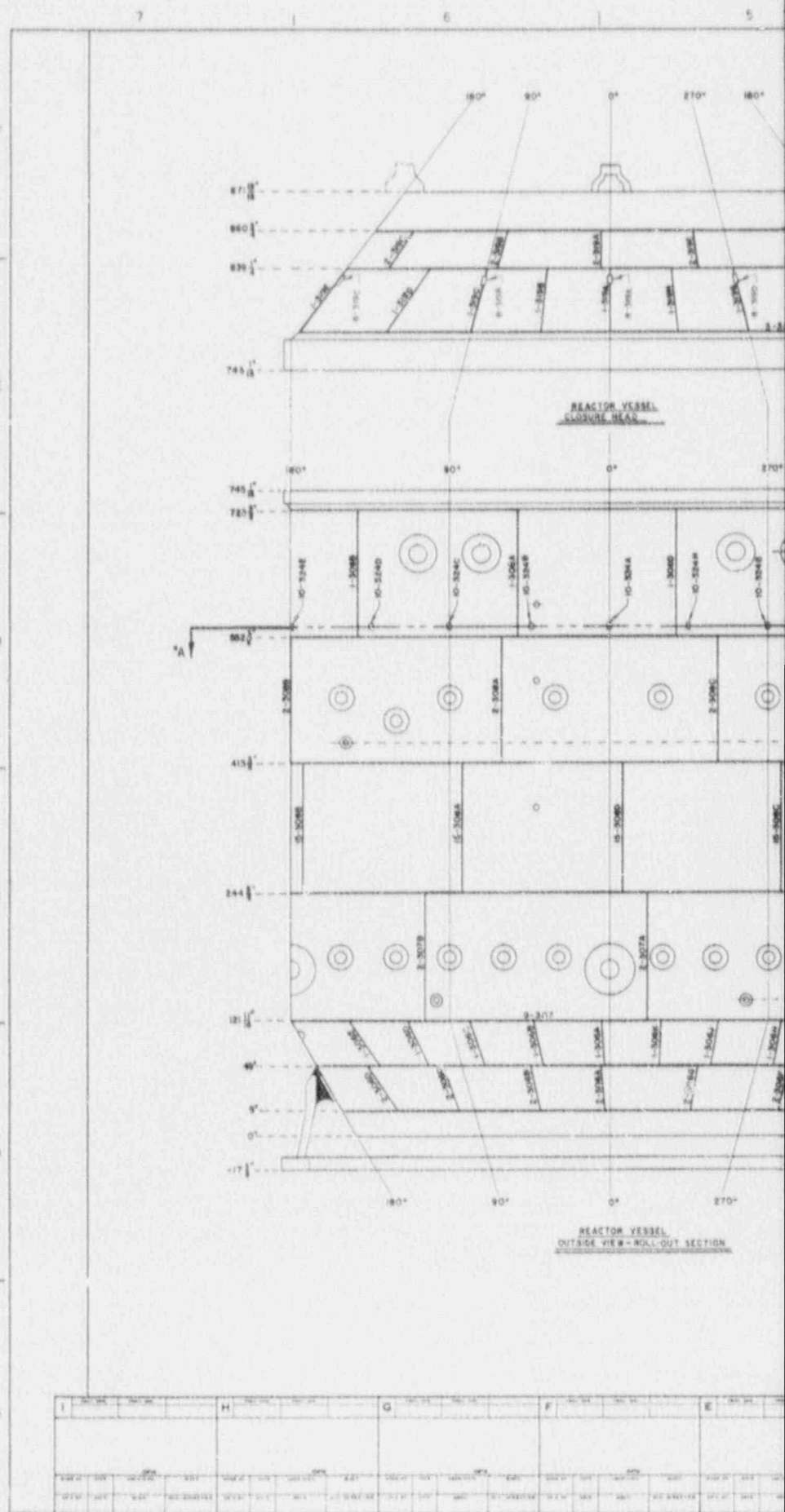
REACTOR REGR. LOOP B - PUMP, SUCTION & DISCHARGE
REACTOR SUBUNIT 2
EMISO. FAN/ALPHA POWER PLANT

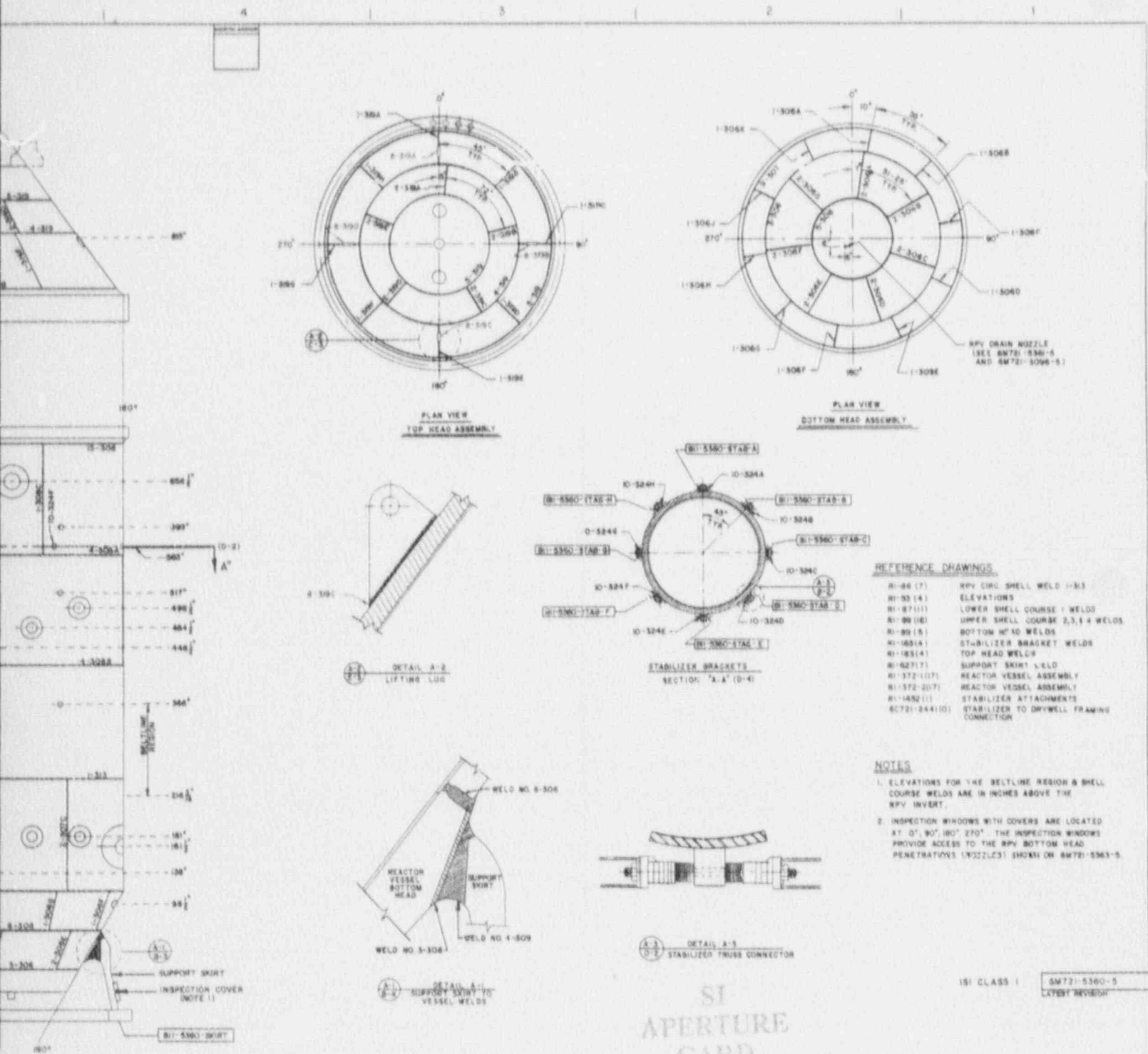
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REACTOR RECIRCULATION LOOP B

NO.	DATE	BY	CHKD.	APP'D.	DESCRIPTION





REFERENCE DRAWINGS

- RI-86 (7) RPV CONC SHELL WELD 1-813
- RI-93 (4) ELEVATIONS
- RI-87 (11) LOWER SHELL COURSE 1 WELDS
- RI-90 (16) UPPER SHELL COURSE 2,3,4 WELDS
- RI-90 (5) BOTTOM HEAD WELDS
- RI-165 (4) STABILIZER BRACKET WELDS
- RI-183 (4) TOP HEAD WELDS
- RI-627 (7) SUPPORT SKIRT L&L
- RI-372-1 (17) REACTOR VESSEL ASSEMBLY
- RI-372-2 (7) REACTOR VESSEL ASSEMBLY
- RI-1452 (1) STABILIZER ATTACHMENTS
- 6C721-244 (10) STABILIZER TO DRYWELL FRAMING CONNECTOR

NOTES

1. ELEVATIONS FOR THE BELTLINE REGION & SHELL COURSE WELDS ARE IN INCHES ABOVE THE RPV INVERT.
2. INSPECTION WINDOWS WITH COVERS ARE LOCATED AT 0°, 90°, 180°, 270°. THE INSPECTION WINDOWS PROVIDE ACCESS TO THE RPV BOTTOM HEAD PENETRATIONS (NOZZLE 23) SHOWN ON 6M721-5363-5.

Also Available On Aperture Card

9101090241-23

REVISIONS

REV. NO. 1

DATE 10/15/74

BY [Signature]

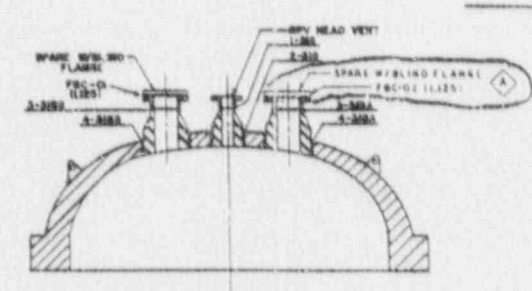
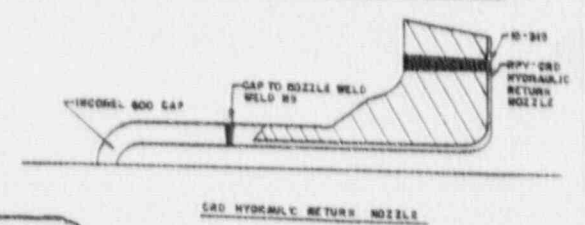
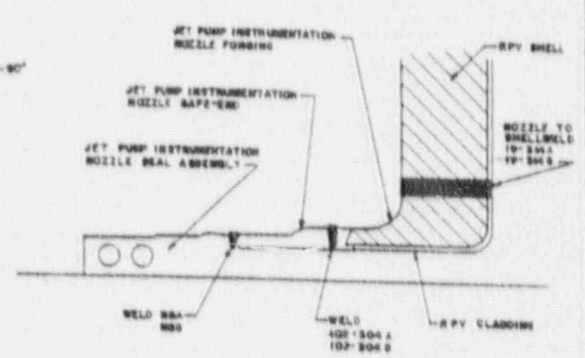
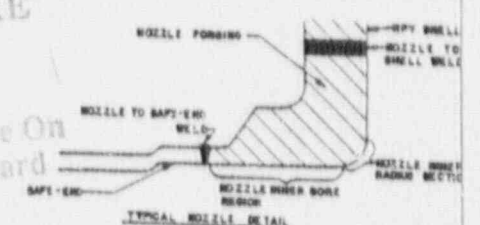
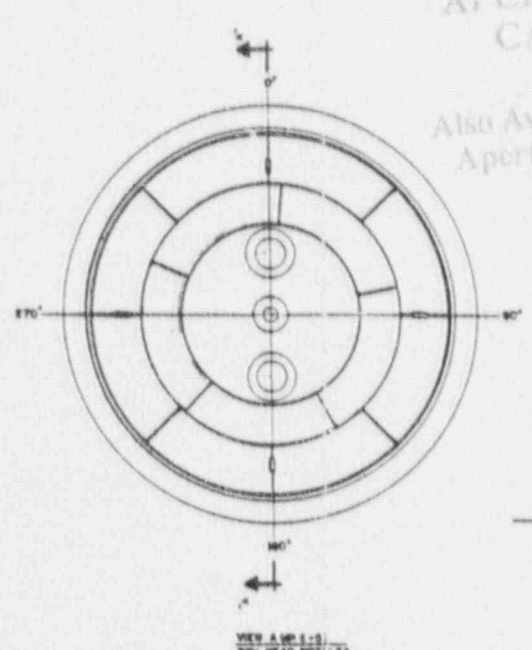
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NO.	REV.	DATE	DESCRIPTION	BY	CHKD.
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THE DETROIT EDISON CO.		ENGINEERING DEPARTMENT	
PROJECT: INSERVICE INSPECTION DETAIL DWS REACTOR			
TITLE: LABEL CALCULATED R-A & R-H COMPONENTS			
LOCATION: REACTOR BUILDING UNIT 2			
PLANT: ENRICO FERRIS ATOMIC POWER PLANT			
DRAWING NO.: 6M721-5360-5			
SCALE: AS SHOWN			
DATE: 10/15/74			
BY: [Signature]			
CHKD.: [Signature]			
APP'D.: [Signature]			

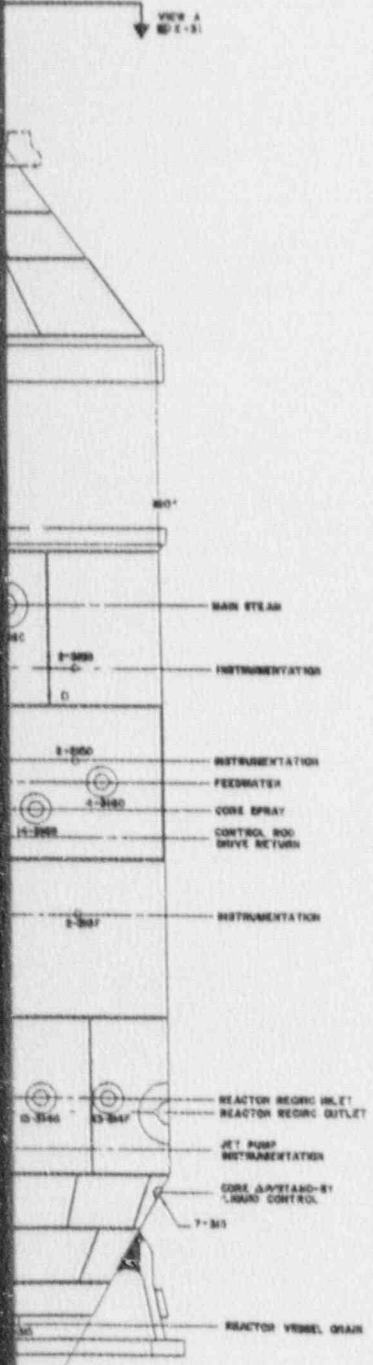
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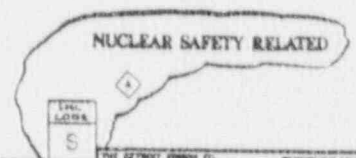


- REFERENCE DRAWINGS
- R1-80(2) REACTOR RECIRCULATION AND JET PUMP INSTRUMENTATION NOZZLES
 - R1-229(D) RPV HEAD NOZZLES
 - R1-81(7) CRD RETURN, RPV DRAIN, CDPVLC & INSTRUMENTATION NOZZLES
 - R1-15 (6) MAIN STREAM FEEDWATER AND CORE SPRAY NOZZLES
 - R1-8554-1 CRD HYDRAULIC RETURN NOZZLE CAP
 - R1-447(2) JET PUMP SEAL ASSEMBLY

- NOTES
1. COMPONENT IDENTIFICATIONS FOR AREAS OF VESSEL NOZZLES ARE REPRESENTED WITH THE ADJACENT NOZZLE TO SHELL WELD (IE 4-315A MS OR 4-315A 10R).
 2. JET PUMP INSTRUMENTATION NOZZLE "A" WELDS WBA AND 102-304 A ARE LOCATED AT AZM 102°. NOZZLE "B" WELDS WBA AND 102-304 B ARE LOCATED AT AZM 282°.
 3. THE CAPPED CRD HYDRAULIC RETURN NOZZLE IS LOCATED AT 144°.
 4. DRYWELL ELEVATIONS ARE LISTED FOR MAJOR VESSEL NOZZLES



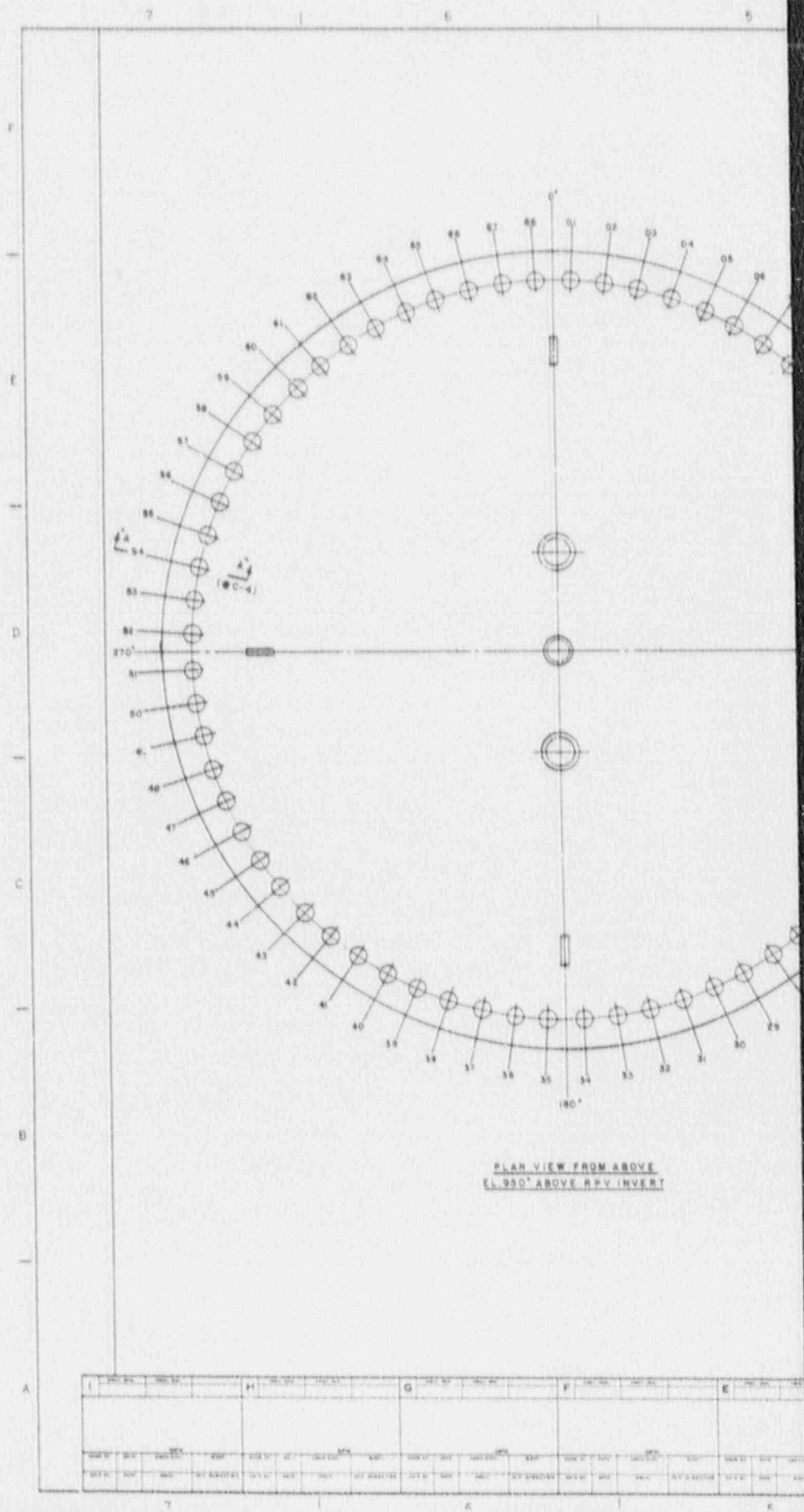
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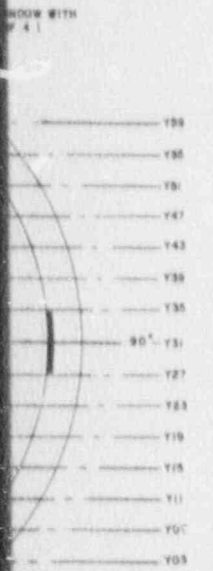


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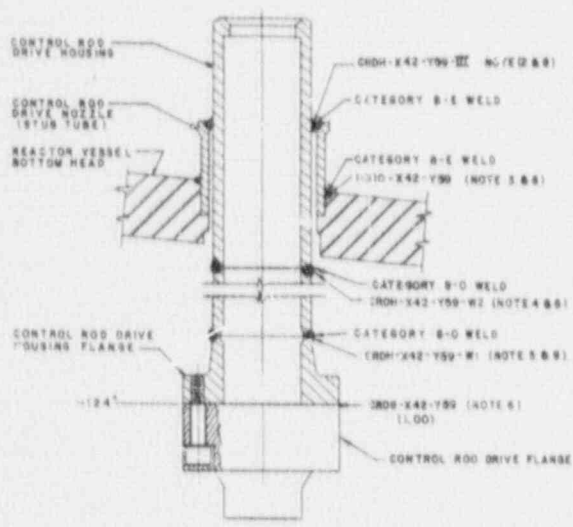
NO.	DATE	BY	CHKD	DESCRIPTION

THE EXPIRY GROUP IS...
 TITLE: REACTOR VESSEL HEAD & JET PUMP INSTRUMENTATION NOZZLES
 REACTOR VESSEL HEAD & JET PUMP INSTRUMENTATION NOZZLES
 REACTOR VESSEL HEAD & JET PUMP INSTRUMENTATION NOZZLES
 EMERG. PLAN ATOMIC POWER PLANT
 DATE: 6M721-5361-5
 CLASS: A





PLAN VIEW
RPV CONTROL ROD DRIVE
PENETRATIONS



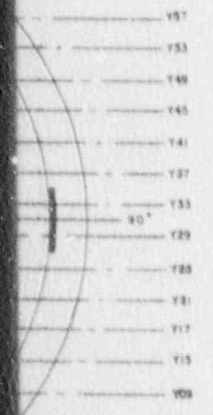
SECTION "A-A" (OF S)
CONTROL ROD DRIVE HOUSING DETAIL

NOTES

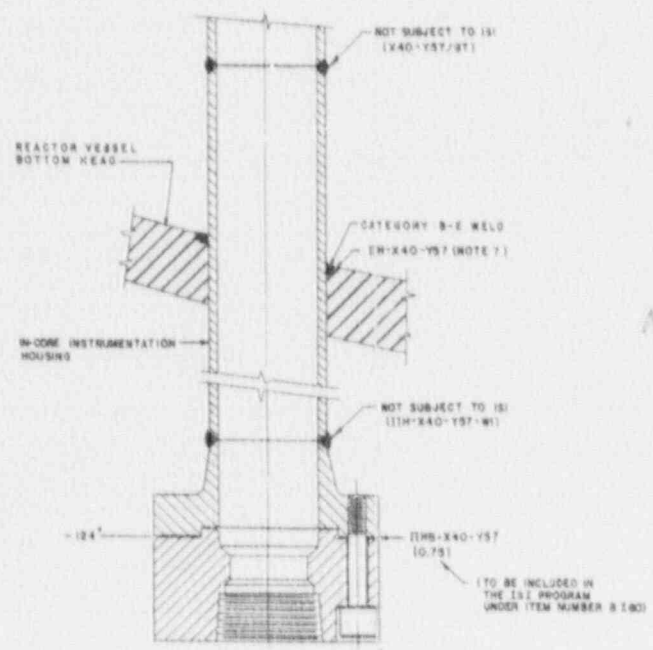
- 1) FOR A CROSS REFERENCE BETWEEN THE COMPONENT NUMBERS ON THIS DRAWING AND IN THE SI DATA BASE VERSUS THE CONSTRUCTION RECORD COMPONENT NUMBERS, SEE LETTER NP-84-900, TABLE 1 AND 2.
- 2) THE STANDARD COMPONENT NUMBER FOR A CRD HOUSING TO CRD NOZZLE (STUB TUBE) WELD IS CRDH-XNN-YNN-W2 WHERE "NN" IS THE COORDINATE NUMBER AND "W2" IS THE GROUP NUMBER OF THE CRD HOUSING.
- 3) THE STANDARD COMPONENT NUMBER FOR A CRD NOZZLE (STUB TUBE) TO RPV BOTTOM HEAD WELD IS 1-30-XNN-YNN WHERE "NN" IS THE COORDINATE NUMBER.
- 4) THE STANDARD COMPONENT NUMBER FOR A CRD HOUSING TUBE A TO TUBE B WELD IS CRDH-XNN-YNN-W2 WHERE "NN" IS THE COORDINATE NUMBER (EXAMINATION REQUIRED OF PERIPHERAL CRDS ONLY).
- 5) THE STANDARD COMPONENT NUMBER FOR A CRD HOUSING TO CRD HOUSING FLANGE WELD IS CRDH-YNN-YNN-W1 WHERE "NN" IS THE COORDINATE NUMBER (EXAMINATION REQUIRED OF PERIPHERAL CRDS ONLY).
- 6) THE STANDARD COMPONENT NUMBER FOR A CRD FLANGE TO CRD HOUSING FLANGE BOLTED CONNECTION IS CRDH-XNN-YNN WHERE "NN" IS THE COORDINATE NUMBER.
- 7) THE STANDARD COMPONENT NUMBER FOR AN IN-CORE INSTRUMENTATION HOUSING TO RPV BOTTOM HEAD WELD IS 11H-XNN-YNN WHERE "NN" IS THE COORDINATE NUMBER.
- 8) INSPECTION OF PERIPHERAL CRD CATEGORY B-E WELDS, PERIPHERAL CRD CATEGORY B-O TUBE TO TUBE WELDS AND THE RPV BOTTOM HEAD AREA CAN BE PERFORMED BY REMOVING THE INSPECTOR COVERS LOCATED AT 0°, 90°, 180°, 270°. ACCESS TO THE RPV SUPPORT SKIRT AREA INSPECTION WINDOWS IS VIA BLOW-OFF DOORS LOCATED IN THE SACRIFICIAL SHIELD AT 0°, 120°, 180°, AND 300° AT EL. 800, APPROXIMATELY. SEE SI-627.
- 9) ACCESS TO PERIPHERAL CRD CATEGORY B-O TUBE TO FLANGE WELDS IS VIA THE CRD GART TRACK OPENING LOCATED AT 234° AT EL. 860 IN THE DRYWELL.

REFERENCE DRAWINGS

- SI-50(7) CRD NOZZLE TO CRD HOUSING
- SI-62(4) CRD NOZZLE AND FLUX MONITOR HOUSING TO RPV BOTTOM HEAD
- SI-288(3) IN-CORE INSTRUMENTATION HOUSING BOLTS
- SI-290(8) CONTROL ROD DRIVE DETAIL
- SI-291(3) CRD HOUSING WELDS AND BOLTING DETAIL
- SI-627(7) INSPECTOR COVER IN VESSEL SUPPORT SKIRT
- WPS 8-433.4.2B CRD NOZZLE TO CRD HOUSING WELDING SPEC.
- WPS 8-433.2.2B FLUX MONITOR HOUSING TO RPV BOTTOM HEAD WELDING SPEC.



PLAN VIEW
RPV IN-CORE INSTRUMENTATION
PENETRATIONS

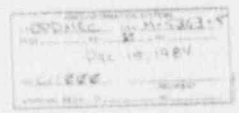


SECTION "B-B" (OF S)
IN-CORE INSTRUMENTATION HOUSING DETAIL

SI
APERTURE
CARD

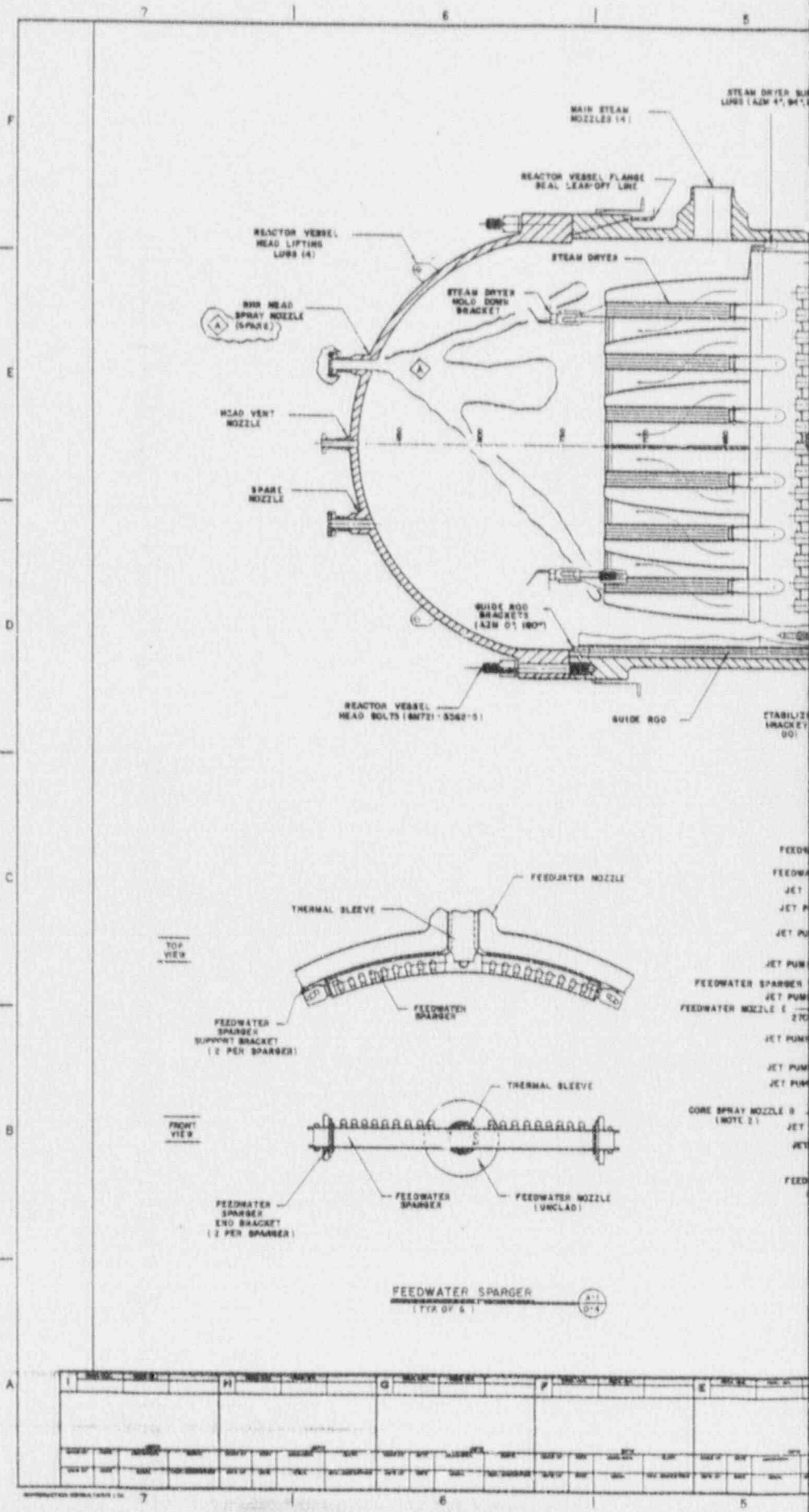
Also Available On
Aperture Card

SI CLASS I 6M721-5363-5
LATEST REVISION



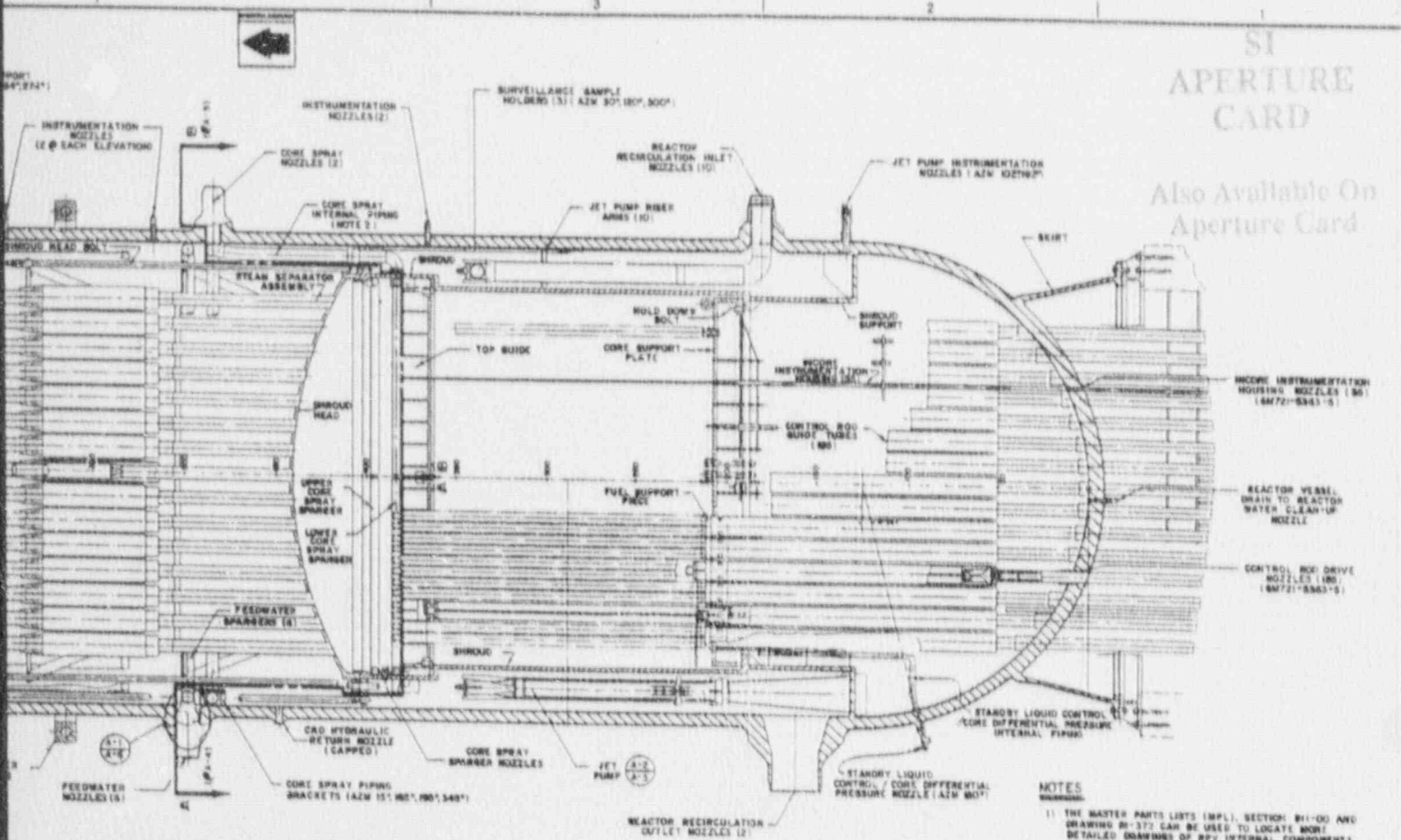
9101090241-26

THE DESIGN DIVISION										INSPECTION DIVISION									
CONSTRUCTION					OPERATION					INSPECTION					REVISIONS				
NO.	DATE	BY	CHKD.	APP.	NO.	DATE	BY	CHKD.	APP.	NO.	DATE	BY	CHKD.	APP.	NO.	DATE	BY	CHKD.	APP.



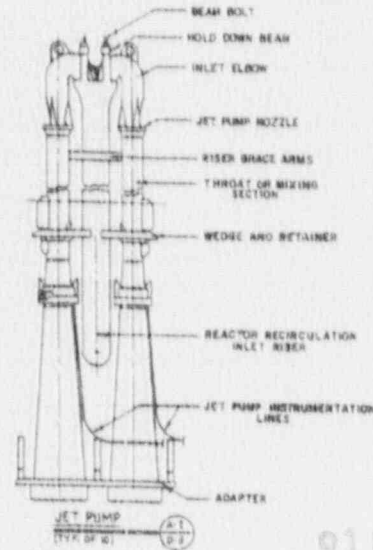
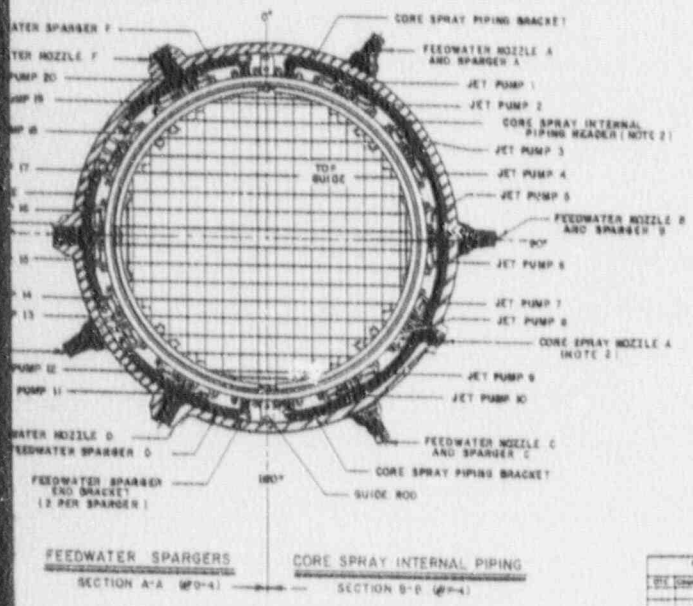
SI APERTURE CARD

Also Available On Aperture Card



- NOTES**
- THE MASTER PARTS LISTS (MPL) SECTION 81-00 AND DRAWING 81-372 CAN BE USED TO LOCATE MORE DETAILED DRAWINGS OF ANY INTERNAL COMPONENTS.
 - CORE SPRAY NOZZLE AT 180° SUPPLIES WATER TO THE LOWER CORE SPRAY SPARGER VIA SHROUD PENETRATIONS AT AZW 9° AND 178°. CORE SPRAY NOZZLE AT 840° SUPPLIES WATER TO THE UPPER CORE SPRAY SPARGER VIA SHROUD PENETRATIONS AT AZW 88.5°.

- REFERENCE DRAWING**
- 81-571-4 VESSEL BRACKETS
 - 81-277 SHROUD HEAD AND STEAM SEPARATOR
 - 81-372-1 (17) REACTOR ASSEMBLY
 - 81-372-2 (17) REACTOR ASSEMBLY
 - 81-527 CORE SPRAY INTERNAL PIPING
 - 81-572 CORE SPRAY PIPING BRACKET
 - 81-874 CORE SPRAY SPARGER
 - 81-873 JET PUMP
 - 81-921 SHROUD
 - 81-571 (12) FEEDWATER SPARGER
 - 81-823 CORE SPRAY SPARGER AND SHROUD



NO.	REV.	DATE	DESCRIPTION
1	1		ISSUED FOR CONSTRUCTION
2	1		REVISIONS
3	1		REVISIONS
4	1		REVISIONS
5	1		REVISIONS
6	1		REVISIONS
7	1		REVISIONS
8	1		REVISIONS
9	1		REVISIONS
10	1		REVISIONS
11	1		REVISIONS
12	1		REVISIONS
13	1		REVISIONS
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27	1		REVISIONS
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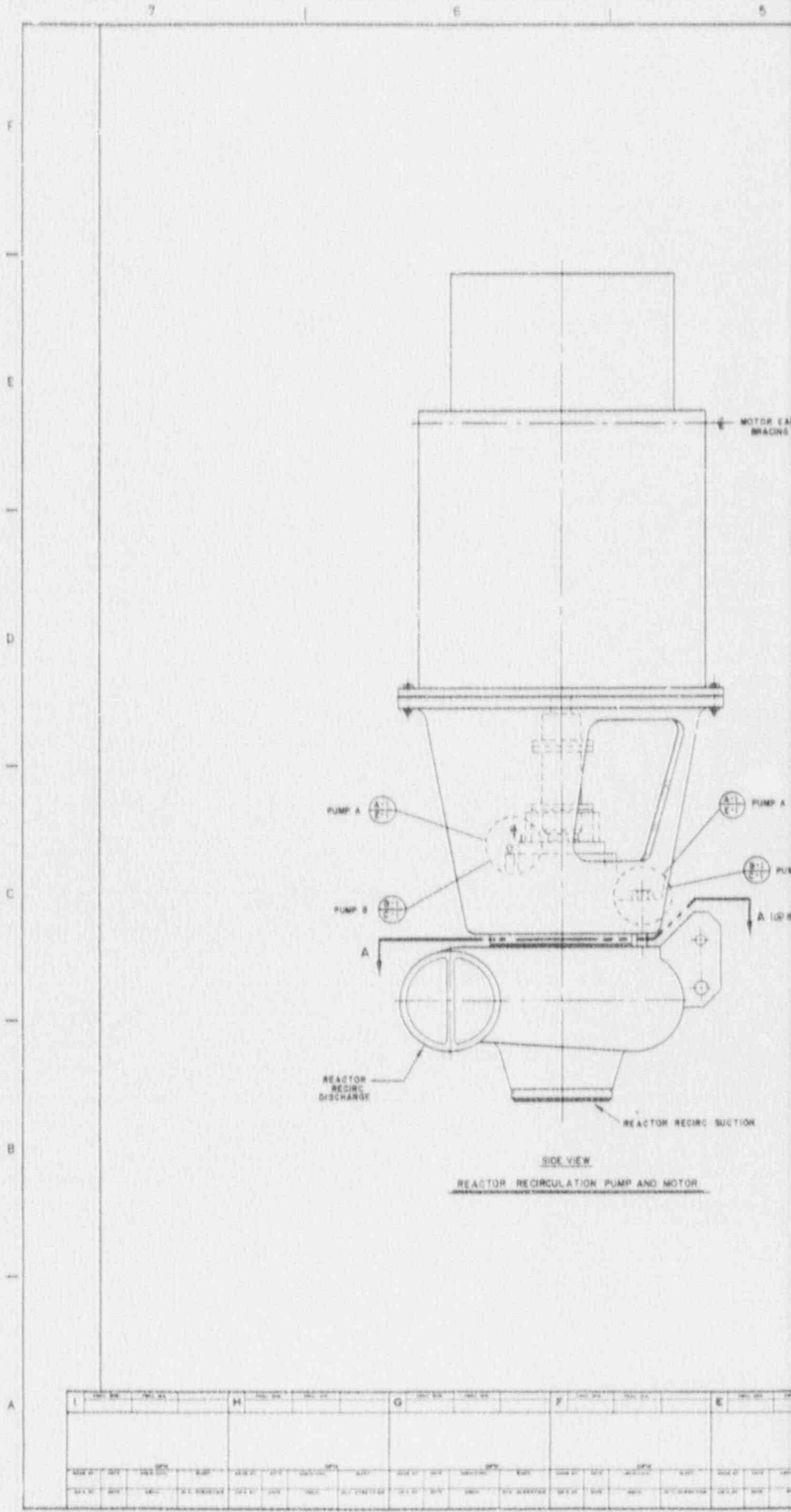
9101090241-27

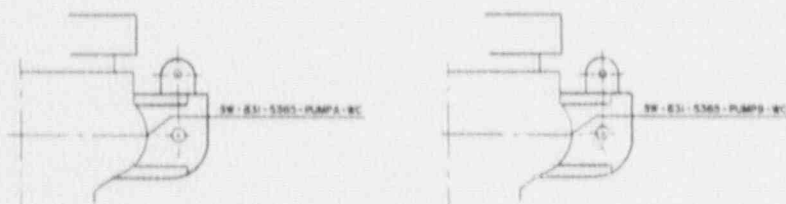
NUCLEAR SAFETY RELATED

6M72-5364-5
 LAYER NUMBER 1

THE DEFEND GUARANTEE CORPORATION
 INSERVICE INSPECTION COMPONENT DETAIL
 REACTOR VESSEL INTERNALS EXAMINATION
 CATEGORIES 81-1 AND 81-2
 GRAND PEARL ATOMIC POWER PLANT UNIT 1

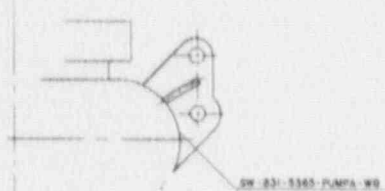
DOCUMENT CONTROL NO. 6M72-5364-5
 REV. 1
 DATE 10/1/73



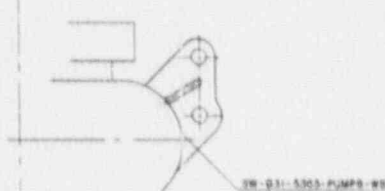


DETAIL
RR PUMP A, LUG-01

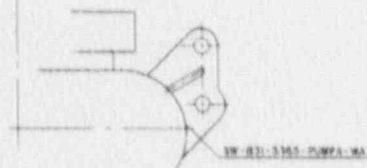
DETAIL
RR PUMP B, LUG-02



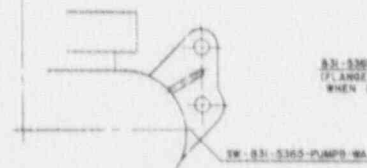
DETAIL
RR PUMP A, LUG-04



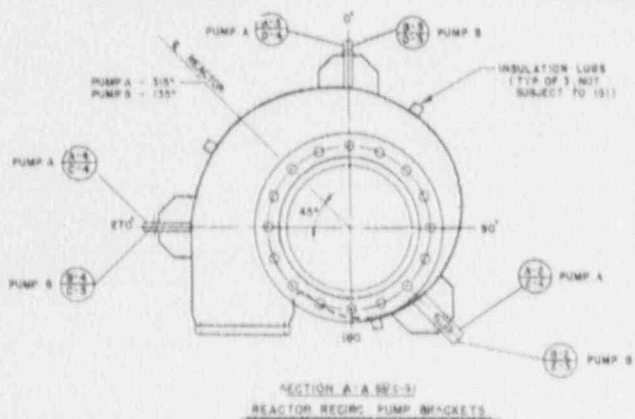
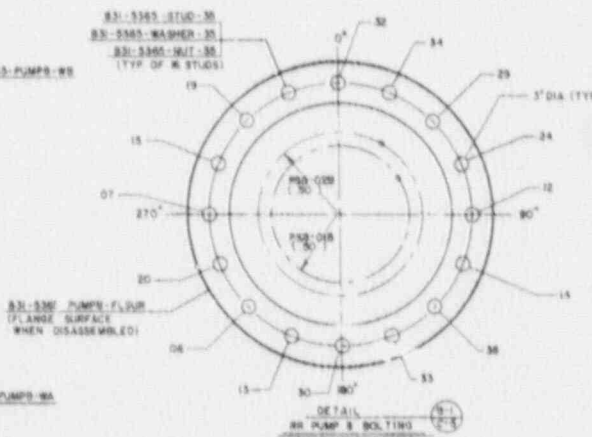
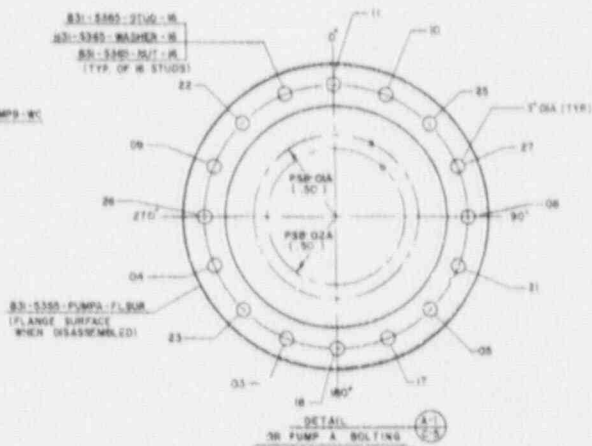
DETAIL
RR PUMP B, LUG-03



DETAIL
RR PUMP A, LUG-05



DETAIL
RR PUMP B, LUG-04



SECTION A-A 992-2
REACTOR RECIRC PUMP BRACKETS

REFERENCE DRAWING

- 81-214(1) REACTOR RECIRCULATION PUMP
- 8M721-5357-5(A) REACTOR RECIRCULATION PIPING IS1 ISOMETRIC
- 8M721-5359-5(A) REACTOR RECIRCULATION PIPING IS1 ISOMETRIC

IS CLASS 1

8M721-5365-5
LATEST REVISION

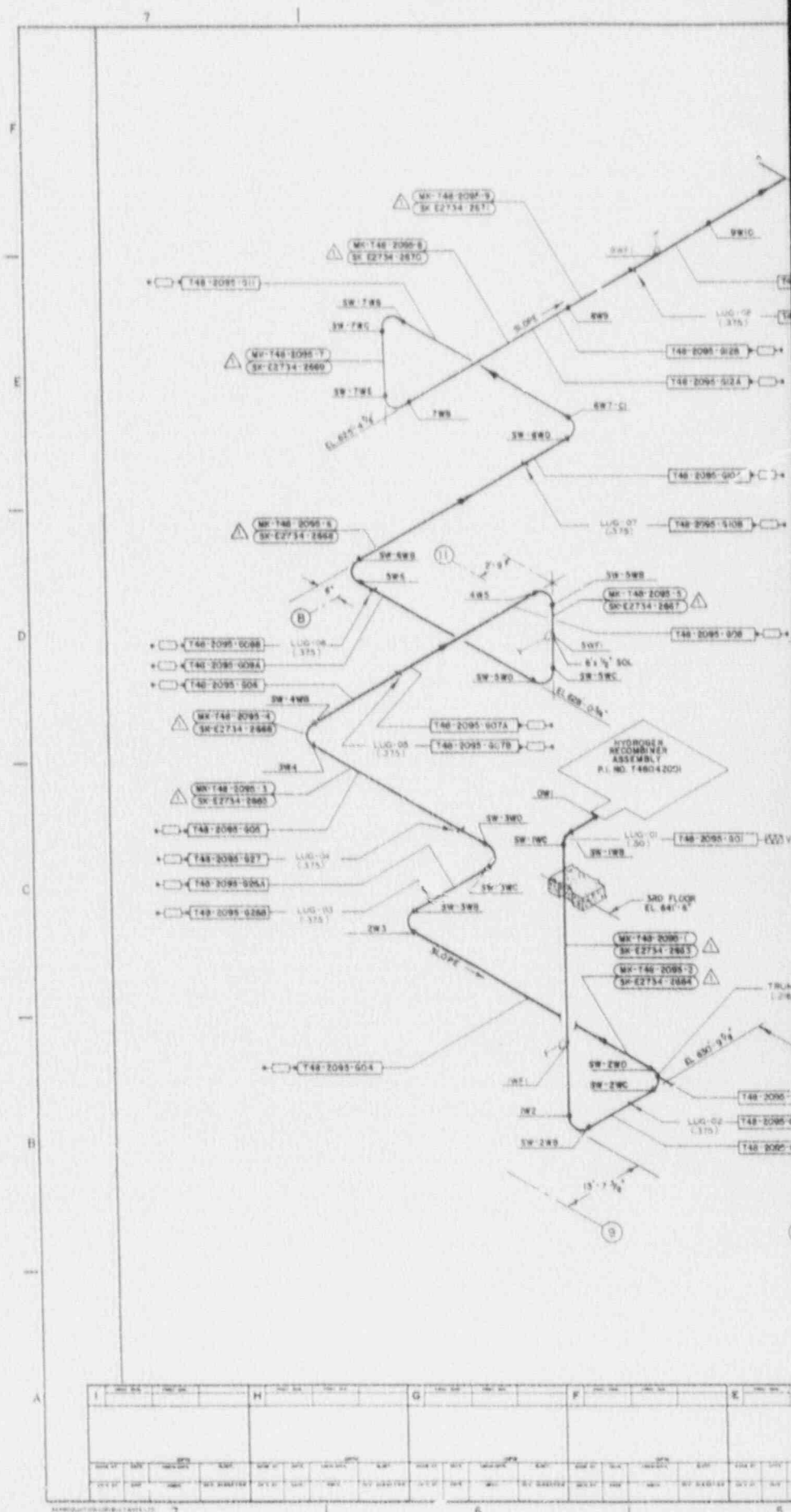
SI
APERTURE
CARD

Also Available On
Aperture Card

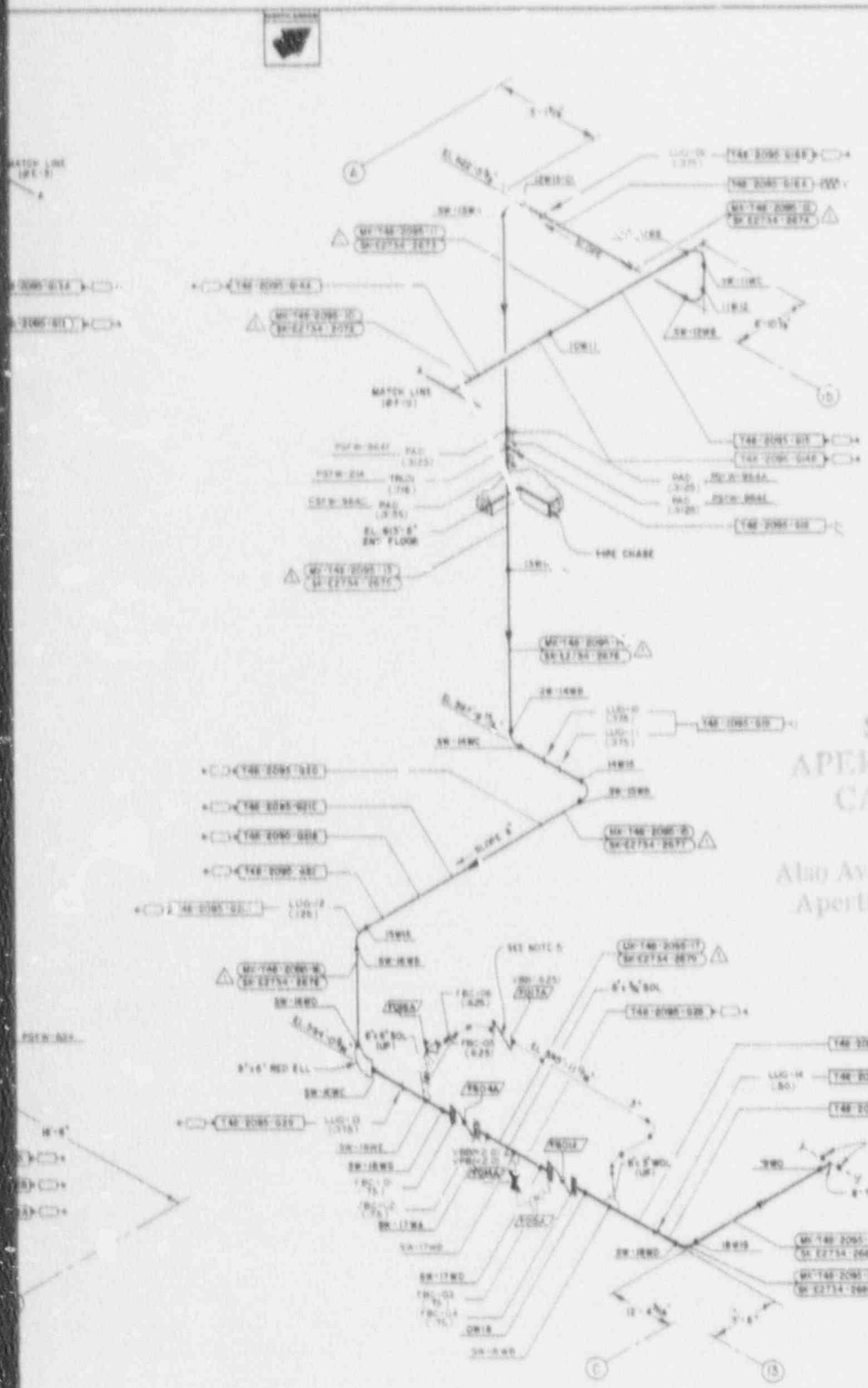
Dec 14, 1964
3191 W

9101090241-28

NO	REV	DATE	BY	CHKD	APPV	DESCRIPTION	REVISION
1						CONFORMANCE	
2						INSERVICE INSPECTION DETAIL QWS	
3						REACTOR RECIRC PUMP DETAILS	
4						REACTOR BLDG UNIT 2	
5						SABROTON, SABRO FERM ATOMIC POWER PLANT	
6						PROJECT DOCUMENT CONTROL NO. 811	
7						8M721-5365-5	



NO.	REV.	DATE	BY	CHKD.	APP.	NO.	REV.	DATE	BY	CHKD.	APP.	NO.	REV.	DATE	BY	CHKD.	APP.



LINE NO.	TYPE	COMPONENT NUMBER	ITEM CODE	REFERENCE	CLASS
100-01	W	04-2095-001	---	SEE TAG 2095-001	---
100-02	W	1-2095-001A-008	---	UP	45°
100-03	W	04-2095-001A-008	---	UP	45°
100-04	W	04-2095-001A-008	---	UP	45°
100-05	W	04-2095-001A-008	---	UP	45°
100-06	W	04-2095-001A-008	---	UP	45°
100-07	W	04-2095-001A-008	---	UP	45°
100-08	W	04-2095-001A-008	---	UP	45°
100-09	W	04-2095-001A-008	---	UP	45°
100-10	W	04-2095-001A-008	---	UP	45°
100-11	W	04-2095-001A-008	---	UP	45°
100-12	W	04-2095-001A-008	---	UP	45°
100-13	W	04-2095-001A-008	---	UP	45°
100-14	W	04-2095-001A-008	---	UP	45°

SI APERTURE CARD

Also Available On Aperture Card

- REFERENCE DRAWINGS
- SM72-230: KEY PLAN OF PIPING SECTION & PLANS
 - SM72-207: SYSTEM DIAGRAM
 - SM-233(1): PIPING LUGS
 - SM72-209(11): PIPING ISOMETRIC
 - SM72-209(21): HAMMER ISOMETRIC

- NOTES
- SHOP WELDS I.E.G. SW-18WB ALWAYS START WITH THE PREFIX SW-... IF A WELD NUMBER DOES NOT INCLUDE THE PREFIX SW-... THE SUBJECT WELD IS A FIELD WELD.
 - SPOOL DRAWING REVISIONS ARE INDICATED BY A Δ.
 - THE COMPLETE WELD NUMBER FOR A SHOP WELD LIKE SW-18WB OR SW-18W-04-2095-18WB, THE COMPLETE WELD NUMBER FOR A FIELD WELD LIKE 18WB IS SW-18W-04-2095-18WB.
 - THE SPOOL NUMBERS FOR THE SPOOLS ON THIS DRAWING WERE SHORTENED FOR DRAFTING CONVENIENCE. THE COMPLETE SPOOL NUMBER FOR A SPOOL LIKE SW-18W-04-2095-17 IS SW-18W-04-2095-17.
 - THE INTERNALS HAVE BEEN REMOVED FROM F07A. THIS VALVE NO LONGER FUNCTIONS AS A CHECK VALVE.

ISI CLASS 2 6M72-2095-5
CHECK REVISIONS

605MCC
Feb 6, 1985
52040

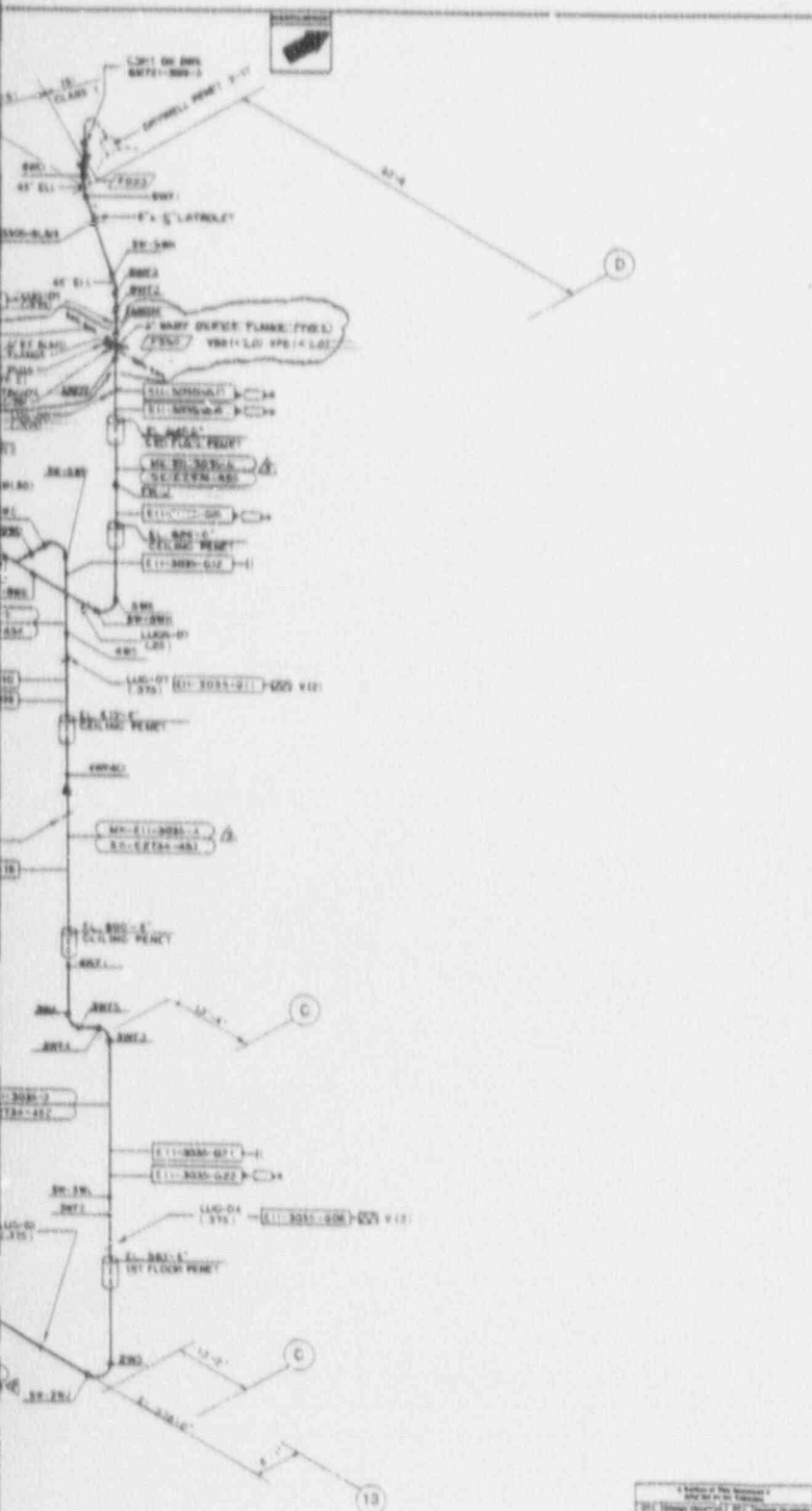
9101090241-29

NO.	DATE	BY	CHKD	APP'D	REVISION
1	12/15/84	...	...	...	...
2	...	...	...	...	...
3	...	...	...	...	...
4	...	...	...	...	...

THE BENTON ENGINEERING CO. DRAWING NO. 6M72-2095-5

INSERVICE INSPECTOR ISOMETRIC
COMBUSTIBLE GAS WORKING RETURN HEADER
TO TOWER UNIT 11 - RE UNIT 23
ERRICO FERRIS ATOMIC POWER PLANT

PROJECT DOCUMENT CONTROL NO. 745 04
11/11/84 11:00 AM
6M72-2095-5



INTEGRALLY WELDED LUGS							
LUG NO.	TYPE OF WELD	COMPONENT NUMBERS	ITEM	TIME	REFERENCE		
LUG-01	W	PPFW-EI-3035-6W1, 6W2, 6W3, 6W4		.875	UP		90°
LUG-02	W	PPFW-EI-3035-6W1, 6W2, 6W3, 6W4		.875	UP		90°
LUG-03	W	SW-EI-3035-2WC, 2WT, 2W2, 2W1	3	.375	N		45°
LUG-04	W	SW-EI-3035-3WC, 3WD, 3WE, 3WF	3	.375	N		45°
LUG-05	W	PPFW-EI-3035-5W1, 5W2, 5W3, 5W4	4	.50	E		90°-25°
LUG-06	W	SW-EI-3035-4WC, 4WD, 4WE, 4WF	3	.375	N		45°
LUG-07	W	PPFW-EI-3035-6W1, 6W2, 6W3, 6W4	4	.25	UP, NOT USED		90°
LUG-08	W	SW-EI-3035-6WC, 6WD, 6WE, 6WF	3	.375	N, NOT USED		45°
LUG-09	W	PPFW-EI-3035-6W1, 6W2, 6W3, 6W4	3	.375	N		90°

SI APERTURE CARD

Also Available On
Aperture Card

REFERENCE DRAWINGS

- 6M721-0020 KEY PLAN OF PW-40 SECTOR & DETAILS
- 6M721-0063 60MT PLAN WEST
- 6M721-0061 PIPE LUGS
- 6M721-0051 FLOW DIAGRAM 60MT
- 6M721-0035-115 PFD OF 60MT ERU
- 6M721-0035-21M SUPPORTS 60MT/ERU

NOTES

- 1) 60MT WELDS 16.6 SW-6W1 ALWAYS START WITH THE PROFFI SW --- IF A WELD NUMBER DOES NOT INCLUDE THE PROFFI SW --- THE SUBJECT WELD IS A FIELD W/
- 2) SPOOL DRAWING DESIGNATIONS ARE INDICATED BY A Z

6M721-0035-5
EVERY DRAWING 'A'

9101090241-32

A Section of the Document	
REV.	DESCRIPTION

REVISIONS		APPROVALS		CONTROL		DATE	
NO.	DESCRIPTION	BY	DATE	BY	DATE	BY	DATE

NUCLEAR SAFETY RELATED

THE DESIGNER'S RESPONSIBILITY IS TO DESIGN AND CONSTRUCT THE REACTOR AND ALL RELATED SYSTEMS TO MEET THE DESIGN REQUIREMENTS AND TO MAINTAIN THE REACTOR AND ALL RELATED SYSTEMS IN A SAFE AND SOUND CONDITION. THE DESIGNER SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE REACTOR AND ALL RELATED SYSTEMS. THE DESIGNER SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE REACTOR AND ALL RELATED SYSTEMS.

6M721-0035-5
EVERY DRAWING 'A'

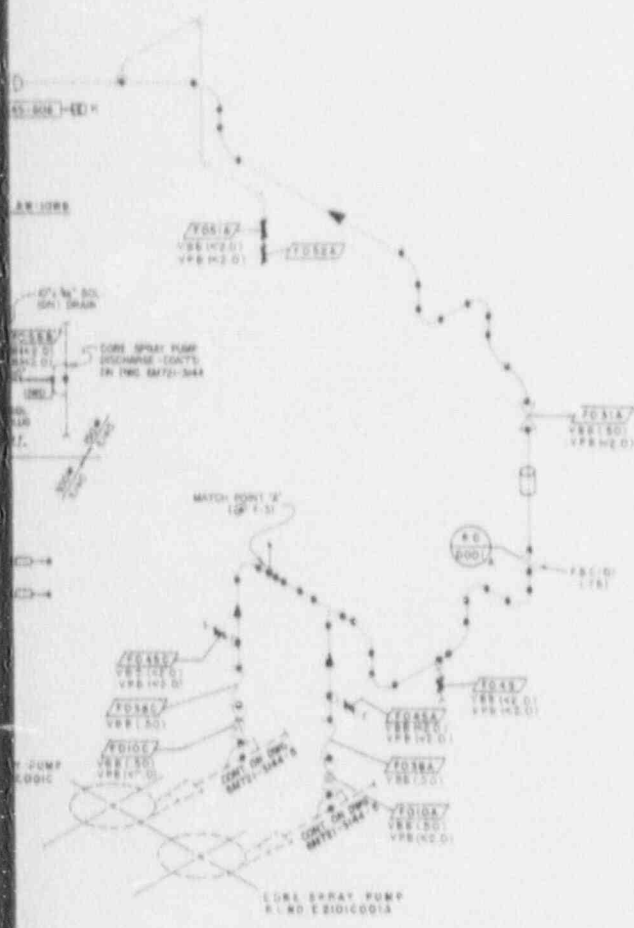


INTEGRALLY WELDED LUGS				
LUG NO.	TYPE OF WELD	COMPONENT NUMBERS	ITEM (IN)	REFERENCE
LUG 01	*	PGW-021-3145-NOTA-ASIS, 45TC-451D	8	825 UP



SI APERTURE CARD

Also Available On Aperture Card



REFERENCE DRAWINGS

- 6M72-0304 SYSTEM DIAGRAM (C)
- 6M72-0320 KEY PLAN OF PIPING SECTION & FLANGES
- SM-253-1(1) PIPE LISTS
- 6M72-3145-1 (N) PIPING ISOMETRIC
- 6M72-3145-2 (J) SUPPORT ISOMETRIC
- 80-121-1(1) PENETRATION DETAILS
- 6M72-4229 TORUS INTERNALS
- 8203145-832(2) C.B.B. TORUS MODIFICATION INSTALLATION SKETCH
- A1-200(2) TORUS PENETRATION MODIFICATION

NOTES

1. WELD NUMBERS (E.G. W03) ARE ALL FIELD WELDS SHOP WELDS (E.G. W01) ALWAYS HAVE THE SW-88-E-214
2. SPOOL DWG REVISIONS ARE INDICATED BY A

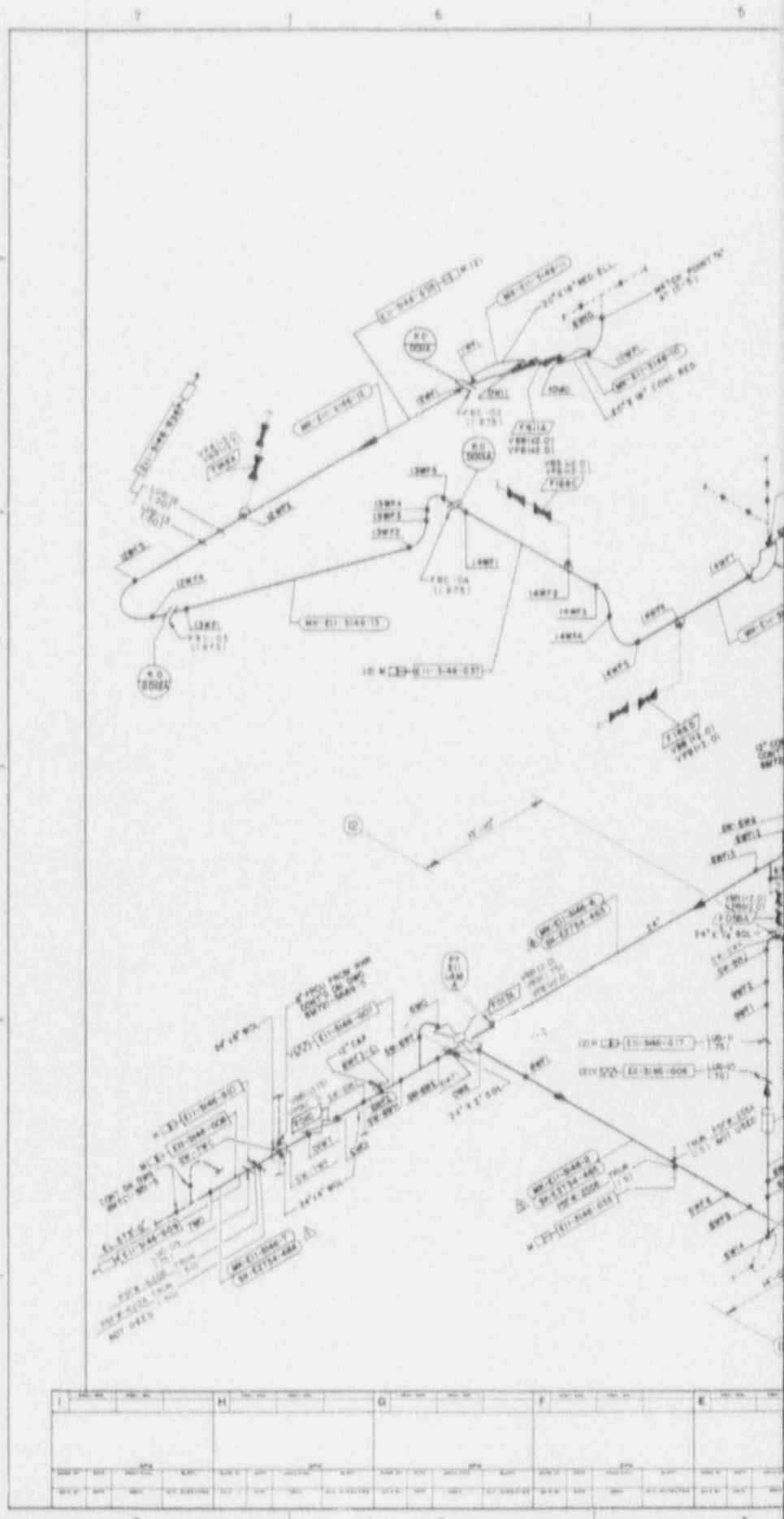
SI CLASS 2 6M72-3145-5
LATEST REVISION

December 8, 1984
141588

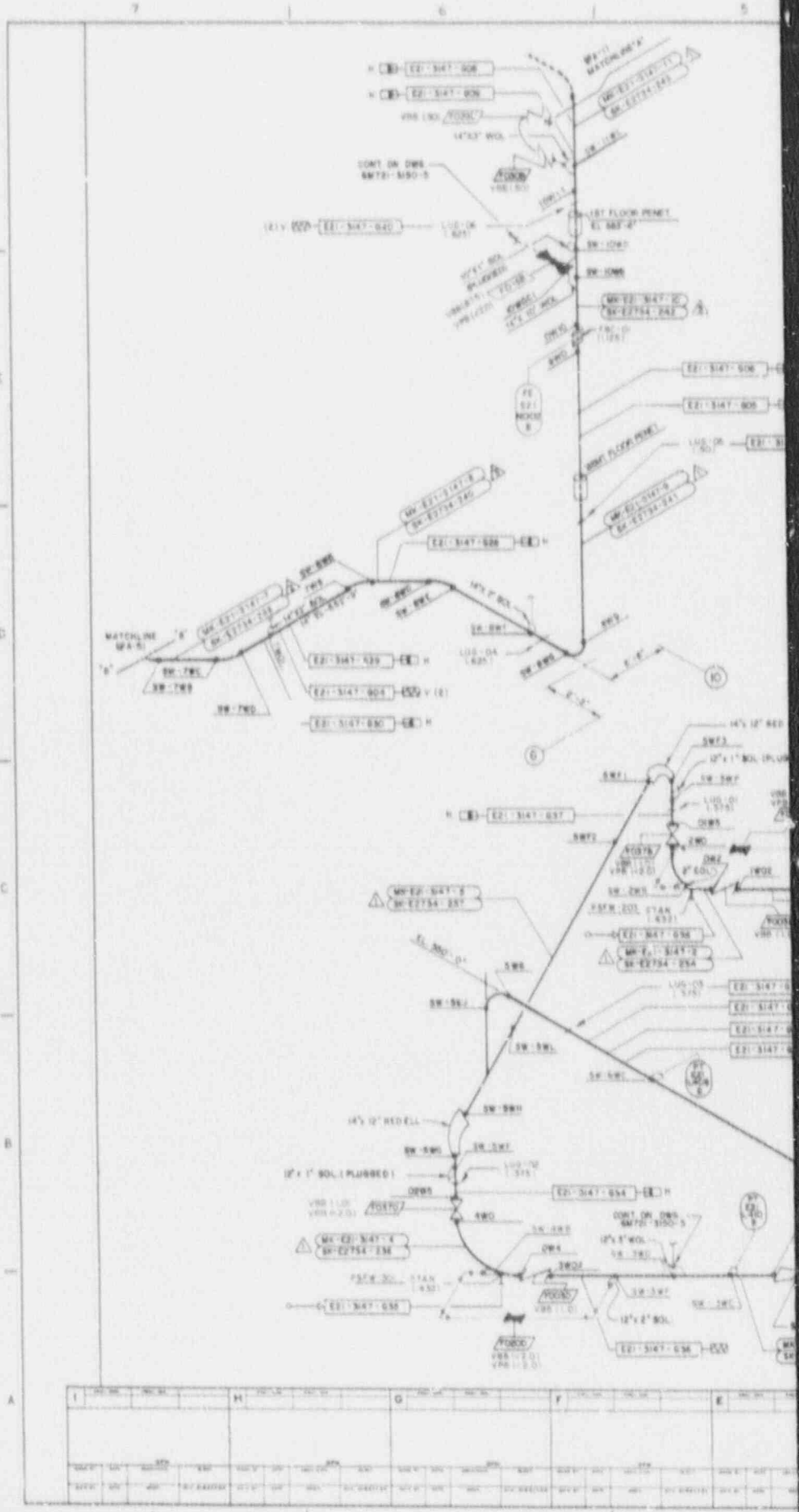
9101090241-34

REVISIONS										DATE		BY		CHECKED		APPROVED				
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1	ISSUED FOR CONSTRUCTION	12/8/84				1	12/8/84				1	12/8/84				1	12/8/84			

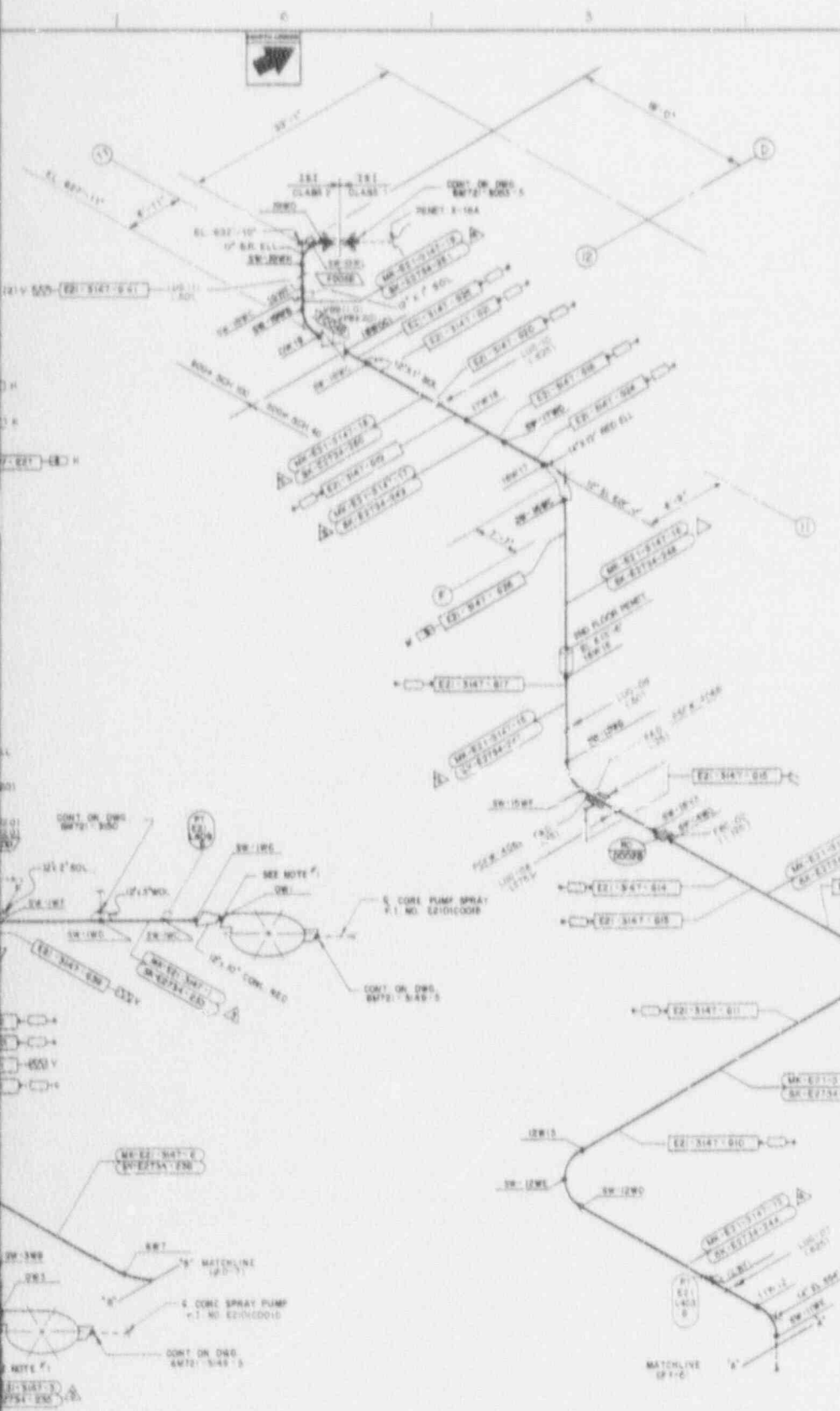
INSPECTION ISOMETRIC
NORTH CORE SPRAY W/L LOW FLOW BY PASS & TEST LINE
REACTOR BLOW DOWN # 2
LOCATION: ENRICO TERM. ATOMIC POWER PLANT
PROJECT: ATOMIC POWER PLANT
DRAWING NO: 6M72-3145-5
DATE: 12/8/84
BY: [Signature]
CHECKED: [Signature]
APPROVED: [Signature]



		H		G		F		E	
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30



7	6	5	4	3	2	1
A	B	C	D	E	F	G



INTEGRALLY WELDED LEGS					
LWD NO.	TYPE OF WELD	COMPONENT NUMBERS	ITEM	TORQ.	REFERENCE
LWD-01	●	SW-E2-3147-SW0, SW0, SW0, SW1	7	375	N. NOT USED
LWD-02	●	SW-E2-3147-SW0, SW0, SW0, SW0	7	375	N. NOT USED
LWD-03	●	MSF-E2-3147-2204, 2206, 2206, 2206	7	375	N
LWD-04	●	SW-E2-3147-SW0, SW1, SW1, SW0	7	375	UP, NOT USED
LWD-05	●	MSF-E2-3147-2204, 2206, 2206, 2206	8	30	N
LWD-06	●	SW-E2-3147-SW0, SW1, SW0, SW0	9	300	N
LWD-07	●	SW-E2-3147-SW0, SW0, SW0, SW0	9	325	UP, NOT USED
LWD-08	●	SW-E2-3147-SW0, SW0, SW0, SW0	7	375	UP, NOT USED
LWD-09	●	SW-E2-3147-SW0, SW0, SW0, SW0	8	30	N. NOT USED
LWD-10	●	SW-E2-3147-SW0, SW1, SW0, SW0	9	325	UP, NOT USED
LWD-11	●	SW-E2-3147-SW0, SW0, SW0, SW0	8	30	N

SI APERTURE CARD

Also Available On Aperture Card

REFERENCE DRAWINGS

- SW-1-030 KEY PLAN OF PIPING SECTION & PLANS
- SW72-2334 SYSTEM DIAG. GAS CORE SPRAY
- SW72-3147-1 (1) L.W. BOMBS
- SW72-3147-2 (1) SUPPORTS BOMBING
- SW-331 (2) PIPE LEGS

NOTES

- 1) FOR WELD PREP. AT PUMPS SEE BYRON-JACKSON DWG. 22-250, OR FILE SW-118
- 2) SHOP WELDS (E.G. SW-SWB) ALWAYS START WITH THE PREFIX SW- IF A WELD NUMBER DOES NOT INCLUDE THE PREFIX SW- THE SUBJECT WELD IS A FIELD WELD.
- 3) SPOOL DRAWING REVISIONS ARE INDICATED BY A Δ

IS: CLASS 2
 6M72-3147-5
 LATEST REVISION

91010902411-36

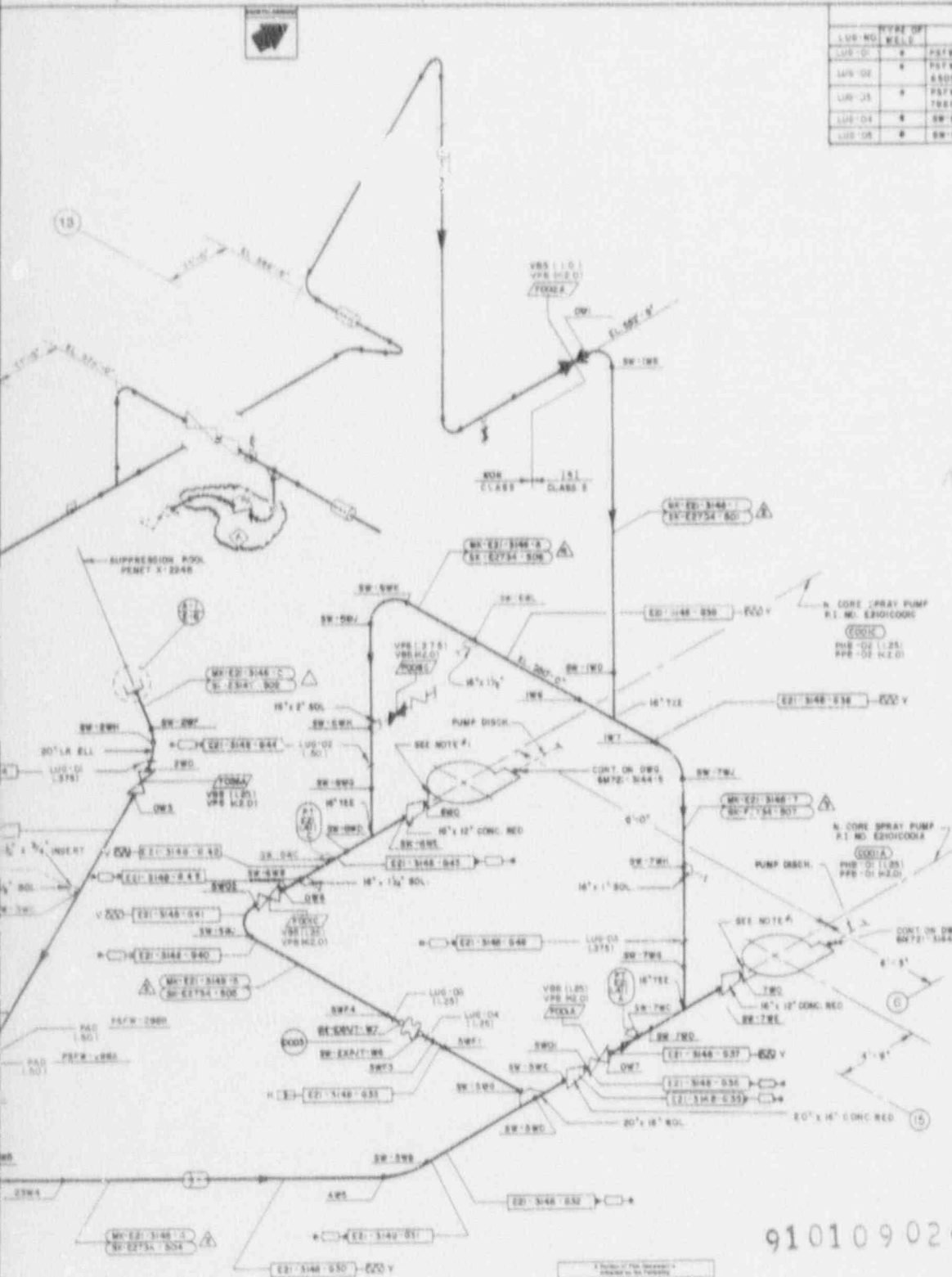
APPROVED BY: [Signature]
 DATE: 4/19/64
 DRAWING NO. 6M72-3147-5

THE BOMBING GROUP IS		ENGINEERING DEPARTMENTS	
NO.	DATE	NO.	DATE
1		1	
2		2	
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4		4	
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INTEGRALLY WELDED LUGS					
LUG NO.	TYPE OF WELD	COMPONENT NUMBERS	TENT (IN)	REFERENCE	L
LUG-01	#	PSW-EI-3148-129	3	375 R	
LUG-02	#	PSW-EI-3148-802A, 802B, 802C, 802D, 802E, 802F	18	80 S	80
LUG-03	#	PSW-EI-3148-788A, 788B, 788C, 788D, 788E, 788F	10	375 S	0
LUG-04	#	SW-EI-3148-EXH17-WO	1.25	NOT USED	
LUG-05	#	SW-EI-3148-EXH17-WO	1.25	NOT USED	

SI APERTURE CARD

Also Available On Aperture Card



- REFERENCE DRAWINGS**
- 82213) C&S TORUS MODIFICATION INSTALLATION SKETCH
 - A1-20012) TORUS PENETRATION MODIFICATION SECTION & PLANS
 - 8M721-2020 KEY PLAN OF PIPING
 - 8M721-2034 FLOW DIAGRAM
 - 8M721-2148-11A) PIPING ISOMETRIC
 - 8M721-2148-211) SUPPORTS ISOMETRIC
 - SM-2531-101) PPS LUGS
 - 82-19913) PENETRATION DETAILS
 - E21-3148-84810) LUG-03
 - E20-149) (EXPANSION JOINT)

- NOTES**
- WELD END PREP PER BYRON JACKSON DWS. NO. 82-2180, DECO FILE NO. RA-118
 - WELD NUMBERS (E & SW) ARE ALL FIELD WELDS. SHOP WELDS (E & SW-SW) ALWAYS HAVE THE SW-PRE FIX.
 - SPOOL DWS NUMBERS ARE INDICATED BY X.

9101090241-37

NUCLEAR SAFETY RELATED

REVISION 5

DATE: 08/21/80

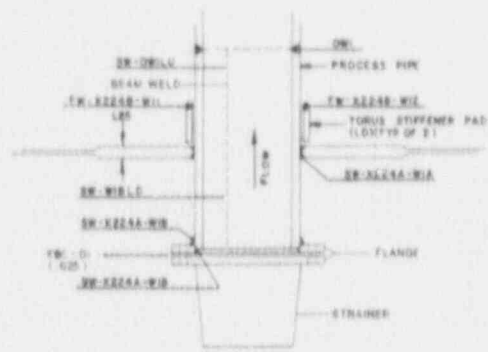
BY: [Signature]

DESCRIPTION: SUPPRESSION CHAMBER REACTOR BUILDING UNIT #2

PROJECT: ENRGO FORM ATOMIC POWER PLANT

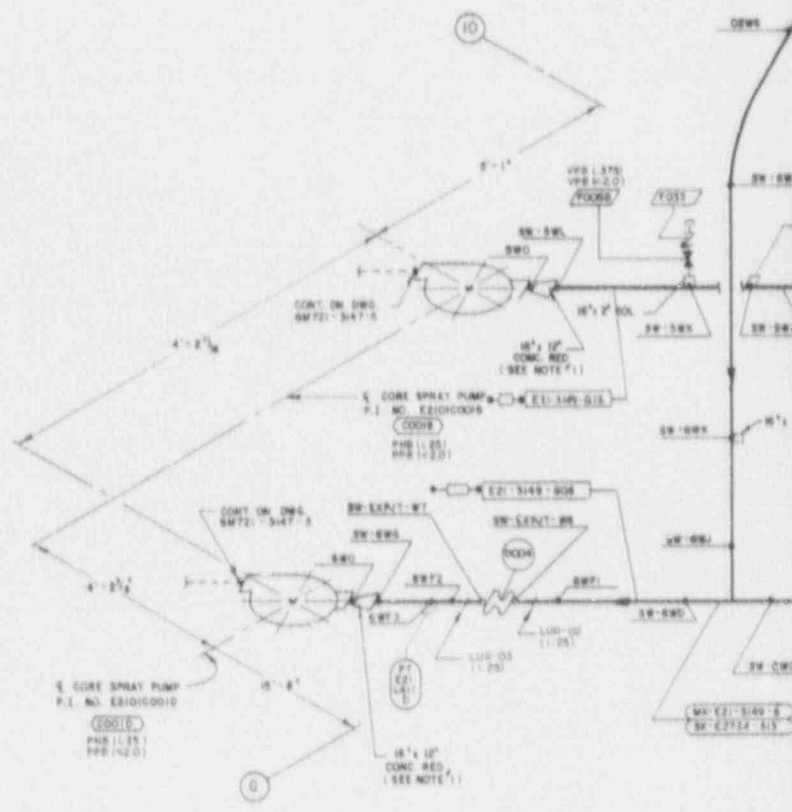
6M721-3148-6

NO.	DATE	BY	CHKD	APPV	DESCRIPTION
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3					
4					
5					



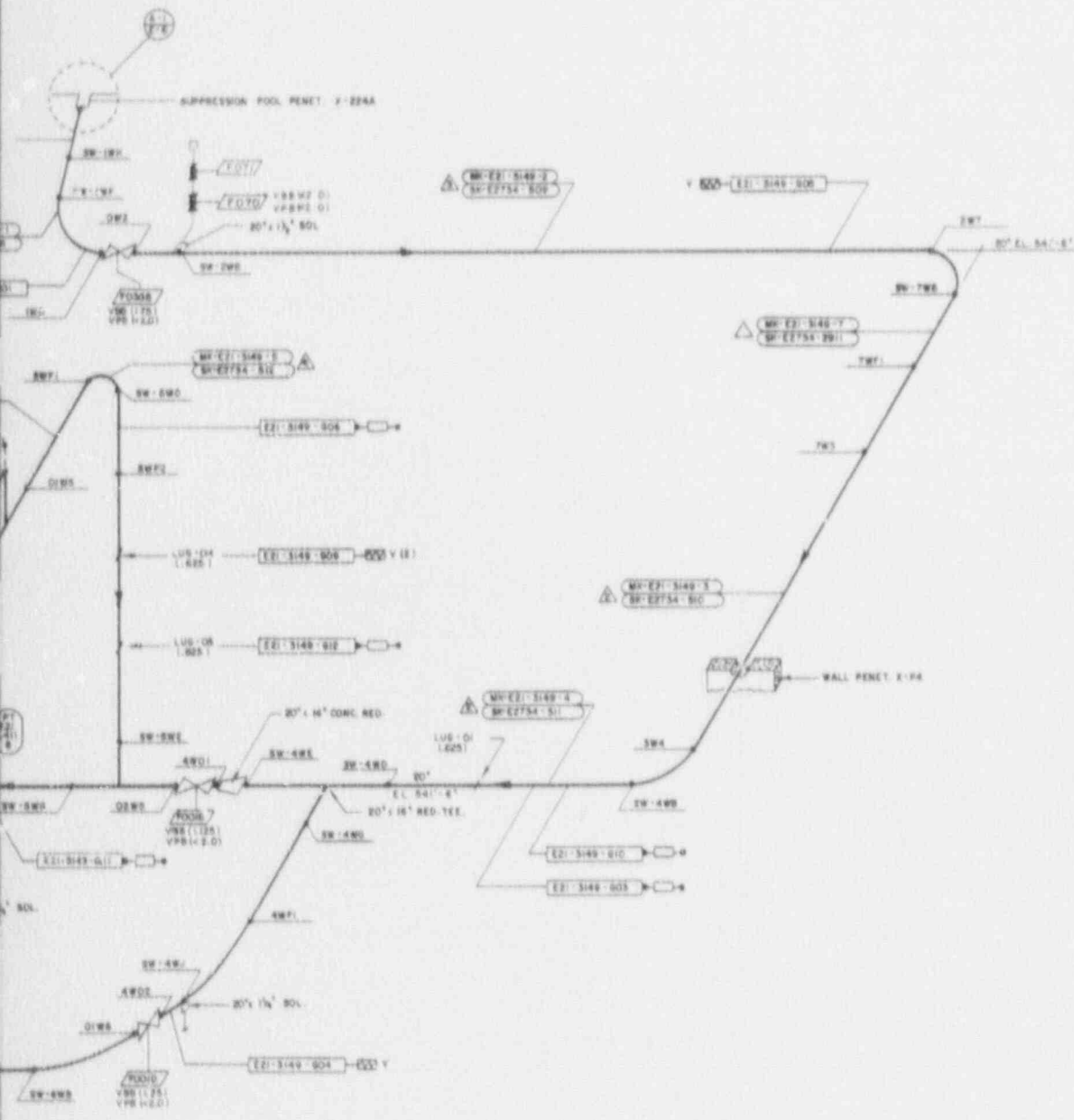
SW-32214-WI
SW-32214-WIA
SW-32214-WI
SW-32214-WIA

SW-32214-WI
SW-32214-WIA



1		H		G		F		E	
SW-32214-WI	SW-32214-WIA	SW-32214-WI	SW-32214-WIA	SW-32214-WI	SW-32214-WIA	SW-32214-WI	SW-32214-WIA	SW-32214-WI	SW-32214-WIA

INTRINSICALLY WELDED LUGS					
LUG NO	TYPE OF WELD	COMPONENT NUMBERS	STEM (IN)	REFERENCE	
LUG-01	*	SW-22-3149-002A, 002B, 002C, 002D	0.875	NOT USED	
LUG-02	*	SW-22-3149-003, 004	1.25	NOT USED	
LUG-03	*	SW-22-3149-005, 006	1.25	NOT USED	
LUG-04	*	SW-22-3149-007A, 007B, 007C, 007D	1.0	NOT USED	
LUG-05	*	SW-22-3149-008A, 008B, 008C, 008D	1.0	NOT USED	



SI
APERTURE
CARD
Also Available On
Aperture Card

- REFERENCE DRAWINGS**
- 6M721-0520 KEY PLAN OF HWRS SECTION 3 PLANS
 - 6M721-0534 FLOW DIAGRAM CORE SPRAY
 - 6M721-0140-102 HWRS SCHEMATIC
 - 6M721-0140-201 SUPPORTS HWRS CORE
 - SM-233101 PWC LUGS
 - 62-099181 PENETRATION DETAILS
 - 62B-149181 EXPANSION JOINT
 - R21131 CORE TORUS MODIFICATION INSTALLATION SKETCH
 - A1-200181 TORUS PENETRATION MODIFICATION
- NOTES**
1. WELD PREPARATION PER DYRON-JACKSON DWG 22-0100 (DECO FILE NO. 84-110)
 2. WELD NUMBERS (C & 004) ARE ALL FIELD WELDS. SHOP WELDS (E & SW-001) ALWAYS HAVE THE SW PRE FIX.
 3. SPOOL DWG REVISIONS ARE INDICATED BY A Δ

9101090241-38

SI CLASS 2 6M721-3149-5
LATEST REVISION Δ

DATE	BY	CHKD	APP'D

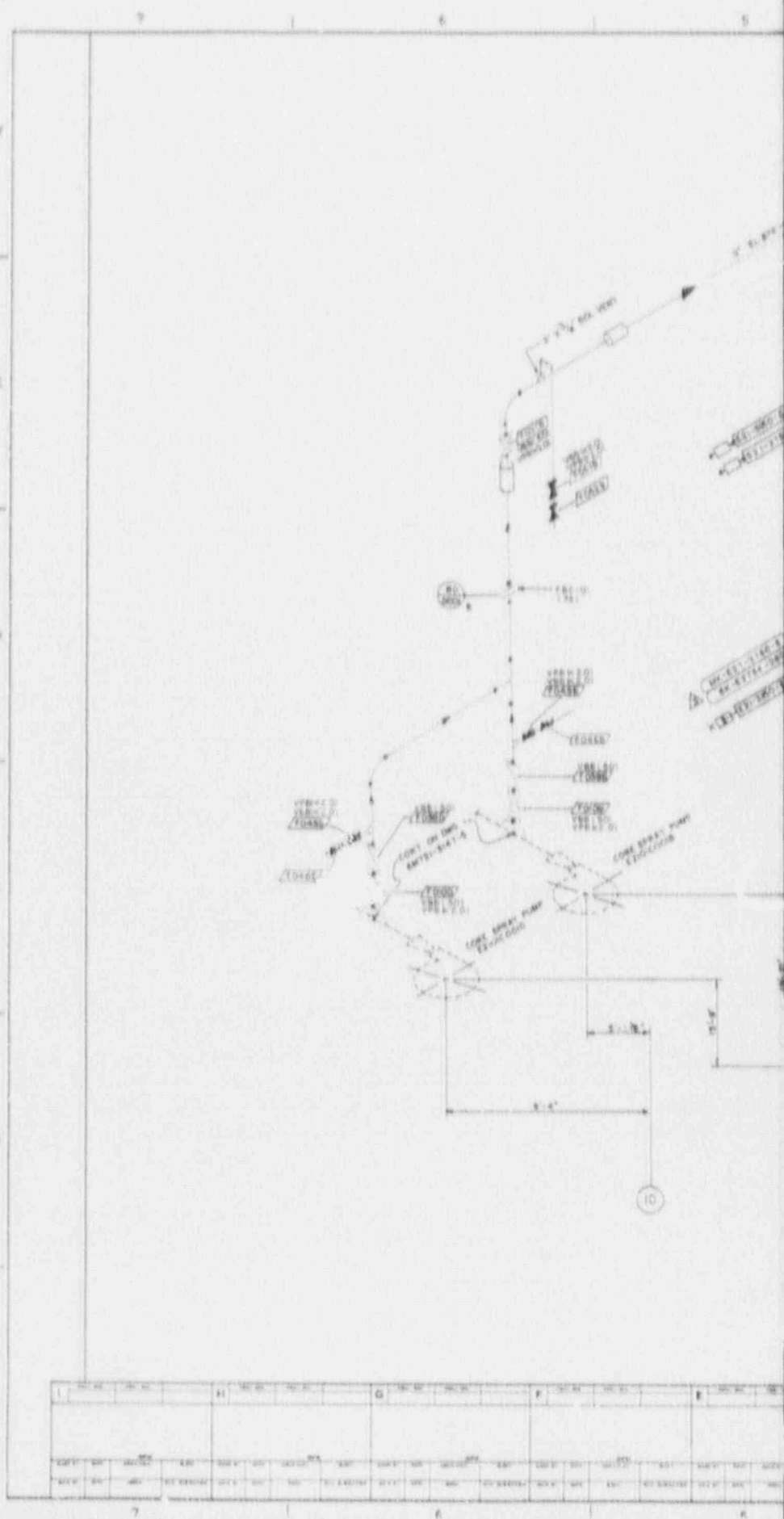
NUCLEAR SAFETY RELATED

THE DETROIT EDISON CO. ENGINEERING DEPARTMENT

PROJECT: HWRS SECTION 3 PLANS
 CORE SPRAY PUMP LOCATION PLANT FROM
 SUPPRESSION CHAMBER REACTOR BUILDING UNIT #2
 ENRUC. FERRIS ATOMIC POWER PLANT

DOCUMENT CONTROL NO. 77-1
 6M721-3149-5 A

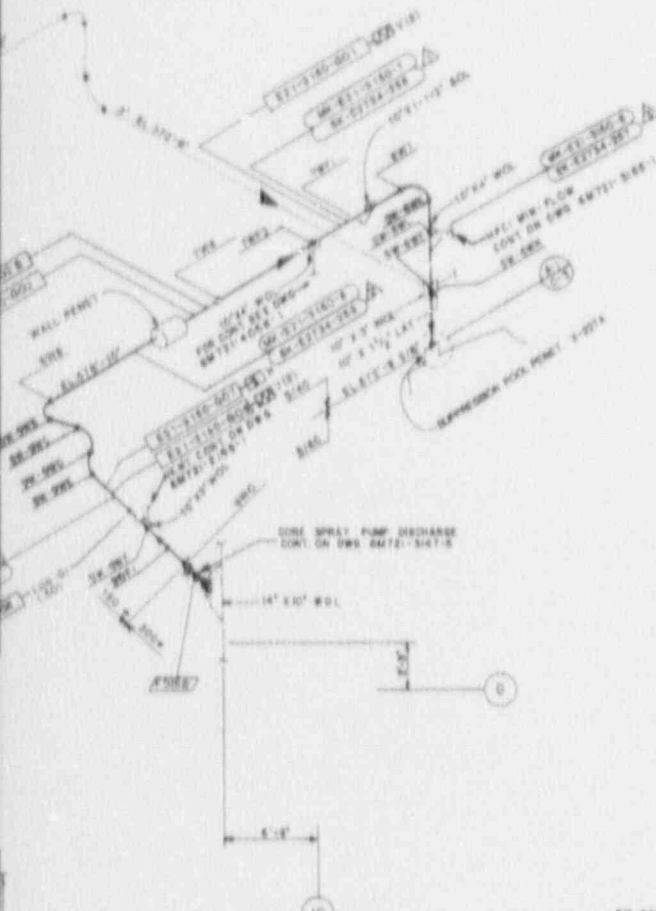
NO.	DATE	DESCRIPTION	BY	CHKD	APP'D



7	6	5	4	3	2	1
7	6	5	4	3	2	1



INTEGRALLY WELDED LOSS				
WELD NO.	TYPE OF WELD	COMPONENT NUMBERS	ITEM # (IN)	REFERENCE
6M72-3150-5	SW	FW-827A-W32	1	AS



SI APERTURE CARD

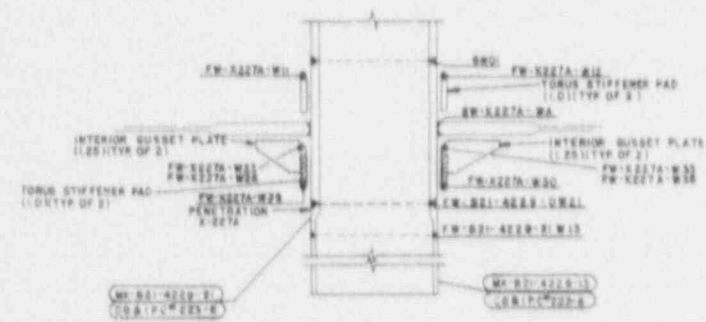
Also Available On Aperture Card

REFERENCE DRAWINGS

- 6M721-2520 KEY PLAN OF PIPING SECTION & FLANG
- 6M721-2524 FLOW DIAGRAM (CORE SPRAY)
- 6M721-3150-1181 PIPING ISOMETRIC
- 6M721-3150-2100 SUPPORTS ISOMETRIC
- 3M-2331(1) PWE LOGS
- 82-121(1) PENET. / ION DETAILS
- 6M721-4225 WISC. PIPING INSIDE TORUS
- 42531AND RND C & I TORUS MODIFICATION INSTALLATION
- 82107 TORUS PENETRATION MODIFICATION
- A1-200 (2)

NOTES

- 1. WELD NUMBERS (E.G. 6M72) ARE ALL FIELD WELDS
- 2. SHOP WELDS (E.G. SW-8M7) ALWAYS HAVE THE SW PRE-FIX
- 3. SPOOL DWG REVISIONS ARE INDICATED BY A Δ



TORUS INTERNAL PIPING SCALE NONE

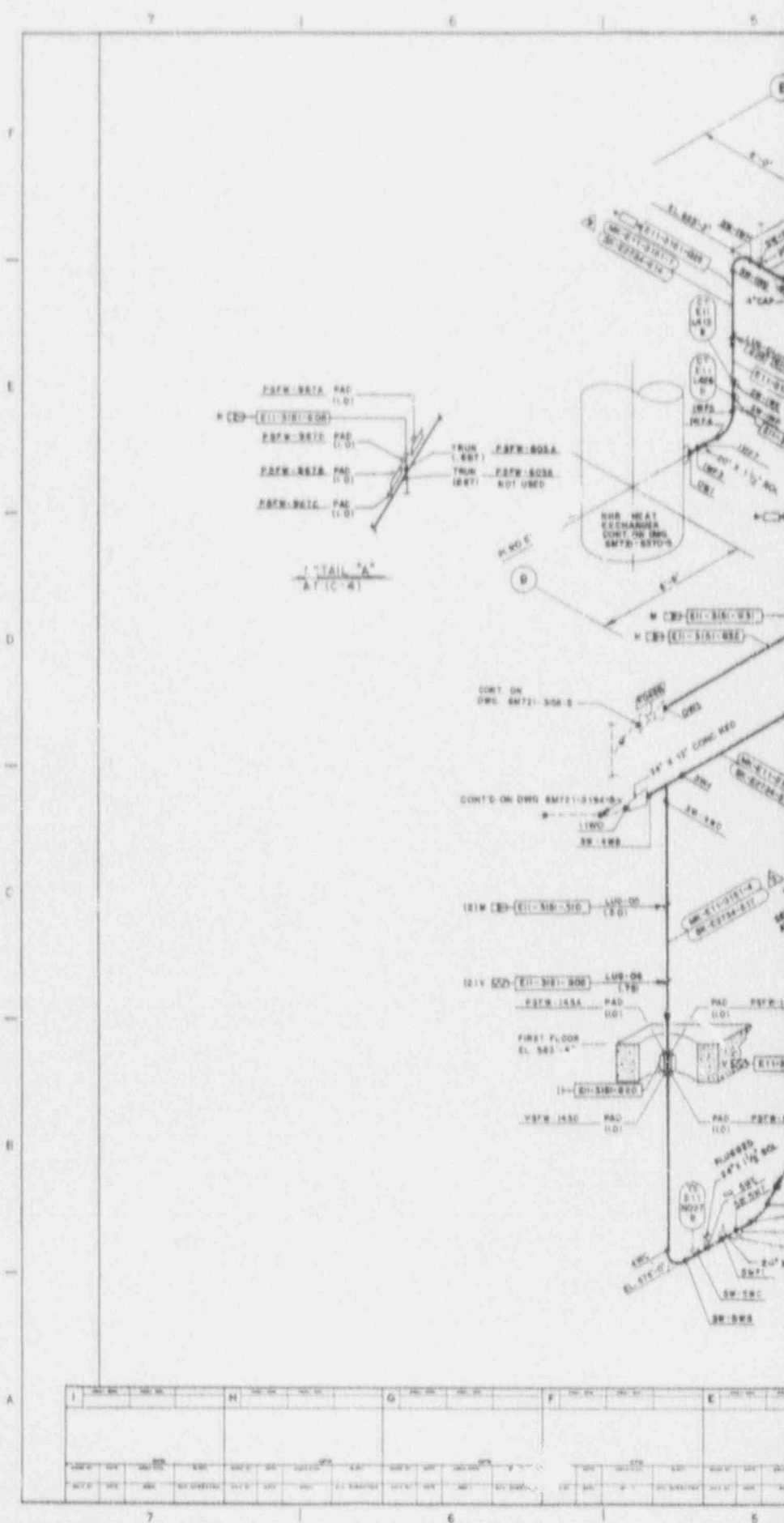
SI CLASS 2 6M721-3150-5
 15/17 REVISION

DATE	BY	CHKD
11/15/74	W. J. ...	...
DATE	BY	CHKD
...

9101090241-39

NO.	DATE	DESCRIPTION	BY	CHKD
1	11/15/74	ISSUED FOR CONSTRUCTION	W. J. ...	...
2	...	...	...	...
3	...	...	...	...

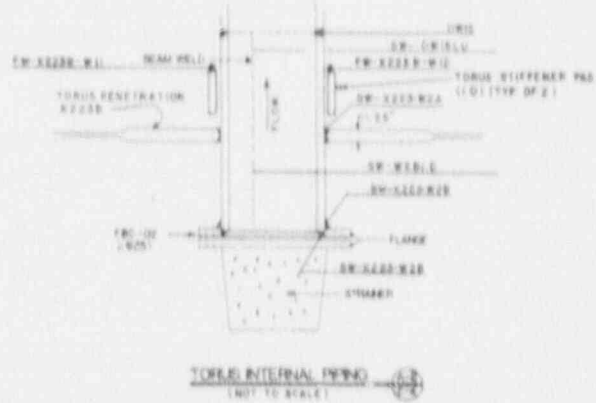
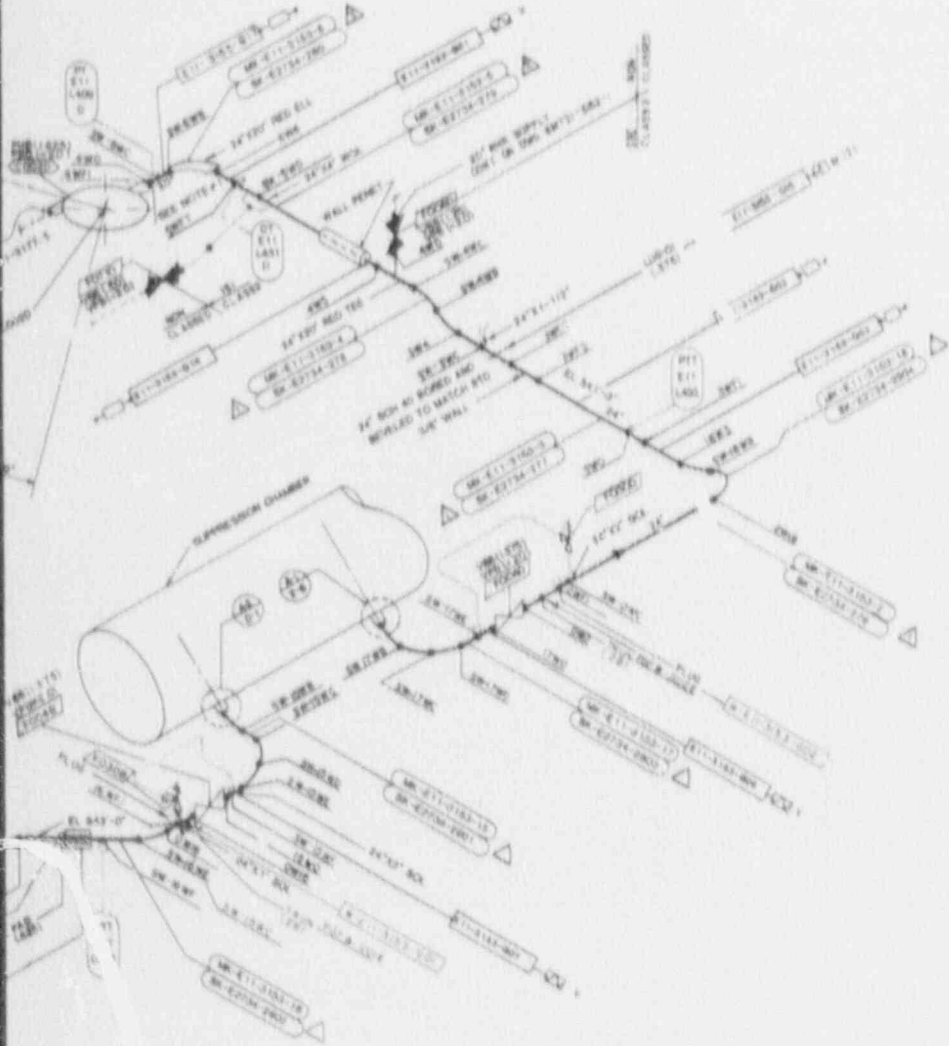
PROJECT	SI CLASS 2
DESCRIPTION	RESERVE INSPECTION ISOMETRIC
CONTRACT NO.	...
DATE	11/15/74
BY	W. J. ...
CHKD	...
SCALE	...
PROJECT NO.	6M721-3150-5
ISSUED BY	...
ISSUED FOR	CONSTRUCTION



I	H	G	F	E
[Grid lines and dimensions]				



INTEGRALLY WELDED LIDS					
LOG NO	TYPE	COMPONENT NUMBER	ITEM	UNIT	REFERENCE
LID-01	A	60721-015-001 6084 6084 6084 6084	1	1/4"	UP
LID-02	A	60721-015-002 6084 6084 6084 6084	1	1/4"	UP
LID-03	A	60721-015-003 6084 6084 6084 6084	1	1/4"	UP
LID-04	A	60721-015-004 6084 6084 6084 6084	1	1/4"	UP



REFERENCE DRAWINGS

- 60721-015-001 KEY PLAN OF PIPING SECTION & PLAN
- 60721-015-002 FLOW DIAGRAM 6084
- 60721-015-003 PIPING ISOMETRIC
- 60721-015-004 SUPPORTS ISOMETRIC
- 60721-015-005 WELD LOGS
- 60721-015-006 TORUS PENETRATION
- 60721-015-007 C.B.S. TORUS MODIFICATION
- 60721-015-008 C.B.S. TORUS MODIFICATION
- 60721-015-009 TORUS MODIFICATION
- 60721-015-010 TORUS PENETRATION
- 60721-015-011 MODIFICATION

NOTES

- FOR WELD JOINT PROPS SEE DYWIDAG JACKING PLAN DRAWING NO. 20-0187 (REV) FILE IN-115
- SHOP WELDS: E.G. SM-011-015-001 ALWAYS START WITH THE PREFIX SW. IF A WELD NUMBER DOES NOT INCLUDE THE PREFIX SW, THE SUBJECT WELD IS A FIELD WELD.
- SPKX DRAWING REVISIONS ARE INDICATED BY A Δ .

SI APERTURE CARD

Also Available On Aperture Card

IS CLASS 2 60721-015-5 LAYOUT NUMBER

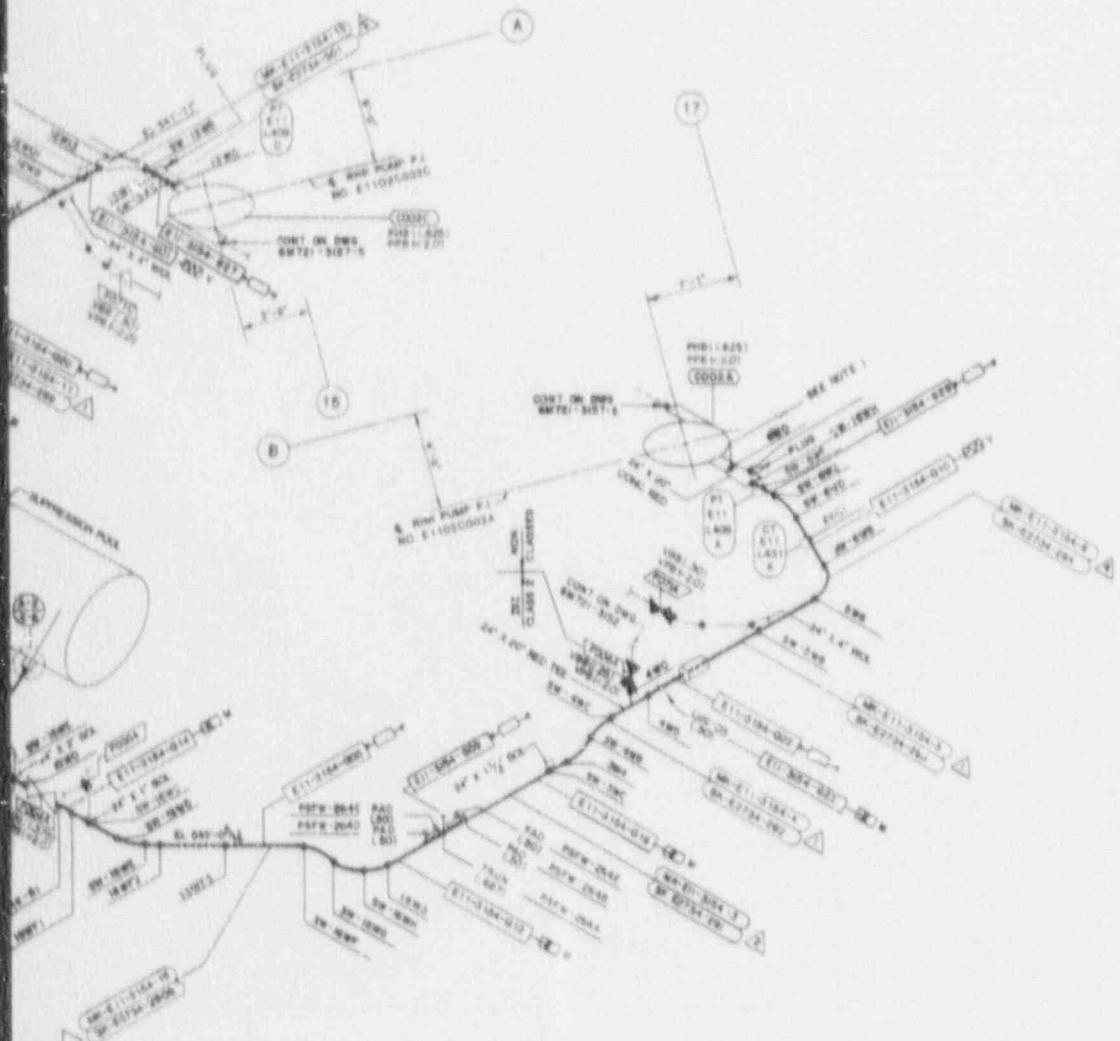
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BY: [Signature]

910109024141

NO.	DATE	BY	CHKD.	APP'D.	REVISION	DESCRIPTION
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3					3	REVISION
4					4	REVISION
5					5	REVISION
6					6	REVISION
7					7	REVISION
8					8	REVISION
9					9	REVISION
10					10	REVISION
11					11	REVISION
12					12	REVISION
13					13	REVISION
14					14	REVISION
15					15	REVISION



INTEGRALLY WELDED LEAD					
LWD NO.	TYPE OF WELD	COMPONENT NUMBER	ITEM (IN)	REFERENCE	L
LWD-01	#	PSFW-EI-504-754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000	14	30	UP
LWD-02	#	PSFW-EI-504-726	3	3%	DOWN
LWD-03	#	PSFW-EI-504-966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000	14	30	UP



SI APERTURE CARD

Also Available On Aperture Card

REFERENCE DRAWINGS

- 6M721-0000 KEY PLAN OF TRENCH SECTION & PLAN
- 6M721-0084 FLOW DIAGRAM 2640
- 6M721-0154-1 (U) P-WIG DIMETRIC
- 6M721-0154-2 (1) SUPPORT ISOMETRIC
- 3M-233 (D) LUBS
- 82-100 (1) TORUS PENETRATIONS
- 818(4) AND 820(4) C & S TORUS MODIFICATION INSTALLATION SKETCH
- A-200 (2) TORUS PENETRATION MODIFICATION

NOTES

1. FOR WELD END PREPARATION AT FLANG SECTION SEE BYRON JACKSON PUMP DWG NO. 25-2187.DWG FILE NO. 84-115
2. SHOP WELDS (E & SW-1891) ALWAYS START WITH THE PREFIX SW- IF A WELD NUMBER DOES NOT INCLUDE THE PREFIX SW- THE SUBJECT WELD IS A FIELD WELD.
3. SPOOL DWG REVISIONS ARE INDICATED BY A Δ .

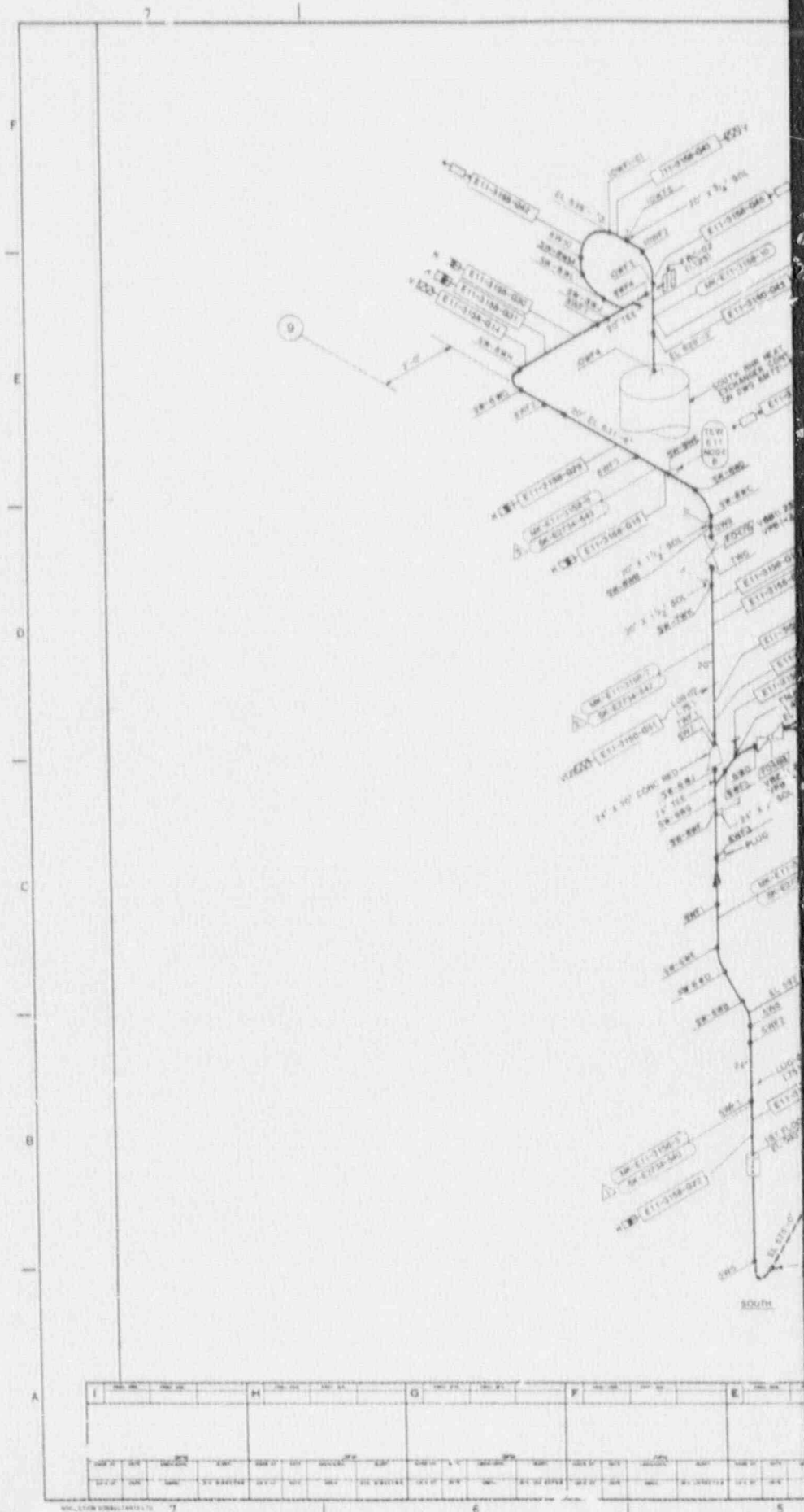
ISI CLASS 2

6M721-0154-5
LATEST REVISION

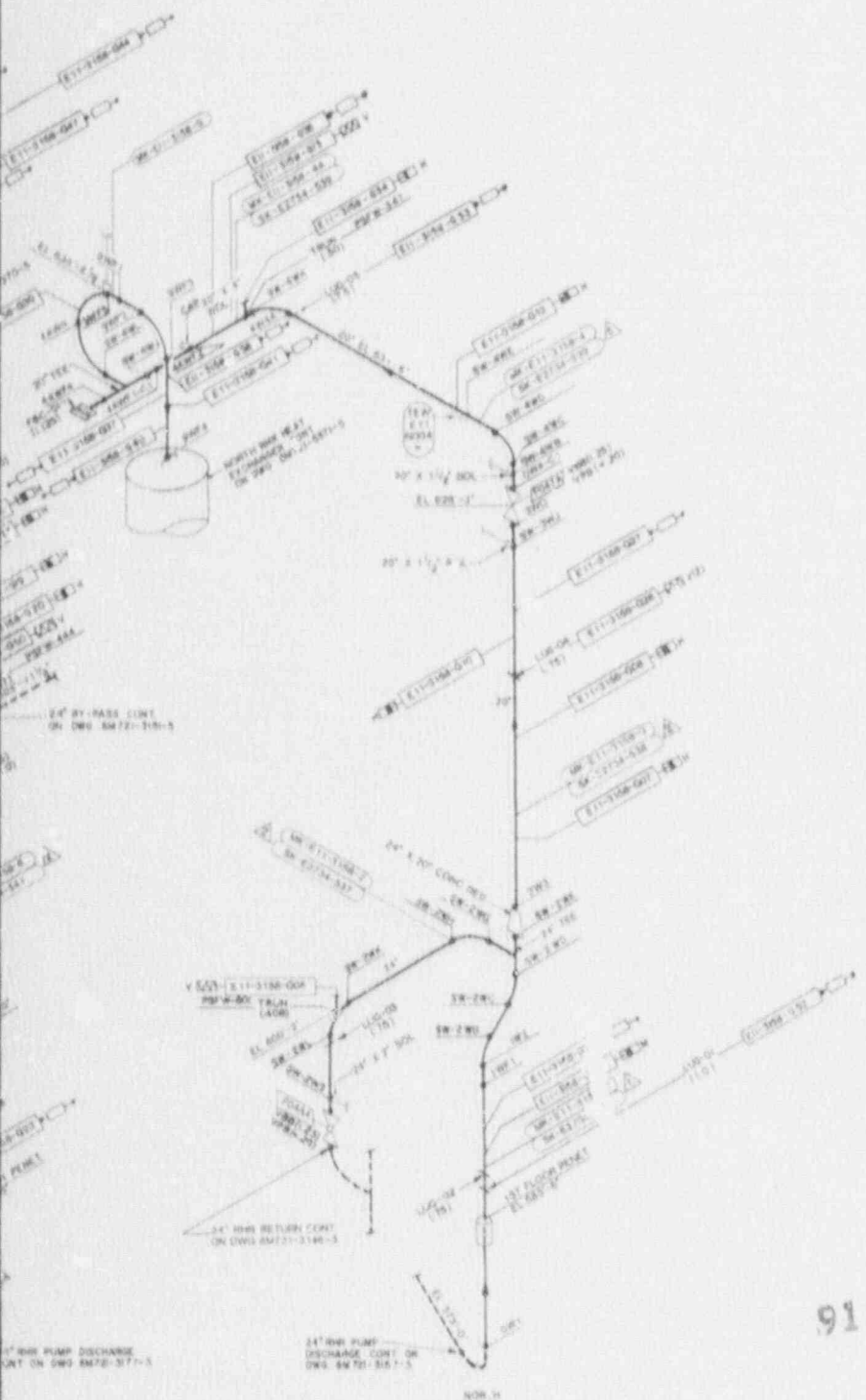
DATE: 10/1/84
BY: ELSA
CHECKED: G.M. DUFF
APPROVED: [Signature]

9101090241-42

NO.	DATE	BY	CHKD.	APP.	REVISION
1	10/1/84	E.L.S.	G.M.D.	[Signature]	ISSUED FOR CONSTRUCTION
2					
3					
4					



1	2	3	4	5	6	7



INTEGRALLY WELDED LUGS						
LUG NO	TYPE OF WELD	COMPONENT NUMBERS	ITEM TAG	REFERENCE		
LUG-02	*	PSFV-EI-358 583A, 593B, 583C, 583D, 583E, 583F	1-0	5		50
LUG-03	*	SR-EI-358 781, 782, 783, 784, 785, 786, 787, 788	16	75	N, NOT USED	50*
LUG-04	*	SR-EI-358 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800	16	75	N, NOT USED	50*
LUG-05	*	SR-EI-358 58C, 58D, 58E, 58F, 58G, 58H, 58I, 58J, 58K, 58L, 58M, 58N, 58O, 58P, 58Q, 58R, 58S, 58T, 58U, 58V, 58W, 58X, 58Y, 58Z	16	75	N	0*
LUG-06	*	PSFV-EI-358 758A, 758B, 758C, 758D, 758E, 758F, 758G, 758H, 758I, 758J, 758K, 758L, 758M, 758N, 758O, 758P, 758Q, 758R, 758S, 758T, 758U, 758V, 758W, 758X, 758Y, 758Z	16	75	N	50*
LUG-08	*	SR-EI-358 58C, 58D, 58E, 58F, 58G, 58H, 58I, 58J, 58K, 58L, 58M, 58N, 58O, 58P, 58Q, 58R, 58S, 58T, 58U, 58V, 58W, 58X, 58Y, 58Z	16	75	N, NOT USED	50*
LUG-07	*	SR-EI-358 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800	16	75	N	0*

SI APERTURE CARD

Also Available On Aperture Card

NOTES

- 1) SHOP WELDS IE-8 SR-8WD ALWAYS START WITH THE PREFIX SR-... IF A WELD DOES NOT INCLUDE THE PREFIX SR-... THE SUBJECT WELD IS A FIELD WELD.
- 2) SHOP DRAWING REVISIONS ARE INDICATED BY A Δ.

REFERENCE DRAWINGS

- 6M721-3320 KEY PLAN OF PIPING SECTION & PLANS
- 6M721-3583 FLOW DIAGRAM (SRW-DIVISION 2)
- 6M721-3584 FLOW DIAGRAM (SRW-DIVISION 1)
- 6M721-3158-11P1 PIPING ISOMETRIC
- 6M721-3158-2111 SUPPLIES ISOMETRIC
- 6M-2331101 PPE LUGS

IN CLASS 2

6M721-3158-5
EXTEND REVISION Δ

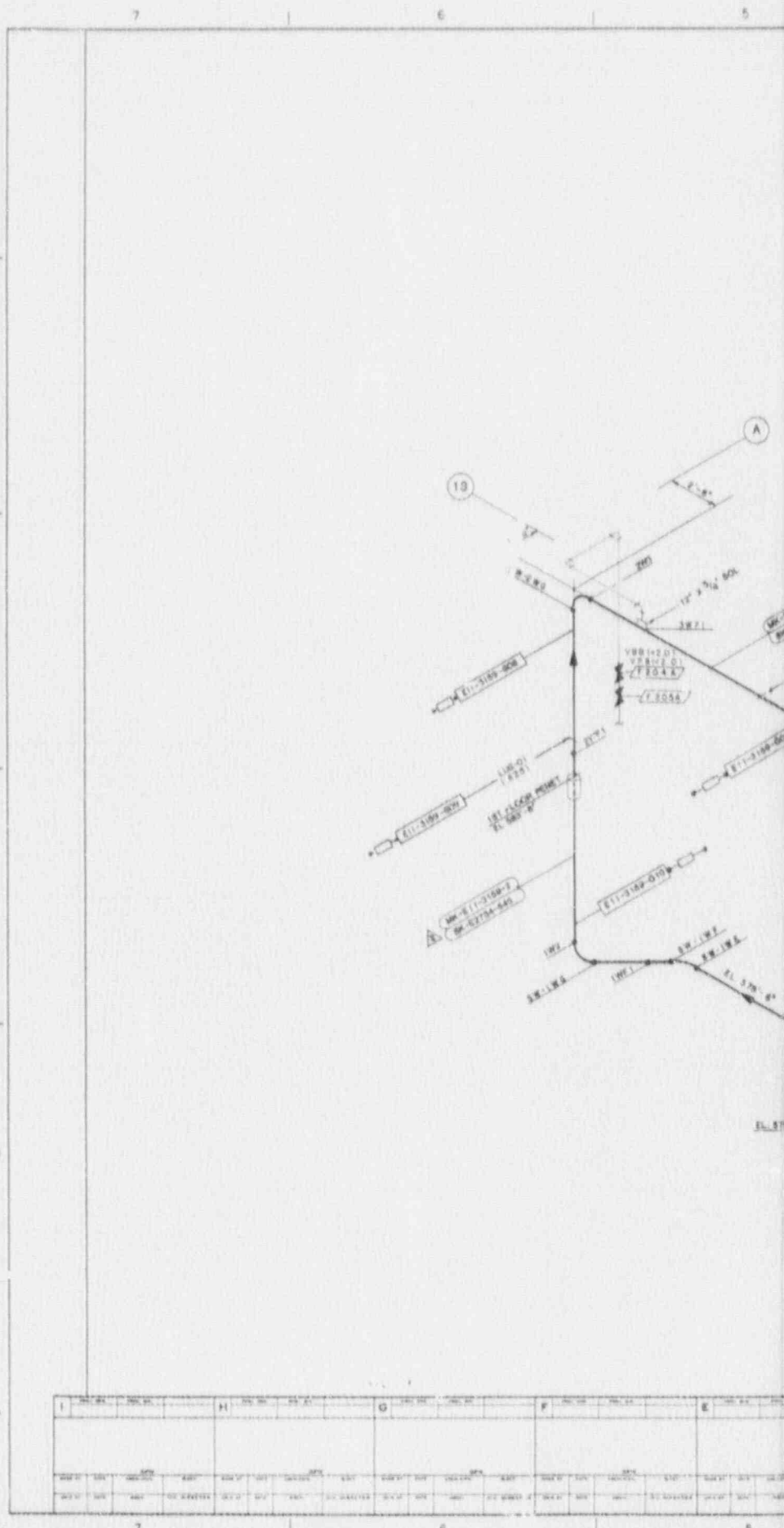
9101090241-44

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NUCLEAR SAFETY RELATED

CLASS 2

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INTEGRALLY WELDED LUGS					
LUG NO.	TYPE OF WELD	COMPONENT NUMBERS	ATTENTION	REFERENCE	L
LUG-D1	•	SW-EII-3159-2WC, 2WC, 2WC, 2WC	5	625 X	45
LUG-D2	•	SW-EII-3159-3WC, 3WC, 3WC, 3WC		NOT USED	
LUG-D5	•	PSW-EII-3159-452A, 452B, 452C, 452D	7	374 N	46

SI
APERTURE
CARD

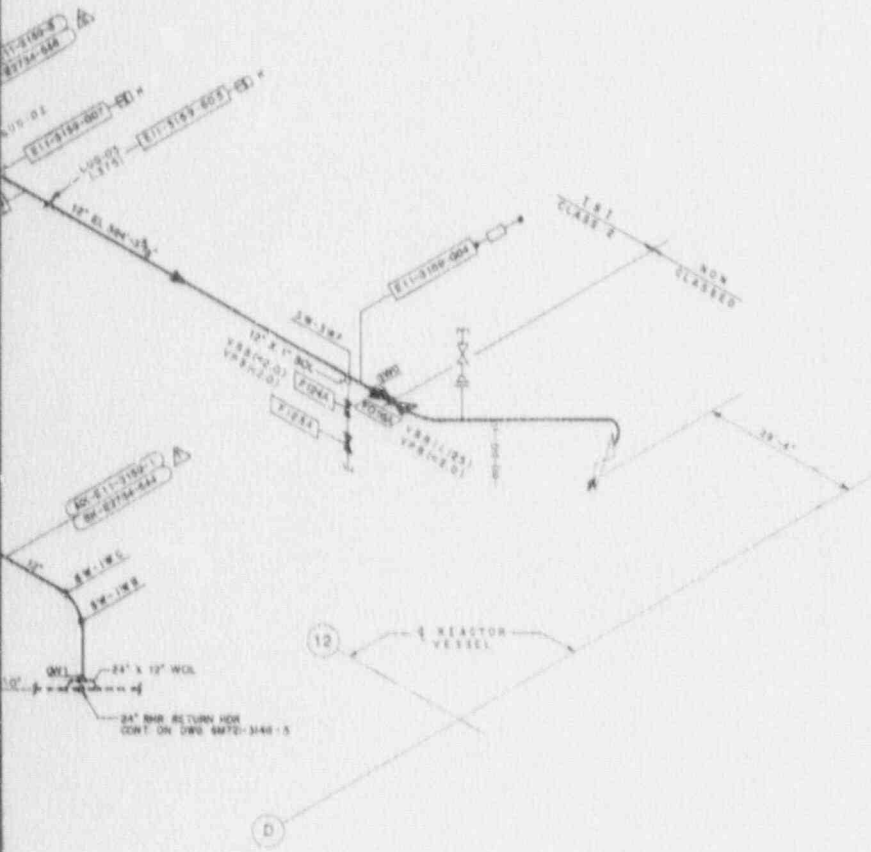
Also Available On
Aperture Card

REFERENCE DRAWINGS

- 6M721-200 KEY PLAN OF PPMG SECTION & PLANS
- 6M721-206 FLOW DIAGRAM 8940
- 6M721-3159-1 (M) PPMG ISOMETRIC
- 6M721-3159-2 (L) SUPPORTS ISOMETRIC
- 3M-2031 (D) WRE LUGS
- 48W-140-15 (B) LUG-D3

NOTES

1. WELD NUMBERS (E.G. SW-6W2) ALWAYS HAVE THE SW-PRE-FIX
2. SPOOL DWG. REVISIONS ARE INDICATED BY A Δ.



[S] CLASS 2 6M721-3159-5
LAYER NUMBER

DATE: 10-15-84
BY: E. J. BROWN
CHECKED: M. J. J. K.
APPROVED: [Signature]

91010902411-45

THE DETROIT EDISON CO. ENGINEERING DEPARTMENT									
PERMANENT RECORD SECTION									
REACTOR CONTAINMENT SPRAY SYSTEM FROM 1501 TO 1502, REACTOR BUILDING UNIT-2									
LOCATION: 1501 FROM ATOMIC POWER PLANT									
PROJECT DOCUMENT CONTROL NO. 1501-1502									
DATE: 10-15-84									
BY: E. J. BROWN									
6M721-3159-5 PS									
D	C	B	A	1	2	3	4	5	6



INTEGRALLY WELDED LUGS						
LUG NO.	TYPE OF WELD	COMPONENT NUMBERS	YS (MTUN)	REFERENCE	L	
LUG-01	*	SW-ET-SMO-ENT, SWL, ZWV, ZWS, ZWL, ZWV	11	SU	WR NOT USED	99'-06"
LUG-02	*	PSPW-ET-SMO-254A, 254B, 254C, 254D, 254E, 254F	10	ASU	WR NOT USED	45"
LUG-03	*	PSPW-ET-SMO-254A, 254B, 254C, 254D, 254E, 254F	11	SO	WR	40'-04"
LUG-04	*	PSPW-ET-SMO-252A, 252B, 252C, 252D, 252E, 252F	9	ASU	WR	40"

SI APERTURE CARD

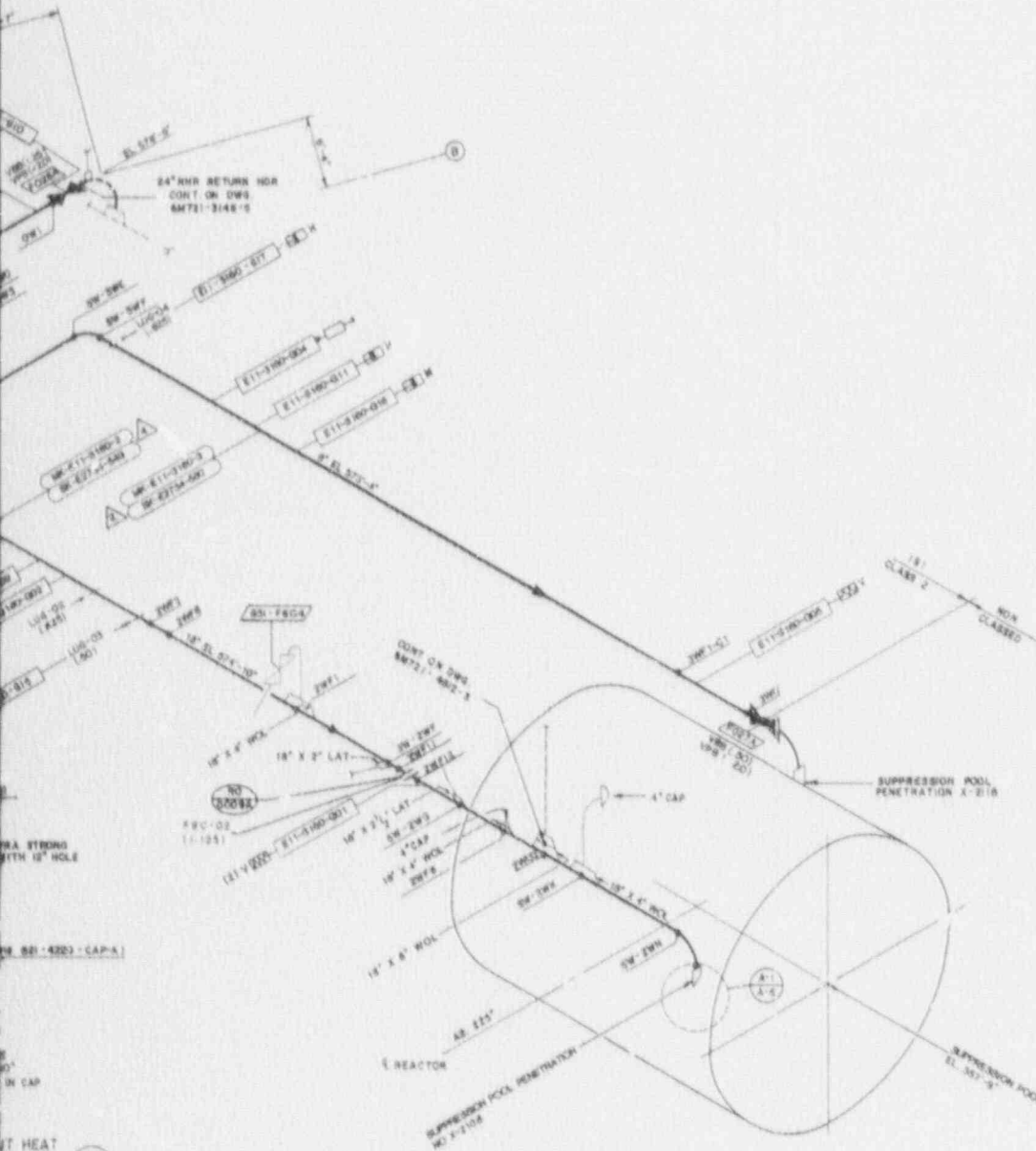
Also Available On Aperture Card

REFERENCE DRAWINGS

- 6M721-2330 KEY PLAN OF PIPING SECTION & PLANS
- 6M721-2084 FLOW DIAGRAM 0090
- 6M721-3180-1 (U) PIPING ISOMETRIC
- 6M721-3180-2 (K) SUPPORTS ISOMETRIC
- SM-2321 (S) PIPE LUGS
- BD-121 (1) TORUS PENETRATION
- 6M721-4229 (H) TORUS INTERNALS
- RE(3) AND 428 (2) C & A: TORUS MODIFICATION INSTALLATION SKETCH
- A1-200 (2) TORUS PENETRATION MODIFICATION

NOTES

1. SHOP WELDS (E.G. SW-SWB) ALWAYS START WITH THE PREFIX SW. IF A WELD NUMBER DOES NOT INCLUDE THE PREFIX SW, THE SUBJECT WELD IS A FIELD WELD.
2. SHOP DRAWING REVISIONS ARE INDICATED BY A Δ .

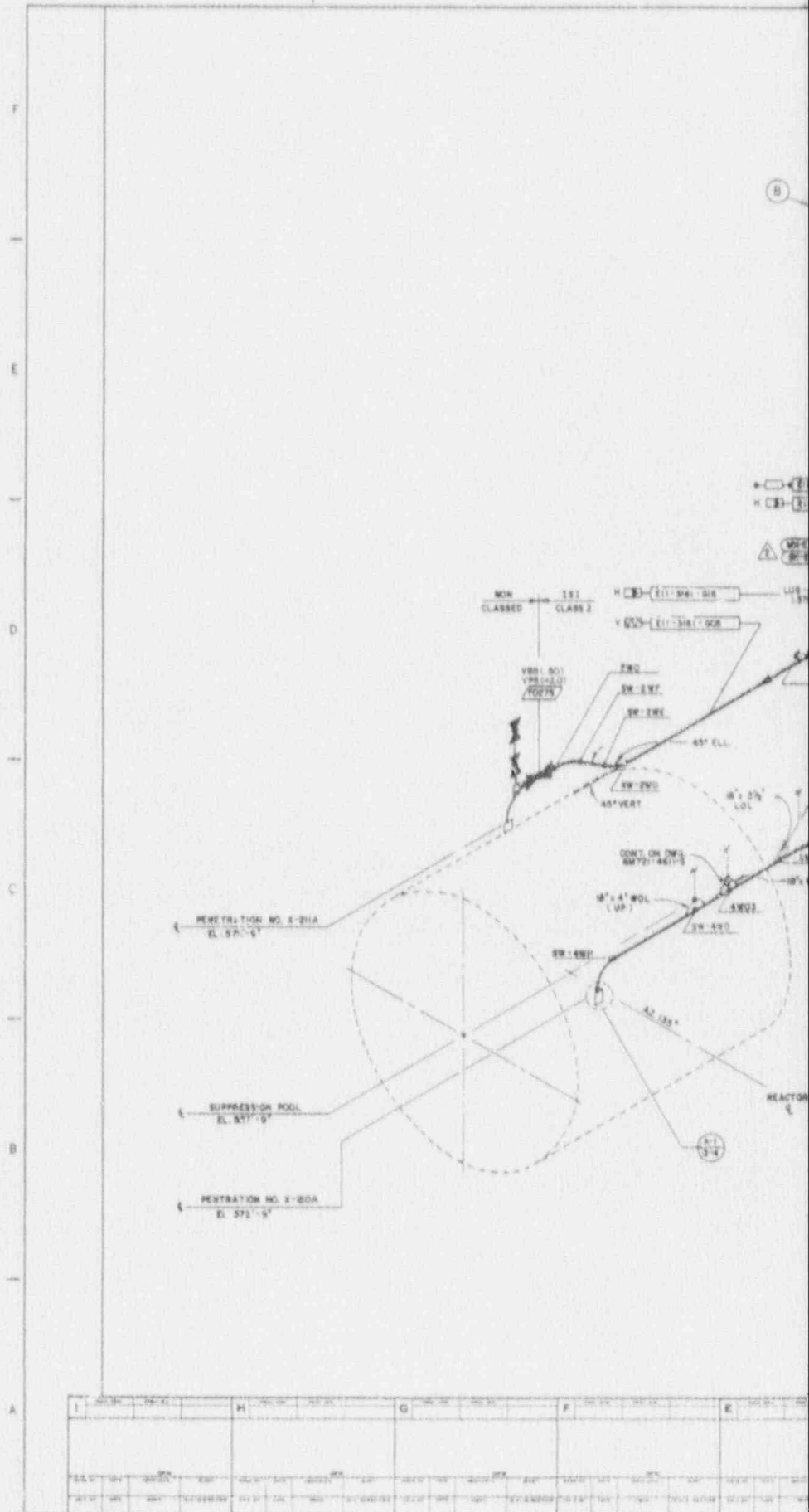


ISI CLASS 2
6M721-3180-5
LATEST REVISION

Checked by: M. J. ...
Date: 10/15/58
Approved by: ...

9.010902411-46

D	C	B	A	REVISIONS	DATE	BY	CHKD	APP'D	DESCRIPTION
				1	10/15/58	M. J. ...			ISSUE FOR CONSTRUCTION
				2					REVISED TO SHOW SUPPRESSION POOL PENETRATION



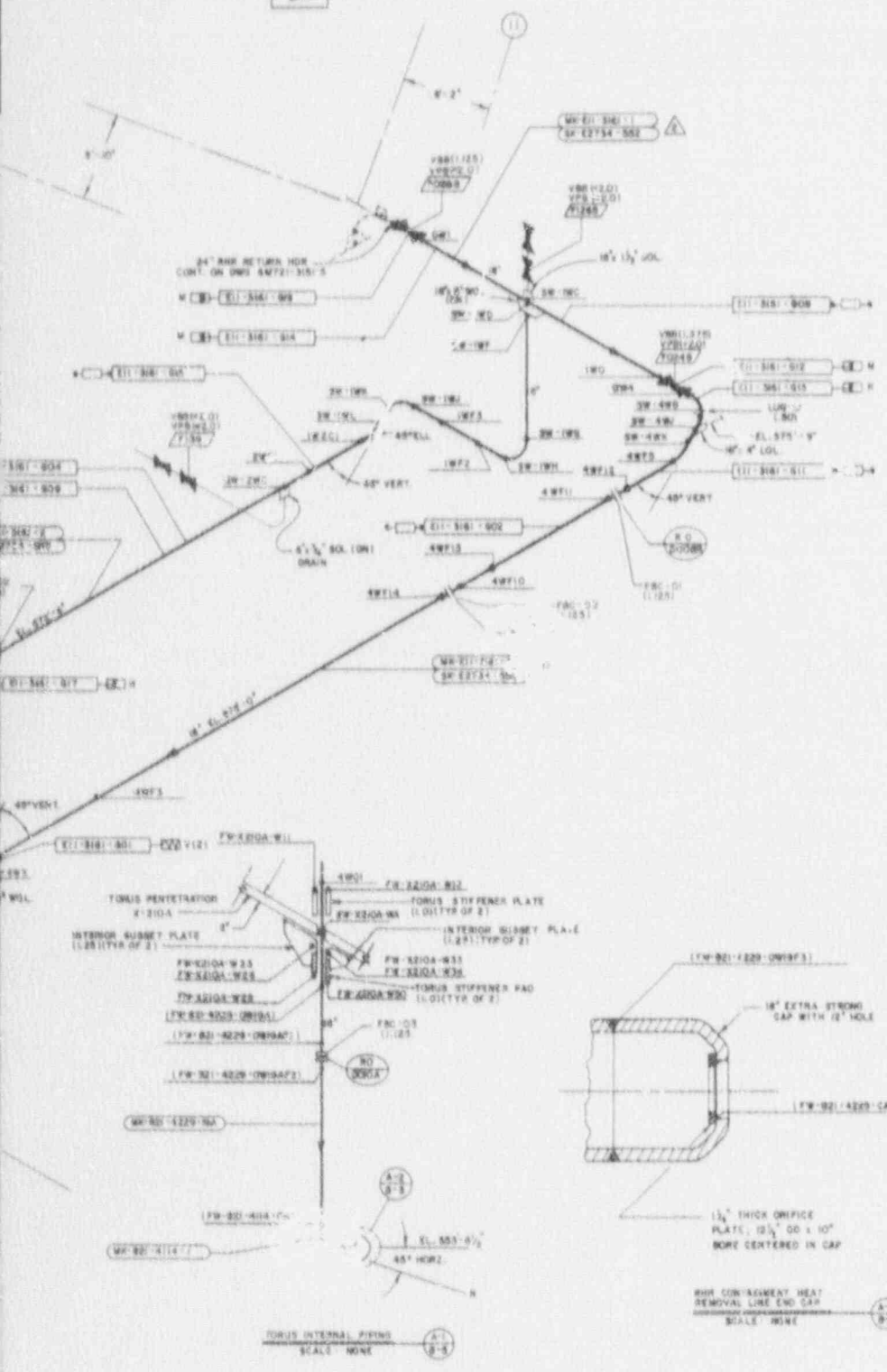
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INTEGRALLY WELDED JOBS						
JOB NO.	TYPE OF WELD	COMPONENT NUMBERS	ITEM TIME	REFERENCE		
LUG-01	B	SW-EL-310-490, 495, 496, 497, 498, 499	11	80	SP. NOT USED	87
LUG-02	B	PSW-EL-310-497A, 497B, 497C, 497D	3	375		135

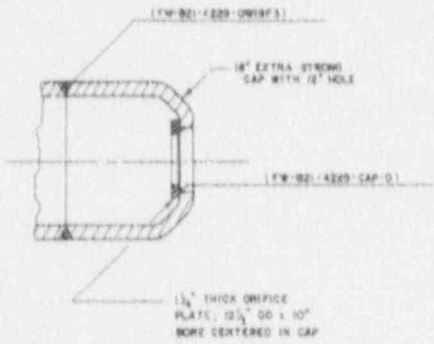
ST APERTURE CARD

Also Available On Aperture Card



- REFERENCE DRAWINGS**
- 6M721-230 KEY PLAN OF PIPING SECTIONS & DETAILS
 - 6M721-208-4 FLOW DIAGRAM (RHR)
 - 6M721-310-110 PIPING ISOMETRIC
 - 6M721-310-210 SUPPORT ISOMETRIC
 - 6M721-420-101 TORUS INTERNALS
 - 6M721-420-102 TORUS PENETRATIONS
 - 6M721-420-103 PIPE JOBS
 - 6M721-205-5 BSWT PLAN WEST
 - 6M721-207-8 MISC SECTIONS
 - 6M721-420-104 C & S TORUS MODIFICATION
 - 6M721-420-105 INSTALLATION SKETCH
 - 6M721-420-106 TORUS PENETRATION MODIFICATION

- NOTES**
- SHOP WELDS (E.G. SW-6W0) ALWAYS START WITH THE PREFIX SW ____ IF A WELD NUMBER DOES NOT INCLUDE THE PREFIX SW ____ THE SUBJECT WELD IS A FIELD WELD.
 - SPC/DL DRAWING REVISIONS ARE INDICATED BY A Δ.



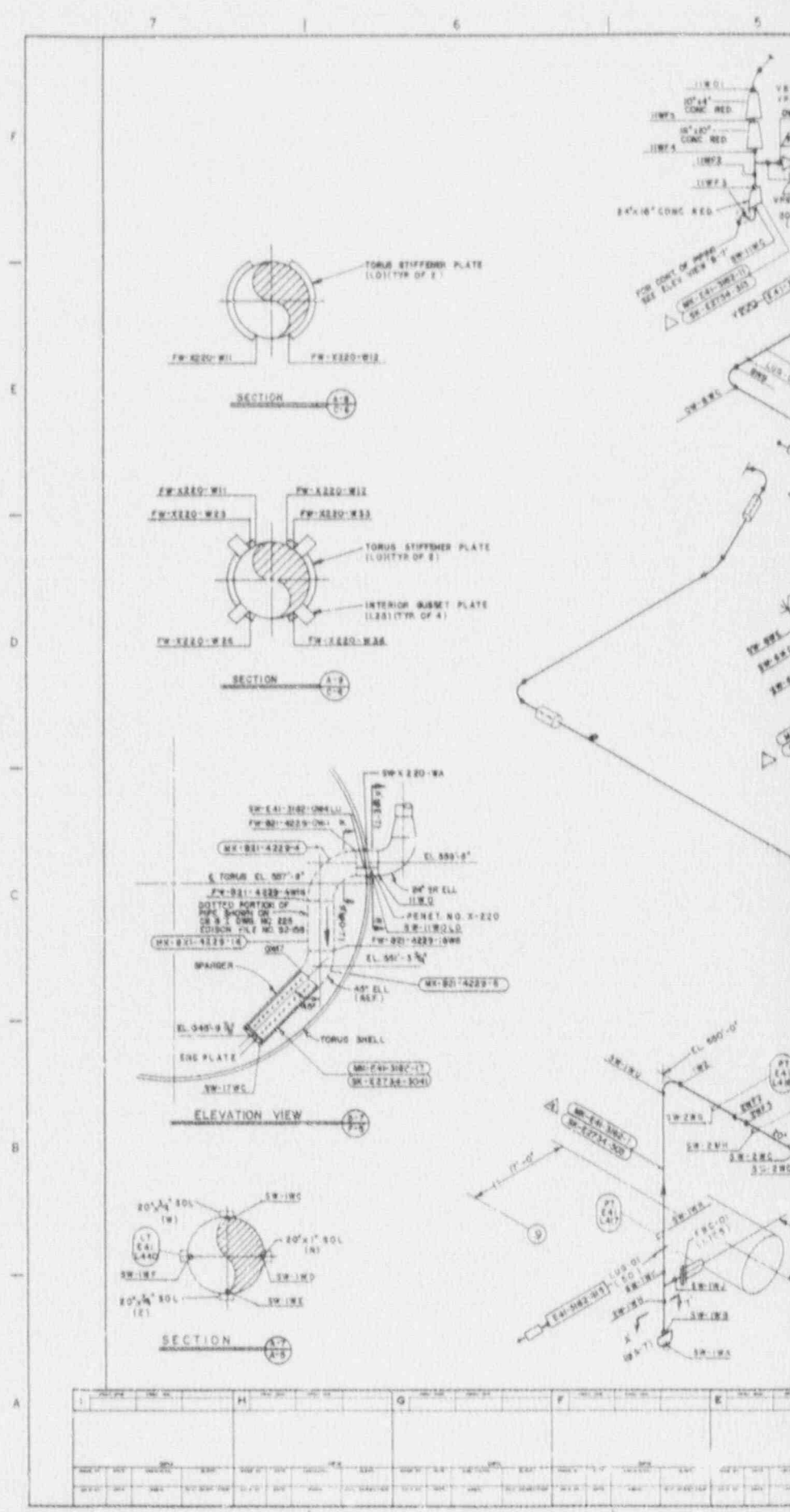
PIPE CONJUGATE HEAT REMOVAL LINE END CAP
SCALE: NONE

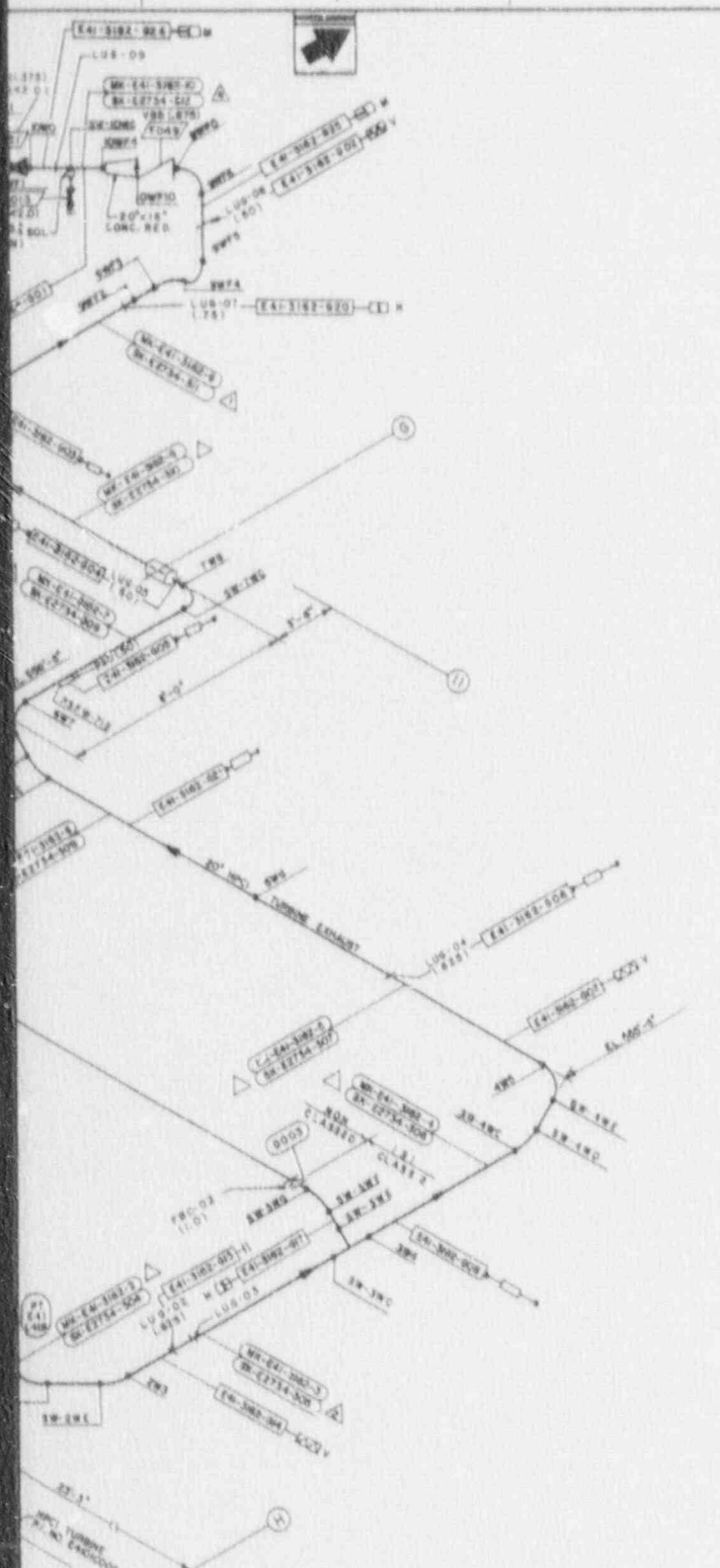
DESIGNED BY: H. S. S.
CHECKED BY: H. S. S.
DATE: 10/1/64

101 CLASS 2 6M721-316-5
LX787 REVISION

9101090241-47

REV	DATE	DESCRIPTION	BY	CHKD	APP'D
1	10/1/64	ISSUE FOR CONSTRUCTION	H.S.S.	H.S.S.	H.S.S.
2	10/1/64	REVISION	H.S.S.	H.S.S.	H.S.S.





INTEGRALLY WELDED LUGS						
LUG NO.	TYPE OF WELD	COMPONENT NUMBERS	STEM (IN)	REFERENCE	L	
LUG-01	#	SW-E41-3162-1WL, 1WN, 1WN, 1WD	14 .50	N	0	
LUG-02	#	PSFW-E41-3162-898A, 899B, 899C, 899D, 899E, 899F	15 .825			
LUG-03	#	SW-E41-3162-3WK, 3WL, 3WX, 3WL, 3WN, 3WN		NOT USED		
LUG-04	#	PSFW-E41-3162-818A, 848B, 880C, 818D, 818E, 818F	15 .825	N	60	
LUG-05	#	PSFW-E41-3162-720B, 720C, 720E, 720F	14 .50	UP	90	
LUG-06	#	SW-E41-3162-5WN, 5WL, 5WQ, 5WS, 5WJ, 5WT		NOT USED		
LUG-07	#	PSFW-E41-3162-583A, 583B, 583C, 583D, 583E, 583F	18 .75	UP	105	
LUG-08	#	SW-E41-316-5WE, 5WF, 5WQ, 5WJ, 5WT	14 .50	N	375	
LUG-09	#	SW-E41-3162-10W, 10WN, 10WL		NOT USED		

SI
APERTURE
CARD

Also Available On
Aperture Card

REFERENCE DRAWING

- 6M721-0058 SYSTEM DIAGRAMS (NPG1)
- 6M721-0320 KEY PLAN OF PIPING SECTIONS AND PLANS
- 3M-2331 (D) PIPE LUGS
- 6M721-3162-1(W) PIPING ISOMETRIC
- 6M721-3162-2(W) SUPPORTS ISOMETRIC
- 82-159 (Z) PENETRATION DETAILS
- 6M721-4229 TORUS INTERNALS
- RIS(2) AND R34(0) C.S.S. TORUS MODIFICATION INSTALLATION SKETCH
- A1-200 (Z) TORUS PENETRATION MODIFICATION

NOTES

- 1. WELD NUMBERS (E.G. SW-6W) ARE ALL FIELD WELDS. SHOP WELDS (E.G. SW-6W) ALWAYS HAVE THE SW-PRE-FIX.
- 2. SPOOL DWG. REVISIONS ARE INDICATED BY A Δ

151 CLASS 2

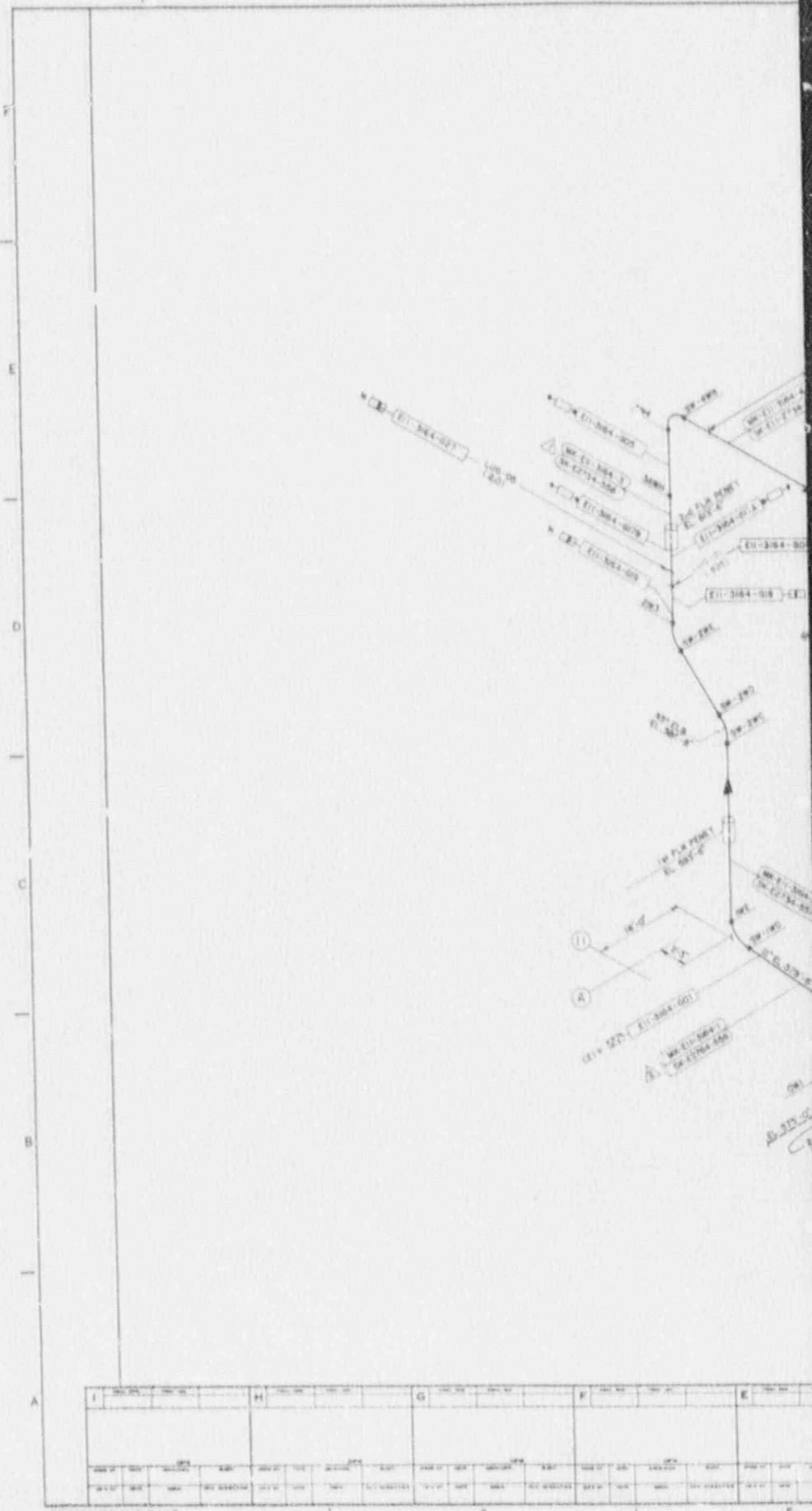
6M721-3162-5
CLASSIFICATION

DATE: Dec 15, 1984
BY: [Signature]
CHECKED BY: [Signature]

9101090241-48

NO.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
1	12/15/84	ISSUED FOR CONSTRUCTION	[Signature]	[Signature]	[Signature]
2					
3					
4					

THE DETROIT EDISON CO.
INSERVICE INSPECTION DIVISION (INPG1)
TURBINE EXHAUST
REACTOR BUILDING
INPGO FURNACE ROOMS FOR 1A, P. 307
6M721-3162-5
CLASSIFICATION

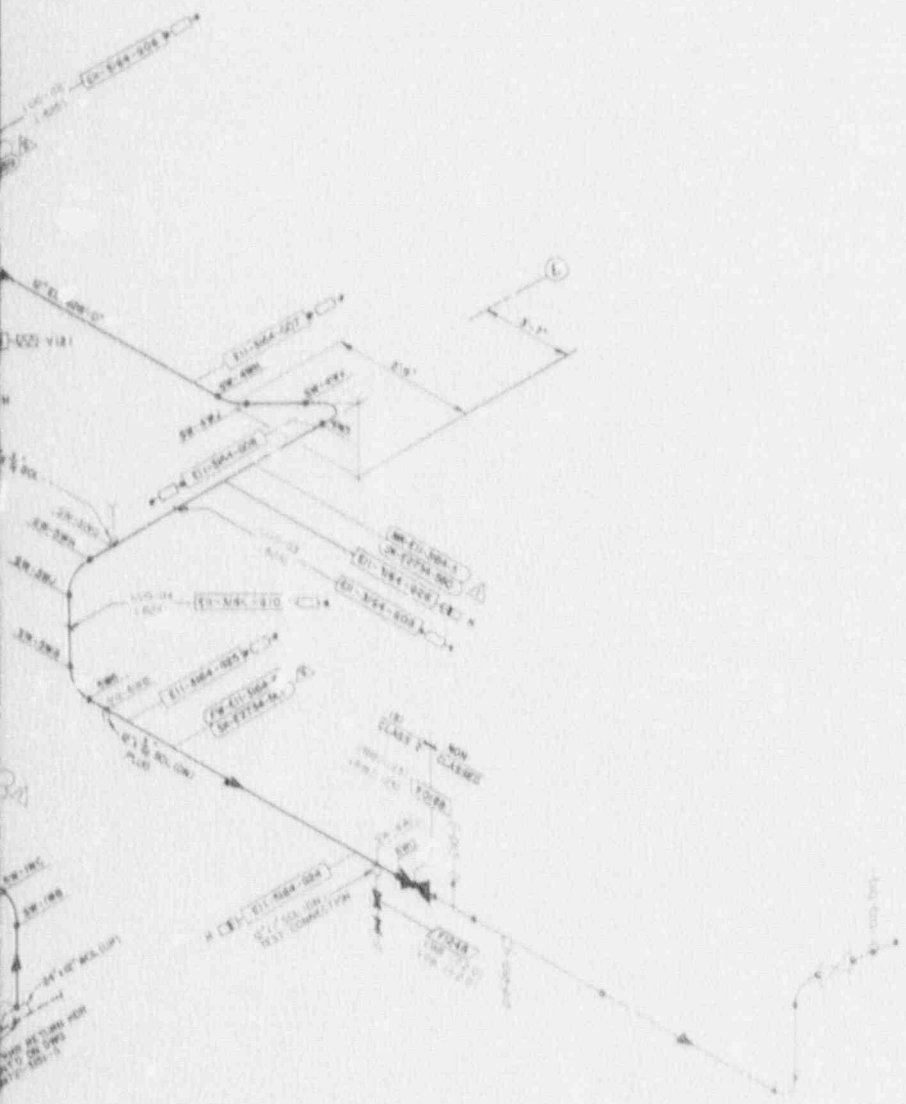




INTEGRALLY WELDED LUGS				
LUG NO.	TYPE OF WELD	COMPONENT NUMBERS	ITEM TIN	REFERENCE
001	W	SW-11, SW-12, SW-13, SW-14, SW-15	1	625 E
002	W	SW-11, SW-12, SW-13, SW-14, SW-15	2	625 N
003	W	SW-11, SW-12, SW-13, SW-14, SW-15	3	625 N
004	W	SW-11, SW-12, SW-13, SW-14, SW-15	4	625 N
005	W	SW-11, SW-12, SW-13, SW-14, SW-15	5	625 N

SI APERTURE CARD

Also Available On Aperture Card



REFERENCE DRAWINGS

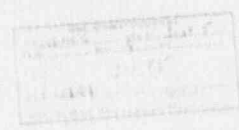
- SM721-2083 SYSTEM DIAGRAM (RHR)
- SM721-737 KEY PLAN OF PIPING SECTION & PLANS
- SM-255 PIPE LUGS
- SM721-110 PIPING ISOMETRIC
- SM721-564-5141 SUPPORTS ISOMETRIC

NOTES

- 1) SHOP WELDS (E.G. SW-100) ALWAYS START WITH THE PREFIX SW - IF A WELD NUMBER DOES NOT INCLUDE THE PREFIX SW - THE SUBJECT WELD IS A FIELD WELD.
- 2) SPOOL DRAWING REVISIONS ARE INDICATED BY A Δ

IS CLASS 2

SM721-3164-5
LARRY HOBSON

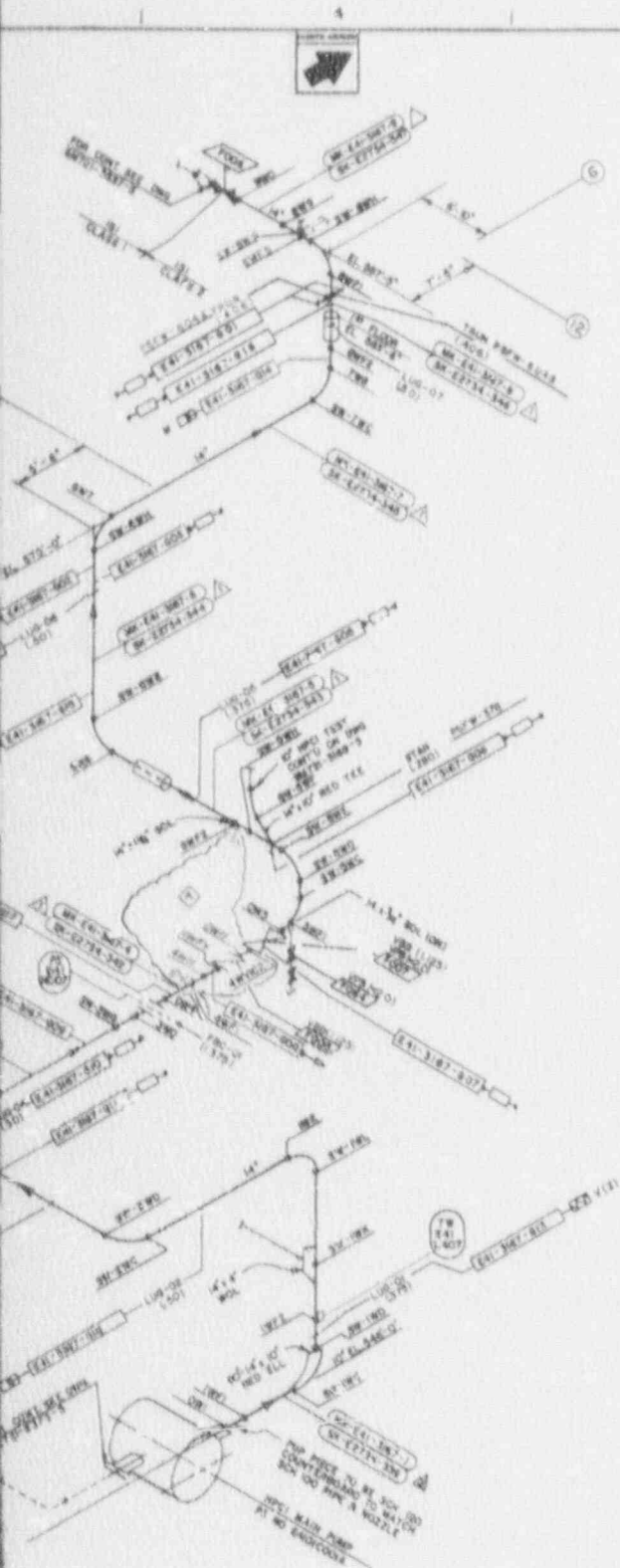


101090241-50

THE DETROIT Edison CO		ENGINEERING DEPARTMENT	
INSERVICE INSPECTION ISOMETRIC RHR CONTAIN APRAV (SOUTH) FROM RETURN HOX TO DRYWELL PENETRATOR-REACTOR BUILDING UNIT 2			
ENRICO (FERMI) ATOMIC POWER PLANT			
DOCUMENT CONTROL NO.			
SM721-3164-5			



I	H	G	F	E



INTEGRALLY WELDED LUGS					
LUG NO.	TYPE OF WELD	COMPONENT NUMBERS	ITEM(T) (M)	REFERENCE	L
LUG-01	W	SW-64-3167-05, 1W, 1W, 1W	7	375 N	45
LUG-02	W	PSW-64-3167-31A, 31B, 31C, 31D	8	50 W	45
LUG-03	W	SW-64-3167-2W, 2W, 2W, 2W	7	375 VERT	45
LUG-04	W	PSW-64-3167-31A, 31B, 31C, 31D	8	50 UP	45
LUG-05	W	SW-64-3167-3W, 3W, 3W, 3W	7	375 VERT	45
LUG-06	W	PSW-64-3167-405A, 405B, 405C, 405D	8	50 N	45
LUG-07	W	SW-64-3167-5W, 5W, 5W, 5W	8	50 NOT USED N	45

SI
APERTURE
CARD

Also Available On
Aperture Card

- REFERENCE DRAWINGS**
- 6M 721-2035 SYSTEM DIAGRAM (MPC)
 - 6M 721-2300 KEY PLAN OF PIPING SECTION AND PLANS
 - 3M-2331-101 PIPE LUGS
 - 6M 721-3167-101 PIPING ISOMETRIC
 - 6M 721-3167-102 SUPPORTS ISOMETRIC

- NOTES**
- WELD NUMBERS IF S WMS ARE ALL FIELD WELDS SHOW WEL 31 (E & SW-64) ALKIDS HAVE THE SW PREFIX
 - SPOOL WMS REVISIONS ARE INDICATED BY A Δ

1:1 CLASS 2 6M721-3167-5
LAYER REVISION A

910:090241-51

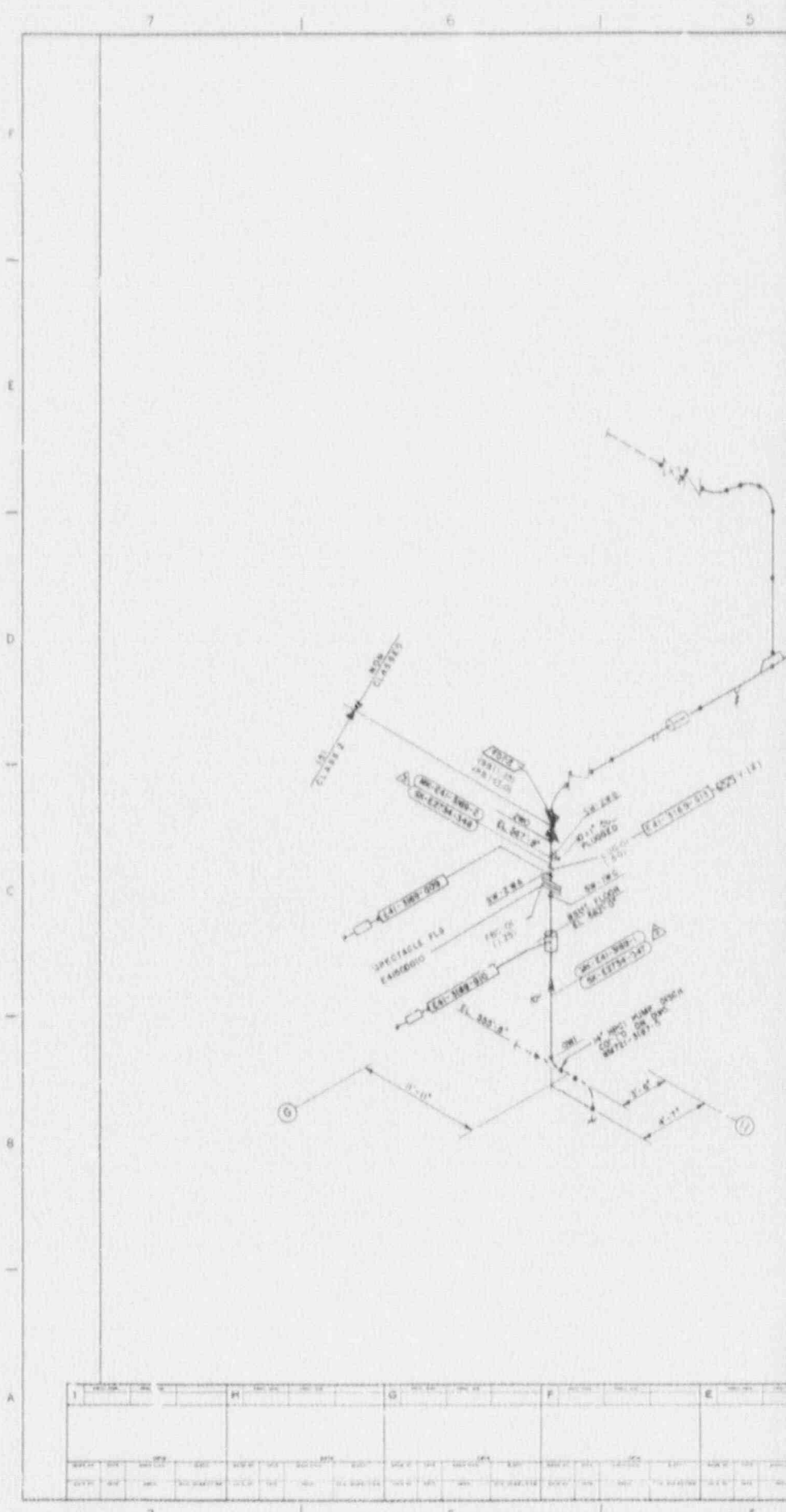
NO.	DESCRIPTION	DATE

NUCLEAR SAFETY RELATED

INSPECTOR INSPECTION ISOMETRIC - HPC PUMP
WREN TO SOUTH REACTOR FEEDWATER HOR
REACTOR BUILDING UNIT #2
DUIGG, FRANK ATOMIC POWER PLANT

6M721-3167-5 A

NO.	DESCRIPTION	DATE	BY	CHKD	APP'D



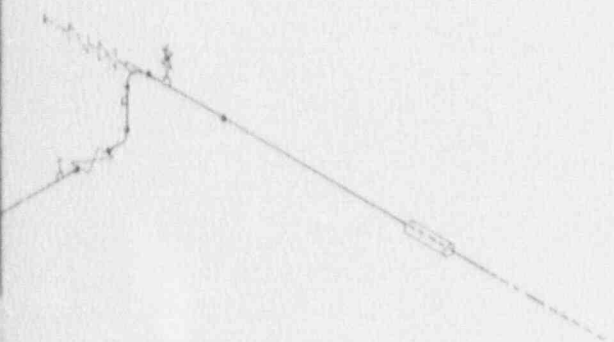
I		H		G		F		E	



INTEGRALLY WELDED LUGS				
LUG NO.	TYPE OF WELD	COMPONENT NUMBERS	ITEM (IN)	REFERENCE
103	W	SM-141-319-2RC, 2WD, 3W, 2WF, 4	4	NO. 4

SI APERTURE CARD

Also Available On Aperture Card



REFERENCE DRAWINGS

- SM 77-1 SYSTEM DIAGRAM (HPC)
- SM 72-1 PIPE PLAN OF PPMG SECTION AND PLANS
- SM 231 (D) PIPE LUGS
- SM 72-369-1 (G) PIPING ISOMETRIC
- SM 72-369-2 (M) SUPPORTS ISOMETRIC

NOTES

1. WELD NUMBERS (IF ANY) ARE ALL FIELD WELDS. SHOP WELDS (I.E. SM-369) HAVE THE SM-PRE-FIX.
2. SPOOL OWN REVISIONS ARE INDICATED BY A Δ

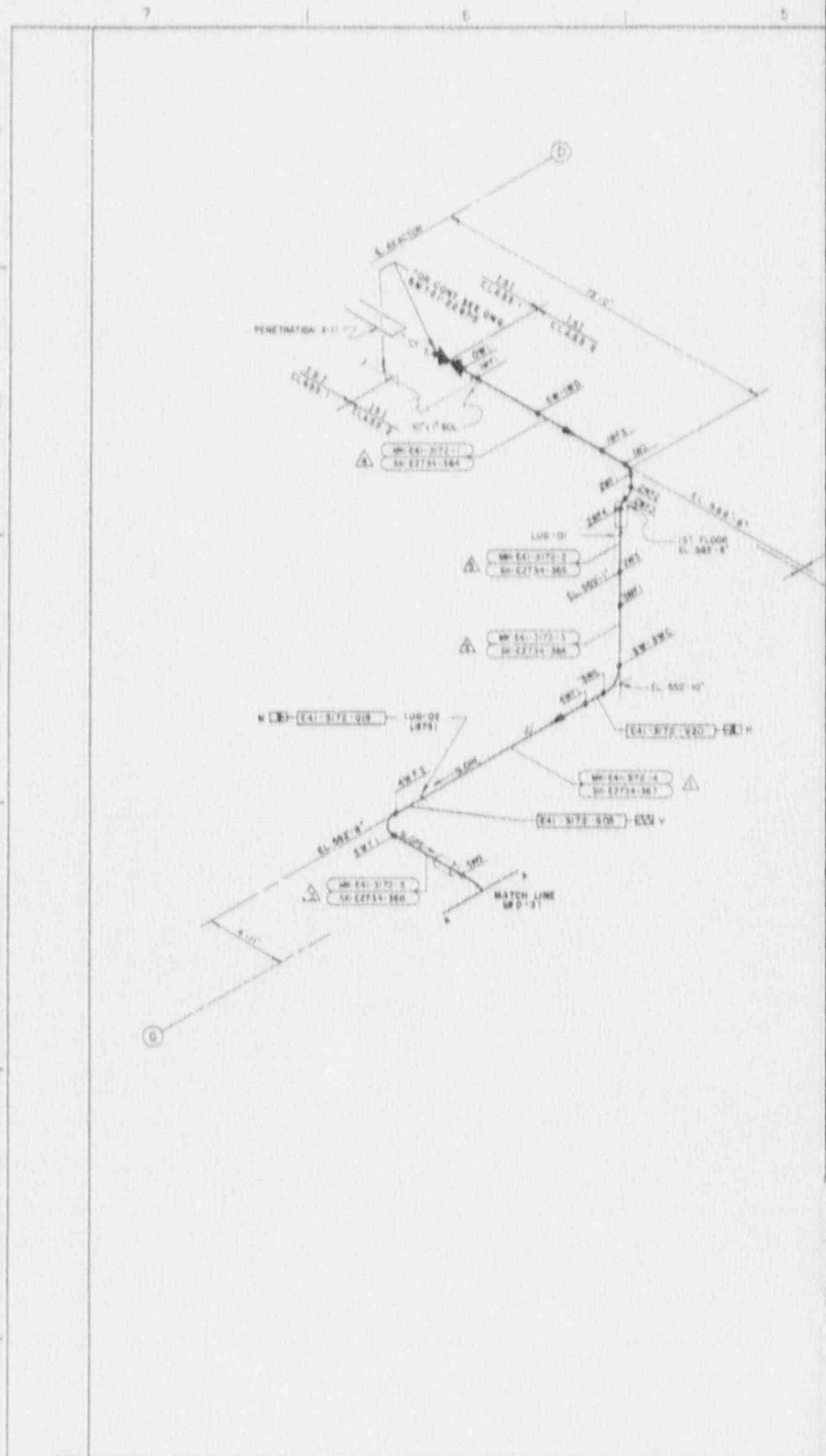
SI CLASS 2 SM721-3169-1
 EXISTING SECTION

9101090241-52

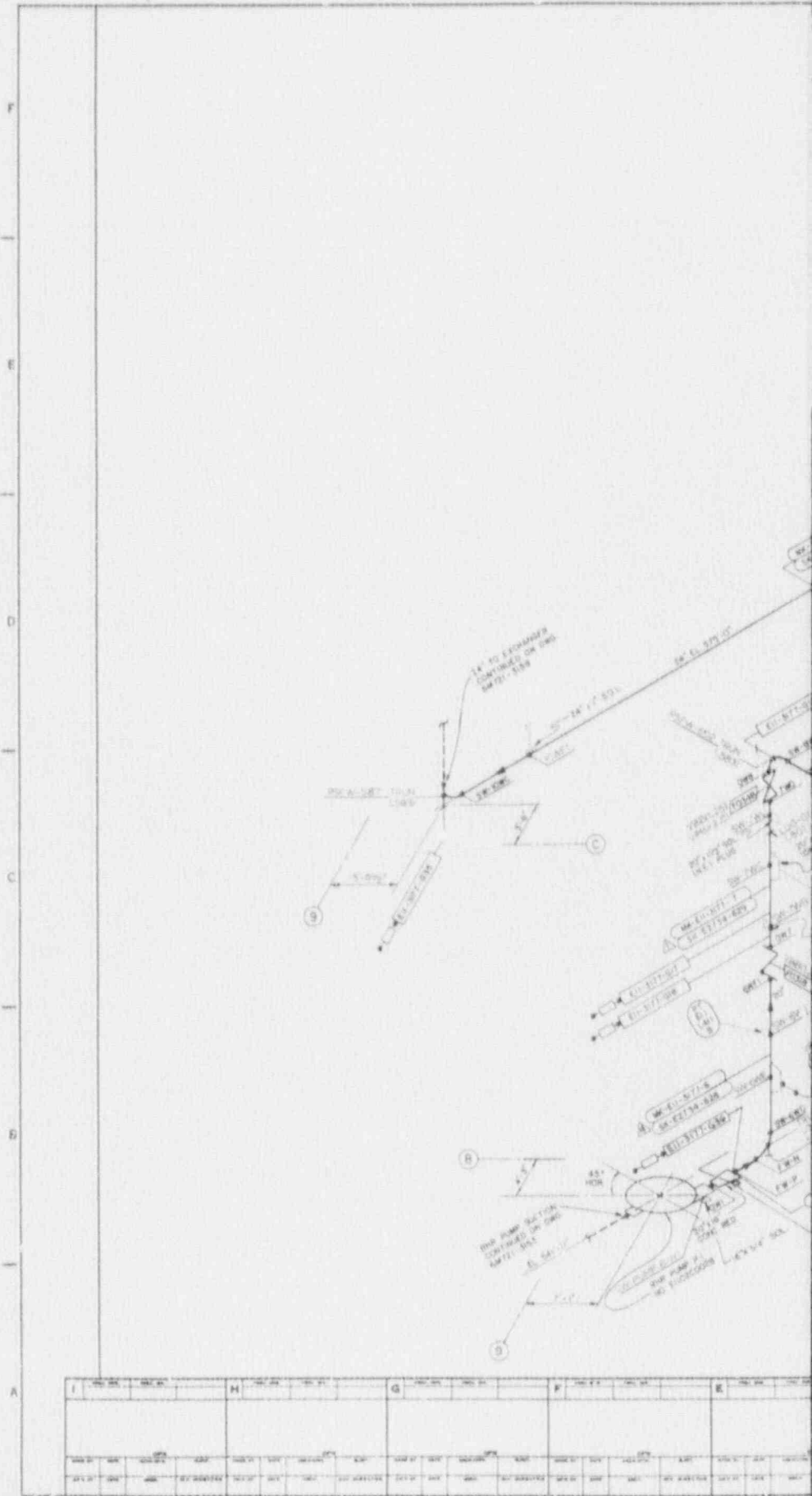
APPROVED: *[Signature]*
 DATE: 4-2-68
 BY: *[Signature]*

NO.	DATE	DESCRIPTION	BY	CHKD	APP'D	REVISION
1	4-2-68	ISSUED FOR CONSTRUCTION	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	

THE DETROIT EDISON CO. ENGINEERING DEPARTMENT
 TITLE: INSERVICE INSPECTION ISOMETRIC DRAWING FROM PUMP DISCHARGE TO SWG STORAGE SYSTEM REACTOR BUILDING UNIT #2
 LOCATION: ENRGO FROM ATOMIC POWER PLANT
 DRAWING DOCUMENT CONTROL NO. 241 10
 PROJECT: SWG STORAGE SYSTEM
 6M721-3169-5 PH
 DESIGNED BY: *[Signature]* CHECKED BY: *[Signature]*
 DRAWN BY: *[Signature]*

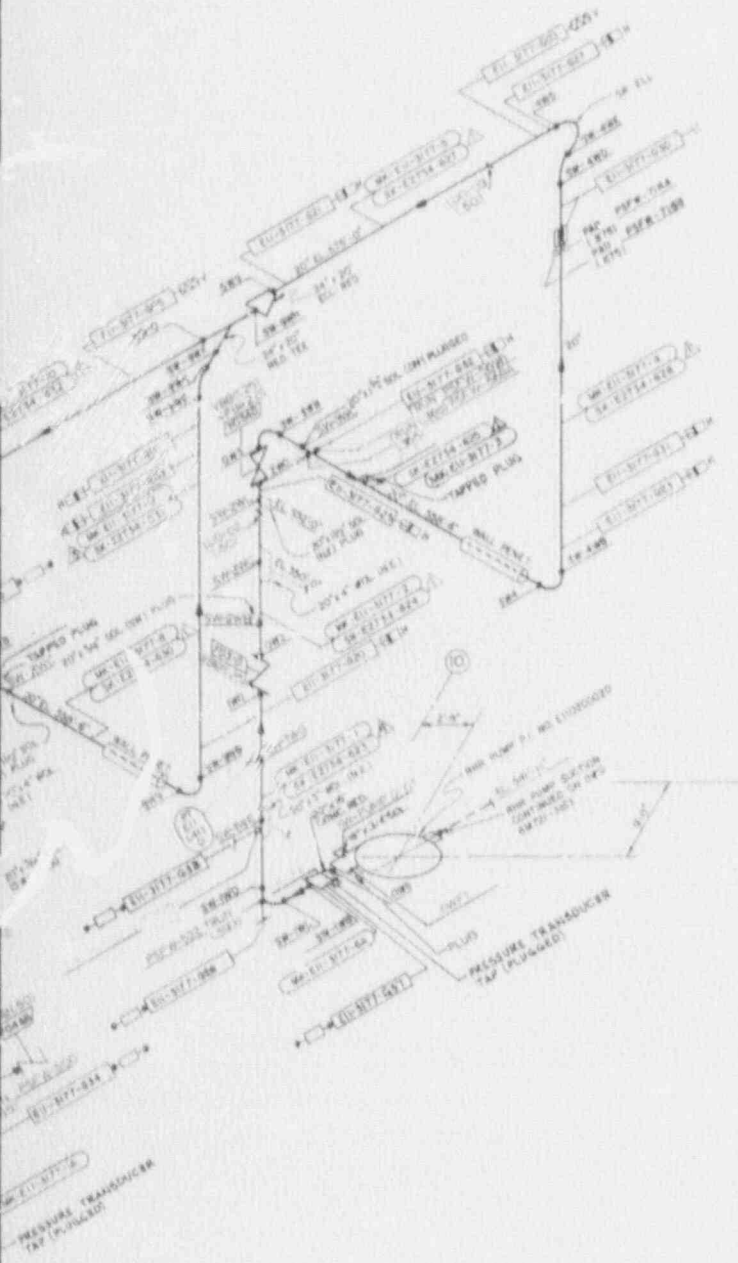


I		H		G		F		E	





INTEGRALLY WELDED LUGS						
LUG NO.	TYPE OF WELD	COMPONENT NUMBERS	ITEM	TYP.	REFERENCE	L.
LM-01	W	SW-ET-3177-TW6, TW7, TW9, TW10, TW11, TW4	14	50	IS NOT USED	30"
LM-02	W	SW-ET-3177-TW2, TW3, TW5, TW8, TW12, TW13	14	50	IS NOT USED	30"
LM-03	W	SW-ET-3177-SWC, SWC SW4, SW5, SW7, SW8, SW9	14	50	IS NOT USED	30"



SI APERTURE CARD
Also Available On Aperture Cards

REFERENCE DRAWINGS

- 6M72-2081 SYSTEM DIAGRAM (RHW)
- 6M72-2382 4E' PLAN OF PIPING SECTIONS B PLAN
- SM-2551(D) PIPE LUGS
- 6M72-3177-1(1) PIPING ISOMETRIC
- 6M72-3177-2(2) SUPPORTS ISOMETRIC

NOTES

- 1) SHOP WELDS (E.G. SW-SWB) ALWAYS START WITH THE PREFIX SW- IF A WELD NUMBER DOES NOT INCLUDE THE PREFIX SW- THE SUBJECT IS A FIELD WELD.
- 2) SPOOL DRAWING REVISIONS ARE INDICATED BY A Δ

IS CLASS 2

6M72-3177-5
LATEST REVISION A

9101090241-54

APPROVED FOR RELEASE	DATE

NUCLEAR SAFETY RELATED

5

REV.	DATE	BY	CHKD.	DESCRIPTION		APP'D.	DATE	REVISIONS
				NO.	DESCRIPTION			

THE DETROIT Edison Co. MANUFACTURING INSPECTION, ISOLATING PIPE, PUMP, DISCONNECT, SW, RECORDING BUILDING, 487-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000
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INTEGRALLY WELDED LUGS
NONE

SI APERTURE CARD

Also Available On
Aperture Card

REFERENCE DRAWINGS

- 6M72-2063 SYSTEM DIAGRAM (RHD) S&T
- 6M72-2320 KEY PLAN OF PIPING SECTION & PLANS
- SM-233 (D) PIPE LINES
- 6M72-3084-1 (V) PIPING ISOMETRIC
- 6M72-3084-2 (J) SUPPORTS ISOMETRIC

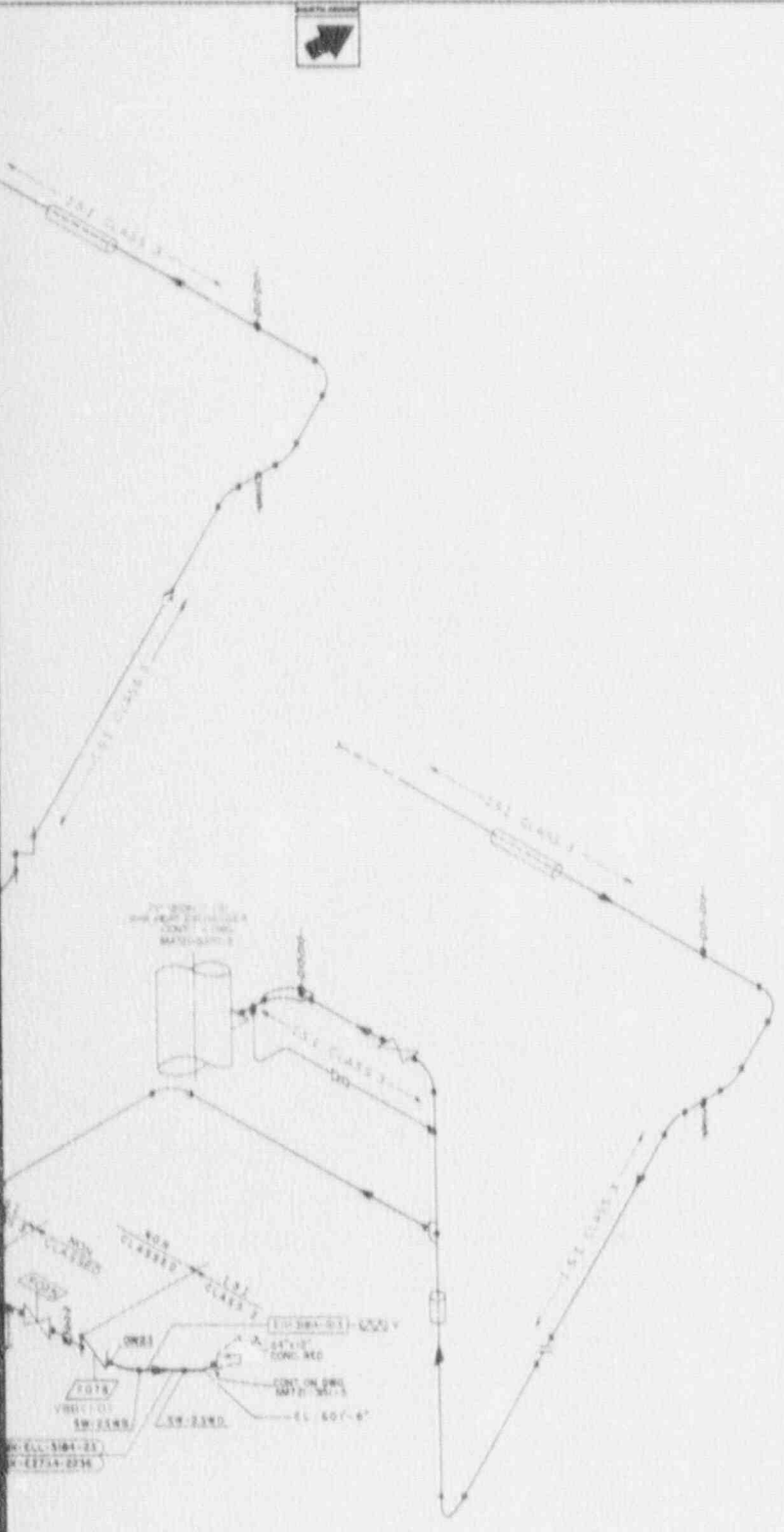
NOTES

1. WELD NUMBERS (E & SW) ARE ALL FIELD WELDS
SHOP WELDS (E.G. SW-5M2) ALWAYS HAVE THE
SW-PRE-Y (Y)
2. SPOOL DWS REVISIONS ARE INDICATED BY A Δ

1:1 CLASS 2 6M72-3084-5
REVISED

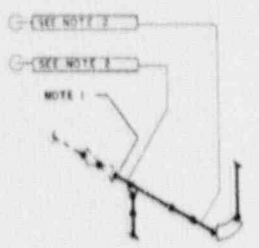
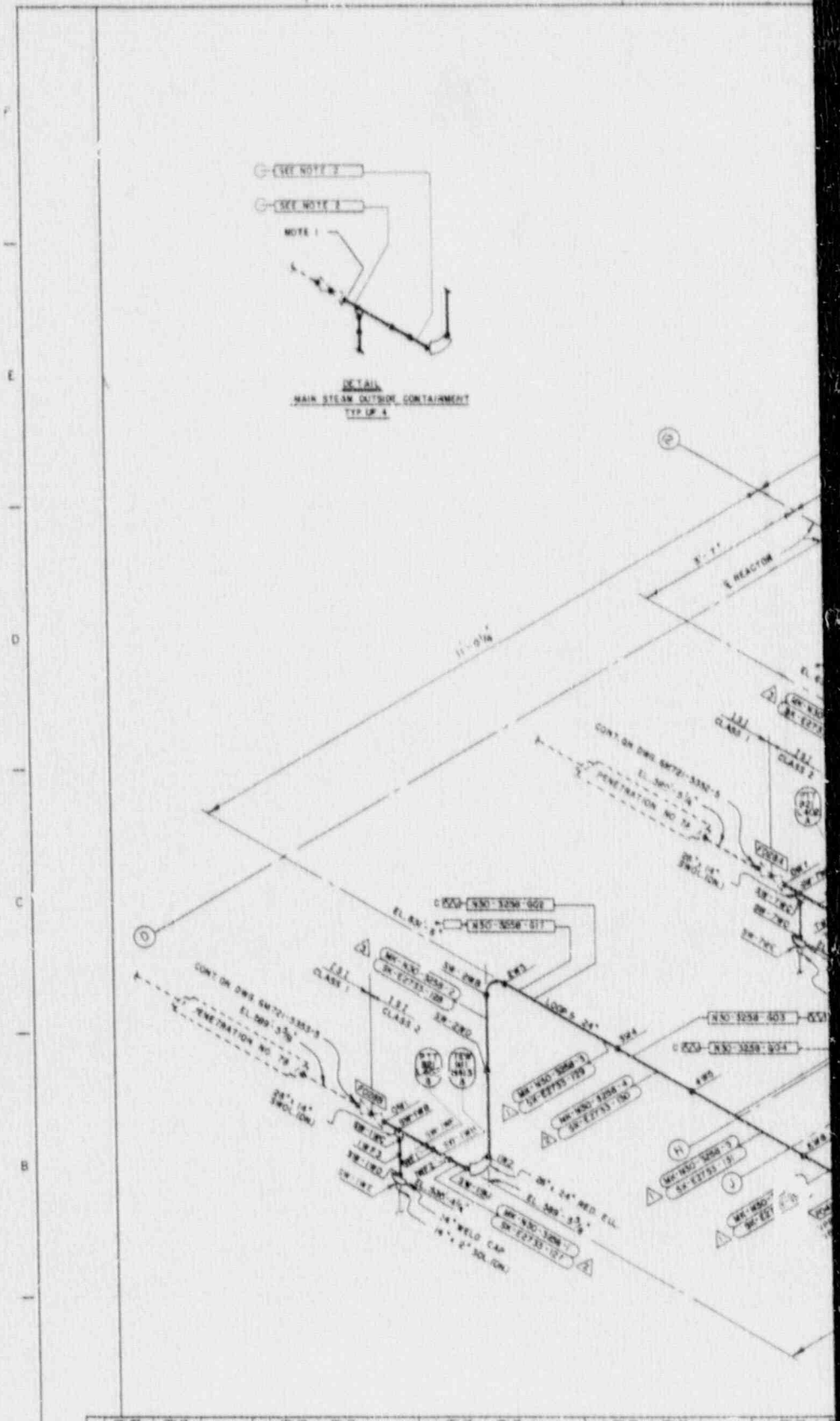
9101090241-55

DATE: FEB 16, 1965
BY: E. J. J. J.



NO.	REV.	DATE	BY	CHKD.	DESCRIPTION
1	1				ISSUED FOR CONSTRUCTION
2	1				REVISION
3	1				REVISION
4	1				REVISION
5	1				REVISION
6	1				REVISION
7	1				REVISION
8	1				REVISION
9	1				REVISION
10	1				REVISION
11	1				REVISION
12	1				REVISION
13	1				REVISION
14	1				REVISION
15	1				REVISION
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17	1				REVISION
18	1				REVISION
19	1				REVISION
20	1				REVISION

7 6 5

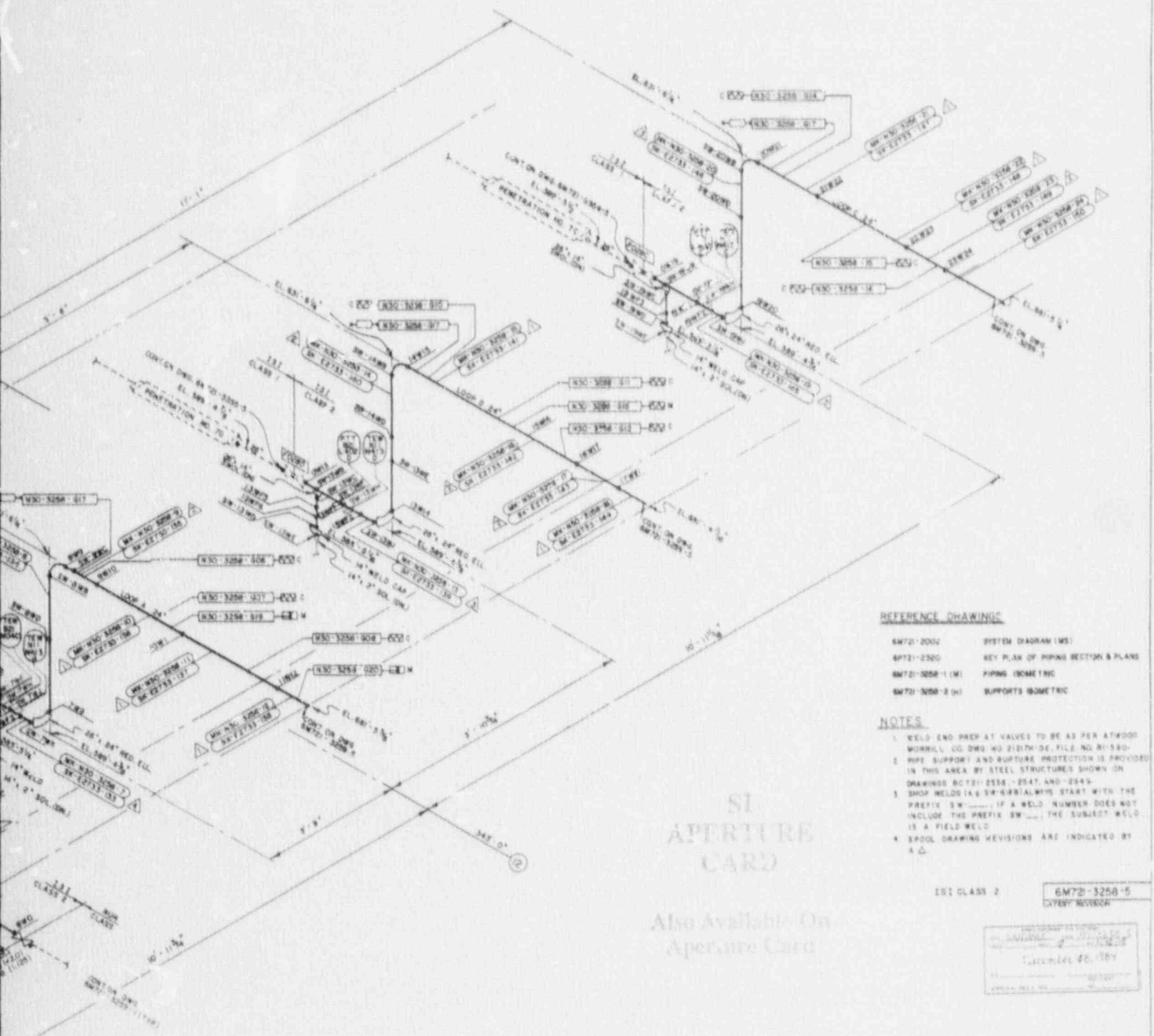


DETAIL
MAIN STEAM OUTSIDE CONTAINMENT
TYP. OF 4

F
E
D
C
B
A

I	H	G	F	E

7 6 5



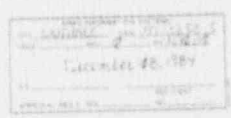
- REFERENCE DRAWINGS**
- 6M72-2002 SYSTEM DIAGRAM (MS)
 - 6M72-2300 KEY PLAN OF PIPING SECTION & PLANS
 - 6M72-3258-1 (M) PIPING ISOMETRIC
 - 6M72-3258-2 (H) SUPPORTS ISOMETRIC

- NOTES**
1. WELD END PREP AT VALVES TO BE AS PER ATWOOD MORRILL CO. DWS NO. 2127H-DE, FILE NO. B1-530-PIPE SUPPORT AND BURSTURE PROTECTION IS PROVIDED IN THIS AREA BY STEEL STRUCTURES SHOWN ON DRAWINGS 6C72-2558-2047 AND -2049.
 2. SHOP WELDS (AS SHOWN) SHALL START WITH THE PREFIX SW..... IF A WELD NUMBER DOES NOT INCLUDE THE PREFIX SW....., THE SUBJECT WELD IS A FIELD WELD.
 3. SPOOL DRAWING REVISIONS ARE INDICATED BY A Δ.

SI
APERTURE
CARD

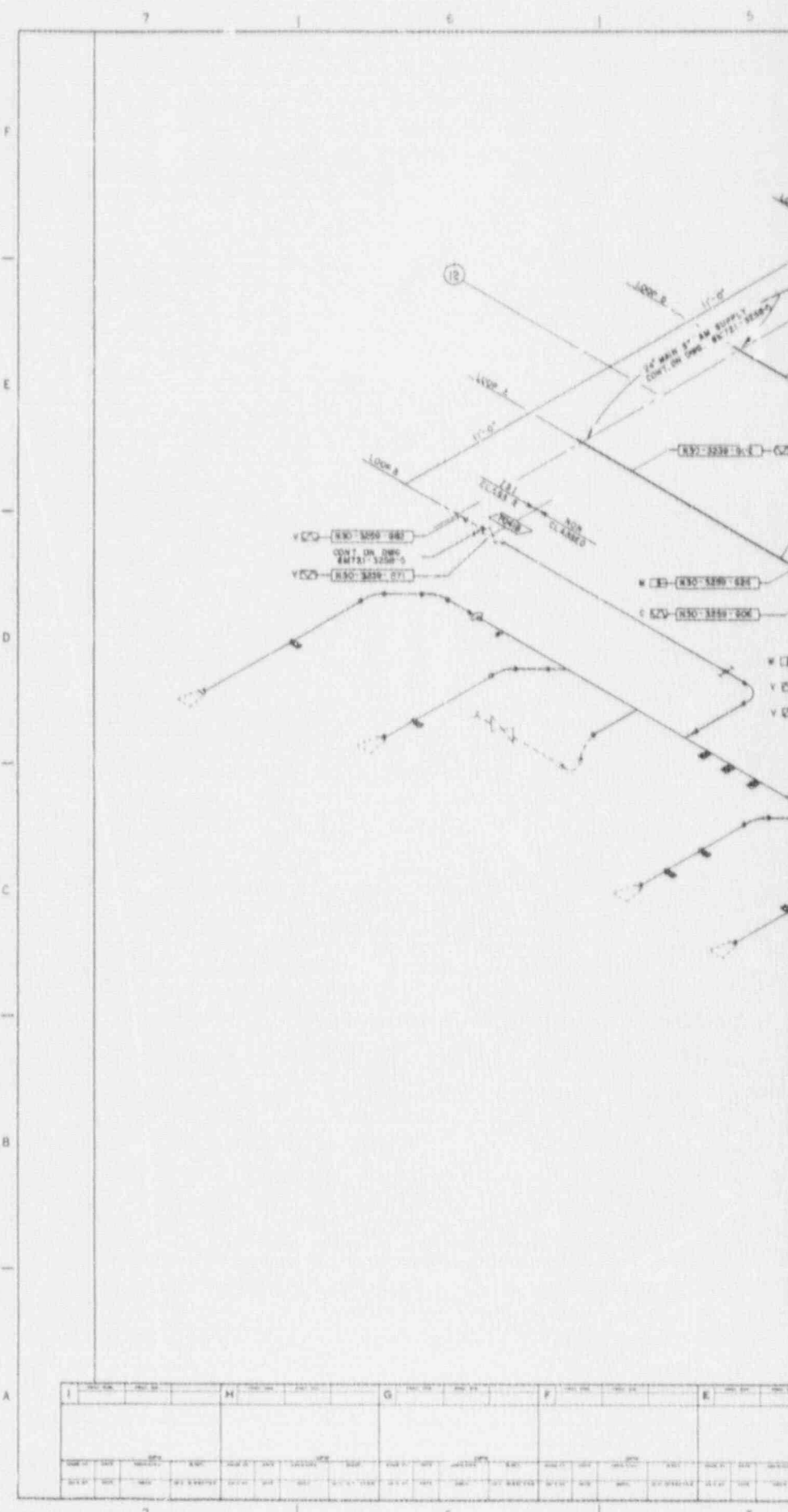
Also Available On
Aperture Card

ISI CLASS 2 6M72-3258-5
EXPERT NUMBER



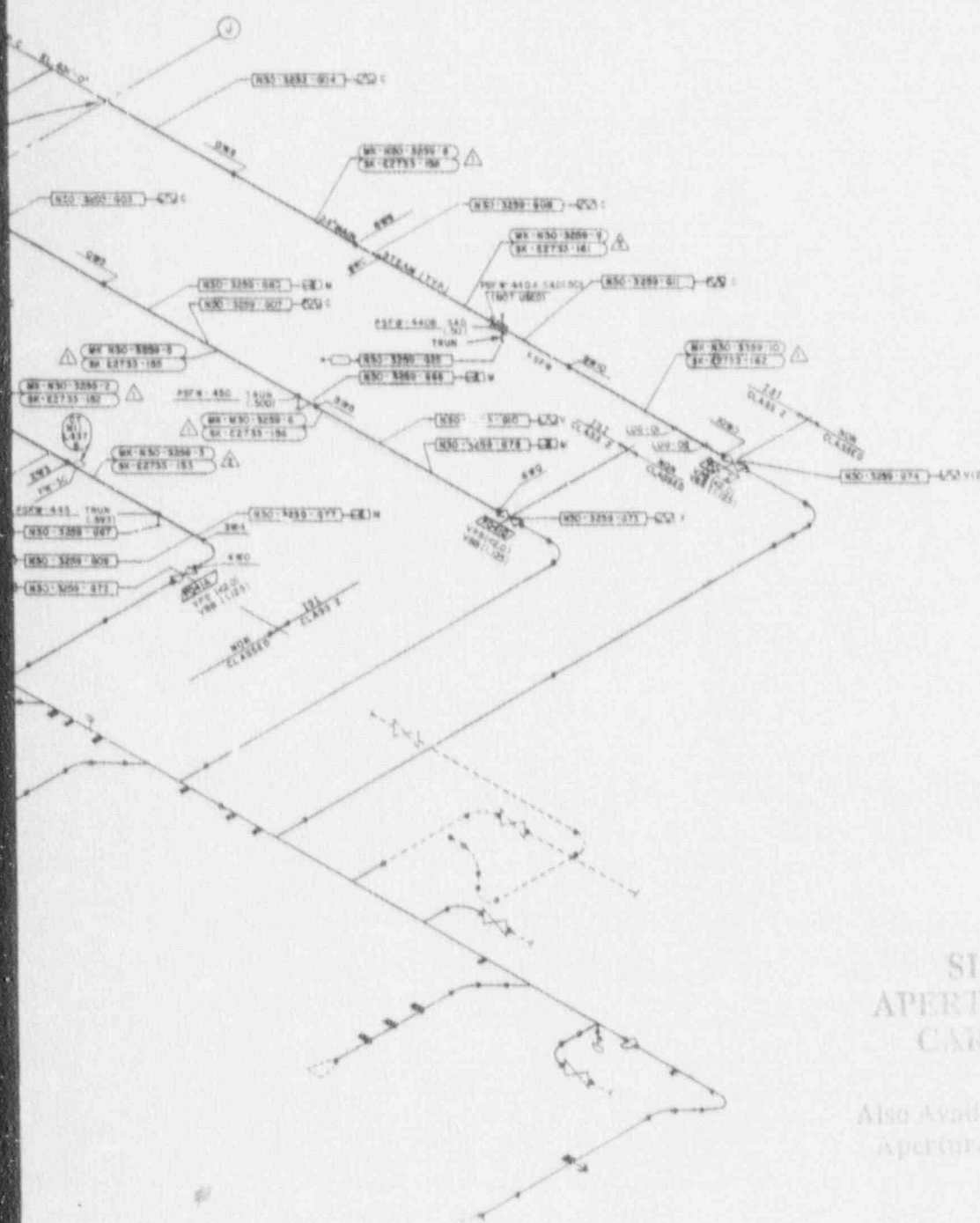
9101090241-56

THE DETROIT STEEL CO.		DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION
1			INSERVICE INSPECTION, ISO 17818
2			MAIN STEAM FROM DRYWELL TO TURBINE MANIFOLD
3			REACTOR BLOCK UNIT 1
4			DURING FERRIC ATOMIC POWER PLAN
5			INSPECTION DOCUMENT CONTROL
6			REVISIONS
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I			H			G			F			E		

INTEGRALLY WELDED LUGS						
LUG NO.	TYPE	SP	COMPONENT NUMBERS	ITEM TAG	REFERENCE	L
LUG 101	•		SW-NR-3259-10W1, 10W2, 10W3, 10W4, 10W5, 10W6, 10W7, 10W8	76	NOT USED	
LUG 102	•		SW-NR-3259-10W1, 10W2, 10W3, 10W4, 10W5, 10W6, 10W7, 10W8	76	NOT USED	



- REFERENCE DRAWINGS**
- 6M72-2002 SYSTEM DIAGRAM (MS)
 - 6M72-2300 KEY PLAN OF PIPE SECTION AND PLANS
 - SM-233(01) PIPE LUGS
 - 6M72-3259-1(1) PIPING ISOMETRIC
 - 6M72-3259-2(1) SUPPORTS ISOMETRIC

- NOTES**
- MATERIALS DOWNSTREAM FROM SHD ISOLATION VALVE (SHEETS 3259-201 & 202) ARE EXCLUDED FROM MATERIAL CLASS REQUIREMENTS. SEE TEMP-5884 & P-1075.
 - SHOP WELD (E.G. SW-SWS) ALWAYS START WITH THE PREFIX SW. IF A WELD NUMBER DOES NOT INCLUDE THE PREFIX SW, THE SUBJECT WELD IS A FIELD WELD.
 - SPOOL DRAWING REVISIONS ARE INDICATED BY A Δ.

SI
APERTURE
CARD

1ST CLASS 2 6M72-3259-5
RAYMOND HERRIAC

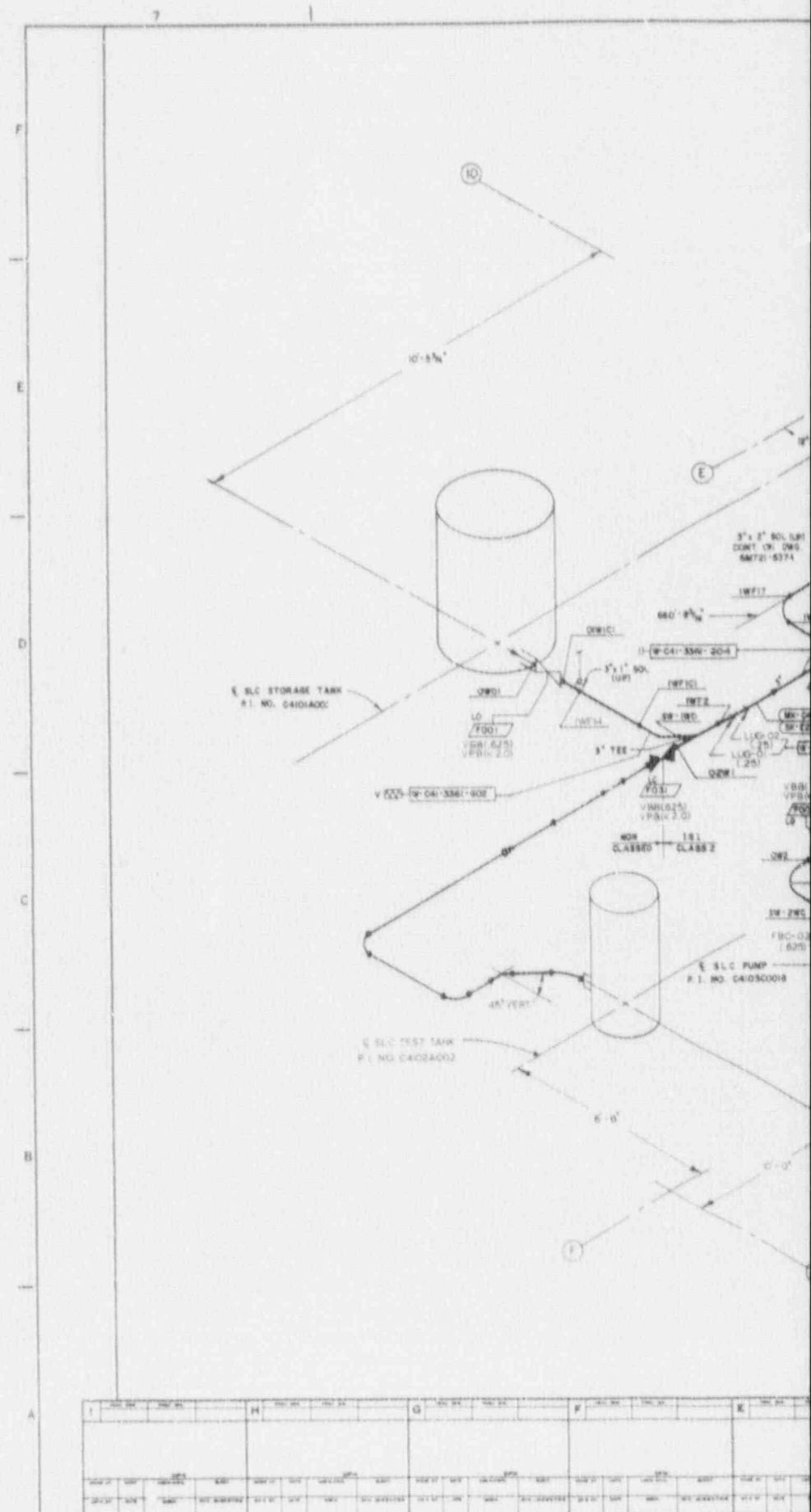
Also Available On
Aperture Card

9101090241-57

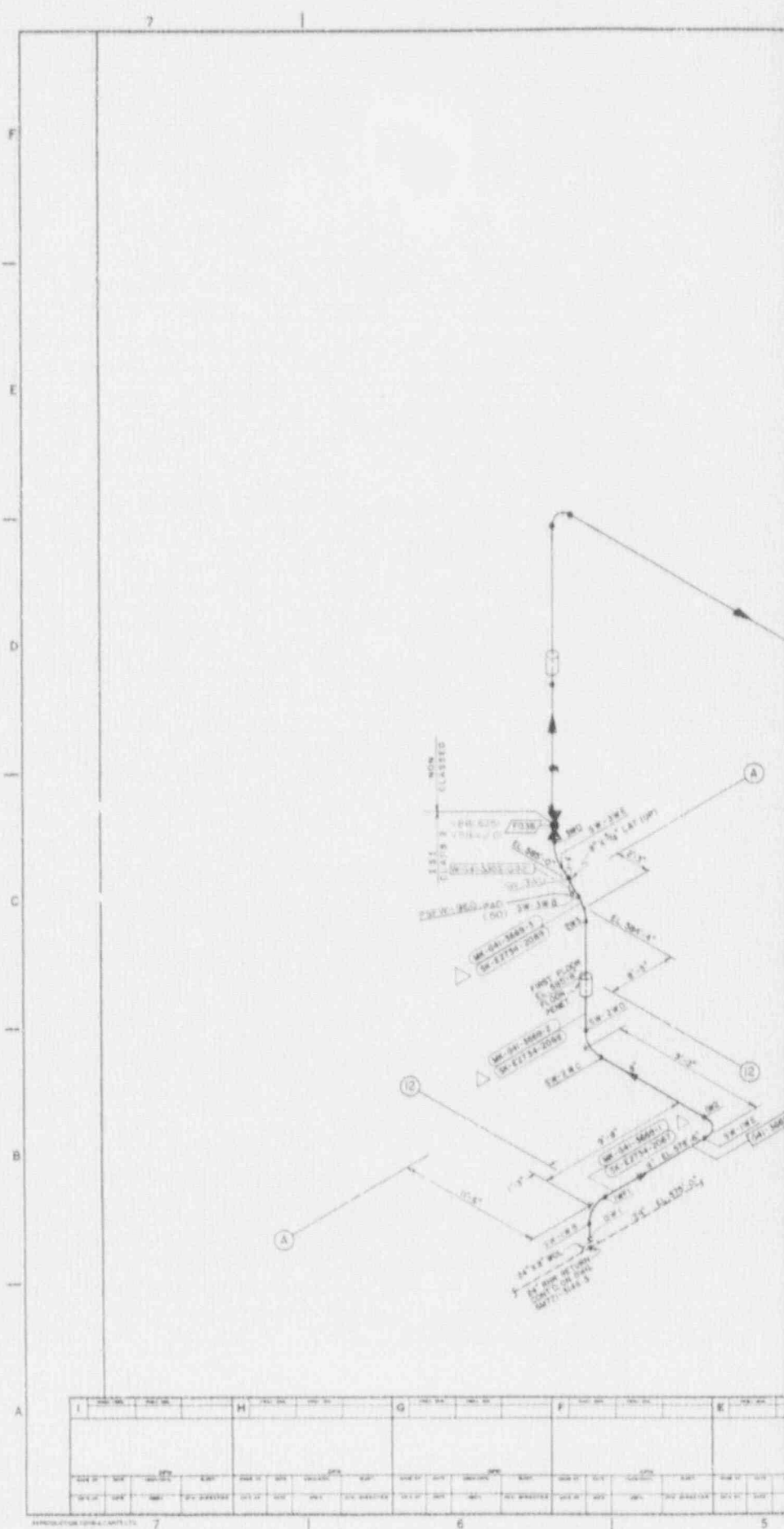
DEC 5 1991
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THE BETHLEHEM STEEL COMPANY											
DRAWING INFORMATION						REVISIONS					
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6M72-3259-5
RAYMOND HERRIAC



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INTEGRALLY WELDED LUGS
NONE

SI APERTURE CARD

Also Available On
Aperture Card



REFERENCE DRAWINGS

- 6M721-2048-2083 SYSTEM DIAGRAM (RHR)
- 6M721-2520 KEY PLAN OF PIPING SECTION & PLANS
- 3M-2331 (D) PIPE LUGS
- 6M721-3669-1 (K) PIPING ISOMETRIC
- 6M721-3669-2 (L) SUPPORTS ISOMETRIC

NOTES

- WELD NUMBERS (E.G. DW) ARE ALL FIELD WELDS
SHOP WELDS (E.G. SW, EW) ALWAYS HAVE THE
SW-EW-FIX
- SPOOL DW'S REVISIONS ARE INDICATED BY A Δ

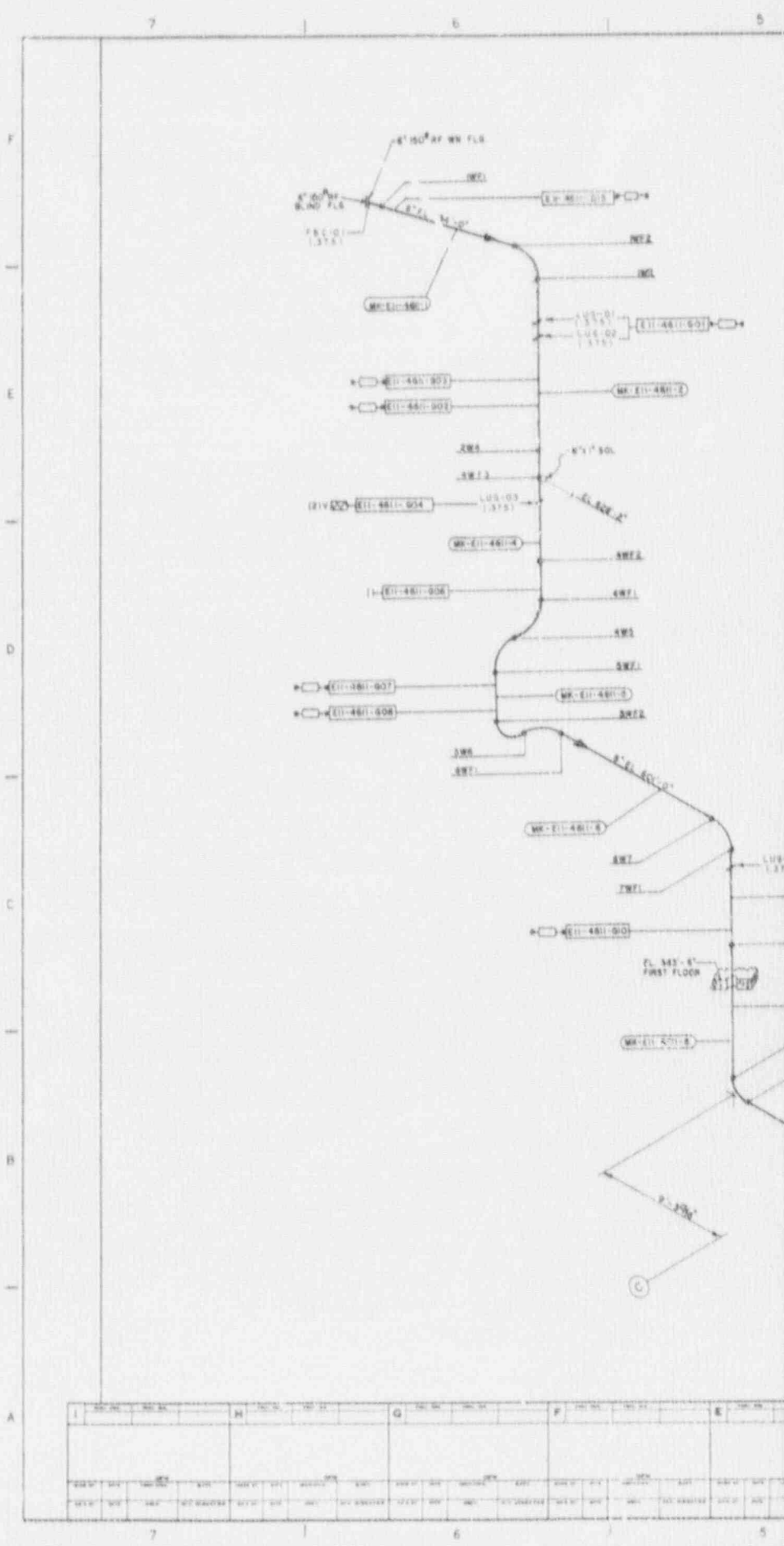
IS | CLASS 2

6M721-3669-5
LATEY SECTION

9101090241-54

DATE	10/10/70
BY	6M721
CHECKED	
DATE	

THE DETROIT ENGINE CO.		ENGINEERING DEPARTMENT	
DATE	10/10/70	PROJECT	INSERVICE INSPECTION ISOMETRIC
BY	6M721	DESCRIPTION	RHR SUPPLY HEADER TO PFC SYSTEM
CHECKED		LOCATION	REACTOR BUILDING UNIT #2
DATE		PLANT	ENRICO FERM1 ATOMIC POWER PLANT
APPROVED		DOCUMENT CONTROL NO.	14-33
DATE		PROJECT NUMBER	6M721-3669-5
BY		SCALE	AS SHOWN
CHECKED		DATE	
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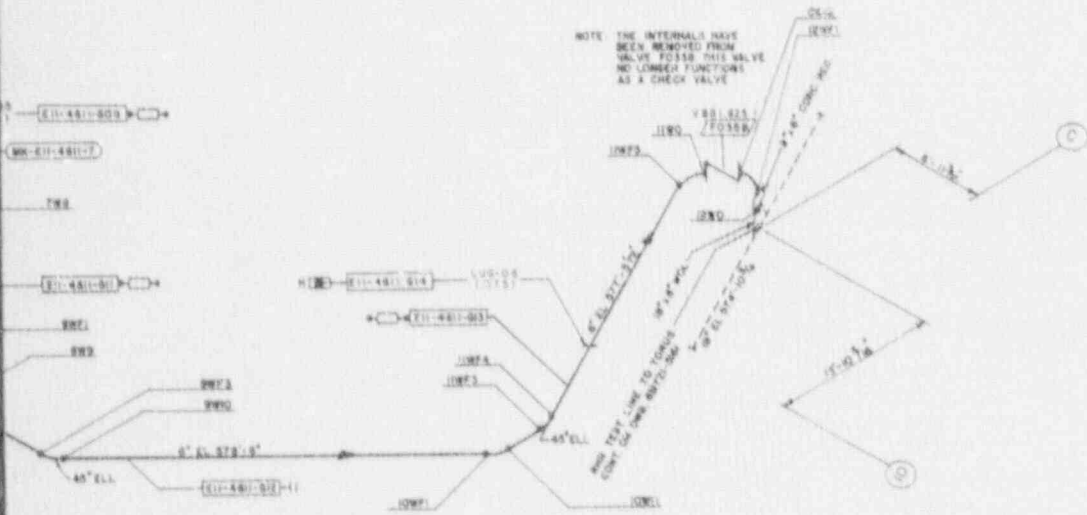


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001	001	002	002	003	003	004	004	005	005
006	006	007	007	008	008	009	009	010	010



INTEGRALLY WELDED LUGS					
LUG NO.	TYPE OF WELD	COMPONENT NUMBERS	ITEM TIME	REFERENCE	
LUG-01	*	PSFW-EI1-4611-7432, 7433, 743C, 743D	3	375 N	0
LUG-02	*	PSFW-EI1-4611-743E, 743F, 743G, 743H	3	375 N	0
LUG-03	*	PSFW-EI1-4611-744A, 744B, 744C, 744D	3	375 N	43
DELETED					
LUG-05	*	PSFW-EI1-4611-746A, 746B, 746C, 746D	3	375 N	43
LUG-06	*	PSFW-EI1-4611-747A, 747B, 747C, 747D	3	375 UP	43

SI APERTURE CARD
Also Available On Aperture Card



REFERENCE DRAWINGS

- 6M721-2084 SYSTEM DIAGRAM OVER
- 6M721-2330 KEY PLAN OF PIPING SECTION B PLAN
- SM-2331 101 PIPE LUGS
- 6M721-4611-1 (D) PIPING ISOMETRIC
- 6M721-4611-2 (D) SUPPORTS ISOMETRIC

NOTES

- WELD NUMBERS (E.G. SW-02) ARE ALL FIELD WELDS. SHOP WELDS (E.G. SW-02) ALWAYS HAVE THE SW-PRE-FIX.
- SPOOL OWS REVISIONS ARE INDICATED BY A Δ

ISI CLASS 2 6M721-4611-5
LATEST REVISION

DATE: 15, 1984
BY: C/D/D

9101090248-60

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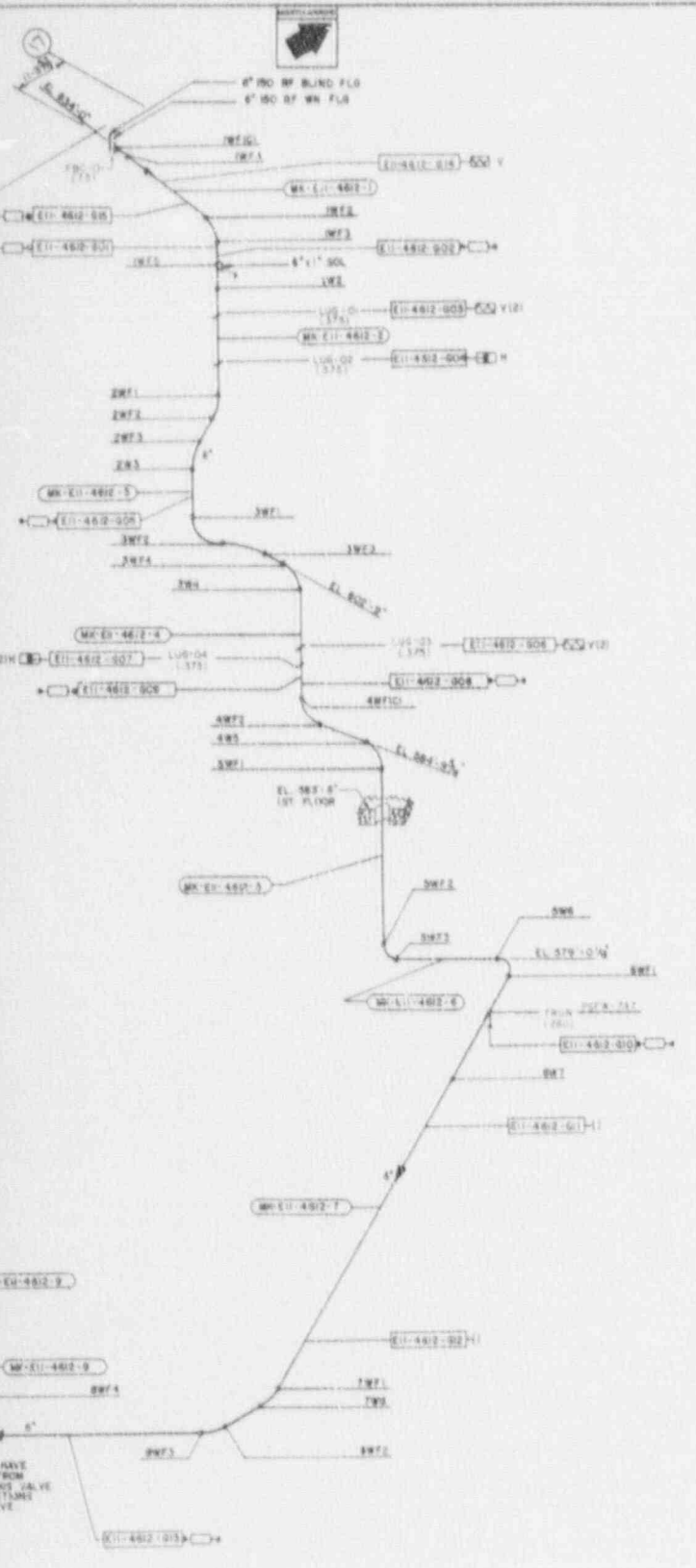
THE DETROIT EDISON CO. ENGINEERING DEPARTMENT

TITLE: INSERVICE INSPECTION ISOMETRIC RELIEF LINE FROM REAR HEAT EXCH. SOUTH REACTOR BLDG. UNIT 2

PROJECT: ENRICO FARM ATOMIC POWER PLANT

DOCUMENT CONTROL NO. 15

6M721-4611-5



INTEGRALLY WELDED LUSS					
LUSS NO.	TYPE OF WELD	COMPONENT NUMBERS	STEM (I/W)	REFERENCE	L
LUSS-01	*	PSFW-EI-4612-786A, 786B, 786C, 786D	3	375 N	0
LUSS-02	*	PSFW-EI-4612-786A, 786B, 786C, 786D	3	375 N	0
LUSS-03	*	PSFW-EI-4612-750A, 750B, 750C, 750D	3	375 N	0
LUSS-04	*	PSFW-EI-4612-751A, 751B, 751C, 751D	3	375 N	01

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Also Available On
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REFERENCE DRAWINGS

- 6M721-2084 SYSTEM DIAGRAM (DHR)
- 6M721-2330 KEY PLAN OF PIPING SECTION (PLAN)
- SW-253 (0) PIPE LUGS
- 6M721-4612-1 (0) PIPING ISOMETRIC
- 6M721-4612-2 (0) SUPPORTS ISOMETRIC

NOTES

1. WELD NUMBERS (E. & SW#) ARE ALL FIELD WELDS.
 2. SHOP WELDS (E. & SW#) ALWAYS HAVE THE SW PRE-FIX.
 3. SPINDL DWS REVISIONS ARE INDICATED BY A Δ.

SI CLASS 2 6M721-4612-5
 LATEST REVISION

DOUGLAS R. HARRIS
 DEC 2, 1974
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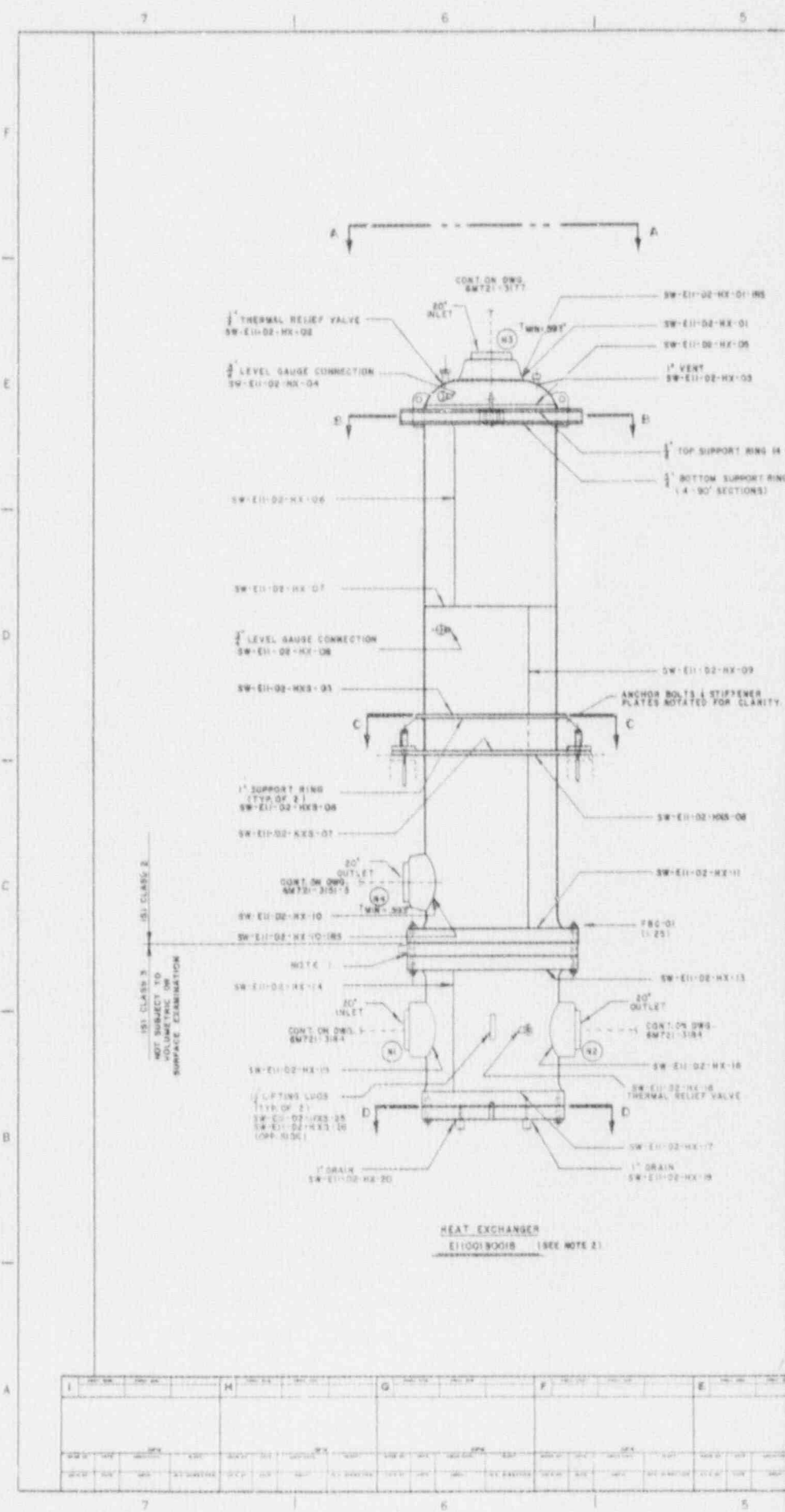
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REV.	DATE	BY	CHKD.	APP.	DESCRIPTION
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THE DETROIT EDGEMO CO. ENGINEERS AND ARCHITECTS

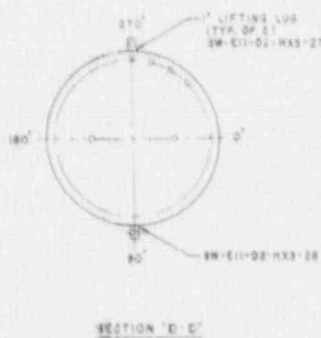
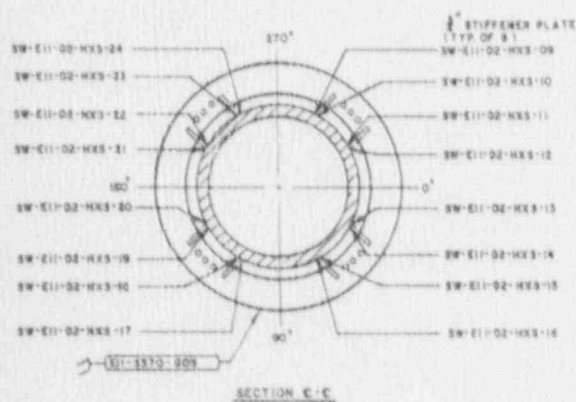
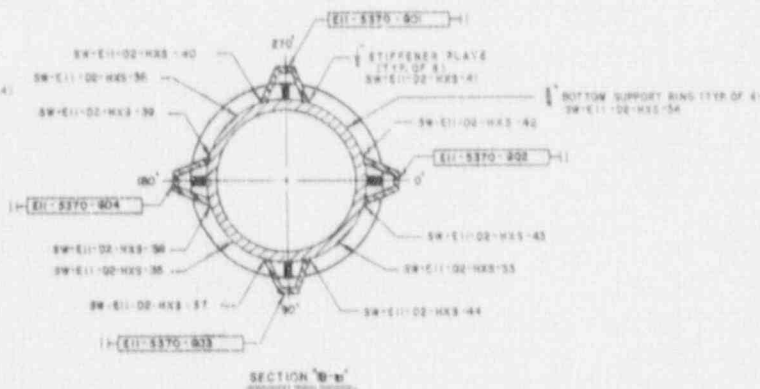
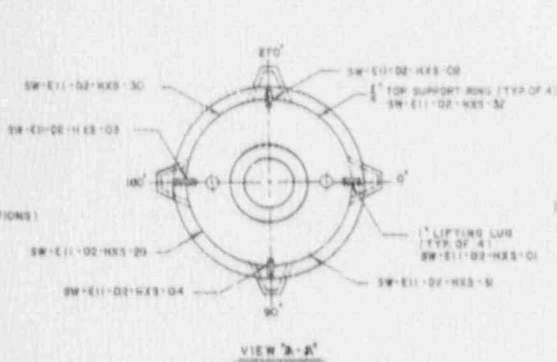
INSERVICE INSPECTOR ISOMETRIC
 RELIEF LINE FROM DHR HEAT EXCH-NORTH
 REACTOR BLDG UNIT 2
 ENRICO FERM. ATOMIC POWER PLANT

DOCUMENT CONTROL NO. 6M721-4612-5
 SHEET NO. P22



SI APERTURE CARD

Also Available On
Aperture Card



REFERENCE DRAWINGS

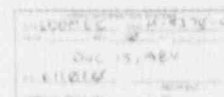
- 6M721-2320 KEY PLAN OF PIPING SECTION & DETAILS
- 6M721-2004 SYSTEM DIAGRAM (RHR)
- R4-206(2) DETAILS & ASSEMBLY OF RHR HEAT EXCHANGER
- R4-206(1) SUPPORTS & LIFTING LUGS OF RHR HEAT EXCHANGER
- R4-207(1) CROSS SECTION OF RHR HEAT EXCHANGER

NOTES

- TUBE SHEET (NOT SHOWN) HAS SOCKET WELD NUMBER: SW-E11-02-HX-02, WHICH IS 151 CLASS 2.
- THE "A" RHR HEAT EXCHANGER WAS INSTALLED IN DIVISION 2. THE "B" HEAT EXCHANGER WAS RESEMBLED TO THE "A" HEAT EXCHANGER. THIS SHOULD BE CONSIDERED WHEN REVIEWING CONSTRUCTION RECORDS.

(15) CLASS 2

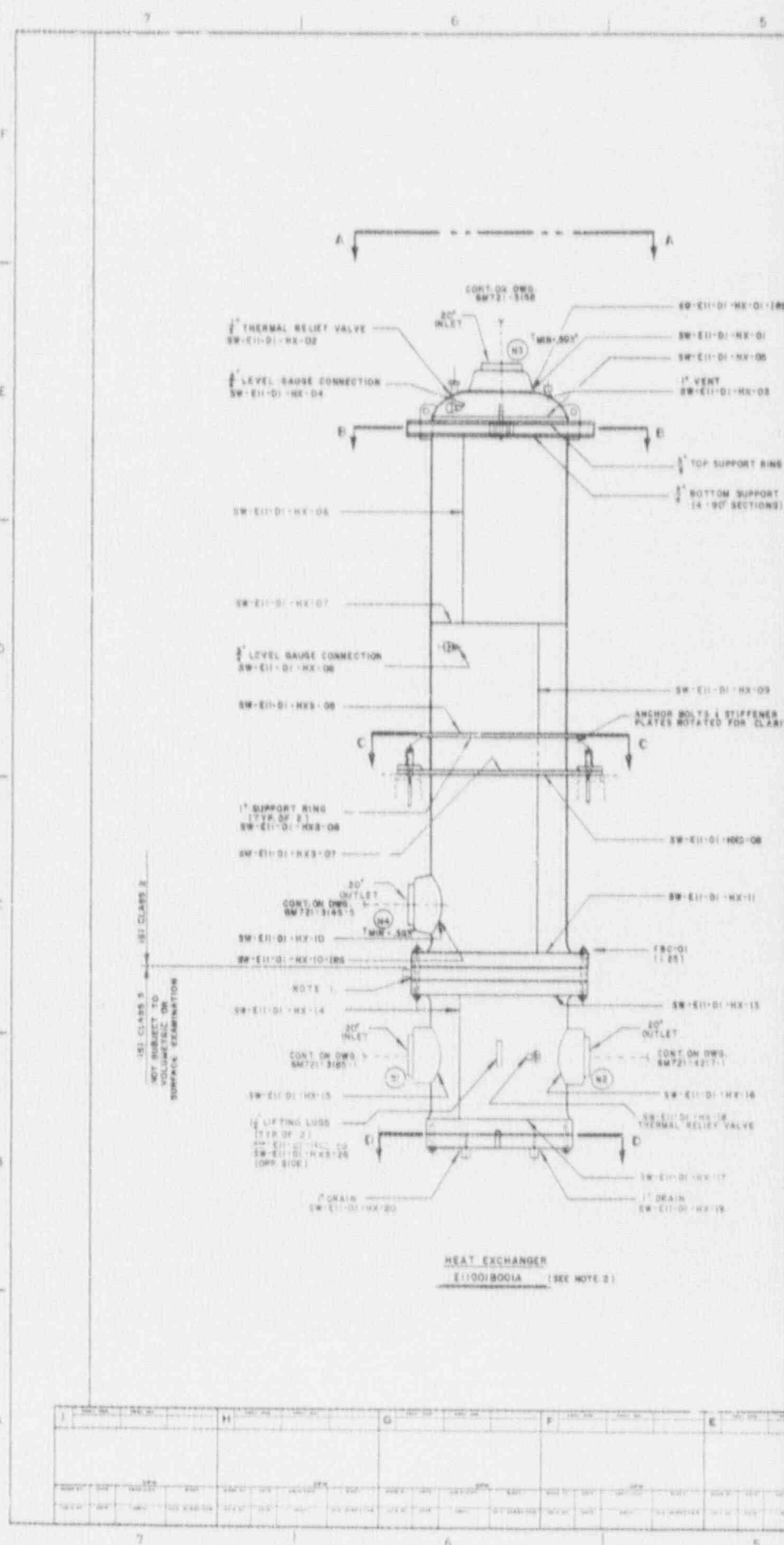
6M721-5370-5
LATEST REVISION

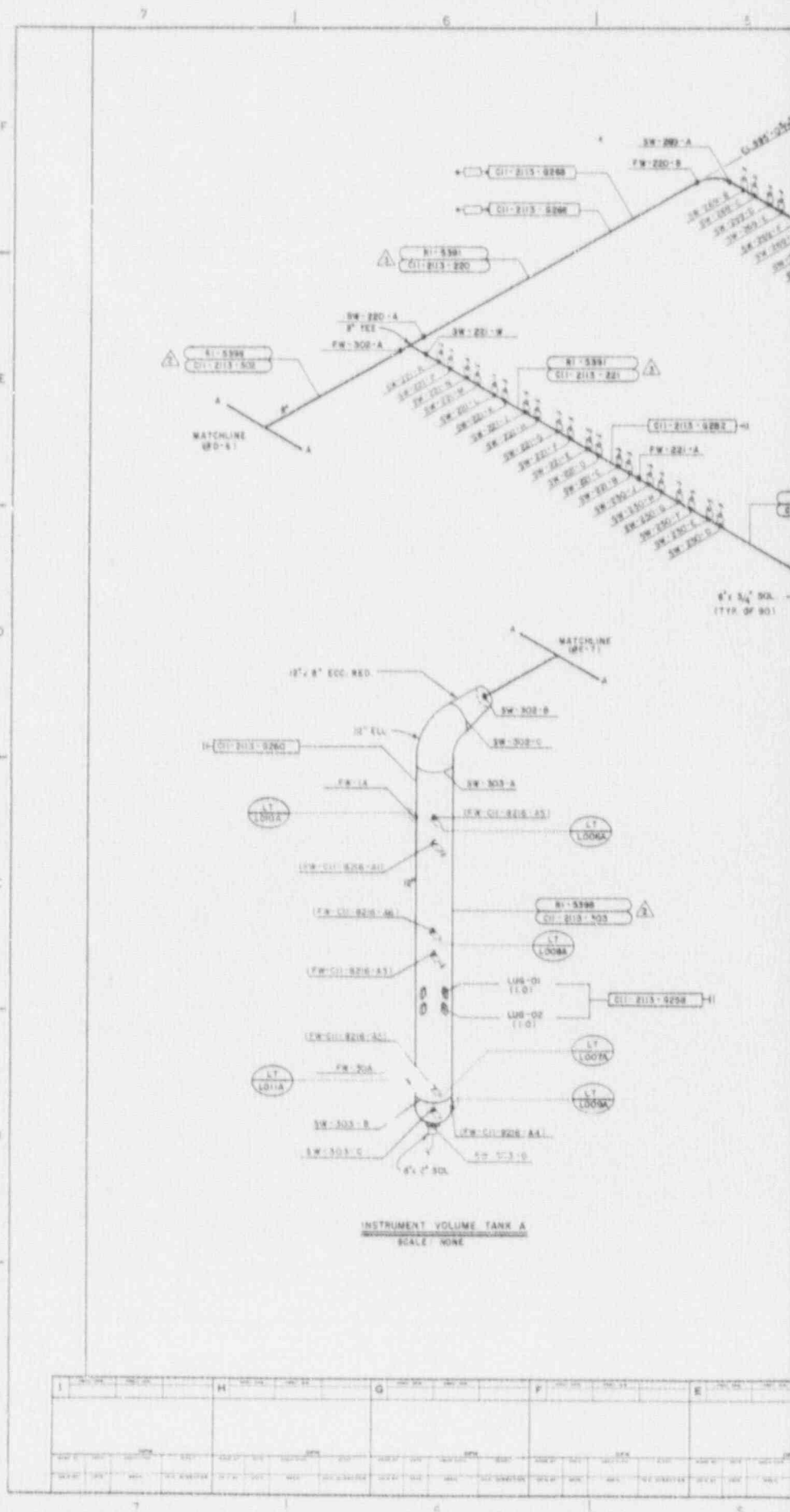


9101090241-62

NO.	DATE	BY	CHKD.	APP.	REVISION	DESCRIPTION
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4						

THE DETROIT EDISON CO.	ENGINEERING DEPARTMENT
INSERVICE INSPECTION DETAIL SWB	
RHR DIV. 2 HEAT EXCHANGER & REACTOR W.D. UNIT #2	
SHELDON JERMI ATOMIC POWER PLANT	
PROJECT CONTROL NO.	6M721-5370-5
DATE	DEC 15, 1964
BY	K. J. GILG
CHKD.	
APP.	



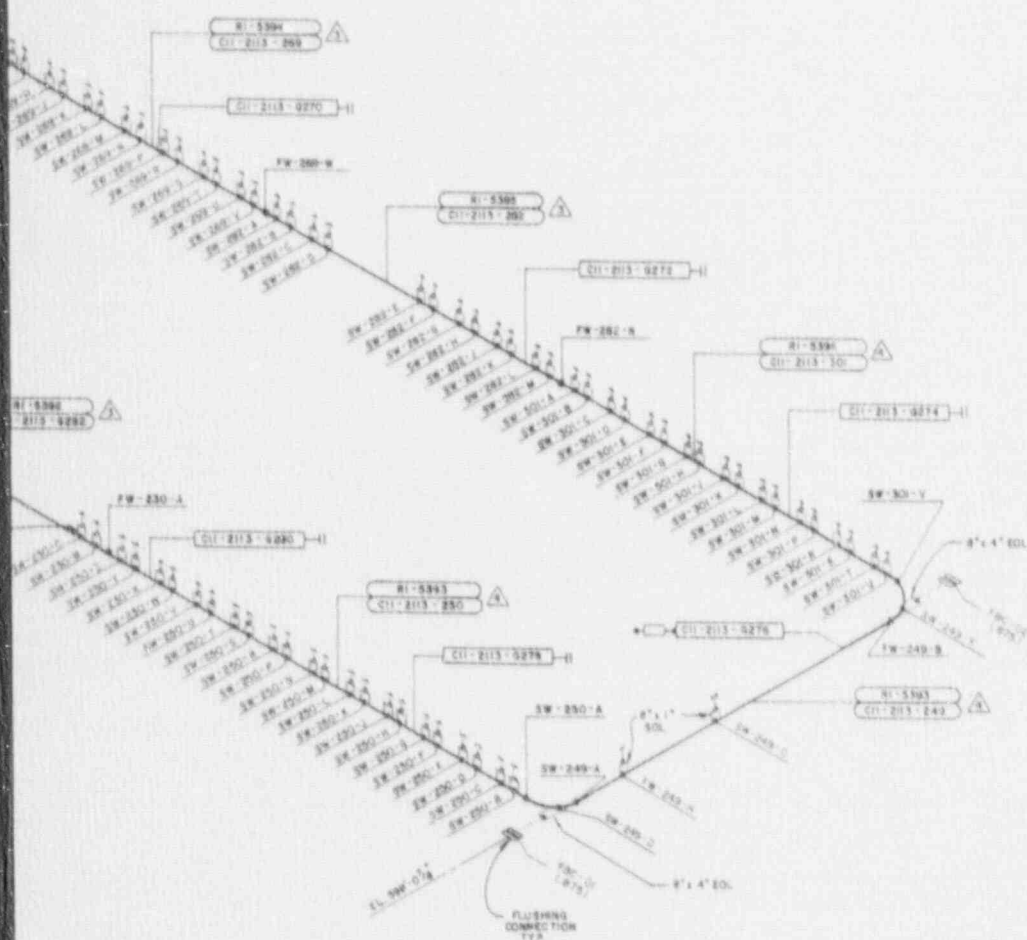


INSTRUMENT VOLUME TANK A
SCALE NONE

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INTEGRALLY WELDED LUGS						
LOG NO.	TYPE OF WELD	COMPONENT NUMBERS	ITEM (FIN)	REFERENCE	L	
LM-01	●	FW-CI-213-9258-A,B,C,D	---	10	4170-213-71, N	0*
LM-02	●	FW-CI-213-9258-E,F,G,H	---	10	4170-213-71, N	0*



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REFERENCE DRAWINGS

- 6170-213-1161 GENERAL ARRANGEMENT
- 6170-213-3161 GENERAL ARRANGEMENT
- 6170-213-10101 ORD SCRAM HEADER
- 6170-213-13141 MOUNTING DETAILS
- 6W1-CI-808-1141 INSTRUMENTATION TAPS
- 6W21-808 SYSTEM DIAGRAM

NOTES

- 1) THE COMPLETE WELD NUMBER FOR A SHOP WELD LIKE SW-249-0 IS SW-CI-213-249-0 THE COMPLETE WELD NUMBER FOR A FIELD WELD LIKE FW-249-8 IS FW-CI-213-249-8 '5372' IS NOT USED IN THE WELD NUMBER.
- 2) A CROSS REFERENCE BETWEEN HANGER MARK NUMBERS (E.G. CI-213-9274) AND THE HANGER DETAIL DRAWING NUMBER IS ATTACHED TO LETTER WP-84-1287.
- 3) UNLESS OTHERWISE NOTED, ALL SOCKETS ARE 8" x 1" SOI.
- 4) THE VENDOR PRINT FILE (E.G. R1-5396) IS LISTED WITH THE SPOOL SKETCH IDENTIFICATION FOR SHOP FABRICATED SPOOLS.

ISI CLASS 2

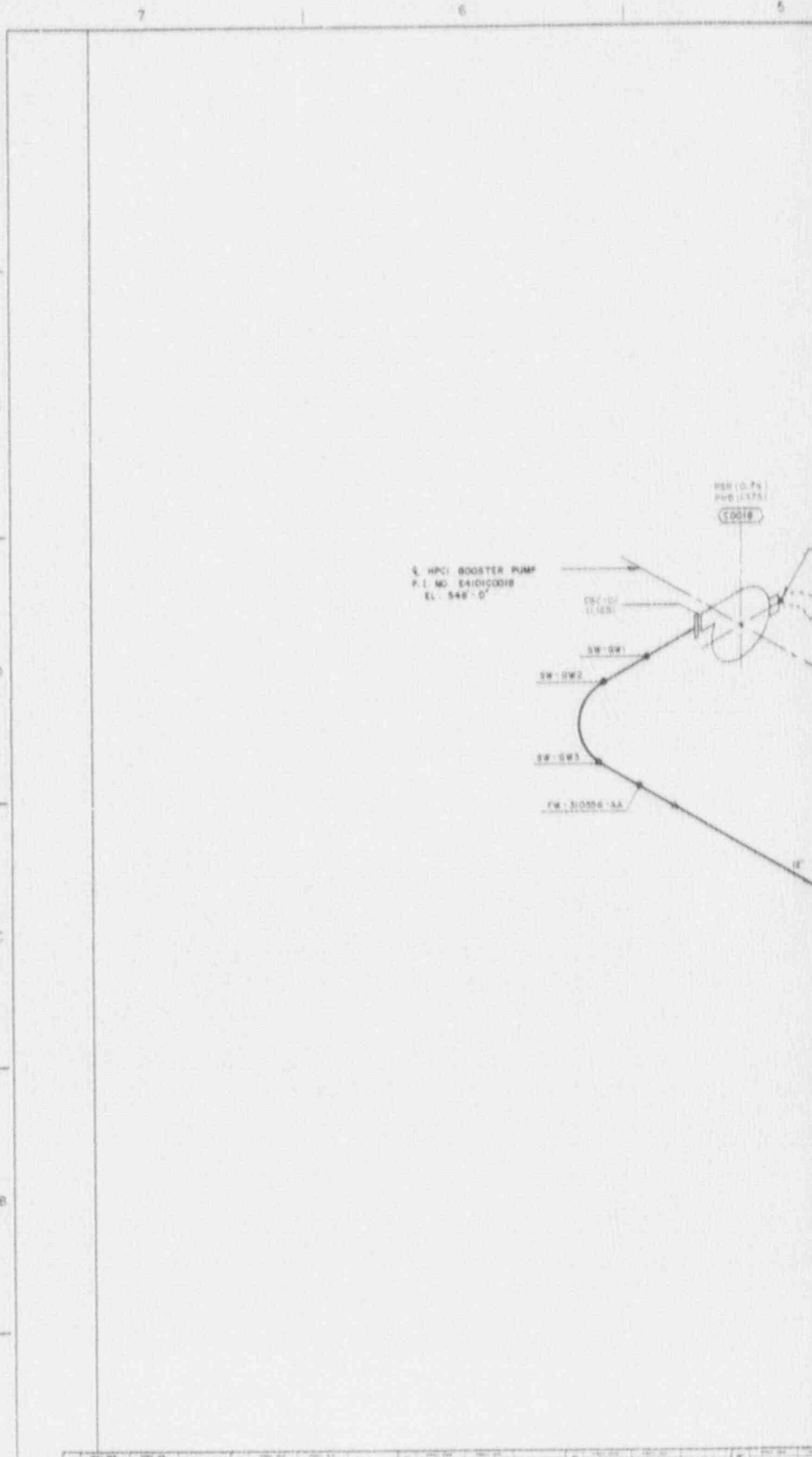
6M721-5372-5
CAYBET DIVISION

RECEIVED
OCT 22 1964
CAYBET DIVISION

9101090241-64

REV	DATE	BY	CHKD	APP	DESCRIPTION
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6					REVISED TO SHOW CHANGES
7					REVISED TO SHOW CHANGES
8					REVISED TO SHOW CHANGES
9					REVISED TO SHOW CHANGES
10					REVISED TO SHOW CHANGES

NO.	DESCRIPTION	DATE	BY	CHKD	APP
1	ISSUED FOR CONSTRUCTION				
2	REVISED TO SHOW CHANGES				
3	REVISED TO SHOW CHANGES				
4	REVISED TO SHOW CHANGES				
5	REVISED TO SHOW CHANGES				
6	REVISED TO SHOW CHANGES				
7	REVISED TO SHOW CHANGES				
8	REVISED TO SHOW CHANGES				
9	REVISED TO SHOW CHANGES				
10	REVISED TO SHOW CHANGES				



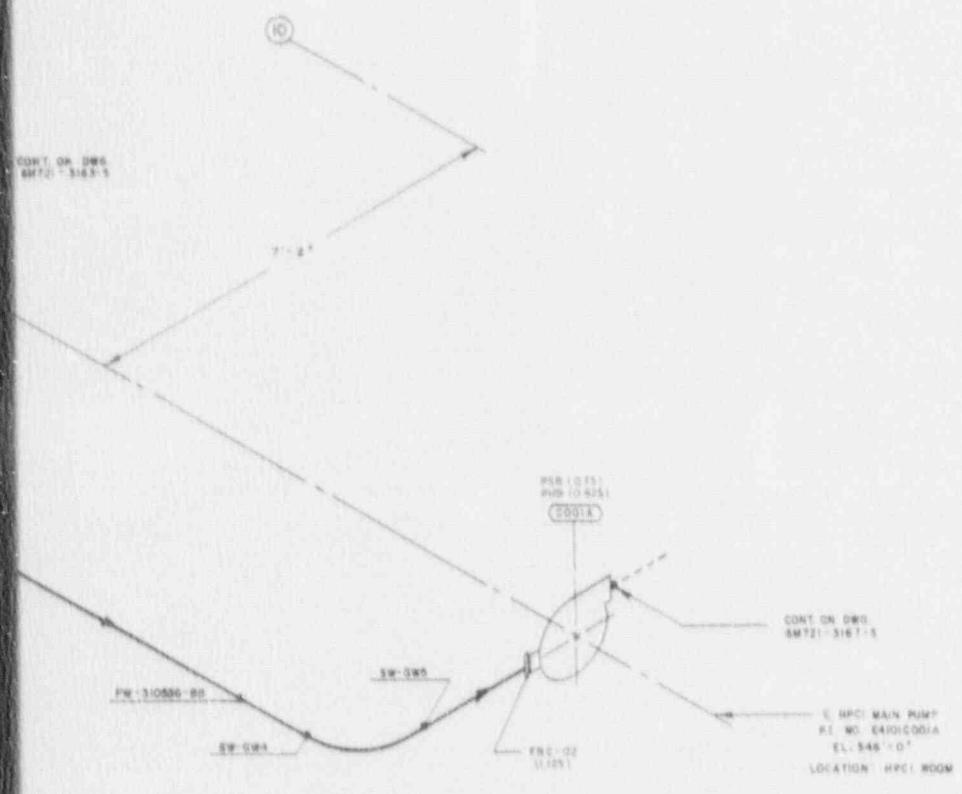
I	H	G	F	E



INTEGRALLY WELDED LUGS
NONE

SI APERTURE CARD

Also Available On
Aperture Card

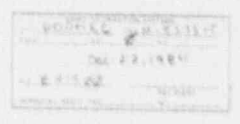


REFERENCE DRAWINGS

- FWR-PD-6055101 HPCI BOOSTER TO HPCI MAIN PUMP PIPING
- R4-432 VENDOR DRAWING

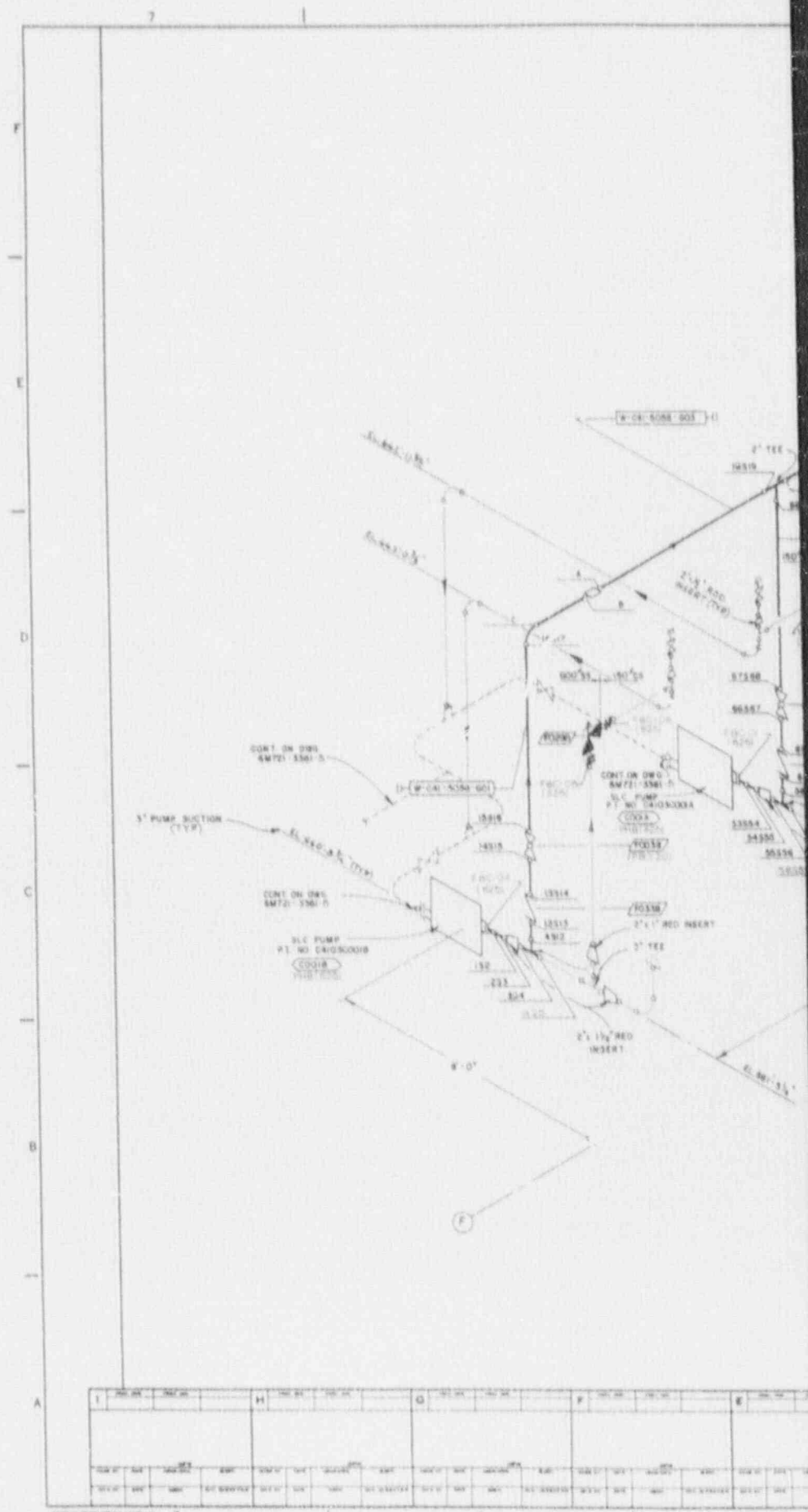
NOTES

ISI CLASS 2 6M721-5373-5
LAYER REVISION

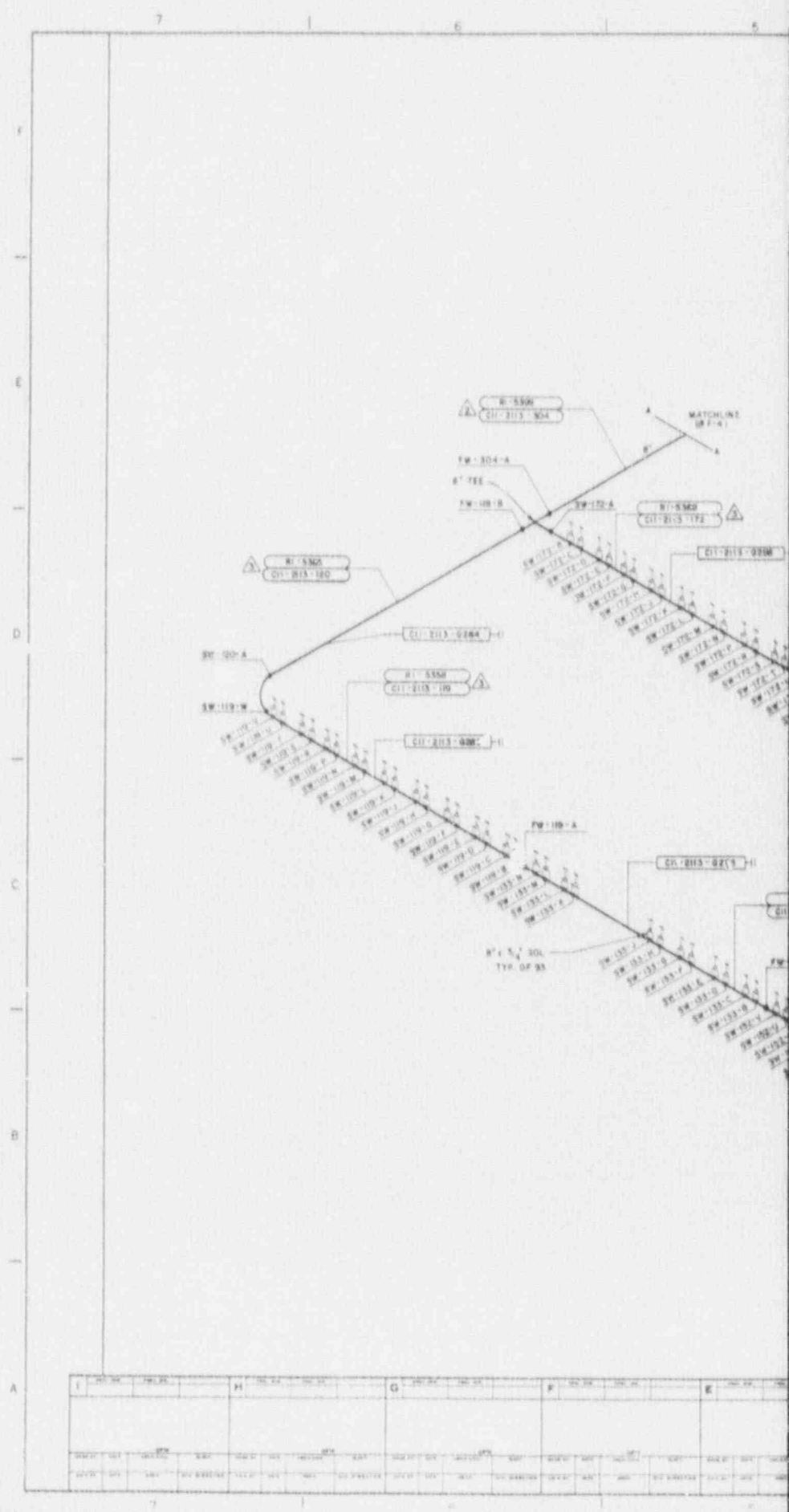


9101090241465

THE DETROIT EDISON CO.												ENGINEERING DEPARTMENT											
PROJECT												FILE											
CONDUIT												6M721-5373-5											
PROJECT												BOOSTER TO HPCI MAIN PUMP CONNECTION											
DRAWING												(RYAN JACKSON) REACTOR BLDG. UNIT #2											
REVISION												LOCATION: ENRICO PERMI ATOMIC POWER PLANT											
DATE												PART DOCUMENT CONTROL NO. 141-13											
DRAWN												HPCI MAIN PUMP BOOSTER TO HPCI MAIN PUMP CONNECTION											
CHECKED												DATE											
APPROVED												6M721-5373-5											
DATE												DATE											

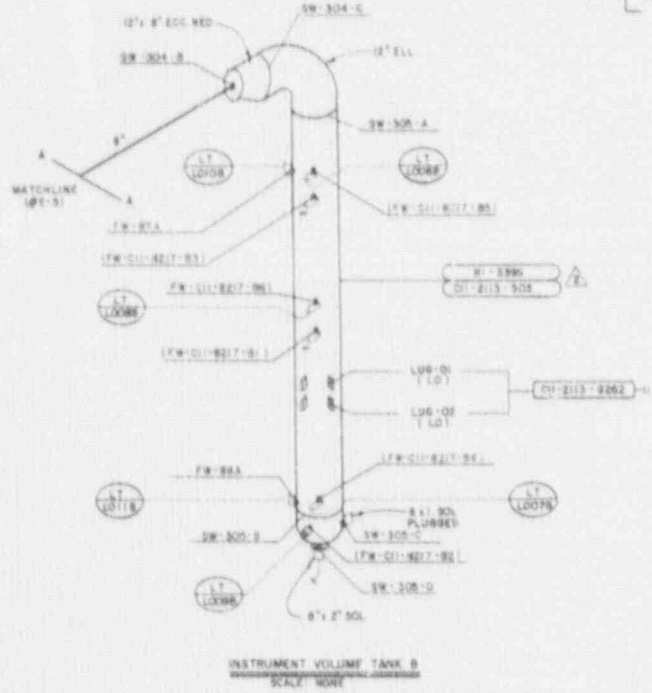


1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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INTEGRALLY WELDED LUGS					
LUG NO.	TYPE OF WELD	COMPONENT NUMBERS	ITEM (I/N)	REFERENCE	Q
01-01	B	FW-CII-2115-2082-A,B,C,D	---	10 4772-2115-M.S	0*
02	B	FW-CII-2115-2087-E,F,G,H	---	10 4772-2115-M.S	0*



SI APERTURE CARD

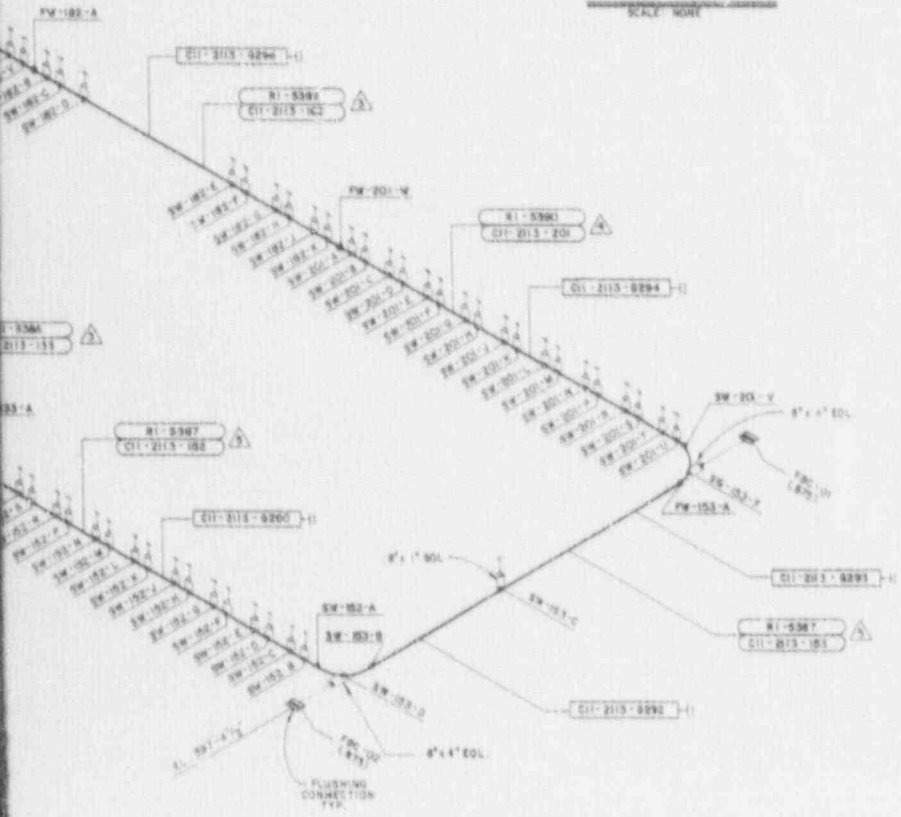
Also Available On Aperture Card

REFERENCE DRAWINGS

- | | |
|-----------------|----------------------|
| 6721-2115-11E) | GENERAL ARRANGEMENT |
| 6721-2115-51E) | GENERAL ARRANGEMENT |
| 6721-2115-101C) | CRD SCRAM HEADER |
| 6721-2115-151A) | MOUNTING DETAILS |
| 6721-2115-151B) | INSTRUMENTATION TAPS |
| 6721-2081 | SYSTEM DIAGRAM |

NOTES

- 1) THE COMPLETE WELD NUMBER FOR A SHOP WELD LIKE SW-249-0 IS SW-CII-2115-249-0. THE COMPLETE WELD NUMBER FOR A FIELD WELD LIKE FW-249-0 IS FW-CII-2115-249-0. '3179' IS NOT USED IN THE WELD NUMBER.
- 2) A CROSS REFERENCE BETWEEN HANGER MARK NUMBERS (E.G. CII-2115-2074) AND THE HANGER DETAIL DRAWING NUMBER IS ATTACHED TO LETTER WP-94-1257.
- 3) UNLESS OTHERWISE NOTED, ALL SOCKLETS ARE 8" x 1" 30L.
- 4) THE VENDOR PRINT FILE NO. (E.G. 91-386) IS LISTED WITH THE SPOOL SKETCH IDENTIFICATION FOR SHOP FABRICATED SPOOLS.



ISI CLASS 2 6A721-5375-5
LAYER NUMBER

Dec 22, 1984
CALDWELL

9101090241-67

THE DETROYT ENGINEERING CO.		DESIGNED BY		CHECKED BY		DATE		SCALE		PROJECT		SHEET		
D	DRY	C	CON	B	BOL	A	ACT							
SERVICE INSPECTION ISOMETRIC CONTROL ROD DRIVE SCRAM DISCHARGE VOLUME "B" (BOOTH) REACTOR BUILDING UNIT 2 ENRICO FERMI ATOMIC POWER PLANT													6M721-5375-5	6M721-5375-5

6.0 Inservice Inspection Program (Plan) Tables (NDE)

The accompanying table lists the components or areas that are to be examined during the interval. Listed in an order following the items presented in the ASME Section XI, Subsections IWB, IWC and IWD, the tables contain the following information:

Code Class: is the ASME class as defined in accordance with the Code of Federal Regulations (10CFR50.55a) Regulatory Guide 1.26, and NUREG 0800.

Interval: refers to the 120 month inspection interval as discussed in Section 2.0 of this document.

Page/Rev.: indicates the consecutive and total page numbers for the NDE program. Rev. or Revision indicates the revision of the individual page or entire document.

Code Category: is the Examination Category as defined by ASME Section XI, Subarticles IWB-2500, or IWC-2500, or IWD-2500.

Item Number: lists the Item No. as defined by ASME Section XI, Subarticles IWB-2500, IWC-2500, or IWD-2500. Note, all Item Numbers are addressed even though they may not be applicable to Fermi 2.

Description and Unique Identification: repeats the generic descriptions listed in tables IWB-2500-1, IWC-2500-1, and IWD-2500-1. The components to be examined are then listed by system and/or specific identification.

Exam Method - Exam Method Selected: identifies the code required method of examination i.e. Volumetric, Surface, or Visual. The specific examination selected is there shown for the component i.e. UT, PT, MT, or VT. (see list of abbreviations for expanded definitions).

Relief Request: If applicable, indicates the request for relief applicable in accordance with 10CFR50.55a (g) (5) (iii). See Section 4.0 of this document.

Augmented Exam Method: indicates the examination was required to meet a regulatory or licensing commitment and its outage code when completed or scheduled.

Sel. Basis: shows the abbreviation for the basis for selection of a component for examination.

Period: defined as the 3 year period within the 120 month (10 year) interval when the specific examination is scheduled. There are 3 periods in each 10 year interval and they can vary by +/- 1 year collectively over the 10 year period. Each period contains the specific outage code indicating that the required exam has either been scheduled or completed.

NOTE

No attempt has been made to schedule specific examinations at this time. All exams will be scheduled for inspection in accordance with the rules of ASME Section - XI, IWA, IWB, IWC, IWD and IWF, and as augmented by specific commitments (i.e., NUREG 0313). Future revisions to this program (plan) shall be issued for each period to show the specific examinations to be performed during each period as well as all examinations completed during previous periods.

Remarks: is reserved for additional information to explain, amplify, or provide added details necessary to clarify the examination requirements.

- 6.1 Examination methods delineated in the following tables are intended to be representative of the ISI practice to be used or of preservice methods utilized. In either case, it should be recognized that either UT or RT are acceptable volumetric exams and either PT or MT are acceptable surface exams. Unique weld joint parameters may, of course, dictate more restrictive selection criteria; e.g., high background radiation will preclude RT, stainless materials will preclude MT, etc. It is intended that the process which selects exam methods for inspections under this plan treat UT and RT as interchangeable and PT and MT as interchangeable with consideration given to past practice in light of the reproducibility of results.

6.2 List of Abbreviations: The following abbreviations are used:

Plant Identification System (PIS) - Codes for Plant Systems

- B11 - PIS Number for the Reactor Pressure Vessel
- B21 - PIS Number for the Nuclear Boiler System
- B31 - PIS Number for the Reactor Recirculation System
- C11 - PIS Number for the Control Rod Drive System
- C41 - PIS Number for the Standby Liquid Control System
- E11 - PIS Number for the Residual Heat Removal System
- E21 - PIS Number for the Core Spray System
- E41 - PIS Number for the High Pressure Coolant Injection System
- E51 - PIS Number for the Reactor Core Isolation Cooling System
- G33 - PIS Number for the Reactor Water Cleanup System
- G41 - PIS Number for the Fuel Pool Cooling System
- G51 - PIS Number for the Torus Water Management
- N20 - PIS Number for the Condensate
- N21 - PIS Number for the Feedwater System
- N30 - PIS Number for the Main Steam System
- P34 - PIS Number for the Post Accident Sampling
- P42 - PIS Number for the Reactor Building Closed Cooling Water
- P44 - PIS Number for the Emergency Equipment Cooling Water
- P45 - PIS Number for the Emergency Equipment Service Water
- R30 - PIS Number for the Emergency Diesel Generator and Service Water System
- T4804 - PIS Number for the Combustible Gas Control System
- T50 - PIS Number for the Primary Containment Monitoring

Acronyms Used to Identify Plant Systems

- CGC - Combustible Gas Control
- CRD - Control Rod Drive
- CS - Core Spray
- FPC - Fuel Pool Cleanup
- HPCI - High Pressure Coolant Injection
- RCIC - Reactor Core Isolation Cooling
- RHR - Residual Heat Removal
- RRC - Reactor Recirculation
- RWCU - Reactor Water Cleanup
- SDV - Scram Discharge Volume
- SLC - Standby Liquid Control

Non-Destructive Examination Method Abbreviations

- MT - Magnetic Particle Examination
- PT - Liquid Penetrant Examination
- UT - Ultrasonic Examination
- VT - Visual Examination
- VT-1 - Visual Examination per IWA-2211
- VT-2 - Visual Examination per IWA-2212
- VT-3 - Visual Examination per IWA-2213
- VT-4 - Visual Examination per IWA-2214
- UT Mech. - UT Mechanized
- UT Mech./Man. - UT Mechanized or Manual

Weld Selection Basis Abbreviations

HCU	- High Cumulative Usage
HS	- High Stress
MS	- Moderate Stress
R	- Random
TE	- Terminal End
A	- Augmented
DM	- Dissimilar Metal Weld

Plant Component and Weld Terminology Abbreviations

CRDH	- Control Rod Drive Housing
EXPJT	- Pipe Expansion Joint
FBC	- Flange Bolted Connection
FW	- Field Weld
HX	- Heat Exchanger
HXS	- Heat Exchanger Shell
IBR	- Inner Bore Region (Nozzle)
IRS	- Inner Radius Section (Nozzle)
IHH	- Incore Instrumentation Housing
LD	- Longitudinal Downstream (Seam Weld)
LU	- Longitudinal Upstream (Seam Weld)
PAD	- Integral Attachment Weld Directly onto the Pressure Boundary of the Pipe
PSFW	- Piping Support Field Weld
PS	- Primary Steam (Nuclear Steam Supply System)
RD	- Recirculation Discharge
RS	- Recirculation Suction
SDV	- Scram Discharge Volume
SW	- Shop Weld
TRUNION	- Hanger Support Welded Directly onto the Pressure Boundary of the Pipe
VBB	- Valve Body and Bonnet Housing

Generic Miscellaneous Abbreviations

BWR	- Boiling Water Reactor
DWG	- Drawing
EF2	- Enrico Fermi 2
in.	- Inches
N/A	- Not Applicable
NUREG	- Nuclear Regulatory Guide
PWR	- Pressurized Water Reactor
RR	- Relief Request
RPV	- Reactor Pressure Vessel

Component Support Abbreviations

A	- Anchor
C	- Constant Support
G	- Guide
R	- Rigid Support
SP	- Spring Hanger

Outage Codes

XX

C or S

Completed Exam or Scheduled Exam

Refuel Outage Sequential Number

EXAMPLE: 01C - First Refueling Outage, Completed Exam
02S - Second Refueling Outage, Scheduled Exam

ISI-CLASS 1 COMPONENTS

TABLES

FERRI 2 INSERVICE INSPECTION
PROGRAM PLAN TABLES (NDE)

CODE
CLASS 1

INTERVAL 1 2 3 4

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Rev. 1 Change 0

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-A		PRESSURE RETAINING WELDS IN REACTOR VESSEL								NOTE 14 applies to all welds on this page.
	B1.10	Shell Welds								All welds - 1st Interval
	B1.11	Circumferential	Volumetric							Dwg. 6W721-5360-5
		4-308A	UT Mech.	RR-1A						
		4-308B	UT Mech.	RR-1A						
		1-313	UT Mech.	RR-1A			025			
		9-307	UT Mech.	RR-1A						
	B1.12	Longitudinal	Volumetric							
		1-308A	UT Mech.	RR-1A			025			
		1-308B	UT Mech.	RR-1A						
		1-308C	UT Mech.	RR-1A			025			
		1-308D	UT Mech.	RR-1A						
		2-308A	UT Mech.							
		2-308B	UT Mech.				025			
		2-308C	UT Mech.				025			
		15-308A	UT Mech.							
		15-308B	UT Mech.				025			
		15-308C	UT Mech.							
		15-308D	UT Mech.				025			
		2-307A	UT Mech.	RR-1A						
		2-307B	UT Mech.	RR-1A						
		2-307C	UT Mech.	RR-1A						
	B1.20	Head Welds								
	B1/21	Circumferential - Closure Head	Volumetric							
		5-319	UT							
		4-315	UT				025			

ISI-NDE Program

FERMI 2 INSERVICE INSPECTION
PROGRAM PLAN TABLES (NDE)

CODE
CLASS 1

INTERVAL 1 2 3 4

Page A-6-3 of 112
Rev. 1 Change 0

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Snl. Basis	PERT00			REMARKS
							1st	2nd	3rd	
B-A (Cont'd)	31/21 Cont'd	Circumferential - Bott. Head	Volumetric							NOTE 14 applies to all welds on this page. Dwg. 6M721-5360-5
		6-306 5-306	UT Mech. UT	RR-2A			025			
	81.21	Meridional - Closure Head	Volumetric							
		2-319A	UT				025			
		2-319B	UT				025			
		2-319C	UT				025			
		2-319D	UT							
		2-319E	UT							
		1-319A	UT							
		1-319B	UT				025			
		1-319C	UT							
		1-319D	UT							
		1-319E	UT							
		1-319F	UT							
		1-319G	UT							
		1-319H	UT				025			
		Meridional - Bott. Head	Volumetric							
		1-306A	UT Mech.	RR-1A			025			
		1-306B	UT Mech.	RR-1A						
		1-306C	UT Mech.	RR-1A						
		1-306D	UT Mech.	RR-1A			025			
		1-306E	UT Mech.	RR-1A			025			
		1-306F	UT Mech.	RR-1A						
		1-306G	UT Mech.	RR-1A			025			
		1-306H	UT Mech.	RR-1A						
		1-306J	UT Mech.	RR-1A						
		1-306K	UT Mech.	RR-1A			025			
		2-306A	UT	RR-2A						
		2-306B	UT	RR-2A						

FERMI 2 INSERVICE INSPECTION
 PROGRAM PLAN TABLES (WDE)

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	CORRE CLASS 1	INTERVAL		Relief Request		Augmented Exam Method	Set Basis	PERIOD			REMARKS
				Exam Req'd Exam Method Selected	Exam Method Selected	Request	1st			2nd	3rd		
B-A (Cont'd)	B1-22 Cont'd	2-306C			UT		RR-2A					NOTE 14 applies to all Category B-A & B-1 welds on this page.	
		2-306D			UT		RR-2A						
		2-306E			UT		RR-2A						
		2-305F			UT		RR-2A						
		2-305G			UT		RR-2A						
B1-30	B1-30	Shell-to-Flange Weld			Volumetric								
		13-30B			UT Mech.		RR-1A			025			
B1-40	B1-40	Head-to-Flange Weld			Volumetric & Surface								
		3-319			UT RT					025 025		N/A	
B1-50	B1-51	Repair Welds			Volumetric							No Repair Welds currently exist	
		Ballline region			Volumetric								No Components (per)
B-B	B3-90	PRESSURE RETAINING WELDS IN VESSELS OTHER THAN REACTOR VESSELS										Permit-2 is on Inspection Program B Deg. 68721-5361-5	
		FULL PENETRATION WELDS OF NOZZLES IN VESSELS - INSPECTION PROGRAM B											
B-D	B3-90	Reactor Vessel			Volumetric								
		Nozzle-to-Vessel Welds			UT Mech. UT Mech. UT Mech. UT Mech.					025 025			
		B-316A											
		B-316B B-316C B-316D											

FERMI 2 INSERVICE INSPECTION
PROGRAM PLAN TABLES (NDE)

CODE
CLASS 1

INTERVAL

1 | | 2 | | 3 | | 4 | |

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Rev. 1 Change

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS	
							1st	2nd	3rd		
B-D (Cont'd)	B3.90 Cont'd	4-316A	UT Mech.	RR-6A			025			NOTE 14 applies to all welds on this page in Item Number B3.90.	
		4-316B	UT Mech.				025				
		4-316C	UT Mech.								
		4-316D	UT Mech.	RR-6A				025			
		4-316E	UT Mech.								
		4-316F	UT Mech.								
		14-316A	UT Mech.						025		
		14-316B	UT Mech.						025		
		15-315	UT						025		
		13-314A	UT Mech.						025		
		13-314B	UT Mech.								
		13-314C	UT Mech.						025		
		13-314D	UT Mech.								
		13-314E	UT Mech.								
		13-314F	UT Mech.						025		
		13-314G	UT Mech.								
		13-314H	UT Mech.								
		13-314J	UT Mech.						025		
		13-314K	UT Mech.						025		
		5-314A	UT Mech.								
		5-314B	UT Mech.								
		19-314A	UT						025		
		19-314B	UT								
		2-31B	UT								
		4-318A	UT								
4-318B	UT										
	B3.100	Nozzle Inside Radius Section	Volumetric		Surface						
		8-316A IRS	UT Mech.				025				
		8-316B IRS	UT Mech.				025				
		8-316C IRS	UT Mech.								
		8-316D IRS	UT Mech.								
		4-316A IRS	UT Mech.				025				
					PT						

NUREG-0819

FERMI 2 INSERVICE INSPECTION
PROGRAM PLAN TABLES (NDE)

CODE
CLASS 1

INTERVAL 1 2 3 4

Page A-6-B of 112
Rev. 1 Change 0

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Set. Basis	PERIOD			REMARKS	
							1st	2nd	3rd		
B-D (Cont'd)	B3.100 Cont'd	4-316B IRS	UT Mech.		PT		025			NUREG-0619	
		4-316C IRS	UT Mech.		PT					NUREG-0619	
		4-316D IRS	UT Mech.			PT		025			NUREG-0619
		4-316E IRS	UT Mech.			PT					NUREG-0619
		4-316F IRS	UT Mech.			PT					NUREG-0619
		14-318A IRS	UT Mech.					025			
		14-316B IRS	UT Mech.					025			
		15-315 IRS	UT					025			
		13-314A IRS	UT Mech.					025			
		13-314B IRS	UT Mech.					025			
		13-314C IRS	UT Mech.								
		13-314D IRS	UT Mech.					025			
		13-314E IRS	UT Mech.								
		13-314F IRS	UT Mech.					025			
		13-314G IRS	UT Mech.								
		13-314H IRS	UT Mech.								
		13-314J IRS	UT Mech.					025			
		13-314K IRS	UT Mech.					025			
		5-314A IRS	UT Mech.								
		5-314B IRS	UT Mech.								
		19-314A IRS	UT					025			
		19-314B IRS	UT								
		2-318 IRS	UT								
4-318A IRS	UT										
4-318B IRS	UT										
N/A	N/	Nozzle Inner Bore Region			Volumetric						
		4-316A IBR			UT		025			NUREG-0619	
		4-316B IBR			UT		025			NUREG-0619	
		4-316C IBR			UT					NUREG-0619	

ISI-NDE Program

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	CODE CLASS 1	INTERVAL				Exam Method Selected	Relief Request	Augmented Exam Method	Serial	PERIOD			REMARKS
				1	2	3	4					1st	2nd	3rd	
		Nozzle Inner Bore Region (Cont'd)													
		4-316D IBR						UT				025		MUREG-0618	
		4-316E IBR						UT						MUREG-0619	
		4-316F IBR						UT						MUREG-0619	
		Pressurizer												No Components (BWR)	
	B3.110	Nozzle-to-Vessel Welds													
	B3.120	Nozzle Inside Radius Section												No Components (BWR)	
		Steam Generators (Primary Side)													
	B3.130	Nozzle-to-Vessel Welds													
	B3.140	Nozzle Inside Radius Section												No Components (BWR)	
		Heat Exchangers (Primary Side)													
	B3.150	Nozzle-to-Vessel Welds													
	B3.160	Nozzle Inside Radius Section												No Components (BWR)	
B-E		PRESSURE RETAINING PARTIAL PENETRATION WELDS IN VESSELS													
	B4.10	Partial Penetration Welds						Visual VT-2							

FERMI 2 INSERVICE INSPECTION PROGRAM PLAN TABLES (NDE)

INTERVAL 1 X 2 3 4

CODE CLASS 1

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Set. Rec'd	PERIOD 1st 2nd 3rd	REMARKS
B-E (Cont'd)	B4.11	Vessel Nozzles 7-315 17-315	VT-2 VT-2					Dwg. 68721-5361-5 25% Nozzles-external Surfaces - Note 4
	B4.12	Control Rod Drive Nozzles Vessel to Stub Tube (185) 1-310-X__-Y__	VT-2	RR-7A				Dwg. 68721-5363-5 25% Nozzles-external Surfaces - Note 4
	B4.13	Control Rod Drive Nozzles Stub Tube to CRD Housing CRDH-Y__-V__ (105)	VT-2	RR-7A				Dwg. 68721-5361-5 25% Nozzles-external Surfaces - Note 4
B-F		Instrumentation Nozzles Vessel Level B Pressure	VT-2 VT-2 VT-2 VT-2 VT-2					Dwg. 68721-5363-5 25% Nozzles-external Surfaces - Note 4
	B4.20	Incore Instrumentation IIM-X__-Y__ (55) Pressurizer Heater Penetration Welds	VT-2	RR-7A				No Components (BMM) Category B-F Welds will also be considered as Category B-J welds
		PRESSURE RETAINING DISSIMILAR METAL WELDS Reactor Vessel						

FORM 2 INSERVICE INSPECTION
PROGRAM PLAN TABLES (NDE)

CODE
CLASS 1

INTERVAL 1 | X | 2 | | 3 | | 4 | |

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS												
							1st	2nd	3rd													
B-F (Cont'd)	85.10	Nominal Pipe Size > 4 in. Nozzle-to-Safe End Butt Welds	Volumetric and Surface								(Note No. 1)											
												N5-A	U Mech/Man PT	01C		TE, DM						Dwg. 6M721-3053-5 Notes No. 2 & 8, Cat. B
												N5-B	UT Mech/Man PT	01C		MS	01C					Dwg. 6M721-3052-8 Notes No. 2 & 8, Cat. B
												N-9	UT PT	01C		TE, DM	01C					Dwg. 6M721-5381-5 Notes No. 2 & 8, Cat. B
												2-303A	UT Mech/Man PT	01C			02S					Dwg. 6M721-5358-5 Notes No. 2 & 8, Cat. B
												2-303B	UT Mech/Man PT	01C			02S					Dwg. 6M721-5358-5 Notes No. 2 & 8, Cat. B
												2-303C	UT Mech/Man PT	01C								Dwg. 6M721-5358-5 Notes No. 2 & 8, Cat. B
												2-303D	UT Mech/Man PT	01C								Dwg. 6M721-5358-5 Notes No. 2 & 8, Cat. B
												101-304E	UT Mech/Man PT	01C								Dwg. 6M721-5358-5 Notes No. 2 & 8, Cat. B
												2-303F	UT Mech/Man PT	01C								Dwg. 6M721-5358-5 Notes No. 2 & 8, Cat. B
												2-303G	UT Mech/Man PT	01C								Dwg. 6M721-5358-5 Notes No. 2 & 8, Cat. B
												2-303H	UT Mech/Man PT	01C				01C				Dwg. 6M721-5358-5 Notes No. 2 & 8, Cat. B
												2-303J	UT Mech/Man PT	01C				01C				Dwg. 6M721-5358-5 Notes No. 2 & 8, Cat. B
												2-303K	UT Mech/Man PT	01C								Dwg. 6M721-5357-5 Notes No. 2 & 8, Cat. B
												4-303A	UT Mech/Man PT	01C				01C				Dwg. 6M721-5359-5 Notes No. 2 & 8, Cat. B
												4-303B	UT Mech/Man PT	01C				01C				Dwg. 6M721-5361-5 Notes No. 2 & 8, Cat. B
												102-304A	UT PT	01C				01C				Dwg. 6M721-5361-5 Notes No. 2 & 8, Cat. B

ISI-NDE Program

FERMI 2 INSERVICE INSPECTION
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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-F (Cont'd)	85.10 Cont'd	102-304B	UT PT		OIC OIC	TE, DM				Dwg. BW721-5381-5 Notes No. 2 & B Cat. B
	85.20	Nominal Pipe Size < 4 in. Nozzle-to-Safe End Butt Welds								No Nozzle-to-Safe End Butt Welds < 4 in.
	85.30	Nozzle-to-Safe End Socket Welds								No Nozzle-to-Safe End Socket welds.
		Pressurizer								No Components (BWR)
	85.40	Nominal Pipe Size > 4 in. Nozzle-to-Safe End Butt Welds								
	85.50	Nominal Pipe Size < 4 in. Nozzle-to-Safe End Butt Welds								
	85.60	Nozzle-to-Safe End Socket Welds								
		Steam Generators								No Components (BWR)
	85.70	Nominal Pipe Size > 4 in. Nozzle-to-Safe End Butt Welds								
	85.80	Nominal Pipe Size < 4 in. Nozzle-to-Safe End Butt Welds								
	85.90	Nozzle-to-Safe End Socket Welds								

FERMI 2 INSERVICE INSPECTION
PROGRAM PLAN TABLES (NDE)

CODE
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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-F (Cont'd)		Heat Exchangers								No Components (BWR)
	85.100	Nominal Pipe Size \geq 4 in. Nozzle-to-Safe End Butt Welds								
	85.110	Nominal Pipe Size < 4 in. Nozzle-to-Safe End Butt Welds								
	85.120	Nozzle-to-Safe End Socket Welds								
		Piping								
	85.130	Nominal Pipe Size > 4 in. Dissimilar Metal Butt Welds								Note No. 1 applies to all 85.130 welds
		SW-E11-2298-BWC	PT		01C		01C			Note No. 2, Cat. B
		SW-E11-2299-1WB	UT		01C		01C			Note No. 2, Cat. B
		SW-E11-2327-BWC	PT							Note No. 2, Cat. B
		SW-E21-3052-4W0X	UT							Notes No. 2 & B, Cat. B
	SW-E21-3053-4W0X	PT		01C		01C			Notes No. 2 & B, Cat. B	
	SW-G33-3096-10WD	UT		01C		01C			Note No. 2, Cat. B	
	SW-G33-3096-12WD	PT		01C		01C			Note No. 2, Cat. B	
	85.140	Nominal Pipe Size < 4 in. Dissimilar Metal Butt Welds								N/A

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-F (Cont'd)	85.150	Dissimilar Metal Socket Welds								No Dissimilar Metal Socket Welds
B-G-1		PRESSURE RETAINING BOLTING GREATER THAN 2 IN. IN DIAMETER Reactor Vessel								Owg. 8W721-5362-5
	86.10	Closure Head Nuts 326-02, 1 thru 68	Surface MT				025 (23)			All bolts, studs, nuts bushing, threads in flange stud holes.
	86.20	Closure Head Studs In Place 326-01, 1 thru 68	Volumetric UT				025 (19)			Examined only when connections are dis- assembled
	86.30	Closure Head Studs, When Removed 326-01, 1 thru 68	Surface and volumetric MT UT				025 (4)			
	86.40	Threads in Flange 1 thru 68	Volumetric UT				025 (23)			
	86.50	Closure Washers & Bushings 326-03, 1 thru 68	Visual VT-1 VT-1				025 (23)			No Components (BWR)
	86.60	Pressurizer Bolts and Studs								

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CLASS 1

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-G-1	86.70	Flange Surface, When Connection Disassembled								
	86.80	Nuts, Bushings and Washers								
	Steam Generators									
	86.90	Bolts and Studs								
	86.100	Flange Surface, When Connection Disassembled								
	86.110	Nuts, Bushing and Washers								
	Heat Exchangers									
	86.120	Bolts and Studs								
	86.130	Flange Surface, When Connection Disassembled								
	86.140	Nuts, Bushing and Washers								
	Piping									
	86.150	Bolts and Studs								
	86.160	Flange Surface, When Connection Disassembled								
	86.110	Nuts, Bushing and Washers								
Pumps										
86.180	Bolts and Studs	Volumetric								

No Components (BWR)

No Components (BWR)

No Bolts, Studs, Nuts,
Etc. Greater than
2 in.

Dwg. 6W721-5365-5

FERMI 2 INSERVICE INSPECTION
 PROGRAM PLAN TABLES (NDE)

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	CODE CLASS 1	INTERVAL	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Set. Basis	PERIOD	REMARKS
B-G-1 (Cont'd)	B6.180 Cont'd	RRC Pump A, Studs 1 thru 15		UT					025	Dwg. 6M721-5365-5
	B6.190	RRC Pump B, Studs 1 thru 16		UT						
		Flange Surface, when Connection Disassembled		Visual						
	B6.200	RRC Pump A, Flange RRC Pump B, Flange		VT-1 VT-1						
		Nuts, Bushings and Washers		Visual					025	
		RRC Pump A RRC Pump B		VT-1 VT-1						
		Valves		Visual						
	B6.210	Bolts and Studs		VT-1						
	B6.220	Flange Surface, when Connection Disassembled		VT-1						
B-G-2	B6.230	Nuts, Bushings and Washers PRESSURE RETAINING BOLTING 2 IN. AND LESS IN DIAMETER		VT-1 VT-1						No Bolts, Studs, Nuts Etc. Greater than 2 in. Bolting may be examined a) in place under tension. b) when connection is disassembled. c) when the bolting is removed.

FERREL 2 INSERVICE INSPECTION
PROGRAM PLAN TABLES (NDE)

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CLASS 1

INTERVAL

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-G-2 (Cont'd)	87.10	Reactor Vessel								
		Bolts, Studs and Nuts Flange Bolted Connection Spare Flange (0°) Spare Flange (180°) Instrumentation Nozzle					025			
	87.20	Pressurizer								No Components (BWR)
		Bolts, Studs and Nuts								No Components (BWR)
	87.30	Steam Generators								
		Bolts, Studs and Nuts								No Components (BWR)
	87.40	Heat Exchangers								
		Bolts, Studs and Nuts								
	87.50	Piping								
		Bolts, Studs and Nuts Flange Bolted Connections FBC-E11-3519-01 FBC-E41-2297-01 FBC-E51-2192-01	Visual	VT-1 VT-1 VT-1				025 025		DWG. 6W721-3519-5 DWG. 6W721-2297-5 DWG. 6W721-2192-5
87.60	Pumps									
	Bolts, Studs and Nuts Seal Bolting RRC Pump A Seal Bolting RRC Pump B	Visual VT-1	VT-1 VT-1						Dwg. 6W721-5365-5	
87.70	Valves Bolts, Studs and Nuts	Visual VT-1							Inspections of bolting will be performed on valves during refurbishment	

FERMI 2 INSERVICE INSPECTION PROGRAM PLAN TABLE (NDE)

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Method Selected	Relief Request	Augmented Exam Method	INTERVAL			Remarks
						1st	2nd	3rd	
B-G-2 (Cont'd)	B7.70 Cont'd	B21-Nuclear Boiler System Loop A	VT-1			1st	2nd	3rd	Dwg. 68F721-5352-5
		FBC-B21-5352-01M B21-F013M-VBB	VT-1			025			
		FBC-B21-5352-01N B21-F013N-VBB	VT-1			025			
		FBC-B21-5352-01R B21-F013R-VBB	VT-1			025			
		B21-F022A-VBB	VT-1			025			
		B21-F028A-VBB	VT-1			025			
		B21-Nuclear Boiler System Loop B	VT-1			025			Dwg. 68F721-5353-5
		FBC-B21-5353-01F B21-F013F-VBB	VT-1			025			
		FBC-B21-5353-01E B21-F013E-VBB	VT-1			025			
		FBC-B21-5353-01D B21-F013D-VBB	VT-1			025			
		FBC-B21-5353-01L B21-F013L-VBB	VT-1			025			
		FBC-B21-5353-01H B21-F013H-VBB	VT-1			025			
		B21-F022B-VBB	VT-1			025			
		B21-F028B-VBB	VT-1			025			

Inspections performed each outage on pipe bolting and main body replacement bolting during SRY removal for testing.

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	CLASS 1	INTERVAL				Exam Req'd Exam Method Exam Selected	Relief Request	Augmented Exam Method	PERIOD			REMARKS
				1	2	3	4				1st	2nd	3rd	
B-G-2 (Cont'd)	B7.70 Cont'd	B21-Nuclear Boiler System Loop C											Dwg. 6M721-5354-5	
		FBC-B21-5354-01C B21-F013C-VBB										025		
		FBC-B21-5354-01K B21-F013K-VBB										025		
		FBC-B21-5354-01J B21-F013J-VBB										025		
		FBC-B21-5354-01B B21-F013B-VBB										025		
		FBC-B21-5354-01G B21-F013G-VBB										025		
		B21-F022C-VBB										025		
		B21-F028C-VBB										025		
		B21-Nuclear Boiler System Loop D											Dwg. 6M721-5355-5	
		FBC-B21-5355-01A B21-F012A-VBB										025		
		FBC-B21-5355-01P B21-F013P-VBB										025		
		B21-F022D-VBB										025		
		B21-F028D-VBB										025		

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	CLASS 1	INTERVAL		PERIOD		REMARKS
				1	2	1st	2nd		3rd
B-G-2 (Cont'd)	B-7.70 Cont'd	B31-Reactor Recirculation Loop A						Dwg. 6M721-5351-5
		B31-F023A-VBB						
		B31-F031A-VBB					025	Dwg. 6M721-5359-5
		B31-Reactor Recirculation Loop B						
		B31-F023B-VBB						
		B31-F031A-VBB						Dwg. 6M721-2298-5
		E11-229B RHR						
		E11-F015A-VBB						
		E11-F050A-VBB						
		E11-F060A-VBB						Dwg. 6M721-2299-5
		E11-229B RHR						
		E11-F067-VBB						
		E11-F009-VBB						
		E11-F608-VBB						
		E11-F008-VBB						
		E11-2327 RHR						Dwg. 6M721-2327-5
		E11-F015B-VBB					025	

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	CLASS 1	INTERVAL		Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
				1	2				1st	2nd	3rd	
B-G-2 (Cont'd)	07.70 cont'd	E11-F050B-VBB E11-F060B-VBB E11-3519 RHR E11-F023-VBB E11-F022-VBB E21-3052 Core Spray E21-F005A-VBB E21-F006A-VBB E21-F007A-VBB E21-3053 Core Spray E21-F005B-VBB E21-F006B-VBB E21-F007B-VBB E41-2297 HPCI E41-F002-VBB E41-F003-VBB	1	X	2	3	4					
				VT-1								
				VT-1								Dwg. 6M721-30519-5
				VT-1					025			
				VT-1					025			Dwg. 6M721-3052-5
				VT-1					025			
				VT-1					025			Dwg. 6M721-3053-5
				VT-1					025			
				VT-1					025			Dwg. 6M721-2297-5
				VT-1					025			

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	INTERVAL		Relief Request	Augmented Exam Method	Set Basis	PERIOD			REMARKS
			1	2				1st	2nd	3rd	
B-G-2 (Cont'd)	B7.70	G33-3096 RWCU									Dwg. 6M721-3096-5
		G33-F004-VBB	VT-1					025			
		G33-F001-VBB	VT-1								
		G33-F101-VBB	VT-1								
		G33-F102-VBB	VT-1								
		G33-F100-VBB	VT-1								
		G33-F106-VBB	VT-1								
		N21-2336 Feedwater Loop A									Dwg. 6M721-3537-5
		N21-F076A-VBB	VT-1								
		N21-F032A-VBB	VT-1								
		N21-F010A-VBB	VT-1								
		N21-F011A-VBB	VT-1								
		N21-2336 Feedwater Loop B									Dwg. 6M721-3538-5
	B7.70	N21-F076B-VBB	VT-1								
		N21-F032B-VBB	VT-1								
		N21-F010B-VBB	VT-1								
		N21-F011B-VBB	VT-1								

PERMI 2 INSERVICE INSPECTION
 PROGRAM PLAN TABLES (NDE)

CODE CLASS 1

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	PERIOD			REMARKS
						1st	2nd	3rd	
B-5-2 (Cont'd)	B7.80	CRD Housings	Visual VT-1				02S		Bolts, Studs and nuts in CRD Housing when disassembled
		Bolts, Studs and Nuts (185)							
		INTEGRAL ATTACHMENTS FOR VESSELS							
B-H	B8.10	Reactor Vessel	Volumetric or Surface, as applicable				02S 02S		68721-5360-5 100% of the length of the weld.
		Integrally Welded Attachments							
		Support Skirt Welds							
		3-306							
		4-309							
		UT							
		UT							
		Stabilizer Bracket Welds							
		10-324A							
		10-324B							
10-324C									
10-324D									
10-324E									
10-324F									
10-324G									
10-324H									
		Top Head Lifting Lugs	MT MT MT MT MT MT				02S		No Components (SMB)
		B-319A							
		B-319E							
		B-319C							
		B-319D							
		Pressurizer	MT MT MT MT				02S		
		Integrally Welded Attachments							
		B8.20							

FERMI 2 INSERVICE INSPECTION
PROGRAM PLAN TABLES (NDE)

CODE
CLASS 1

INTERVAL 1 2 3 4

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-H (Cont'd)	88.30	Steam Generator								No Components (BWR)
		Integrally Welded Attachments								No Components (BWR)
B-J		Heat Exchanger								No Components (BWR)
		Integrally Welded Attachments								
		PRESSURE RETAINING WELDS IN PIPING								All welds in these Item No.s subject to examinations are grouped together by system on the following pages. Each Item No. is repeated for each weld for continuity
										See Part-E, Appendix-A, for additional informa- tion on Category B-J weld selection
	89.10	Nominal Pipe Size \geq 4 in.								
	89.11	Circumferential Welds	Surface and Volumetric							
	89.12	Longitudinal Welds	Surface and Volumetric							12" of each inter- secting seam weld will be examined
	89.20	Nominal Pipe Size < 4 in.								

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Reg'd Exam Method Selected	Relief Request	Augmented Exam Method	Sci Basis	PERIOD			REMARKS	
							1st	2nd	3rd		
B-J (Cont'd)	09.21	Circumferential Welds	Surface								
	09.22	Longitudinal Welds	Surface								
	09.30	Branch Connection Welds									
	09.31	Nominal Pipe Size \geq 4 in.	Surface and Volumetric								
	09.32	Nominal Pipe Size < 4 in.	Surface								
	09.40	Socket Welds	Surface								
			B21-Nuclear Boiler System Loop A								
	09.11	7-316A	MT UT Mech/Man			TE	01C 01C				
	09.12	SW-PS-2-A1-ALU	MT UT				01C 01C				
	09.11	SW-PS-2-A1-A	MT UT			HS	01C 01C				
	09.12	SW-PS-2-A1-ALD-I	MT UT				01C 01C				
	09.12	SW-PS-2-A1-ALD-O	MT UT				01C 01C				
	09.12	SW-PS-2-A1-BLU-I	MT UT				01C 01C				
09.12	SW-PS-2-A1-BLU-O	MT UT				01C 01C					

Dwg. #H721-5352-5

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont'd)	B9.11	SW-PS-2-A1-B	MT UT			HS	01C 01C			
	B9.12	SW-PS-2-A1-BLD	MT UT				01C 01C			
	B9.12	SW-PS-2-A3LU	MT UT							
	B9.11	FW-PS-2-A3	MT			HS				
	B9.12	SW-PS-2-A3LD-0	MT UT							
	B9.12	SW-PS-2-A3-ALU-0	MT UT							
	B9.11	SW-PS-2-A3-A	MT UT			MS				
	B9.12	SW-PS-2-A3-ALD	MT UT							
	B9.11	SW-PS-2-A3-C	MT UT			MS				
	B9.12	SW-PS-2-A3-C-LLU	MT UT							
	B9.31	SW-PS-2-A3-L	MT UT			HS				
	B9.12	SW-PS-2-A3-LLD	MT UT							
	B9.11	SW-PS-2-A3-F	MT UT			MS				
	B9.11	SW-PS-2-A6LU	MT UT							
	B9.11	FW-PS-2-A6	MT UT			MS				

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PROGRAM PLAN TABLES (NDE)

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont'd)		B21-Nuclear Boiler System Loop B								Dwg. 8M721-5353-5
	89.11	7-316B	MT UT Mech/Man			TE				
	89.12	SW-PS-2-B1-ALU	MT UT							
	89.11	SW-PS-2-B1-A	MT UT			MS				
	89.12	SW-PS-2-B1-ALD-I	MT UT							
	89.12	SW-PS-2-B1-ALD-O	MT UT							
	89.12	SW-PS-2-B1-BLU-I	MT UT							
	89.12	SW-PS-2-B1-BLU-O	MT UT							
	89.11	SW-PS-2-B1-B	MT UT			MS				
	89.12	SW-PS-2-B1-BLD	MT UT							
	89.12	SW-PS-2-B3LU	MT UT					025 025		
	89.11	FW-PS-2-B3	MT UT			MS		025 025		

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CODE CLASS 1

FERMI 2 INSERVICE INSPECTION PROGRAM PLAN TABLES (NDE)

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Set. Basis	PERIOD 1st 2nd 3rd	REMARKS
B-J (Cont'd)	B9.12	SW-PS-2-B3-D-0	MT UT				02S 02S	
	B9.12	SW-PS-2-B3-ALU-0	MT UT				02S 02S	
	B9.11	SW-PS-2-B3-A	MT UT			MS	02S 02S	
	B9.12	SW-PS-2-B3-ALD	MT UT				02S 02S	
	B9.11	SW-PS-2-B3-C	MT UT			MS	02S 02S	
	B9.11	SW-PS-2-B3-F	MT UT			MS	02S 02S	
	B9.31	SW-PS-2-B3-H	MT UT			R	01C 01C	
	B9.11	SW-PS-2-B3-J	MT UT			MS	01C 01C	
	B9.11	SW-PS-2-B3-R	MT UT			MS	02S 02S	

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PROGRAM PLAN TABLES (NDE)

CODE
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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sol. Base	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont'd)		B21-Nuclear Boiler System Loop C								
	89.12	7-318C	MT UT Mech/Man			TE				
	89.12	SW-PS-2-C1-ALU	MT UT							
	89.11	SW-PS-2-C1-A	MT UT			MS				
	89.12	SW-PS-2-C1-ALD-I	MT UT							
	89.12	SW-PS-2-C1-ALD-O	MT UT							
	89.12	SW-PS-2-C1-BLU-I	MT UT							
	89.12	SW-PS-2-C1-BLU-O	MT UT							
	89.11	SW-PS-2-C1-B	MT UT			MS				
	89.12	SW-PS-2-C1-BLD	MT UT							
	89.12	SW-PS-2-C3LU	MT UT					01CL 01CL 025		Limited Exam - 71% Completed - Limited by Clamp.
	89.11	FW-PS-2-C3	MT UT			MS		01C 01C		

ISI-NDE Program

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Base	PERIOD			REMARKS
							1st	2nd	3rd	
R-J (Cont'd)	89.12	SW-PS-2-C3LD-0	MT UT				01C 01C			
	89.12	SW-PS-2-C3-ALU-0	MT UT				02S 02S			
	89.11	SW-PS-2-C3-A	MT UT			MS	02S 02S			
	89.12	SW-PS-2-C3-ALD	MT UT				02S 02S			
	89.11	SW-PS-2-C3-C	MT UT			HS				
	89.11	SW-PS-2-C3-D	MT UT			HCU				
	89.11	SW-PS-2-C3-F	MT UT			MS				
	89.11	SW-PS-2-C3-J	MT UT			HS	02S 02S			
	89.11	SW-PS-2-C3-K	MT UT			HCU	02S 02S			
	89.11	SW-PS-2-C3-M	MT UT			HS				

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont'd)		B21-Nuclear Boiler System Loop D								DWG. 6M721-5355
	89.11	7-116D	MT UT Mech.			TE				
	89.12	SW-PS-2-D1-ALU	MT UT							
	89.11	SW-PS-2-D1-A	MT UT			HS				
	89.12	SW-PS-2-D1-ALD-I	MT UT							
	89.12	SW-PS-2-D1-ALD-O	MT UT							
	89.12	SW-PS-2-D1-BLU-I	MT UT							
	89.12	SW-PS-2-D1-BLU-O	MT UT							
	89.11	SW-PS-2-D1-B	MT UT			HS				
	89.12	SW-PS-2-D1-BLD	MT UT							
	89.12	SW-PS-2-D3LU	MT UT							
	89.11	FW-PS-2-D3	MT UT			HS				

ISI-NDE Program

FERMI 2 INSERVICE INSPECTION
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CLASS 1

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Code Category	Item Number	Code Category Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont'd)	89.12	SW-PS-2-D3LD-0	MT UT							
	89.12	SW-PS-2-D3-ALU-0	MT UT							
	89.11	SW-PS-2-D3-A	MT UT			HS				
	89.12	SW-PS-2-D3-ALD	MT UT							
	89.31	SW-PS-2-D3-E	MT UT			R				
	89.11	SW-PS-2-D3-J	MT UT			MS	01C 01C			
	89.11	SW-PS-2-X7D-W1	UT UT		RR-3A	MS				Inaccessible for examination

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FERMI 2 INSERVICE INSPECTION
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CODE
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INTERVAL 1 2 3 4

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont'd)		B31-Reactor Recirculation Loop A								DWG. 6W721-5356-5 -5357-5
		B9.11 FW-RS-2-A1	UT		*	A				Note No. 2, Cat. E
		B9.12 SW-RS-2-A1LD	UT							
		B9.12 SW-RS-2-A1-W2LU-I	PT UT		01C 01C		01C 01C			
		B9.12 SW-RS-2-A1-W2LU-O	PT UT		01C 01C		01C 01C			
		B9.11 SW-RS-2-A1-W2	PT UT		01C 01C	R	01C 01C			Note No. 2, Cat. B
		B9.12 SW-RS-2-A1-W2LD	PT UT		01C 01C		01C 01C			
		B9.12 SW-RS-2-A2-W1LU	UT							
		B9.11 SW-RS-2-A2-W1	UT		*	A				Note No. 2, Cat. B
		B9.12 SW-RS-2-A2-W1LD-I	UT							
		B9.12 SW-RS-2-A2-W1LD-O	UT							
		B9.12 SW-RS-2-A3-LU-I	PT UT		01C 01C		01C 01C			
		B9.12 SW-RS-2-A3-LU-O	PT UT		01C 01C		01C 01C			
		B9.11 FW-RS-2-A3	PT UT		01C 01C	R	01C 01C			Note No. 2, Cat. B
		B9.12 SW-RS-2-A3LU-I	PT UT		01C 01C		01C 01C			

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CODE
CLASS 1

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Set. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont'd)	89.12	SW-RS-2-A5LU-0	PT UT		01C 01C		01C 01C			
	89.11	FW-RS-2-A5	PT UT		01CL 01CL	R	01CL 01CL 025			Partial Limitation - Insulation - Support Ring 86% Complete Note No. 2, Cat. B
	89.11	FW-RS-2-A6	PT UT			R				Note No. 2, Cat. B
	89.12	SW-RS-2-A6LD	PT UT							
	89.31	SW-RD-2-A1-W1	PT UT		01C 01C	R	01C 01C			Note No. 2, Cat. A
	89.11	FW-RD-2-A1-W1	PT UT			R				Note No. 2, Cat. B UFSAR 5.2.3.2
	89.11	FW-RD-2-A8	UT		*	A				Note No. 2, Cat. B
	89.12	SW-RD-2-ABLD-I	UT							
	89.12	SW-RD-2-AB-LD-0	UT							
	89.11	FW-RD-2-A2-W2	PT UT			R				Note No. 2, Cat. B UFSAR 5.2.3.2
	89.12	SW-RD-2-A2-W20LU	PT UT		01C 01C					
	89.11	SW-RD-2-A2-W20	PT UT		01C 01C	R				Note No. 2, Cat. B NE-83-842 & NE-83-863
	89.11	SW-RD-2-A2-W20LD	PT UT		01C 01C					
	89.12	SW-RD-2-A2-W2LU	PT UT		01C 01C		01C 01C			

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Code Category	Item Number	Code Category Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont'd)	89.11	SW-RD-2-A2-W2	PT UT		01C 01C	R	01C 01C			Note No. 2, Cat. B NE-83-842 & NE-83-863
	89.12	SW-RD-2-A2-W2LD-A	PT UT		01C 01C		01C 01C			
	89.12	SW-RD-2-A2-W2LD-B	PT UT		01C 01C		01C 01C			
	89.12	SW-RD-2-A9LU-A	UT		025		025			
	89.12	SW-RD-2-A9LU-B	UT		025		025			
	89.11	FW-RD-2-A9	UT		025	A	025		Note No. 2, Cat. B	
	89.12	SW-RD-2-A9LD-A	UT		025		025			
	89.12	SW-RD-2-A9LD-B	UT		025		025			
	89.11	SW-RD-2-A3-W7	PT UT		01C 01C	R	01C 01C		Note No. 2, Cat. B	
	89.12	SW-RD-2-A3-W7LD	PT UT		01C 01C		01C 01C			
	89.12	SW-RD-2-A3-W9LU	PT UT							
	89.11	SW-RJ-2-A3-W9	PT UT			R			Note No. 2, Cat. B	
	89.31	SW-RD-2-A3-W3	PT UT			R			Note No. 2, Cat. A	

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Code Category	Item Number	Code Category Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont)	89.11	SW-RD-2-A11	PT UT			R				Note No. 2, Cat. B
	89.12	SW-RD-A2-A11LD	PT UT							
	89.12	SW-RD-A16LU	PT UT							
	89.11	FW-RD-2-A16	PT UT			R				Note No. 2, Cat. B
	89.11	FW-RD-2-A12	UT		*	A				Note No. 2, Cat. B
	89.12	SW-RD-2-A12LD	UT							
	89.12	SW-RD-2-A8-W1LU	UT							
	89.11	SW-RD-2-A8-W1	UT		*	A				Note No. 2, Cat. A
	89.12	SW-RD-2-A8-W1LD-1	UT							
	89.11	FW-RD-2-A14	UT		*	A				Note NO. 2, Cat. B
	89.12	SW-RD-2-A14LD	UT							

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CLASS 1

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont'd)		B21-Reactor Recirculation Loop B								Dwg. 6M721-5358-5 -5359-5
	89.12	SW-RS-2-B1-W1LU	PT UT							
	89.11	SW-RS-2-B1-W1	PT UT			MS				Note No. 2, Cat. B
	89.12	SW-RS-2-B1-W1LD-1	PT UT							
	89.12	SW-RS-2-B1-W1LD-0	PT UT							
	89.12	SW-RS-2-B2LU	UT		025		025			
	89.11	FW-RS-2-B2	UT		025	A	025			Note No. 2, Cat. B
	89.12	SW-RS-2-B2LD	UT		025		025			
	89.12	SW-RS-2-B2-W10ALU-A	UT							
	89.12	SW-RS-2-B2-W10ALU-B	UT							
	89.11	SW-RS-2-B2-W10A	UT		*	A				Note No. 2, Cat. B
	89.12	SW-RS-2-B2-W10ALD	UT							
	89.11	FW-RS-2-B4	UT		*	A				Note No. 2, Cat. B
	89.12	SW-RS-2-B4LD	UT							
	89.31	SW-RS-2-B3-W2	PT UT				HS			Note No. 2, Cat. A

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sol. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont'd)	B9.12	SW-RS-2-B3-W1LU	UT							
	B9.11	SW-RS-2-B3-W1	UT		*	A				Note No. 2, Cat. A
	B9.12	SW-RS-2-B3-W1LD-1	UT							
	B9.12	SW-RS-2-B3-W1LD-0	UT							Note No. 2, Cat. B
	B9.11	FW-RD-2-B1-W1	PT UT			R				Note No. 2, Cat. B UFSAR 5.2.3.2
	B9.12	SW-RD-2-B7LU	UT							
	B9.11	FW-RD-2-B7	UT		*	A				Note No. 2, Cat. B
	B9.11	FW-RD-2-B2-W2	PT UT		01C 01C	R	01C 01C			Note No. 2, Cat. B UFSAR 5.2.3.2
	B9.12	SW-RD-2-B2-W20LU	PT UT		01C 01C		01C 01C			
	B9.11	SW-RD-2-B2-W20	PT UT		01C 01C	R	01C 01C			Note No. 2, Cat. B NE-83-842 & NE-83-863
	B9.12	SW-RD-2-B2-W20LD	PT UT		01C 01C		01C 01C			
	B9.12	SW-RD-2-B2-W2LU	PT UT		01C 01C					
	B9.11	SW-RD-2-B2-W2	PT UT		01C 01C	R				Note No. 2, Cat. B NE-83-842 & NE-83-863
	B9.12	SW-RD-2-B2-W2LD-A	PT UT		01C 01C					

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont'd)	B9.12	SW-RD-2-B2-W2LD-B	PT UT		01C 01C					
	B9.11	SW-RD-2-B3-W5LU-A	UT		02S		02S			
	B9.11	SW-RD-2-B3-W5LU-B	UT		02S		02S			
	B9.11	SW-RD-2-B3-W5	UT		02S	A	02S			Note No. 2, Cat. B
	B9.11	SW-RD-2-B3-W8	UT		*	A				Note No. 2, Cat. B
	B9.12	SW-RD-2-B3-W6LD	UT							
	B9.12	SW-RD-2-B3-W8LU	UT							
	B9.11	SW-RD-2-B3-W8	UT		*	A				Note No. 2, Cat. B
	B9.31	SW-RD-2-B3-W4	PT UT			R				Note No. 2, Cat. A
	B9.12	SW-RD-2-B4-W2LU-1	PT UT							
	B9.11	SW-RD-2-B4-W2	PT UT			MS				Note No. 2, Cat. A
	B9.12	SW-RD-2-B4-W2LD	PT UT							
	B9.12	SW-RD-2-B5-W2LU-1	PT UT							
	B9.11	SW-RD-2-B5-W2	PT UT			MS				Note No. 2, Cat. B

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont'd)	89.12	SW-RD-2-B5-WZLD	PT UT							
	89.12	SW-RD-2-B16LU	UT							
	89.11	FW-RD-2-B16	UT		*	A				Note No. 2, Cat. B
	89.12	SW-RD-2-BB-W1LU	PT UT		01C 01C		01C 01C			
	89.11	SW-RD-2-BB-W1	PT UT		01C 01C	R	01C 01C			Note No. 2, Cat. A
	89.12	SW-RD-2-BB-W1LD-I	PT UT		01C 01C		01C 01C			
	89.12	SW-RD-2-BB-W2LU-I	PT UT			MS	025 025			Note No. 2, Cat. A
	89.11	SW-RD-2-BB-W2	PT UT				025 025			
	89.12	SW-RD-2-BB-W2LD	PT UT							
	89.11	FW-RD-2-B13	PT UT		01C 01C	A				Note No. 2, Cat. B
	89.12	SW-RD-2-B13LD	PT UT		01C 01C					
	89.12	SW-RD-2-B18LU	PT UT		01C 01C					
	89.11	FW-RD-2-B18	PT UT		01C 01C	A				Note No. 2, Cat. B
	89.11	FW-RD-2-B14	UT		*	A				Note No. 2, Cat. B

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CLASS 1

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Code Category	Item Number	Code Category Code Item No. Description Unique Identification	Exam Reg'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont'd)	89.11	SW-RD-2-B14LD	UT							
	89.12	SW-RD-2-B19LU	UT							
	89.11	FW-RD-2-B19 E11-2298-RMR	UT			A				Note No. 2, Cat. B
	89.11	FW-E11-2298-0W1	MT UT			HS				Dwg. 6M721-2298-5
	89.11	SW-E11-2298-2WE	MT UT			R				
	89.11	FW-E11-2298-4WD	MT UT			R	025 025			
	89.11 85.130	SW-E11-2298-8WC	PT UT		01C 01C	DM	01C 01C			Notes 1 & 2, Cat. B
	89.12	SW-E11-2298-8WCLD	PT UT		01C 01C		01C 01C			

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J	89.12	SW-E11-2298-6WDLU	PT UT		01C 01C		01C 01C			
	89.11	FW-E11-2298-6WD E11-2298-RHR	PT UT		01C 01C	HS	01C 01C			Note 2, Cat. B Dwg. 8M721-2299-5
	89.11	FW-E11-2299-0W1	PT UT			R				Note 2, Cat. B
	89.12	SW-E11-2299-0W1LD	PT UT							
	89.12	SW-E11-2299-1WBLU	PT UT							
	89.11 85.130	SW-E11-2299-1WB	PT UT			DM				Note 1, Note 2, Cat. B
	89.11	FW-E11-2299-1W0	MT UT			R				
	89.11	SW-E11-2299-3WAM	MT UT			R	01C 01C			
	89.11	SW-E11-2299-4WQ	MT UT			R				

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CLASS 1

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Set. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont'd)	89.31	FW-E11-2299-5WF5	MT UT			MS	025 025			
	89.11	FW-E11-2299-5W0 E11-2327-RHR	MT UT			HS				Dwg. 6M721-2327-5
	89.11	FW-E11-2327-0W1	MT UT			HS	01C 01C			
	89.11	FW-E11-2327-3W4	MT UT			R				
	89.11	FW-E11-2327-4WB	MT UT			R	025 025			
	89.11 85.130	SW-E11-2327-6WC	PT UT			DM				Notes 1 & 2, Cat. B
	89.12	SW-E11-2327-6WCLD	PT UT							
	89.12	SW-E11-2327-6WOLU	PT UT							
	89.11	FW-E11-2327-6W0 E11-3519-RHR	PT UT			HS				Note 2, Cat. B
	89.11	FW-E11-3519-1VW2	MT UT			R				Dwg. 6M721-3519

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont'd)	89.11	SW-E11-3519-2WJ	MT UT			HS				Dwg. 6M721-3052-5 Notes 1, 2 & 8, Cat. B
		E21-3052-Core Spray								
	89.11	SW-E21-3052-3WP	MT UT			HS	01C 01C			
		89.11	SW-E21-3052-3WN	MT UT			HS			
	89.11	SW-E21-3052-4WK	MT UT			MS				
	89.11	FW-E21-3052-4WF1	MT UT			MS				
	89.11 85.130	SW-E21-3052-4WDX	PT UT			DM	01C 01C			

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont'd)		E21-3053-Core Spray								Dwg. 6M721-3053-5
	89.11	SW-E21-3053-3WP	MT UT			HS				
	89.11	SW-E21-3053-3WN	MT UT			HS				
	89.11	SW-E21-3053-4WR	MT UT			MS	025			
	89.11	FW-E21-3053-4WF2	MT UT			MS	025			
	89.11 85.130	SW-E21-3053-4WDX	PT UT		01C 01C	DM				Notes 1, 2 & 8, C.it. 8
		E41-2297-HPCI								Dwg. 6M721-2297-5
	89.11	FW-E41-2297-2W3	MT UT			R	01C 01C			
	89.11	FW-E41-2297-3W0	MT UT			R				
	89.11	FW-E41-2297-0W4	MT UT			R	025 025			

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont'd)		E51-2192 RCIC								Dwg. 6M721-2192-5
	89.11	SW-E51-2192-8WJ	MT UT			R				
	89.11	FW-E51-2192-1VW5	MT UT			R				Dwg. 6M721-3096-5 6M721-5351-5
		G33-3096-RWCU								
	89.21	FW-G33-3096-18WF22	PT UT			MS	01C 01C			
	89.11	FW-G33-3096-8WF4	MT UT			R				
	89.11	SW-G33-3096-3WG	MT UT			R				
	89.11 85.13C	SW-G33-3096-12WD	PT UT			DM	01C 01C			Notes 1 & 2, Cat. B
	89.11	SW-G33-3096-12WB	MT UT			HS				
89.11	FW-G33-3096-12WF2	UT			A				Note 2, Cat. B	

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont'd)	89.11	FW-G33-3096-8W11	MT UT			R				
	89.11	FW-G33-3096-10WF3	PT UT			R	025 025			Note 2, Cat. B
	89.11	FW-G33-3096-10WF1	PT UT			R				Note 2, Cat. B
	89.11 85.130	SW-G33-3096-10WD	PT UT		01C 01C	DM				Notes 1 & 2, Cat. B
	89.11	FW-G33-3096-10WF4	MT UT			HS	01CL-025 01C			Limited Exam 91% Completed - Limited by Clamp.
	89.11	FW-G33-3096-9WF1	MT UT			R	025 025			
	89.11	N21-2338-Feedwater Loop A								Dwg. 6N721-3537-5
	89.11	FW-N21-2338-11W02	MT UT			HS				HPCI Selection
	89.11	FW-N21-2338-2W0	MT UT			MS	01C 01C			

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont'd)	89.11	FW-N21-2336-0W13	MT UT			MS				
	89.11	SW-N21-2338-13WC	MT UT			MS	01C 01C			
	89.11	FW-N21-2336-13W14	MT UT			HS				
	89.11	FW-N21-2336-14WF1	MT UT			MS				
	89.11	FW-N21-2336-14W15	MT UT			HS				
	89.11	SW-N21-2336-15WP	MT UT			R	01C 01C			
	89.11	FW-N21-2336-15W0	MT UT			R	01C 01C			
	89.11	N4A	MT UT			R	02S 02S			
	89.11	3-316A	MT UT Mech.			TE	02S 02S			
	89.11	SW-N21-2336-13WE	MT UT			MS	01C 01C			
	89.11	3-316B	MT UT Mech.			TE	02S 02S			

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-J (Cont'd)	89.11	FW-N21-2336-16W19	MT UT			R				
	89.11	3-316C	MT UT Mech.			TE				
		N21-2336-Feedwater Loop B								Dwg. BM721-3536-B
	89.11	FW-N21-2336-1W02	MT UT			HS				RCIC Selection
	89.11	SW-N21-2336-1WB	MT UT			MS				RCIC Selection
	89.11	FW-N21-2336-1W03	MT UT			HS				RWCU Selection
	89.31	SW-N21-2336-1WD	MT UT			HS				RCIC Selection
	89.11	SW-N21-2336-1WU	MT UT			MS	01C 01C			RCIC Selection
	89.11	FW-N21-2336-0W1	MT UT			MS				RCIC Selection
	89.11	SW-N21-2336-1WL	MT UT			MS	01C 01C			RCIC Selection
	89.11	FW-N21-2336-12W0	MT UT			MS				
	89.11	FW-N21-2336-0W3	MT UT			HS				
	89.11	SW-N21-2336-3WC	MT UT			MS				
	89.11	FW-N21-2336-3W4	MT UT			HS				
	89.11	SW-N21-2336-4WC	MT UT			MS				

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS	
							1st	2nd	3rd		
B-J (Cont'd)	89.11	FW-N21-2336-4W5	MT UT			MS					
	89.11	3-316F	MT UT Mech.			TE					
	89.11	SW-N21-2336-3WE	MT UT			MS					
	89.11	3-316E	MT UT Mech.			TE					
	89.11	3-316D	MT UT Mech.			TE					
		Closure Head-Nozzle to Flange		UT							
	89.11	1-318	MT UT			TE				Dwg. 6M721-5361-5	
	89.11	3-318A	MT UT			R				Dwg. 6M721-5361-5 Dwg. 6M721-3519-5	
	89.11	3-318B	MT UT			R				Dwg. 6M721-5361-5	
		RPV-Jet Pump Instrumentation Safe End to Seal Assembly									
	89.11	NBA	PT UT			01C 01C	TE	01C 01C		Dwg. 6M721-5361-5 Note 2, Cat. B	
	89.11	NBB	PT UT			01C 01C	TE			Dwg. 6M721-5361-5 Note 2, Cat. B	

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							1st	2nd	3rd	
B-K-1		INTEGRAL ATTACHMENTS FOR PIPING, PUMPS AND VALVES								
		Piping								Includes 100% of the weld length
	B10.10	Integrally Welded Attachments								Dwg. 6M721-5352-5
		B21-Nuclear Boiler System Loop A								
	B10.10	SW-PS-2-A2-AA1	MT				025			
		-AA2	MT				025			
		-AA3	MT				025			
		-AA4	MT				025			
		FW-PS-2-A4-GA1	MT	RR-BA						
		-GA2	MT	RR-BA						
		-GA3	MT	RR-BA						
		-GA4	MT	RR-BA						
		SW-PS-2-X7A-W2A	MT	RR-10A						
		-W2B	MT	RR-10A						
		-W2C	MT	RR-10A						
		B21-Nuclear Boiler System Loop B								Dwg. 6M721-5353-5
	B10.10	SW-PS-2-B2-AA1	MT							
		-AA2	MT							
		-AA3	MT							
		-AA4	MT							
		PSFW-PS-2-B3-556A	MT							
		-556B	MT							
		-556C	MT							
		-556D	MT							

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS	
							1st	2nd	3rd		
B-K-1 (Cont'd)	B10.10 Cont'd	PSFW-PS-2-B3-559A	MT				01CL-025			Limited Exam 77% completed per Lug. Clamp Limitation.	
		-559B	MT				01CL-025				
		-559C	MT				01CL-025				
		-559D	MT				01CL-025				
		FW-PS-2-B4-GB1	MT	RR-BA							
		-GB2	MT	RR-BA							
		-GB3	MT	RR-BA							
		-GB4	MT	RR-BA							
		SW-PS-2-X7B-W2A	MT	RR-10A							
		-W2B	MT	RR-10A							
	-W2C	MT	RR-10A								
	B21-Nuclear Boiler System Loop C										
	B10.10	SW-PS-2-C2-AA1	-AA1	MT				025			Dog. 6M721-5354-5
			-AA2	MT				025			
			-AA3	MT				025			
			-AA4	MT				025			
		PSFW-PS-2-C3-558A	-558B	MT							
			-558C	MT							
			-558D	MT							
			-558E	MT							
PSFW-PS-2-C3-557A		-557B	MT								
		-557C	MT								
	-557D	MT									
	-557E	MT									
FW-PS-2-C4-GC1	-GC2	MT	RR-BA								
	-GC3	MT	RR-BA								
	-GC4	MT	RR-BA								
	-GC5	MT	RR-BA								

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-K-1 (Cont'd)	B10.10	SW-PS-2-X7C-W2A	MT	RR-10A						Dwg. 6M721-5354-5
	Cont'd	-W2B -W2C	MT MT	RR-10A RR-10A						
		B21-Nuclear Boiler System Loop D								
	B10.10	SW-PS-2-D2-AA1	MT							Dwg. 6M721-5357-5
		-AA2	MT							
		-AA3	MT							
		-AA4	MT							
		FW-PS-2-D4-GD1	MT	RR-8A						
		-GD2	MT	RR-8A						
		-GD3	MT	RR-8A						
		-GD4	MT	RR-8A						
		SW-PS-2-X7D-W2A	MT	RR-10A						
		-W2B	MT	RR-10A						
		-W2C	MT	RR-10A						
		B31-Reactor Recirculation Loop A								
	B10.10	SW-RS-2-A2-W4	PT							
		-W5	PT							
		-W6	PT							
		-W7	PT							
		FW-RS-2-A2-AL1	PT	RR-9A						
		-AL2	PT	RR-9A						
		-AL3	PT	RR-9A						
		-AL4	PT	RR-9A						

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-K-1 (Cont'd)	810.10 Cont'd	SW-RD-2-A2-W16	PT	RR-9A						
		-W17	PT	RR-9A						
		-W18	PT	RR-9A						
		-W19	PT	RR-9A						
		FW-RD-2-A2-AL1	PT					01CL-025		Limited Exam 87%
		-AL2	PT					01CL-025		Completed per Lug.
		-AL3	PT					01CL-025		Clamp Limitation.
		-AL4	PT					01CL-025		
			831-Reactor Recirculation Loop B							Dwg. 6M721-5359-5
		810.10	SW-RS-2-B2-W6A	PT					025	
	-W7A		PT					025		
	-W8A		PT					025		
	-W9A		PT					025		
	SW-RD-2-B2-W16		PT	RR-9A						
	-W17		PT	RR-9A						
	-W18		PT	RR-9A						
-W19	PT		RR-9A							
		FW-RD-2-B2-AL1	PT							
		-AL2	PT							
		-AL3	PT							
		-AL4	PT							

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIODS			REMARKS
							1st	2nd	3rd	
B-K-1 (Cont'd)	B10.10	E11-2298-RHR								Dwg. 6M721-2298-5
		PSFW-E11-2298-B33A	MT				025			
		-B33B	MT				025			
		-B33C	MT				025			
		-B33D	MT				025			
		-B33E	MT				025			
		-B33F	MT				025			
		PSFW-E11-2298-B32A	MT							
		-B32B	MT							
		-B32C	MT							
	-B32D	MT								
	-B32E	MT								
	-B32F	MT								
	SW-E11-2298-X13B-W2A	MT		RR-10A						
	-W2B	MT		RR-10A						
	-W2C	MT		RR-10A						
	B10.10	E11-2299-RHR								Dwg. 6M721-2299-5 Limited Exam 50% Completed per Lug. Clamp Limitation.
		PSFW-E11-2299-781A	MT				01CL-025			
		-781B	MT				01CL-025			
		-781C	MT				01CL-025			
	-781D	NT				01CL-025				
	SW-E11-2299-2WN	MT								
	-2WN	MT								
	-2WP	MT								
	-2WQ	MT								

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS		
							1st	2nd	3rd			
B-K-1 (Cont'd)	B10.10	PSFW-E11-2299-836A	MT									
		-836B	MT									
		-836C	MT									
		-836D	MT									
		-836E	MT									
		-836F	MT									
		SW-E11-2299-X12-W2A	MT	RR-10A								
	-W2B	MT	RR-10A									
	-W2C	MT	RR-10A									
	E11-2327-RHR											
	B10.10	B10.10	SW-E11-2327-2WD	MT						025		
			-2WE	MT						025		
			-2WF	MT							025	
			-2WG	MT							025	
-2WH			MT							025		
-2WJ			MT							025		
B10.10		B10.10	SW-E11-2327-4WD	MT								
			-4WE	MT								
			-4WF	MT								
			-4WG	MT								
			-4WH	MT								
			-4WJ	MT								
B10.10		B10.10	SW-E11-2327-X13A-W2A	MT	RR-10A							
			-W2B	MT	RR-10A							
		-W2C	MT	RR-10A								
E11-3519-RHR												
B10.10	B10.10	SW-E11-3519-X17-W2A	MT	RR-10A								
		-W2B	MT	RR-10A								
		-W2C	MT	RR-10A								

Dwg. 6M721-2327-5

Dwg. 6M721-3519-5

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS	
							1st	2nd	3rd		
B-K-1 (Cont'd)	B10.10 Cont'd	E21-3052-Core Spray								DWG. 6M721-3052-5	
		SW-E21-3052-2WN	MT								
		-2WP	MT								
		-2WQ	MT								
		-2WR	MT								
		SW-E21-3052-2WS	MT								
		-2WT	MT								
		-2WU	MT								
		-2WV	MT								
		PSFW-E21-3052-803A	MT					01CL-025			Limited Exam 84%
		-803B	MT					01CL-025			Completed per Lug.
		-803C	MT					01CL-025			Limited by Clamp.
		-803D	MT					01CL-025			
		SW-E21-3052-X168-W2A	MT			RR-10A					
		-W2B	MT			RR-10A					
	-W2C	MT			RR-10A						
			E21-3053-Core Spray								Dwg. 6M721-3053-5
		B10.10	SW-E21-3053-2WN	MT							
			-2WP	MT							
			-2WQ	MT							
	-2WR		MT								
	SW-E21-3053-2WS		MT					025			
	-2WT		MT					025			
	-2WU		MT					025			
	-2WV		MT					025			
	PSFW-E21-3053-795A		MT								
	-795B		MT								
	-795C		MT								
	-795D		MT								

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							1st	2nd	3rd	
B-K-1 (Cont'd)	010.10	SW-E21-3053-X18A-X2A	MT	RR-10A						
	Cont'd	-W2B -W2C	MT MT	RR-10A RR-10A						
	B10.10	N21-2336-Feeder Loop A								Dwg. 6M721-3537-5
		SW-N21-2336-12WC	MT				01CL-025			Limited Exam 88% Completed per Log. Limited by Clamp.
		-12WD	MT				01CL-025			
		-12WE	MT				01CL-025			
		-12WF	MT				01CL-025			
		-12WG	MT				01CL-025			
		-12WH	MT				01CL-025			
		SW-N21-2336-12WJ	MT							
		-12WK	MT							
		-12WL	MT							
		-12WM	MT							
		-12WN	MT							
		-12WP	MT							
		SW-N21-2336-9WB	MT							
		-9WC	MT							
		-9WD	MT							
		-9WE	MT							
		SW-N21-2336-X9A-W2A	MT	RR-10A						
		-W2B	MT	RR-10A						
		-W2C	MT	RR-10A						
		N21-2336 Feeder Loop B								Dwg. 6M721-3536-5
	B10.10	SW-N21-2336-2WC	MT							
		-2WD	MT							
		-2WE	MT							
		-2WF	MT							
		-2WG	MT							
		-2WH	MT							

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	CODE CLASS 1	INTERVAL				Relief Request	Augmented Exam Method	Sel.	PERIOD			REMARKS
				1	2	3	4				1st	2nd	3rd	
B-K-1 (Cont'd)	B10.10 Cont'd	SW-N21-2336-2WJ -2WK -2WL -2WM -2WN -2WP										02S 02S 02S 02S 02S		
		SW-N21-2338-19KB -19KC -19KD -19KE												
		SW-N21-2336-K08-WZA -WZB -WZC					RR-10A RR-10A RR-10A							
		Pumps												
	B10.20	Integrally Welded Attachments												
		RRC Pump A												
		SW-B31-5365-Pump A-WA -WB -WC					RR-11A RR-11A RR-11A							
		RRC Pump B												
		SW-B31-5365-Pump B-WA -WB -WC					RR-11A RR-11A RR-11A							

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	CODE CLASS 1	INTERVAL				Exam Reqd'd Exam Method Selected	Relief Request	Augmented Exam Method	PERIOD			REMARKS
				1	2	3	4				1st	2nd	3rd	
B-K-1	B10.30	Valves Integrally Welded Attachments											N/A	
B-L-1	B12.10	PRESSURE RETAINING WELDS IN PUMP CASINGS Pump Casing Welds											No Pump Casing Welds	
B-L-2	B12.20	PUMP CASINGS Recirculation Pump A Pump Casing (B3101C001A)						RR-4A	PT				Internal Surfaces (Note No. 10)	
B-M-1	B12.20	Recirculation Pump B Pump Casing (B3101C001B) PRESSURE RETAINING WELDS IN VALVE BODIES						RR-4A	PT				Internal Surfaces (Note No. 10) No Valve Body Welds	
B-M-2	B12.30	Valves, Nominal Pipe Size < 4 in. Valve Body Welds											Internal Surfaces - Examine one valve in each group of valves that are of the same constructional design and manufacturing method and that perform similar functions in the system	
	B12.40	Valves, Nominal Pipe Size < 4 in. Valve Body Welds												
	B12.50	VALVE BODY WELDS Valve Body, Exceeding 4 in. Nominal Pipe Size												

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CODE CLASS 1

FERRI 2 INSERVICE INSPECTION PROGRAM PLAN TABLES (MDE)

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Set Beats	PERIOD			REMARKS
							1st	2nd	3rd	
B-M-2 (Cont'd)	B12.50	B21-Nuclear Boiler System	VT-3	RR-5A						Dwg. 6M721-5352-5
		F022A (V17-2003)								Dwg. 6M721-5353-5
		F022B (V17-2001)								Dwg. 6M721-5354-5
		F022C (V17-2002)								Dwg. 6M721-5355-5
		F022D (V17-2004)								Dwg. 6M721-5352-5
		F028A (V17-2007)								Dwg. 6M721-5353-5
		F028B (V17-2005)								Dwg. 6M721-5354-5
		F028C (V17-2006)								Dwg. 6M721-5355-5
		F028D (V17-2008)								Dwg. 6M721-5352-5
		F013A (V22-2071)								Dwg. 6M721-5353-5
		F013B (V22-2068)								Dwg. 6M721-5354-5
		F013C (V22-2060)								Dwg. 6M721-5355-5
		F013D (V22-2054)								Dwg. 6M721-5352-5
		F013E (V22-2056)								Dwg. 6M721-5353-5
		F013F (V22-2050)								Dwg. 6M721-5354-5
F013G (V22-2066)	Dwg. 6M721-5355-5									
F013H (V22-2058)	Dwg. 6M721-5352-5									
F013J (V22-2064)	Dwg. 6M721-5353-5									
F013K (V22-2062)	Dwg. 6M721-5354-5									
F013L (V22-2052)	Dwg. 6M721-5355-5									
F013M (V22-2046)	Dwg. 6M721-5352-5									
F013N (V22-2047)	Dwg. 6M721-5353-5									
F013P (V22-2070)	Dwg. 6M721-5354-5									
F013R (V22-2048)	Dwg. 6M721-5355-5									
R31-Reactor Recirculation			VT-3	RR-5A					Dwg. 6M721-5357-5	
F031A (V6-2003)									Dwg. 6M721-5358-5	
F031B (V8-2004)									Dwg. 6M721-5359-5	
F023A (V8-2001)									Dwg. 6M721-5352-5	
F023B (V6-2002)			Dwg. 6M721-5353-5							

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	PERIOD			REMARKS
						1st	2nd	3rd	
B-M-2	B12.50	E11-RHR							
		F015A (VB-2161)	VT-3	RR-5A				Dwg. 6M721-2298-5	
		F015B (VB-2162)	VT-3	RR-5A				Dwg. 6M721-2327-5	
		F050A (VB-2163)	VT-3	RR-5A				Dwg. 6M721-2298-5	
		F050B (VB-2164)	VT-3	RR-5A				Dwg. 6M721-2327-5	
		F060A (VB-2165)	VT-3	RR-5A				Dwg. 6M721-2298-5	
		F060B (VB-2166)	VT-3	RR-5A				Dwg. 6M721-2327-5	
		F008 (VB-2092)	VT-3	RR-5A				Dwg. 6M721-2298-5	
		F009 (VB-2091)	VT-3	RR-5A				Dwg. 6M721-2292-5	
		F006 (VB-3407)	VT-3	RR-5A				Dwg. 6M721-2299-5	
		F067 (VB-2090)	VT-3	RR-5A				Dwg. 6M721-2298-5	
		F022 (VB-2172)	VT-3	RR-5A				Dwg. 6M721-3519-5	
		F023 (VB-2171)	VT-3	RR-5A				Dwg. 6M721-3519-5	
E21-Core Spray		F005A (VB-2021)	VT-3	RR-5A			Dwg. 6M721-3052-5		
		F005B (VB-2022)	VT-3	RR-5A			Dwg. 6M721-3053-5		
		F006A (VB-2023)	VT-3	RR-5A			Dwg. 6M721-3052-5		
		F006B (VB-2024)	VT-3	RR-5A			Dwg. 6M721-3053-5		
E41-MPCI		F007A (VB-2025)	VT-3	RR-5A			Dwg. 6M721-3052-5		
		F007B (VB-2026)	VT-3	RR-5A			Dwg. 6M721-3053-5		
		F002 (V17-2020)	VT-3	RR-5A			Dwg. 6M721-2297-5		
		F003 (V17-2021)	VT-3	RR-5A			Dwg. 6M721-2297-5		
		F006 (VB-2194)	VT-3	RR-5A			Dwg. 6M721-5352-5		

PERMITS INSERVICE INSPECTION
 PROGRAM PLAN TABLES (MDE)

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	CODE CLASS 1	INTERVAL	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD 1st 2nd 3rd	REMARKS
B-M-2 (Cont'd)	B12.50 Cont'd	E51-RCIC							
		F013 (V8-2228)		VT-3	RR-5A				Dwg. 6M721-3536-5
		G33-RMCU		VT-3	RR-5A				Dwg. 6M721-3096-5
		F001 (V8-2252)		VT-3	RR-5A				Dwg. 6M721-3096-5
		F004 (V8-2253)		VT-3	RR-5A				Dwg. 6M721-5351-5
		F108 (V8-2240)		VT-3	RR-5A				Dwg. 6M721-5351-5
		F100 (V8-2250)		VT-3	RR-5A				Dwg. 6M721-5351-5
		F102 (V8-2251)		VT-3	RR-5A				Dwg. 6M721-5351-5
		M21-Feedwater		VT-3	RR-5A				Dwg. 6M721-3537-5
		F010A (V12-2008)		VT-3	RR-5A				Dwg. 6M721-3536-5
		F010B (V12-2007)		VT-3	RR-5A				Dwg. 6M721-3537-5
		F076A (V12-2002)		VT-3	RR-5A				Dwg. 6M721-3536-5
F076B (V12-2001)		VT-3	RR-5A				Dwg. 6M721-3537-5		
F032A (V12-2004)		VT-3	RR-5A				Dwg. 6M721-3536-5		
F032B (V12-2003)		VT-3	RR-5A				Dwg. 6M721-3537-5		
F011A (V12-2006)		VT-3	RR-5A				Dwg. 6M721-3537-5		
F011B (V12-2005)		VT-3	RR-5A				Dwg. 6M721-3536-5		

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FERMI 2 INSERVICE INSPECTION PROGRAM PLAN TABLES (MDE)

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Beams	PERIOD			REMARKS
							1st	2nd	3rd	
B-N-1		INTERIOR OF REACTOR VESSEL								
	813.10	Reactor Vessel Vessel Interior	Visual VT-3					025		Examine that portion of the vessel interior made accessible during a normal refueling outage.
		Shroud Head	VT-3					01C-025		Direct visual exam
		Shroud Head Bolts	VT-3 UT (48)		01C-025	A		01C-025		(Note 9)
		Steam Separator Assy.	VT-3					01C-025		Direct visual exam
		Feedwater Sparger and Nozzle Area	VT-3 UT		01C	A		025		MUREG 0819
		Core Spray Sparger and Interior Piping	VT-3		01C	A		01C-025		Remote visual exam (Note 12)
		Top Guide	VT-3					01C		Remote visual exam
		Instrumentation Lines	VT-3		01C	A		01C-025		Remote visual exam (Note 7)
		Sample Holders	VT-3					01C		Remote visual exam
		Guide Holders	VT-3					01C		Remote visual exam
		Core Shroud	VT-3					01C		Remote visual exam
		Recirculation Inlet Nozzle	VT-3					01C		Remote visual exam
		Jet Pump Components	VT-3					01C-025		Remote visual exam 01C = 50% Completed
		Jet Pump Hold Down Beams	VT-3 UT		01C-025	A		01C-025		Remote visual exam (Note 3) All cracked Beams will be replaced if cracks found.
		Steam Dryer Assembly	VT-3					01C-025		Remote visual exam (Note 11)

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sci. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-N-2		Control Rod Drive Housings	VT-3							
		Flux Monitor Housings	VT-3							
		CDP and SLC Line	VT-3							
		Access Hole Cover	VT-3				025	065		(Note No. 13)
		INTEGRALLY WELDED CORE SUPPORT STRUCTURES AND INTERIOR ATTACHMENTS TO REACTOR VESSELS								
		Reactor Vessel (BWR)								
	B13.20	Interior Attachments Within Beltline Region	Visual VT-1				025			
		Jet Pump Riser Brace Arms	VT-1				01C			Remote visual exam 01C = 50% Complete
		Surveillance Specimen Holder Brackets	VT-1				01C			Remote visual exam
	B13.21	Interior Attachments Beyond Beltline Region	Visual VT-3				025			
	Steam Dryer Support Lugs	VT-3				01C			Remote visual exam	
	Core Spray Piping Brackets	VT-3				01C			Remote visual exam	
	Feedwater Sparger Brackets	VT-3				01C			Remote visual exam	

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-N-3		REMOVABLE CORE SUPPORT STRUCTURE	Visual VT-3							Partial
	B13.22	Core Support Structure								
		Lower Core Shroud	VT-3							
		Core Support Assy.	VT-3							
		Peripheral Fuel Support	VT-3							
		Reactor Vessel (PWR)								No Components (BWR)
B-N-2	B13.30	Interior Attachments								
B-N-3		Within Bellline Region								
	B13.31	Interior Attachments								
		Beyond Bellline Region								
	B13.32	Core Support Structures								
B-0		PRESSURE RETAINING WELDS IN CONTROL ROD HOUSINGS								

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Failed Request	Augmented Exam Method	Sel. Base	PERIOD			REMARKS
							1st	2nd	3rd	
B-0	B14.10	Reactor Vessel Welds in CRD Housing	Volumetric or Surface							10% of peripheral housings 40 x .1 = 4
		CRD Housing - Tube to Flange						025		
		CRDH-X02-V27-W1	PT							
		CRDH-X02-V31-W1	PT							
		CRDH-X02-V35-W1	PT							
		CRDH-X02-V39-W1	PT							
		CRD Housing - Tube to Tube								
		CRDH-X02-V27-W2	PT							
		CRDH-X02-V31-W2	PT							
		CRDH-X02-V35-W2	PT							
		CRDH-X02-V39-W2	PT							
B-P		ALL PRESSURE RETAINING COMPONENTS								
		Reactor Vessel	Visual, VT-2							
	B15.10	Pressure Retaining Boundary	VT-2							System Leakage Test Each Refueling (Note No. 15)
	B15.11	Pressure Retaining Boundary Pressurizer	VT-2							System Hydro Test (Note No. 15) No Components
	B15.20	Pressure Retaining Boundary								

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basic	PERIOD			REMARKS
							1st	2nd	3rd	
B-P (Cont'd)	815.21	Pressure Retaining Boundary Steam Generator								No Components (BWR)
	815.30	Pressure Retaining Boundary								
	815.31	Pressure Retaining Boundary Heat Exchangers								No Components (BWR)
	815.40	Pressure Retaining Boundary								
	815.41	Pressure Retaining Boundary Piping								
	815.50	Pressure Retaining Boundary						01C-025		System Leakage Test Each Refueling Outage Prior to Plant Startup (Note No. 15)
	815.51	Pressure Retaining Boundary Pumps								System Hydro Test (Note No. 15)
	815.60	Pressure Retaining Boundary						01C-025		System Leakage Test Each Refueling Outage Prior to Plant Startup (Note No. 15)
815.61	Pressure Retaining Boundary								System Hydro Test (Note No. 15)	

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
B-D (Cont'd)	815.70	Valves Pressure Retaining Boundary					01C-025			System Leakage Test Each Refueling Outage Prior to Plant Startup (Note No. 15)
	815.71	Pressure Retaining Boundary								System Hydro Test (Note No. 5)

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sci. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
C-A	C1.10	PRESSURE RETAINING WELDS IN PRESSURE VESSEL	Volumetric				025			Welds at gross structural discontinuities only
		Shell Circumferential Welds								
	RHR Heat Exchanger B SW-E11-D2-HX-11	UT								
C1.20	C1.20	Head Circumferential Welds	Volumetric							Examine 100% of the weld
		RHR Heat Exchanger B SW-E11-D2-HX-05	UT							
C1.30	C1.30	Tubesheet-to-Shell Weld								No Tubesheet-to-Shell Weld
C-B	C2.10	PRESSURE RETAINING NOZZLE WELDS IN VESSELS								N/A
		Nozzles in Vessels \leq 1/2 in. Nominal Thickness								
		Nozzle-to-shell (or head Weld)								
		Nozzles without reinforcing plate in vessels $>$ 1/2 in. Nominal Thickness								
		Nozzle-to-shell (or head Weld)								
C2.21	C2.21	Nozzle-to-shell (or head Weld)	Surface and Volumetric							N/A

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sol. Base	PERIOD			REMARKS
							1st	2nd	3rd	
C-B (Cont'd)		RHR Heat Exchanger B								
		SW-E11-D2-HX-01	RT UT				025 025			
		SW-E11-D2-HX-10	RT UT							
	C2.22	Nozzle Inside Radius Section	Volumetric							
		RHR Heat Exchanger B								
		SW-E11-D2-HX-01 IRS	UT				025			
		SW-E11-D2-HX-10 IRS	UT							
	C2.30	Nozzle With Reinforcing Plate in vessels > 1/2 in Nominal Thickness								N/A
	C2.31	Reinforcing plate welds to nozzle and vessel								N/A
	C2.32	Nozzle-to-shell (or head) Weld								N/A
C-C		INTEGRAL ATTACHMENTS FOR VESSELS, PIPING, PUMPS, AND VALVES								Integrally welded attachments whose base material design thickness is 3/4 in. or greater
	C3.10	Pressure Vessels Integrally Welded Attachments								

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS	
							1st	2nd	3rd		
C-C (Cont'd)	C3.10 Cont'd	RRR Heat Exchanger B									
		SW-E11-D2-HXS-05	MT				025			Dwg 6M721-5370-5	
		-05	MT				025				
		-07	MT				025				
		-08	MT		RR-14A						Inaccessible for exam- inations
		-09	MT					025			
		-10	MT					025			
		-11	MY					025			
		-12	MT					025			
		-13	MT								
		-14	MT								
		-15	MT								
		-16	MT								
-17	MT										
-18	MT										
-19	MT										
-20	MT										
-21	MT										

FERRI 2 INSERVICE INSPECTION
PROGRAM PLAN TABLES (NDE)

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INTERVAL 1 | | 2 | | 3 | | 4 | |

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
C-C (Cont'd)	C3.10 Cont'd	SW-E11-D2-HXS-22	MT							
		SW-E11-D2-HXS-23	MT							
SW-E11-D2-HXS-24		MT								
	C3.20	PIPING								
		Integrally Welded Attachments	Surface							
		C11-50-2113-CRD-SDV	MT							Dwg 6M721-5372-5
		C11-50-2113-G258A	MT				025			
		G258B	MT				025			
		G258C	MT				025			
		G258D	MT				025			
		G258E	MT				025			
		G258F	MT				025			
		G258G	MT				025			
		G258H	MT				025			
		C11-50-2113-G262A	MT							Dwg 6M721-5375-5
		G262B	MT							
		G262C	MT							
		G262D	MT							
		G262E	MT							
		G262F	MT							
		G262G	NT							
		G262H	NT							
		E11-3035-RHR								Dwg 6M721-3035-5
	PSFW-E11-3035-891A	MT								
	891B	MT								
	891C	MT								
	891D	MT								

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PROGRAM PLAN TABLE(S) (NDE)

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS	
							1st	2nd	3rd		
C-C (Cont'd)	C3.20 Cont'd	PSFW-E11-3035-891E	MT							Dwg 6M721-3035-5	
		891F	MT								
		891G	MT								
		891H	MT								
		E11-3146-RMR									Dwg 6M721-3146-5
		PSFW-E11-3146-808A	MT					01CL-025			Limited Exam 83% Completed per Log. Limited by Clamp.
		808B	MT				01CL-025				
		808C	MT				01CL-025				
		808D	MT				01CL-025				
		808E	MT				01CL-025				
		808F	MT				01CL-025				
		808G	MT				01CL-025				
		808H	MT				01CL-025				
		808I	MT				01CL-025				
		808J	MT				01CL-025				
		808K	MT				01CL-025				
		808L	MT				01CL-025				
		PSFW-E11-3146-888A	MT								
		888B	MT								
		888C	MT								
		888D	MT								
		888E	MT								
		888F	MT								
		888G	MT								
		888H	MT								
		888I	MT								
		888J	MT								
		888K	MT								
		888L	MT								
		SW-E11-3146-2WE	MT			RR-12A					
2WF	MT			RR-12A							

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS	
							1st	2nd	3rd		
C-C (Cont'd)	C3.20 Cont'd	SW-E11-3146-2WG	MT	RR-12A						Dwg 8M721-3146-5	
		2WH	MT	RR-12A							
		2WJ	MT	RR-12A							
		2WK	MT	RR-12A							
		SW-E11-3146-7WG	MT	RR-12A							
		7WH	MT	RR-12A							
		7WJ	MT	RR-12A							
		7WK	MT	RR-12A							
		7WL	MT	RR-12A							
		7WH	MT	RR-12A							
		SW-E11-3146-9WC	MT					025			
		9WD	MT					025			
		9WE	MT					025			
		9WF	MT					025			
		9WG	MT					025			
		9WH	MT					025			
		PSPW-E11-3146-951A	MT								
		951B	MT								
		951C	MT								
		951D	MT								
		951E	MT								
		951F	MT								
		PSPW-E11-3146-952A	MT								
		952B	MT								
		952C	MT								
		952D	MT								
		952E	MT								
		952F	MT								
		952G	MT								
		952H	MT								
952I	MT										
952J	MT										
952K	MT										

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FERMI 2 INSERVICE INSPECTION
PROGRAM PLAN TABLES (NDE)

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	CLASS 2	INTERVAL		Relief Request	Augmented Exam Method	Sei. Basis	PERIOD			REMARKS	
				1	2				3	4	1st		2nd	3rd
C-C (Cont'd)	C3.20 Cont'd	PSFW-E11-3146-952L											
		PSFW-E11-3146-255A (Trunion)				RR-12A RR-12A						Dwg 6M721-3146-5	
		PSFW-E11-3146-148A (PAD)				RR-13A RR-13A RR-13A RR-13A						INACCESSIBLE	
		E11-3151-0006											
		SW-E11-3151-2ND				RR-12A RR-12A RR-12A							
		PSFW-E11-3151-593A 593B 593C 593D 593E 593F									025 025 025 025 025 025		
		PSFW-E11-3151-146A 146B 146C											Dwg 6M721-3151-5
		SW-E11-3151-4WF 4WF 4WF 4WF 4WF 4WF											

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PROGRAM PLAN TABLES (NDE)

CODE
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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS		
							1st	2nd	3rd			
C-C (Cont'd)	C3.20 Cont'd	SW-E11-3151-8WB	MT							Dwg 6M721-3151-5		
		8WC	MT									
		8WD	MT									
		8WE	MT									
		8WF	MT									
		8WG	MT									
		SW-E11-3151-10WC	MT									
		10WD	MT									
		10WE	MT									
		10WF	MT									
		10WG	MT									
		10WH	MT									
		PSFW-E11-3151-145A	MT		RR-13A							
		(PAD) 145B	MT		RR-13A							
		145C	MT		RR-13A							
		145D	MT		RR-13A							
		PSFW-E11-3151-967A	MT									
		(PAD) 967B	MT									
		967C	MT									
		967D	MT									
		E11-3153-RHR										Dwg 6M721-3153-5
		SW-X223A-W11	MT					01C				
		W12	MT					01C				
SW-X223B-W11	MT											
W12	MT											

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS	
							1st	2nd	3rd		
C-C (Cont'd)	C3.20 Cont'd	E11-3154-RHR									
		SW-X223C-W11 W12	MT MT				025 025			Dwg 6M721-3154-5	
		SW-X223D-W11 W12	MT MT								
		E11-3157-RHR									
		PSFW-E11-3157-314A 314B 314C 314D 314E 314F	MT MT MT MT MT MT					025 025 025 025 025 025			Dwg 6M721-3157-5
		SW-E11-3157-SWD SWE SWF SWG SWH SWJ	MT MT MT MT MT MT		RR-12A RR-12A RR-12A RR-12A RR-12A						
		E11-3158-RHR									
		PSFW-E11-3158-538A 538B 538C 538D 538E 538F	MT MT MT MT MT MT					025 025 025 025 025 025			Dwg 6M721-3158-5

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS		
							1st	2nd	3rd			
C-C (Cont'd)	C3.20 Cont'd	SW-E11-3158-3WC	MT							Dwg 6M721-3158-5		
		3WD	MT									
		3WE	MT									
		3WF	MT									
		3WG	MT									
		3WH	MT									
		PSFW-E11-3158-759A	MT									
		759B	MT									
		759C	MT									
		759D	MT									
		759E	MT									
		759F	MT									
		SW-E11-3158-7WC	MT					01CL-025				Limited Exam 85% Completed per Lug. Limited by Clamp.
		7WD	MT				01CL-025					
		7WE	MT				01CL-025					
		7WF	MT				01CL-025					
		7WG	MT				01CL-025					
		7WH	MT				01CL-025					
		SW-E11-3158-1WC	MT			RR-12A						
		1WD	MT			RR-12A						
		1WE	MT			RR-12A						
		1WF	MT			RR-12A						
		1WG	MT			RR-12A						
		1WH	MT			RR-12A						
		SW-E11-3158-2WN	MT			RR-12A						
		2WN	MT			RR-12A						
		2WO	MT			RR-12A						
		2WP	MT			RR-12A						
		2WQ	MT			RR-12A						
		2WR	MT			RR-12A						

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS		
							1st	2nd	3rd			
C-C (Cont'd)	C3.20 Cont'd	SW-E11-3158-SWC	MT	RR-12A						Dwg 6M721-3158-5		
		SWD	MT	RR-12A								
		SWE	MT	RR-12A								
		SWF	MT	RR-12A								
		SWG	MT	RR-12A								
		SWH	MT	RR-12A								
				E11-3180-RHR								Dwg 6M721-3160-5
				FW-X210B-W11	MT							
				W12	MT							
				W23	MT							
				W26	MT							
				W29	MT							
				W30	MT							
				W33	MT							
				W36	MT							
				E11-3181-RHR								
				FW-X210A-W11	MT							
				W12	MT				01C			
				W23	MT				01C			
				W26	MT							
		W29	MT									
		W30	MT									
		W33	MT									
		W36	MT									

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Beals	PERIOD			REMARKS		
							1st	2nd	3rd			
C-C (Cont'd)	C3.20 Cont'd	E11-3164-RMR								Dwg 6M721-3164-5		
		PSFW-E11-3164-884A	MT									
		884B	MT									
		884C	MT									
		884D	MT									
		E11-3177-RMR									Dwg 6M721-3177-5	
		PSFW-E11-3177-718A	MT									
		(PAD) 718B	MT									
		E21-3145-CS									Dwg 6M721-3145-5	
		FW-X227B-W11	MT					025				
		W12	MT					025				
		W23	MT								Internal Stiffeners Welds W23-W26	
		W26	MT									
		W29	MT									
		W30	MT									
		W33	MT									
		W36	MT									
		E21-3148-CS										Dwg 6M721-3148-5
		FW-X224B-W11	MT									
		W12	MT									
SW-E21-3148-EXPJT-W8	MT											
SW-E21-3148-EXPJT-W9	MT											
E21-3149-CS										Dwg 6M721-3149-5		
FW-X224A-W11	MT											
W12	MT											

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Ratio	PERIOD			REMARKS		
							1st	2nd	3rd			
C-C (Cont'd)	C3.20 Cont'd	SW-E21-3149-EXPJT-WB	MT	RR-12A						Dwg 6M721-3148-5		
		SW-E21-3149-EXPJT-W9	MT	RR-12A						Dwg 6M721-3150-5		
		E21-3150-CS										
		FW-X227A-W11	MT						01C			
		W12	MT						01C			
		W23	MT									
		W26	MT									
		W29	MT									
		W30	MT									
		W33	MT									
		W36	MT									
		E41-3162-HPCI										Dwg 6M721-3162-5
		PSFW-E41-3162-583A	MT									
		583B	MT									
		583C	MT									
		583D	MT									
		583E	MT									
		583F	MT									
		FW-X220-W11	MT							025		
		W12	MT							025		Dwg 6M721-3163-5
E41-3163-HPCI												
FW-X225-W11	MT											
W12	MT											

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS	
							1st	2nd	3rd		
C-C (Cont'd)	C3.20 Cont'd	E41-3172-MPCI								Dwg 6M721-3172-5	
		PSFW-E41-3172-592A	MT				01CL-02S			Limited Exam 82% Completed per Lug. Limited by Clamp.	
		592B	MT				01CL-02S				
		592C	MT				01CL-02S				
		592D	MT				01CL-02S				
		PSFW-E41-3172-625A	MT								
		625B	MT								
		625C	MT								
		625D	MT								
		T48-04-2095-CGC									Dwg 6M721-2095-5
		PSFW-T48-04-2095-465A	MT								
		465B	MT								
		T48-04-2097-CGC									Dwg 6M721-2097-5
		FW-X218-W11	MT								
		W12	MT								
		N30-3259-RS									
		SW-N30-3259-10WB	MT		RR-12A						
		10WC	MT		RR-12A						
		10WD	MT		RR-12A						
		10WE	MT		RR-12A						
		10WF	MT		RR-12A						
		10WG	MT		RR-12A						
		10WH	MT		RR-12A						
10WJ	MT		RR-12A								
10WK	MT		RR-12A								
10WL	MT		RR-12A								
10WM	MT		RR-12A								
10WN	MT		RR-12A								

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PROGRAM PLAN TABLES (NDE)

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
C-C (Cont'd)	C3.30	PUMPS Integrally welded attachments	Surface							N/A
	C3.40	VALVES Integrally welded attachments	Surface							N/A
C-D		PRESSURE RETAINING BOLTING GREATER THAN 2 in. IM DIAMETER								
	C4.10	Pressure Vessels Bolts and Studs								No Bolts and Studs >2"
	C4.20	Piping Bolts and Studs								No Bolts and Studs >2"
	C4.30	Pumps Bolts and Studs								No Bolts and Studs >2"

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Re. Syst	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
C-D (Cont'd)	C4.40	Valves Bolts and Studs								No Bolts and Studs >2"
C-F		PRESSURE RETAINING WELDS IN PIPING								All welds in these Item Nos. subject to examina- tions are grouped toge- ther by system on the following pages. Each Item No. is repeated for each weld for continuity
	C5.10	Typical Piping Welds \leq 1/2 in Nominal Wall Thickness								See Part-E, Appendix-B, for additional informa- tion on Category C-F Weld Selection
	C5.11	Circumferential Weld	Surface							Examine 2.5t of weld length at the inter- secting circumferential weld
	C5.12	Longitudinal Weld	Surface							

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PROGRAM PLAN TABLES (NDE)

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	ERTOC			REMARKS	
							1st	2nd	3rd		
C-F (Cont'd)	C5.20	Piping Welds > 1/2 in. Nominal Wall Thickness									
	C5.21	Circumferential Weld	Surface and Volumetric								
	C5.22	Longitudinal Weld	Surface and Volumetric							Examine 2.5t of weld length at the inter- secting circumferential weld	
	C5.30	Pipe Branch Connections >4 in Nominal Branch Pipe Size									
	C5.31	Circumferential Weld	Surface								
	C5.32	Longitudinal Weld	Surface							Examine 2.5t of weld length at the intersect-	
			C11-50-2113-CRD-SDV								
	C5.21	SW-C11-2113-303-A	MT UT			R					Dwg 6M721-5372-5
	C5.21	SW-C11-2113-250-A	MT UT			R	01C 01C				Dwg 6M721-5372-5
	C5.21	FW-C11-2113-249-B	MT UT			R					Dwg 6M721-5372-5
	C5.21	SW-C11-2113-172-A	MT UT			R					Dwg 6M721-5375-5
		C41-2979-SLC								Dwg 6M721-2979-5	
C5.11	FW-C41-2979-81502	PT			R						

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS	
							1st	2nd	3rd		
C-F (Cont'd)	C5.11	FW-C41-2979-72573	PT			R	025				
	C5.11	FW-C41-2979-63564	PT			R					
	C5.11	FW-C41-2979-64565	PT			R					
	C5.11	FW-C41-2979-P	PT			R	01C				
	C5.11	FW-C41-2979-L	PT			R					
	C5.11	FW-C41-2979-50551	PT			R					
	C5.11	FW-C41-2979-17518	PT			R					
	C5.11	FW-C41-2979-253	PT			R	025				
	C5.11	FW-C41-2979-11512	PT			R					
	C5.11	FW-C41-2979-152	PT			R	025				
			C41-3361-SLC				R				Dwg 6M721-3361-5
	C5.11		FW-C41-3361-1WF25	PT			R	01C			
	C5.11		FW-C41-3361-02W1	PT			R				
	C5.11		FW-C41-3361-1WF22	PT			R				
			C41-3361-SLC				R				Dwg 6M721-3374-5
C5.11		FW-C41-5058-54555	PT			R					
C5.11		FW-C41-5058-85566	PT			R					

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Reg'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS	
							1st	2nd	3rd		
C-F (Cont'd)		E11-3035-RHR								Dwg 6M721-3035-5	
	C5.11	SW-E11-3035-5WE	MT				01C				
	C5.11	FW-E11-3035-0W7	MT								
	C5.11	SW-E11-3035-2WC	MT			R					
	C5.11	FW-E11-3035-2W3	MT			R					
	C5.11	FW-E11-3035-6W0	MT			R					
	C5.11	SW-E11-3035-7WB	MT			R	025				
		E11-3146-RHR									Dwg 6M721-3146-5
	C5.11	FW-E11-3146-6WF3	MT			R	025				
	C5.21	SW-E11-3146-2WB	MT UT			R					
	C5.21	FW-E11-3146-0W1	MT UY			TE					
	C5.21	FW-E11-3146-3WF3	MT UT			R	025 025				
	C5.21	FW-E11-3146-3W4	MT UY			R					
	C5.21	SW-E11-3146-8WE	MT UT			HS					
C5.21	FW-E11-3146-6W10	MT UT			MS	01C 01C					

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Reg'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS	
							1st	2nd	3rd		
C-F (Cont'd)	C5.21	SW-E11-3146-6WH	MT UT			HS	01C 01C				
	C5.21	FW-E11-3146-14WF7	MT UT			R					
	C5.21	FW-E11-3146-5WD	MT UT			MS	0x5 025				
	C5.21	FW-E11-3146-2WD	MT UT			R					
	C5.31	SW-E11-3146-8WC	MT			MS	01C				
	C5.31	SW-E11-3146-5WH	MT			HS					
	C5.31	SW-E11-3146-7WC	MT			HS					
			E11-3151-RHR								Dwg 6M721-3151-5
	C5.11	FW-E11-3151-11WD	MT			R					
	C5.11	FW-E11-3151-8WF2	MT			R					
	C5.21	SW-E11-3151-1WH	MT UT			R	025 025				
	C5.21	SW-E11-3151-5WB	MT UT			R					
	C5.21	FW-E11-3151-7W11	MT UT			MS					
	C5.21	FW-E11-3151-10WD	MT UT			TE					
	C5.21	SW-E11-3151-10WK	MT UT			R	025 025				

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS	
							1st	2nd	3rd		
C-F (Cont'd)	C5.21	FW-E11-3151-0W12	MT UT			R					
	C5.21	FW-E11-3151-3WF2	MT UT			MS					
	C5.21	FW-E11-3151-15WF1	MT UT			R					
	C5.21	FW-E11-3151-15WF4	MT UT			R	011 01C				
	C5.31	SW-E11-3151-8WD	MT			HS	025				
	C5.31	SW-E11-3151-9WC	MT			R				Dwg 6M721-3153-5	
			E11-3153-RHR								
	C5.11	SW-E11-3153-13WE	MT			R	025			Dwg 6M721-3154-5	
			E11-3154-RHR								
	C5.11	FW-E11-3154-11W12	MT			R					
	C5.11	SW-E11-3154-11WC	MT			R					
	C5.11	FW-E11-3154-4W5	MT			R					
	C5.11	SW-E11-3154-4WC	MT			R	01C				
	C5.11	FW-E11-3154-13W0	MT			TE					
	C5.11	FW-E11-3154-4W0	MT			TE				Dwg 6M721-3157-5	
			E11-3157-RHR								

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Code Category	Item Number	Code Category Code Item No. Description Unique Identification	Exam Req'd Exgs Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
C-F (Cont'd)	C5.11	FW-E11-3157-0W6	MT UT			TE	01C 01C			
	C5.21	SW-E11-3157-1WB	MT UT			R				
		E11-3158-RHR								Dwg 6M721-3158-5
	C5.21	FW-E11-3158-1W2	MT UT			R				
	C5.21	SW-E11-3158-6WB	MT UT			R	02S 02S			Dwg 6M721-3158-5
	C5.21	SW-E11-3158-4WD	MT UT			R				
	C5.21	FW-E11-3158-10FW4	MT UT			TE	01C 01C			
	C5.21	SW-E11-3158-8WG	MT UT			R				
	C5.21	FW-E11-3158-9WF2	MT UT			R				
		E11-3159-RHR								Dwg 6M721-3159-5
	C5.11	FW-E11-3159-0W1	MT			HS	02S			
	C5.11	FW-E11-3159-2W3	MT			R				Dwg 6M721-3160-5
		E11-3160-RHR								
	C5.11	FW-E11-3160-1W3	MT			R				
C5.31	SW-E11-3160-1WD	MT			HS					

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
C-F (Cont'd)	C5.11	FW-E11-3160-0W2 E11-3161-RHR	MT			R				Dwg 6M721-3161-5
	C5.11	SW-E11-3161-1WH	MT			R				
	C5.11	SW-E11-3161-4WB	MT			R				
	C5.11	SW-E11-3161-4WK	MT			R				
	C5.11	FW-E11-3161-4WF5 E11-3164-RHR	MT			R				Dwg 6M721-3164-5
	C5.11	SW-E11-3164-2WD	MT			R	01C			
	C5.11	FW-E11-3164-4W5 E11-3177-RHR	MT			R				Dwg 6M721-3177-5
	C5.21	SW-E11-3177-8WD	MT UT			R				
	C5.21	SW-E11-3177-3WB	MT UT			R	02S 02S			
	C5.21	SW-E11-3177-9WE G41-3669-RHR-FPC	MT UT			R				Dwg-6M721-3669-5
	C5.11	FW-G41-3669-0W1	MT			R	01C			
	C5.11	SW-G41-3669-3WB	MT			R				

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
C-F (Cont'd)	C5.11	SW-G41-3669-3WE E11-4611-RHR	MT			R				Dwg 6M721-4611-5
	C5.11	FW-E11-4611-1WF2	MT			R				
	C5.11	FW-E11-4611-1W2 E11-4612-RHR	MT			R	01C			Dwg 6M721-4612-5
	C5.11	FW-E11-4612-3WF4	MT			R				
	C5.11	FW-E11-4612-4WF1	MT			R				
	C5.11	FW-E11-4612-4W5	MT			R	02S			
	C5.11	FW-E11-4612-7WB	MT			R	01C			
	S.11	FW-E11-4612-8WF3	MT			R				
	C5.11	FW-E11-4612-9W0 E21-3144-CS	MT			R				Dwg 6M721-3144-5
	C5.11	FW-E21-3144-0W4	MT			TE				
	C5.11	FW-E21-3144-0W1	MT			TE	01C			
	C5.31	SW-E21-3144-5WE E21-3145-CS	MT			R				
	C5.11	FW-E21-3145-11W0	MT			R	02S			Dwg 6M721-3145-5
	C5.21	SW-E21-3145-9W0	MT UT			R				

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
C-F (Cont'd)		E21-3147-CS								Dwg 6M721-3147-5
		SW-E21-3147-5WJ	MT			R	025			
		SW-E21-3147-15WF	MT			R				
		SW-E21-3147-15WG	MT			R				
		FW-E21-3147-16W17	MT			R	01C			
		SW-E21-3147-19WB	MT UT			R	025 025			
		E21-3148-CS								Dwg 6M721-3148-5
		FW-E21-3148-7WU	MT			TE				
		FW-E21-3148-0WB	MT			TE				
		SW-E21-3148-5WC	MT			R	025			
		E21-3149-CS								Dwg 6M721-3149-5
		SW-E21-3149-4WD	MT			R	01C			
		SW-E21-3149-6WC	MT			R				
		SW-E21-3149-6WL	MT			R				
		E41-3182-HPCI								Dwg 6M721-3182-5
	SW-E41-3182-1WB	MT			R	01C				
	SW-E41-3182-1WJ	MT			R					
	SW-E41-3182-1WK	MT			R					

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Boats	PERIOD			REMARKS	
							1st	2nd	3rd		
C-F (Cont'd)	C5.11	SW-E41-3182-1WU	MT			R				Dwg 6M721-3182-5	
	C5.11	FW-E41-3182-1W2	MT			R					
	C5.11	SW-E41-3182-3WE	MT			R	025				
	C5.11	FW-E41-3182-9WFO	MT			TE					
	C5.11	FW-E41-3182-4W5	MT			R	025				
	C5.11	FW-E41-3182-9WF1	MT			R					
	C5.11	FW-E41-3182-11WF1	MT			R					
	C5.11	FW-E41-3182-11WF4	MT			R					
	C5.11	FW-E41-3182-11WF5	MT			R					
	C5.11	FW-E41-3182-11W0	MT			R	01C				
	C5.12	SW-E41-3182-11WOLD	MT			R	01C				
	C5.11	SW-E41-3182-11WC	MT			R	025				
			E41-3183-HPCI				R				Dwg 6M721-3183-5
	C5.11	SW-E41-3183-8WR	MT			R					
	C5.11	FW-E41-3183-0W9	MT			TE					
	C5.11	FW-E41-3183-8W0	MT			TE	01C				
	C5.11	FW-E41-3185-7W0	MT			TE					
			E41-3187-HPCI				TE				Dwg 6M721-3187-5
C5.21	FW-E41-3187-0W1	MT UT									

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Code Category	Item Number	Code Category Code Item No. Description Unique Identification	Exam Reg'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
C-F (Cont'd)	C5.21	FW-E41-3167-9W0	MT UT			TE				
	C5.21	FW-E41-3167-1W2	MT UT			R				
	C5.21	SW-E41-3167-2WC	MT UT			R	01C 01C			Dwg 6M721-3169-5
		E41-3169-HPCI								
	C5.21	FW-E41-3169-2W0	MT UT			R				Dwg 6M721-3172-5
		E41-3172-HPCI								
	C5.21	FW-E41-3172-0W1	MT UT			TE				
	C5.21	FW-E41-3172-3W4	MT UT			R	02S 02S			
	C5.21	FW-E41-3172-6W7	MT UT			R				
	C5.21	FW-E41-3172-0WB	MT UT			R				
	C5.21	SW-E41-3172-7WH	MT UT			R	01CL 01CL			Exam limited due to branch conn. & tee configuration 13.7% not examined.
		E41-5373-HPCI								Dwg 6M721-5373-5
	C5.11	SW-E41-5373-GW3		MT			R			

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
C-F (Cont'd)		N30-3258-MAIN STEAM								Dwg 8M721-3258-5
	C5.21	SW-N30-3258-1VJ	MT UT			MS				
	C5.22	SW-N30-3258-1WJLU	MT UT							
	C5.21	SW-N30-3258-7WK	MT UT			MS				
	C5.22	SW-N30-3258-7WKLU	MT UT							
	C5.21	SW-N30-3258-13WJ	MT UT			MS				
	C5.22	SW-N30-3258-13WJLU	MT UT							
	C5.21	SW-N30-3258-19WJ	MT UT			MS	01C 01C			
	C5.22	SW-N30-3258-19WJLU	MT UT				01C 01C			
	C5.21	FW-N30-3259-4WO	MT UT			TE	02S 02S			
	C5.21	SW-N30-3258-13WC	MT UT			R				
	C5.31	SW-N30-3258-13WB	MT			R				Dwg 8M721-2095-5
			T4B-04-2095-CGC							
C5.11		F4-T4B-04-2095-11W12	MT			R	01C			

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
C-F (Cont'd)	C5.11	FW-T48-04-2095-7WB	MT			W				
	C5.11	SW-T48-04-2095-5WD	MT			R				
	C5.11	FW-T48-04-2095-19WO	MT			MS	025			
	C5.11	SW-T48-04-2095-WSW3	MT			R				
		T48-04-2097-CGC								Dwg 6M721-2097-5
	C5.11	SW-T48-04-2097-18WC	MT			R				
	C5.11	FW-T48-04-2097-8W9	MT			R	01C			
	C5.11	SW-T48-04-2097-21WB	MT			R				
	C5.11	FW-T48-04-2097-20W21	MT			MS	025			
	C5.11	SW-T48-04-2097-25WF	MT			R				
		SW-T48-04-2097-20WD	MT			MS				
C-G		PRESSURE RETAINING WELDS IN PUMPS AND VALVES								
		Pumps								N/A
	C6.10	Pump Casing Welds	Surface							N/A
	Valves									N/A
C6.20	Valve Body Welds	Surface								N/A

ISI-NDE Program

FERMI 2 INSERVICE INSPECTION PROGRAM PLAN TABLES (NDE)		CODE CLASS 2	INTERVAL	1	X	2	3	4	PERIOD	REMARKS
Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Set Basis	1st	2nd	3rd	
C-H		ALL PRESSURE RETAINING COMPONENTS								
	C7.10	Pressure Vessels Pressure Retaining Components	Visual, VT-2					025		(Note No. 15)
	C7.20	Pressure Retaining Components	Visual, VT-2							(Note No. 15)
	C7.30	Piping Pressure Retaining Components	Visual, VT-2					025		(Note No. 15)
	C7.40	Pressure Retaining Components	Visual, VT-2							(Note No. 15)
	C7.50	Pumps Pressure Retaining Components	Visual, VT-2					025		(Note No. 15)
	C7.60	Pressure Retaining Components	Visual, VT-2							(Note No. 15)
	C7.70	Valves Pressure Retaining Components	Visual, VT-2					025		(Note No. 15)
	C7.80	Pressure Retaining Components	Visual, VT-2							(Note No. 15)

ISI-CLASS 3 COMPONENT

TABLES

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	CODE CLASS 3	INTERVAL				PERIOD			REMARKS
				1	2	3	4	1st	2nd	3rd	
				Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Base				
D-A		SYSTEMS IN SUPPORT OF REACTOR SHUTDOWN FUNCTION									
	D1.10	Pressure Retaining Components		Visual, VT-2						(Note No. 15)	
	D1.20	Integral Attachment - Component Supports and Restraints		Visual, VT-3						(Note No. 5)	
	D1.30	Integrals: Attachment - Mechanical and Hydraulic Snubbers		VT-3 VT-3				025		(Notes No. 5 & 6)	
				Visual, VT-3							
				VT-3				01C			
				VT-3				01C			
				VT-3				01C			
				VT-3				01C			
				VT-3				01C			
				VT-3				01C			
				VT-3				01C			
				VT-3				01C			
				VT-3				01C			
				VT-3				01C			
				VT-3				01C			

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Reg'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS	
							1st	2nd	3rd		
D-A (Cont'd)	D1.30 Cont'd	B21-2593-G08	VT-3						01C		
		B21-2593-G13	VT-3						01C		
		B21-2594-G10	VT-3						01C		
		B21-2595-G17	VT-3						01C		
		B21-2596-G10	VT-3						01C		
		B21-2596-G06	VT-3						01C		
		B21-4093-G13	VT-3						01C		
		B21-4094-G37	VT-3						01C		
		B21-4095-G04	VT-3						01C		
		B21-4095-G07	VT-3						01C		
	B21-4096-G07	VT-3						01C			
	D1.40	Integral Attachment - Spring Type Supports		Visual, VT-3							(Note No. 5)
			B21-2586-G04	VT-3							
			B21-2587-G06	VT-3							
			B21-2588-G04	VT-3						01C	
B21-2589-G01			VT-3								
		B21-2590-G14	VT-3								
		B21-2591-G06	VT-3								
		B21-2591-G07	VT-3								

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PROGRAM PLAN TABLES (NDE)

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS	
							1st	2nd	3rd		
D-A (Cont'd)	D1.40 Cont'd	B21-2592-G07	VT-3				01C				
		B21-2598-G08	VT-3								
		B21-4094-G03	VT-3								
		B21-4096-G01	VT-3					01C			
	D1.50	Integral Attachment - Constant Load Type Supports	Visual, VT-3							No Components	
	D1.60	Integral Attachment - Shock Absorbers	Visual, VT-3							No Components	
D-B	D2.10	SYSTEMS IN SUPPORT OF EMERGENCY CORE COOLING CORE COOLING, CONTAINMENT HEAT REMOVAL, ATMOSPHERE CLEANUP, AND REACTOR RESIDUAL HEAT REMOVAL								(Note No. 15)	
		Pressure Retaining Components	Visual, VT-2							(Note No. 5)	
		Integral Attachment - Component Supports and Restraints	Visual, VT-3								
		E11-2178-G20	VT-3				025				
	D2.20	E11-2180-G12	VT-3								
E11-2180-G17		VT-3									
E11-2184-G12		VT-3				025					

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CODE CLASS 3

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
D-B (Cont'd)	D2.20	E11-3184-G23	VT-3							(Note No. 5)
	Cont'd	E11-3185-G24	VT-3							
		E11-3185-G40	VT-3					02S		
		E11-3185-G45	VT-3					02S		
		P42-3340-G01	VT-3					02S		
		P44-3047-G10	VT-3					01C		
		P44-3048-G22	VT-3					02S		
		P44-3084-G10	VT-3					02S		
		P44-3336-G01	VT-3					02S		
		P44-3337-G04	VT-3					02S		
		P44-3337-G09	VT-3					02S		
		P44-3337-G13	VT-3					02S		
		P44-3346-G04	VT-3					02S		
		P44-3346-G07	VT-3					02S		
		P44-3347-G01	VT-3					02S		
		P44-3348-G12	VT-3					02S		
		P44-3348-G18	VT-3					02S		
		P44-3351-G03	VT-3					02S		
		P44-3351-G04	VT-3					02S		
		P44-3351-G17	VT-3					02S		
		P44-3351-G18	VT-3					02S		
		P44-3351-G25	VT-3					02S		
		P44-3351-G28	VT-3					02S		
		P44-3351-G44	VT-3					02S		
		P44-3382-G30	VT-3					02S		
		P44-3388-G07	VT-3					02S		
		P44-3388-G09	VT-3					02S		
		P44-3558-G11	VT-3					02S		
		P44-3558-G12	VT-3					02S		
		P44-2178-G09	VT-3					02S		

Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	INTERVAL				PERIOD			REMARKS
			1	2	3	4	1st	2nd	3rd	
			Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Seal Balls				
D-8 (Cont'd)	D2.20 Cont'd	P45-2204-G11	VT-3				02S		(Note No. 5)	
		P45-3352-G09	VT-3							
		P45-3352-G15	VT-3							
		P45-3353-G05	VT-3							
		P45-3353-G23	VT-3							
		P45-3353-G24	VT-3							
		P45-3359-G05	VT-3							
		P45-3359-G09	VT-3							
		P45-3359-G10	VT-3							
		P45-3360-G09	VT-3							
		P45-3360-G11	VT-3							
		P45-3360-G15	VT-3							
		P45-3360-G18	VT-3							
		P45-3360-G20	VT-3							
				Integral Attachment - Mechanical and Hydraulic Snubbers	Visual, VT-3					
	D2.30									
		E11-3184-G15	VT-3							
		E11-3184-G25	VT-3							
		E11-3185-G32	VT-3							
		E11-3185-G50	VT-3							
		P44-3347-G50	VT-3							
		Integral Attachment - Spring Type Supports	Visual, VT-3						(Note No. 5)	
	D2.40									
		E11-3184-G03	VT-3							
		E11-3184-G08	VT-3							
		E11-3185-G35	VT-3							
		P42-3340-G08	VT-3							

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS	
							1st	2nd	3rd		
D-B (Cont'd)	D2.40 Cont'd	P44-3048-G10	VT-3							(Note No. 5)	
		P44-3084-G13	VT-3								
		P44-3189-G38	VT-3								
		P44-3337-G15	VT-3								
		P44-3345-G26	VT-3								
		P44-3347-G09	VT-3								
		P44-3347-G17	VT-3								
		P44-3351-G41	VT-3								
		P44-3359-G03	VT-3								
			D2.50	Integral Attachment - Constant Load Type Supports	Visual, VT-3						
	D2.60	Integral Attachment - Shock Absorbers	Visual, VT-3							No Components	
D-C		SYSTEMS IN SUPPORT OF RESIDUAL HEAT REMOVAL FROM SPENT FUEL STORAGE POOL									
		D3.10	Pressure Retaining Components	Visual, VT-2							No Components
		D3.20	Integral Attachment - Component Supports and Restraints	Visual, VT-3							No Components
		D3.30	Integral Attachment - Mechanical and Hydraulic Snubbers	Visual, VT-3							No Components
		D3.40	Integral Attachment - Spring Type Supports	Visual, VT-3							No Components

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
D-C (Cont'd)	D3.50 Cont'd	Integral Attachment-Constant Load Type Supports	Visual, VT-3							No Components
	D3.60	Integral Attachments - Shock Absorbers	Visual, VT-3							No Components
N/A	N/A	Non Tech Spec 4.0.5 Non ASME Section XI								Non TS 4.0.5 Non Section XI
		ANSI B31.1 Welds								Note 2, Category D See DWGS:
		FW-N21-3109-18W0	UT PT		01C-025 01C	A A				8W721-3109-1 -3107-1 -3105-1 -3234-1
		SW-N21-01-B002-AWSE	UT PT		01C-025 01C	A A				518-95 518-96
		FW-N21-3109-29W0	UT PT		01C 01C	A A				
		SW-N21-01-R001-AWSE	UT PT		01C 01C	A A				
		FW-N20-3107-0W1	UT PT		01C-025 01C	A A				
		SW-N20-03-B013-AWSE	UT PT		01C-025 01C	A A				
		FW-N20-3107-0W17	UT PT		01C 01C	A A				
		SW-N20-03-B014-BWSE	UT PT		01C 01C	A A				
		FW-N20-3105-24W0	UT PT		01C-025 01C	A A				
		SW-N20-03-B013-AWSE	UT PT		01C-025 01C	A A				

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Code Category	Item Number	Code Category Description Code Item No. Description Unique Identification	Exam Req'd Exam Method Selected	Relief Request	Augmented Exam Method	Sel. Basis	PERIOD			REMARKS
							1st	2nd	3rd	
NA	NA	FW-N20-3105-16W0	UT PT		01C 01C	A A	-----	-----	-----	Non T.S. 4.0.5 Non Section XI Note 2. Category D
		SW-N20-03-B014-AWSE	UT PT		01C 01C	A A	-----	-----	-----	
		FW-N20-3105-0W23	UT PT		01C-02S 01C	A A	-----	-----	-----	
		SW-N20-03-B011-BWSE	UT PT		01C-02S 01C	A A	-----	-----	-----	
		FW-N20-3105-0W15	UT PT		01C 01C	A A	-----	-----	-----	
		SW-N20-03-B012-BWSE	UT PT		01C 01C	A A	-----	-----	-----	
		FW-N20-3105-22W0	UT PT		01C 01C	A A	-----	-----	-----	
		SW-N20-03-B011-AWSE	UT PT		01C 01C	A A	-----	-----	-----	
		FW-N20-3105-14W0	UT PT		01C-02S 01C	A A	-----	-----	-----	
		SW-N20-03-B012-ASWE	UT PT		01C-02S 01C	A A	-----	-----	-----	
		FW-N20-3105-0W21	UT PT		01C 01C	A A	-----	-----	-----	
		SW-N20-03-B010-BWSE	UT PT		01C 01C	A A	-----	-----	-----	
		FW-N20-3105-0W13	UT PT		01C-02S 01C	A A	-----	-----	-----	
		SW-N20-03-B009-BWSE	UT PT		01C-02S 01C	A A	-----	-----	-----	

NOTE 1

SECTION XI REQUIREMENTS: Examination Category B-F, Pressure Retaining Dissimilar Metal Welds, and Examination Category B-J, Pressure Retaining Welds in Piping.

The code does not define a transition point between the Reactor Pressure Vessel and piping components. Specifically, the code does not define whether a vessel nozzle to safe end weld is a piping weld or a reactor pressure vessel weld. In addition, the nozzle to safe end weld is considered a terminal end in accordance with Category B-J Footnote (1)(a).

To further complicate the situation, examination categories B-F and B-J contain duplicate examination requirements for dissimilar metal pressure retaining welds in piping.

DETROIT EDISON INTERPRETATIONS: Nozzle to safe end welds will be considered pressure retaining piping welds and subject to the examination requirements of Examination Category B-F (Item Nos. B5.10 and B5.20) and Category B-J (Item No. B9.11 and B9.21).

Dissimilar metal piping welds will be subject to the examination requirements of Examination Categories B-F (Item Nos. B5.130 and B5.140) and B-J (Item No. B9.11 or B9.21).

Since the examination requirements of Examination Categories B-F and B-J are identical for a given size and type of weld, the examinations performed will be used to satisfy the requirements of both Examination Categories.

NOTE 2

Reference Detroit Edison Documents NRC-88-0243, NRC-89-0297, and NRC-90-0103, in response to Generic Letter 88-01 and NUREG 0313 Rev. 2. Detroit Edison has committed to the inservice inspection requirements for austenitic stainless steel welds in accordance with the guidelines of Generic Letter 88-01. All applicable welds have been classified according to NUREG 0313 Rev. 2 requirements with the required percentages of welds being included in this program. The applicable category (GL-88-01) is identified in the remarks column. All welds identified and included as augmented selections will only be examined by volumetric techniques (ie. ultrasonic). All inspections will be performed utilizing procedures and personnel qualified to current EPRI Guidelines. Sample expansion, if required, shall follow the NRC Staff recommendations provided in NUREG 0313 Rev 2. Methods and criteria for crack evaluation and repair shall be in conformance with IWB-3600 of Section XI of the 1986 Edition of ASME Boiler and Pressure Vessel Code. The previous requirement (now superseded) was an 80 month augmented inspection cycle per NUREG 0313 Rev. 1 with inspections being performed per IE Bulletin 83-02.

NOTE 3

Per the EF-2 FSAR Section E.5.110-13, Detroit Edison will ultrasonically inspect the RPV Jet Pump Hold Down Beams at each Reactor Refueling Outage until sufficient experience is gained to change the frequency of inspection. If a cracked beam is detected, it will be replaced prior to return to power operation. (Reference IE Bulletin 80-07).

NOTE 4

External surfaces - 25% nozzles among each group of penetrations of comparable size and function.

NOTE 5

ASME Section XI, Table IWD-2500-1, Category D-B, Footnote (3) states the following:

"In case of multiple components within a system of similar design, function, and service, the integral attachment of only one of the multiple components shall be examined. The integral attachments selected for examination shall correspond to those components selected by IWF-2510(b)."

In accordance with the above, the integral attachments selected for IWD examination requirements correspond to those component supports selected to satisfy IWF examination requirements.

NOTE 6

The Detroit Edison's procedure for visual examination of snubbers covers essentially 100% of the integral or non integral snubber assembly from the attachment at the pressure retaining component to the supporting building structure. Uninsulated integral attachments for snubbers listed under item numbers D1.30, D2.30 & D3.30 will be examined in accordance with Fermi II Technical Specification requirements (Reference 3/4.7.5) and Part C of the NDE program. Integral attachments associated with snubbers listed under item numbers D1.30, D2.30 & D3.30 and located on insulated lines will be examined once per interval.

NOTE 7

420 an inspection will be performed on the jet pump sensing lines and support brackets when convenient. This inspection will determine if the weld between the support brackets and the vertical run of the sensing line is intact. Additionally the inspection should concentrate on the jet pumps closest to the recirculation outlet nozzles.

NOTE 8

Per NRC Information Notice No. 90-30 all dissimilar metal welds containing Inconel 600 series base materials, Alloy 82 and 182 weld butter, and/or filler metal shall be examined following the guidelines of SIL 455, Revision 1, Supplement 1 (effective 6-90). It is essential and required that all examinations be performed by the use of 45° and 60° refracted longitudinal waves for crack detection and sizing in the Alloy 182 material and the low alloy material. All scanning of welds will be performed in both an axial and circumferential direction followed by a 45° shear wave if indications are identified using refracted longitudinal techniques. Examination of nozzle welds shall be extended into the area of Alloy 182 Weld Material Buttering. The purpose of this additional/supplemental examination is to assure that Alloy 182 Butter Cracking in the nozzle bore has not occurred and extended into the low alloy nozzle material.

NOTE 9

Per SIL 433 a Ultrasonic (UT) inspection will be performed on the 48 shroud head bolts for evidence of cracking at the first refuel outage. Based on industry experience additional inspections will be performed at subsequent refuel outages.

NOTE 10

Per SIL 415 a liquid penetrant inspection of the suction splitters will be performed in addition to the visual inspection of the pump internals. Per SIL 459 and NRC Information Notice 89-015, a detailed visual inspection of the pump shaft and cover will be performed. This inspection may be supplemented with a liquid penetrant inspection of any suspect areas. Additionally, internal inspections will be performed on the Hydrostatic bearing and baffel plate attachment welds per RICSIL 038 and NRC information Notice 89-020. Per SIL 511, the shaft and cover in the vicinity of the drain hole in the pump cover will be visually examined to determine if thermal cracking is evident. If so, the drain hole will be plugged. Disassembly of pump for inspection will be evaluated prior to each refuel outage based upon industry experience and hours of operation.

NOTE 11

Per SIL 474 a visual inspection will be performed on the steam dryer drain channel welds during refueling outages. The steam dryer assembly, dryer banks, and welds will be visually inspected each refueling outage.

NOTE 12

Per IE Bulletin 80-13, and SIL 289, Supplement 1, a visual inspection will be performed on the core spray internal piping each Refuel Outage. Inspection points will include those specifically identified in IE Bulletin 80-13 and SIL 289, Revision 1, Supplement 1.

NOTE 13

Per SIL 462 inspection of the shroud support access hole cover will be performed at the end of the first 10 year interval or during the plants tenth year of operation.

NOTE 14

All inservice Examinations of the Reactor Pressure Vessel Welds will be performed using both manual and mechanical examination techniques and will most likely be performed from the outside of the vessel. All examinations will be conducted in accordance with the requirements of Regulatory Guide 1.150, Revision 1, to the extent practical (Ref. NRC-87-0078).

Limitations encountered which affect the examination volume as prescribed by ASME Section XI will be documented in an examination report as required by Regulatory Guide 1.150, Revision 1, Appendix A. Regulatory Guide 1.150, Revision 1, Appendix A, recommends the use of the 2 percent notch which penetrates the internal (clad) surface of calibration blocks for detection of near surface flaws in that region. This is the calibration and examination method that shall be used.

Indications, regardless of amplitude, will be recorded on tape during the mechanized examination for analysis. Similarly, signal responses will be scrutinized during the manual examination process and indications will be recorded for further analysis and resolution.

NOTE 15

Visual inspections for leakage required by ASME section XI Code Categories B-P, C-H, D-A, and D-B are performed using the procedures. Test Packages for all tests performed are developed utilizing the inservice Inspection Classification Boundary Drawings listed on Table A-5-5.1 as the basis.

All components on the following systems are included in the Class 1 inspections: B21, B31, C41, E11, E21, E41, E51, G33, N11, P34.

All components on the following systems are included in the Class 2 inspections: C11, C41, E11, E21, E41, G41, G51, N11, N30, P34, T4804, T50.

All components on the following systems are included in the Class 3 inspections: E11, P42, P44, P45, R30.

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PART - B

**INSERVICE INSPECTION-NONDESTRUCTIVE
TESTING (ISI-NDE) PROGRAM (PLANT)
FOR
COMPONENT SUPPORTS**

1.0 Applicable Code

The Fermi 2 Inservice Inspection Program (Plan) for Component Supports is implemented in accordance with the requirements of ASME Section XI of the Boiler and Pressure Vessel Code, 1980 Edition through and including the Winter 1981 Addenda. Where the ASME Section XI Code requirements are determined to be impractical, specific relief requests are included (Refer to Section 4.0)

2.0 Program Description

Visual examination and functional testing requirements in accordance with ASME Section XI, Subsection IWF for all component supports, except snubbers, are addressed in this section. The Inservice Inspection and Testing Program (Plan) for Snubbers can be found in Part C of this document.

All component supports to be examined will receive a VT-3 visual examination to determine the general mechanical and structural condition of the component support. Component supports with moving parts (other than pin connections) will also receive a VT-4 visual examination to determine conditions relating to the operability of the component support.

2.1 Supports To Be Examined

In accordance with ASME Section XI, Subsection IWF, those component supports selected for examination shall be the supports of those components that are required to be examined under IWB, IWC and IWD. Components included in this program have been selected using the above guidance. Component support examinations will be completed in accordance with the examination schedule applicable to the supported component (i.e., if the supported component is a Class 1 component, the schedule in IWB applies to the component support).

2.2 Application of Multiple Loop Theory

Section XI, Subsection IWF, paragraph IWF-2510(b) permits the use of a multiple loop concept for determination of component supports to be examined on systems of similar design, function, and service. It further states that the supports of only one of the multiple components are required to be examined. Detroit Edison has further enhanced this approach by selecting the loop with the largest number of supports (without regard to category for a particular multiple loop. This resultant number will then be distributed to all multiple loops of similar design, function, and service. This approach allows detection on each of the multiple loops and is more likely to detect component support degradation. Distribution of the number of component supports to be examined, will take into consideration the location and type of component supports on the initially selected multiple loop for quantity determination.

Tables B-2.2-C1 (Class-1), B-2.2-C2 (Class-2), and B-2.2-C3 (Class-3) set forth the multiple loops identified at the Fermi 2 plant for determination of component support inspection. These Tables can be found in Part-E, Appendix C, to this program.

Supports scheduled to be examined are listed in the Tables found in Section 5.0, Part B of this document.

3.0 Exemptions

There are provisions in ASME Section XI that exempt certain components (or parts of components) from the examination requirement(s) of Table IWF-2500-1. Component supports satisfying the criteria prescribed in ASME Section - XI of the Code are not subject to the applicable examination requirement(s) of Table IWF-2500-1. This section identifies those "Code Allowed Exemptions" as applicable to the Fermi 2 Inservice Inspection Program for Component Supports.

Exemption EX-B1

ASME Section XI Code Paragraph: IWC-1230

"Piping support members and piping support components that are encased in concrete shall be exempted from the examination requirements of IWC-2500."

Applicability: ISI Class 2 Component Supports Examination Categories F-A, F-B, and F-C.

Discussion: Although IWF-1230 is in the course of preparation, this exemption is extremely practical and is clearly noted in the Code.

Exemption EX-B2

ASME Section XI Code Paragraph: IWF-1300 (e)

"Where the mechanical connection of a non-integral support is buried within the component insulation, the support boundary may extend from the surface of the component insulation provided the support either carries the weight of the component or serves as a structural restraint in compression."

Acceptability: ISI Class 1, 2, and 3 Component Supports. Component supports where the mechanical portion of a non-integral attachment is buried within the component insulation. Item No's F1.10, F2.10, and F3.10.

Discussion: Most supports either carry the weight of the component or serve as structural restraints in compression. Seismic restraints designed for lateral loads only are one of the few exceptions to this generalization.

Exemption EX-B3

ASME Section XI Code Paragraph: IWF-2510 (a)

"Component supports selected for examination shall be the supports of those components that are required to be examined under IWB, IWC, IWD and IWE during the first inspection interval."

Applicability: ISI Class 1, 2 and 3 Supports

Class 1 IWB-1220 exempts the following:

- (a) Components that are connected to the reactor coolant system and part of the reactor coolant pressure boundary and that are of such a size and shape is that upon postulated rupture the resulting flow of coolant system under normal plant operating conditions is within the capacity (a maximum size of 1.44 inches inside diameter for liquid carrying lines and 2.86 inches inside diameter for steam carrying lines) of makeup systems which are operable from on-site emergency power.
- (b) Piping of 1 inch nominal pipe size and smaller. Components and their connections in piping of 1 inch nominal pipe size and smaller.
- (c) Reactor vessel head connections and associated piping, 2 inch nominal pipe size and smaller, made inaccessible by control rod drive penetrations.

Class 2 IWC-1220 exempts the following:

- (a) Supports of system or portions of systems that during normal plant operating conditions are not required to operate or perform a system function but remain flooded under static conditions at a pressure of at least 80% of the pressure that the system will be subjected to when required to operate.

- (b) Supports of systems or portions of systems, other than Residual Heat Removal Systems and Emergency Core Cooling systems, that are not required to operate above a pressure of 275 psig or above a temperature of 200 F.
- (c) Supports which connect to piping, valves and vessels that are 4 in. nominal pipe size and smaller.

Class 3 IWD-1220 exempts the following:

- (a) Supports which connect to piping, valves and vessels that are 4 in. nominal pipe size and smaller.
- (b) Supports which connect to piping, valves and vessels that are larger than 4 in. nominal pipe size provided:
 1. The supports are located on systems whose function is not required in support of reactor residual heat removal, containment heat removal, and emergency core cooling.
 2. The system operates at a pressure of 275 psig or less and a temperature of 200 F or less.

Discussion: IWF-2510 (a) and code interpretation XI-1-83-12R-2 are the basis for these exemptions.

Exemption EX-B4

ASME Section XI Code Paragraph: IWF-2510 (b)

"For multiple components within a system of similar design, function, and service, the supports of only one of the multiple components are required to be examined."

Applicability: ISI Class 1, 2, and 3 Supports.

Discussion: IWF-2510 (b) is the basis for the multiple component Support Exemption.

4.0 Relief Requests

Relief Requests are included where specific requirements of ASME Section XI are determined to be impractical. Each Relief Request is written in accordance with the format guidelines provided in Section 4.1. Individual Relief Requests are included in Section 4.2. As noted in the INTRODUCTION, Section 4.2 is subject to change throughout the inspection interval. If examination requirements in this program plan are determined to be impractical during the course of the interval, additional or modified Relief Requests will be submitted in accordance with 10 CFR 50.55a (g) (5) (iii).

4.1 Relief Request Format

Each Relief Request will include the following sections:

- 4.1.1 **COMPONENT DESCRIPTION:** The component description will include:
- o a general description of the component(s) addressed by the Relief Request.
 - o The applicable Plant Identification System (PIS) number(s) which uniquely identify the plant system and specific component(s) within the system, and
 - o A quantity of components if the Relief Request covers more than ten (10) components.
- 4.1.2 **ASME CODE CLASS:** the ISI classification, Class 1, 2, 3 E1, E2, or E3, as identified on the ISI Classification Boundary Drawings will be listed.
- 4.1.3 **ASME SECTION XI REQUIREMENT:** The impractical ASME Section XI requirement(s) will be listed. To the extent possible, subparagraphs, individual footnotes, or specific Item Numbers will be cited.
- 4.1.4 **BASIS FOR RELIEF:** Information to support Detroit Edison's determination that the Code requirement is impractical will be provided. The following data will be provided, if applicable:
- o A physical sketch if the component(s) are not accessible for examination.
 - o Detailed technical information (an engineering justification) supporting proposed alternate scope of examination, examination method, or acceptance standard.

- o A description of the proposed alternative examination's impact on plant safety and justification of any change in the overall level of plant safety.
- o A justification of any change in the overall level of plant safety if it is not possible to perform alternative examination(s).

4.1.5 **ALTERNATE EXAMINATION:** Any alternate examination(s) that are proposed will be identified. Both alternate examination(s) that are performed in lieu of the Section XI examination requirement(s) and alternate examination(s) will include a statement describing the extent and frequency of examination, the acceptance standard, and whether deferral of inspection to the end of the interval is requested.

4.1.6 **APPLICABLE TIME PERIOD:** A statement identifying the time period during the inspection interval for which relief is requested will be included.

4.2 Relief Request(s)

The following Relief Request(s) are included in this section:

RELIEF
REQUEST
NUMBER

GENERAL DESCRIPTION

RR-B1 Deleted

RR-B2 The examination of supports adjacent to a failed component support will be dependent on the failure evaluation of the failed component support.

RR-B3 Deleted

RELIEF REQUEST NR-B2

COMPONENT DESCRIPTION

Component supports adjacent to a component support that fails to satisfy the acceptance standards of Article IWF-3400.

ASME CODE CLASS

Class 1, 2, and 3 Component Supports

ASME SECTION XI REQUIREMENTS

Subarticle IWF-2430(a) states in part, "When the results of examinations require corrective measures in accordance with the provisions of IWF-3000, the component supports immediately adjacent to those requiring corrective action shall be examined".

BASIS FOR RELIEF

This Section XI requirement is rather arbitrary since there is no sound technical basis for this requirement. Using IWF-2430(a), there will be cases where unnecessary visual examinations will be performed on adjacent supports. There will also be cases where supports that are not adjacent to the failed component support should be included in the scope of additional examinations, yet these components are not even considered by Section XI.

The alternate criteria for additional examinations identified in the Alternate Examination section of this Relief Request is a more technically complete method for determining whether additional supports in a piping subsystem should be examined.

ALTERNATE EXAMINATION

Detroit Edison will perform an engineering evaluation of the failed component support to determine whether additional component supports could also be subject to the same mode of failure. If additional component supports would be subject to the same mode of failure, the engineering evaluation will specify an appropriate number of additional supports to be examined.

The engineering evaluation of the failed component support shall also consider the effect of the failed component support on other component supports within the piping subsystem or component anchorage. Any component supports that were subjected to loads exceeding their upset condition design capacity, regardless of whether they are adjacent to the component support that failed, will be included in the scope of additional examinations. Any component supports that were subjected to loads 25% greater than their predicted upset load will also be included in the scope of additional examination.

APPLICABLE TIME PERIOD

This Relief Request applies to the first ten year interval.

5.0 Inservice Inspection Program (Plan) Tables (Component Supports)

5.1 The accompanying tables list the component supports to be examined during the first inspection interval. The tables are divided into ISI Class - 1, 2, and 3 and start with Class - 1. The tables contain the following information:

Code Class: is the ASME class as defined in accordance with the Code of Federal Regulations (10CFR50.55a) Regulatory Guide 1.26, and NUREG 0800.

Interval: refers to the 120 month inspection interval as discussed in Section 2.0 of this document.

Page/Rev.: indicates the consecutive and total page numbers for the NDE program. Rev. or Revision indicates the revision of the individual page or entire document.

Code Category: is the Examination Category as defined by ASME Section XI, Subarticle IWF.

Item Number: NOT USED - Because IWF category is the main selection determining factor for component supports, Item No. was not used to make hanger selections. The Item Number depicts inspections points and therefore is more appropriately addressed in inspection procedures. The Item Numbers for each category were used to identify the type of visual examination(s) each component support will receive and this information is provided in the tables.

PIS No./System: Identifies the Plant Identification System Number (PIS No.) and the System Title for each group of component supports to be examined.

Isometric/Multiple Loop: Identifies the specific isometric drawing applicable to a particular group of component supports and the Multiple Loop identification No. if applicable.

Unique Identification: Identifies the specific component support subject to examination.

Exam Method - Exam Method Selected: identifies the code required method of examination (i.e. visual) and the specific examination selected for each component shown (i.e. VT-3, VT-4). See Part-B, Section 5.2 for a list of abbreviations for expanded definitions.

Type: Identifies the type of component support to be examined.

Relief Request: If applicable, indicates the request for relief applicable in accordance with 10CFR50.55a (g) (5) (iii). See Part-B, Section 4.0 of this document.

Period: defined as the 3 year period within the 120 month (10 year) interval when the specific examination is scheduled. There are 3 periods in each 10 year interval and they can vary by +/- 1 year collectively over the 10 year period. Each period contains the specific outage code indicating that the required exam has either been scheduled or completed.

Remarks: is reserved for additional information to explain, amplify, or provide added details necessary to clarify the examination requirements.

- 5.1 **List of Abbreviations:** For definitions of abbreviations used in the following tables, refer to Part-A, Section 6.2 of this document.

**INSERVICE INSPECTION PROGRAM (PLAN) TABLES
FOR
CLASS 1
COMPONENT SUPPORTS**

PERMITS 2 INSERVICE INSPECTION PROGRAM (PLAN) TABLES

Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
					1st	2nd	3rd	
FA	B1100 Reactor Pressure Vessel (RPV)	VT-3	A		025			GM721-5380-B GM721-5384-B GM721-2083
	RPV Skirt and Bolting							
	E1100 Residual Heat Removal System (RRR)	VT-3/VT-4	SP					
FC	GM721-2299 RHR Supply from Recirc Pump Suction	VT-3/VT-4	SP		025			
FC	E11-2299-G01	VT-3/VT-4	SP					
FC	E11-2299-G02	VT-3/VT-4	SP					
FC	E11-2299-G03	VT-3/VT-4	SP					
FC	E11-2299-G11	VT-3/VT-4	SP					
	GM721-3519 RPV Head Spray	VT-3	G		025			
FC	E11-3519-G10	VT-3	G					
FC	E11-3519-G10A	VT-3	G					
FC	E11-3519-G10B	VT-3	G					GM721-2035
	E4100 High Pressure Coolant Injection System (HPCI)	VT-3/VT-4	SP		025			
FC	E41-2297-G01	VT-3/VT-4	SP					
FC	E41-2297-G03	VT-3/VT-4	SP		01C			
FC	E41-2297-G04	VT-3/VT-4	SP					
FC	E41-2297-G05	VT-3/VT-4	SP					
FC	E41-2297-G14	VT-3	G					

Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	CODE CLASS 1	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
						1st	2nd	3rd	
FC	E5100 Reactor Core Isolation Cooling System (RCIC) 6M721-2192 RCIC Steamline Drywell E51-2192-G01 E51-2192-G02 E51-2192-G05 E51-2192-G11 E51-2192-G16		VT-3/VT-4	SP		01C			6M721-2044
			VT-3/VT-4	SP					
			VT-3/VT-4	SP					
			VT-3/VT-4	SP					
			VT-3	G					
FC	B2100 Nuclear Boiler System 6M721-5352-5 Main Steam Loop -A- ML 1-1 B21-5352-HA1		VT-3/VT-4	SP					6M721-2089
			VT-3/VT-4	SP					
FC	6M721-5353-5 Main Steam Loop -B- ML 1-1 B21-5353-HB2		VT-3/VT-4	SP		025			
			VT-3/VT-4	SP					
FC	6M721-5354-5 Main Steam Loop -C- ML 1-1 B21-5354-HC3		VT-3/VT-4	SP					
			VT-3/VT-4	SP					
FB	6M721-5355-5 Main Steam Loop -D- ML 1-1 B21-5355-GD1		VT-3	G		01C			
			VT-3	G					

Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	CODE CLASS 1	INTERVAL 1 | X | 2 | 3 | 4 |				PERIOD	REMARKS
			Exam Req'd Exam Method Selected	Type	Relief Request	1st | 2nd | 3rd		
	B3100 Reactor Recirc System							
	6M721-5357-5 Reactor Recirc Suction and Discharge Loop A ML 1-2						6M721-2833	
FC	B31-5357-HA1		VT-3/VT-4	SP		01C	NE-85-1116 (AUGMENTED)	
FC	B31-5357-HA5		VT-3/VT-4	C		01C	NE-85-1116 (AUGMENTED)	
FC	B31-5357-HA6		VT-3/VT-4	C		01C	NE-85-1116 (AUGMENTED)	
FC	B31-5357-HA7		VT-3/VT-4	C				
	6M721-5359-5 Reactor Recirc Suction and Discharge Loop B ML 1-2							
FC	B31-5359-HB2		VT-3/VT-4	SP		01C	NE-85-1116 (AUGMENTED)	
FC	B31-5359-HB4		VT-3/VT-4	SP		01C	NE-85-1116 (AUGMENTED)	
FC	B31-5359-HB5		VT-3/VT-4	C		01C	NE-85-1116 (AUGMENTED)	
FC	B31-5359-HB6		VT-3/VT-4	C				
FC	B31-5359-HB7		VT-3/VT-4	C				
	E1100 Residual Heat Removal							
	6M721-2298-5 Drywell R.H.R. Return (DIV I) ML 1-3							
FC	E11-2298-G01		VT-3/VT-4	SP		02S		
FC	E11-2298-G03		VT-3/VT-4	SP			6M721-2083	
	E1100 Residual Heat Removal							
	6M721-2327-5 Drywell R.H.R. Return (DIV II) ML 1-3							
FC	E11-2327-G01		VT-3/VT-4	SP		01C		
FC	E11-2327-G03		VT-3/VT-4	SP				

Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	CODE CLASS	INTERVAL				PERIOD			REMARKS
			1	2	3	4	1st	2nd	3rd	
			Exam Req'd Exam Method Selected	Type	Relief Request					
	E2100 Core Spray System									
	6M721-3052-5 Core Spray Piping Division I ML 1-4		VT-3/VT-4 VT-3/VT-4	SP SP					6M721-2034	
FC	E21-3052-G02									
FC	E11-3052-G04									
	6M721-3052-5 Core Spray Piping Division II ML 1-4		VT-3/VT-4 VT-3	SP G			025		6M721-2046	
FC	E21-3052-G01									
FC	E21-3052-G03									
	G3300 Reactor Water Cleanup									
	6M721-5351-5 Reactor Water Cleanup Suction from the RPV Recirculation Loops ML 1-5		VT-3/VT-4 VT-3/VT-4 VT-3/VT-4	SP SP SP			025			
FC	Loop "A" G33-3096-G04									
FC	Loop "B" G33-3098-G01									
FC	G33-3096-G03									

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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	CODE CLASS 1	INTERVAL				Relief Request	PERIOD	REMARKS
			1	2	3	4			
			Exam Req'd Exam Method Selected	Type	1st	2nd	3rd		
	G3300 Reactor Water Cleanup (Cont'd)								
	6M721-3098-5 & 5351-5 (Reactor Water Clean-up Suction from the RPV Bottom Head Drain)								
FC	G33-3098-G08		VT-3/VT-4	SP		025			
FC	G33-3098-G09		VT-3	G					
FC	G33-3098-G10		VT-3/VT-4	SP					
FC	G33-3098-G12		VT-3/VT-4	SP					
FC	G33-3098-G37		VT-3	R				6M721-2046	
	N2100 Feedwater System								
	6M721-3536-5 Feedwater Piping Inside Drywell ML 1-6								
FC	N21-3536-G02		VT-3/VT-4	SP		025			
FC	N21-3536-G03		VT-3/VT-4	SP					
FC	N21-3536-G05		VT-3/VT-4	SP		025			
FC	N21-3536-G07		VT-3/VT-4	SP					
FC	N21-3536-G09		VT-3/VT-4	SP					
	6M721-3537-5 Feedwater Piping Inside Drywell ML 1-6								
FC	N21-3537-G01		VT-3/VT-4	SP					
FC	N21-3537-G04		VT-3/VT-4	SP					
FC	N21-3537-G06		VT-3/VT-4	SP					
FC	N21-3537-G08		VT-3/VT-4	SP		025			
FC	N21-3537-G24		VT-3/VT-4	SP					

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PROGRAM (PLAN) TABLES

CODE
CLASS 1

INTERVAL 1 2 3 4

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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
					1st	2nd	3rd	
FC	B3100 Reactor Recirc System BM721-5358-5 Reactor Recirc Ring Header Loop A ML 1-7 B31-5358-HA4	VT-3/VT-4	SP					
	BM721-5358-5 Reactor Recirc Ring Header Loop B ML 1-7 B31-5358-HB3	VT-3/VT-4	SP		01C			

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**INSERVICE INSPECTION PROGRAM (PLAN) TABLES
FOR
CLASS 2
COMPONENT SUPPORTS**

FERRI 2 INSERVICE INSPECTION PROGRAM (PLAN) TABLES

CODE CLASS 2

INTERVAL 1 | X | 2 | 3 | 4 |

Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	1st | 2nd | 3rd	REMARKS
	E1100 Residual Heat Removal System (RRR)					
FC	E11-3035-G01	VT-3	R		025	
FB	E11-3035-G02	VT-3	R		025	
FB	E11-3035-G03	VT-3	G		025	
FB	E11-3035-G04	VT-3	G		025	
FC	E11-3035-G05	VT-3/VT-4	SP			
FB	E11-3035-G06	VT-3	G			
FC	E11-3035-G08	VT-3/VT-4	SP			
FB	E11-3035-G09	VT-3	G			
FB	E11-3035-G10	VT-3	G			
FC	E11-3035-G11	VT-3/VT-4	SP			
FB	E11-3035-G12	VT-3	G			
FB	E11-3035-G15	VT-3	G			
FB	E11-3035-G16	VT-3	G			
FB	E11-3035-G17	VT-3	G			
FC	E11-3035-G18	VT-3/VT-4	SP		025	
FC	E11-3035-G19	VT-3	G		025	
FB	E11-3035-G21	VT-3	R		01C	
FB	E11-3035-G22	VT-3	G			

Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	CODE CLASS 2	INTERVAL				Type	Relief Request	PERIOD	REMARKS
			1	2	3	4				
			Exam Req'd Exam Method Selected				1st	2nd	3rd	
	E4100 High Pressure Coolant Injection (RHR)									
	00721-3162 HPCI Turbine Exhaust									00721-2035
FC	E41-3162-G01		VT-3/VT-4			SP				
FC	E41-3162-G02		VT-3/VT-4			SP				
FC	E41-3162-G03		VT-3			R				
FC	E41-3162-G04		VT-3			G				025
FC	E41-3162-G05		VT-3			R				
FC	E41-3162-G06		VT-3			G				01C
FC	E41-3162-G07		VT-3/VT-4			SP				
FC	E41-3162-G08		VT-3			R				
FC	E41-3162-G09		VT-3			G				
FC	E41-3162-G10		VT-3			SP				
FC	E41-3162-G11		VT-3/VT-4			SP				
FC	E41-3162-G12		VT-3/VT-4			R				01C
FC	E41-3162-G13		VT-3			G				
	00721-3163 HPCI Booster Pump Suction From Suppression Chamber and Condensate Storage Header									
FC	E41-3163-G01		VT-3/VT-4			SP				025
FC	E41-3163-G02		VT-3			R				
FB	E41-3163-G11		VT-3			R				025
FC	E41-3163-G12		VT-3			R				
FB	E41-3163-G13		V1-3			R				01C
FC	E41-3163-G14		VT-3/VT-4			SP				
FC	E41-3163-G16		VT-3			R				

Code Category	PIS No./System Thermoc./Multiple Loop Unique Identification	CODE CLASS 2	INTERVAL 1 | X | 2 | 3 | 4				PERIOD	REMARKS
			Exam Req'd Exam Method Selected	Type	Relief Request	1st | 2nd | 3rd		
	E4100 High Pressure Coolant Injection (HPCI) (Cont'd)							
FC	6M721-3187 HPCI Pump Discharge to South Reactor Feedwater Header		VT-3	R		02S		
FC	E41-3167-G01		VT-3	G				
FC	E41-3167-G02		VT-3	G		01C		
FC	E41-3167-G03		VT-3	R				
FC	E41-3167-G04		VT-3	R		02S		
FC	E41-3167-G05		VT-3	G				
FC	E41-3167-G06		VT-3	R				
FC	E41-3167-G07		VT-3	R				
FC	E41-3167-G08		VT-3	R		01C		
FC	E41-3167-G09		VT-3	G				
FC	E41-3167-G10		VT-3	R				
FC	E41-3167-G11		VT-3	R				
FC	E41-3167-G12		VT-3	G		02S		
FC	E41-3167-G13		VT-3/VT-4	SP				
FC	E41-3167-G14		VT-3	G				
FC	E41-3167-G15		VT-3	G				
FC	E41-3167-G16		VT-3	G				
	6M721-3169 HPCI Testline from pump discharge to CND5 Storage System							
FC	E41-3169-G09		VT-3	R		02S		
FC	E41-3169-G10		VT-3	R				
FC	E41-3169-G13		VT-3/VT-4	SP				

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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD	REMARKS
	E4100 -High Pressure Coolant Injection (HPCI) (Cont'd)					
	BM721-3172 Steam Supply from RPV to HPCI Turbine Stop Valve					
FC	E41-3172-G01	VT-3/VT-4	SP		02S	
FC	E41-3172-G05	VT-3/VT-4	SP		01C	
FC	E41-3172-G10	VT-3/VT-4	SP			
FC	E41-3172-G13	VT-3/VT-4	SP			
FB	E41-3172-G14	VT-3	G			
FC	E41-3172-G15	VT-3	R		02S	
FC	E41-3172-G17	VT-3	G			
FC	E41-3172-G18	VT-3	G			
FB	E41-3172-G28	VT-3	G		02S	
FB	E41-3172-G29	VT-3	G			
FB	E41-3172-G30	VT-3	G			
	G4100 Fuel Pool Cooling and Cleanup System					
	BM721-3669 RHP Supply Header to Fuel Pool Cooling System					
FC	G41-3669-G18	VT-3	R		01C	

BM721-2048

BM721-2048

Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	CODE CLASS 2	INTERVAL				Type	Relief Request	PERIOD			REMARKS
			1	2	3	4			1st	2nd	3rd	
	C1100 Control Rod Drive Header											
	6M721-5372-5 (Control Rod Drive Scram Discharge Vol. A) ML 2-1											
FB	C11-2113-G260					G						
FC	C11-2113-G266					R						
FB	C11-2113-G270					R						
FB	C11-2113-G274					R						
FC	C11-2113-G276					R				01C		
FB	C11-2113-G280					R						
	6M721-5375-5 (Control Rod Drive Scram Discharge Vol. B) ML 2-1											
FB	C11-2113-G262					R						
FB	C11-2113-G284					R				02S		
FB	C11-2113-G288					R						
FB	C11-2113-G292					R						
FB	C11-2113-G294					R				01C		
FB	C11-2113-G296					R						6M721-544B

Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	CODE CLASS 2	INTERVAL	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
							1st	2nd	3rd	
	E1100 Residual Heat Removal									
	6M721-3146-5 (RHR Heat Exchanger Return to Drywell Penet-North) ML 2-2									
FB	E11-3146-G05			VT-3	G			025		
FC	E11-3146-G06			VT-3/VT-4	SP					
FC	E11-3146-G07			VT-3/VT-4	SP					
FC	E11-3146-G09			VT-3	R			025		
FC	E11-3146-G27			VT-3	G					
FB	E11-3146-G30			VT-3	G					
FB	E11-3146-G32			VT-3/VT-4	SP					
FC	E11-3146-G32			VT-3	G					
FB	E11-3146-G36			VT-3	G					
	6M721-3151-5 (RHR Heat Exchanger Return to Drywell Penet-South) ML 2-2									
FC	E11-3151-G02			VT-3/VT-4	SP			025		
FC	E11-3151-G03			VT-3	R					
FC	E11-3151-G04			VT-3/VT-4	SP					
FC	E11-3151-G05			VT-3/VT-4	SP					
FC	E11-3151-G22			VT-3	A					
FA	E11-3151-G25A			VT-3	G					
FB	E11-3151-G28			VT-3	G					
FC	E11-3151-G29			VT-3	G					
FC	E11-3151-G29			VT-3	G					
FC	E11-3184-G13			VT-3/VT-4	SP					

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INTERVAL 1 2 3 4

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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Reg'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
					1st	2nd	3rd	
	E1100 Residual Heat Removal System (Cont'd)							6M721-2083 6M721-2084
	6M721-3154-5 (RHR Pump Suction from Suppression Chamber-North ML 2-3)							
FC	E11-3154-G01	VT-3/VT-4	SP				01C	
FB	E11-3154-G02	VT-3	R					
FC	E11-3154-G05	VT-3/VT-4	SP				02S	
FB	E11-3154-G08	VT-3	R					
FB	E11-3154-G22	VT-3	R					
FB	E11-3154-G28	VT-3	R					
	6M721-3153-5 (RHR Pump Suction from Suppression Chamber-South) ML-2-3							
FB	E11-3153-G03	VT-3	R				01C	
FB	E11-3153-G07	VT-3	R				02S	
FB	E11-3153-G11	VT-3	R					
FC	E11-3153-G12	VT-3/VT-4	SP					
FB	E11-3153-G16	VT-3	R				02S	
FB	E11-3153-G17	VT-3	G					

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CODE CLASS 2

INTERVAL 1 2 3 4

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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
					1st	2nd	3rd	
	E1100 RHR Heat Removal System (Cont'd)							6M721-2083 6M721-2084
	6M721-2157-5 (RHR Pump Discharge to Heat Exchanger-North) ML 2-4							
FC	E11-3157-G04	VT-3/VT-4	SP				010	
FB	E11-3157-G24	VT-3	G				025	
FC	E11-3157-G28	VT-3	G					
FC	E11-3157-G29	VT-3	R					
FC	E11-3157-G31	VT-3	A					
FA	E11-3157-G34	VT-3	A					
FA	E11-3157-G37	VT-3	A					
	6M721-3177-5 (RHR Pump Discharge to Heat Exchanger-South) ML 2-4							
FB	E11-3177-G18	VT-3	G				025	
FB	E11-3177-G19	VT-3	R					
FA	E11-3177-G26	VT-3	A					
FB	E11-3177-G30	VT-3	A				025	
FA	E11-3177-G35	VT-3	G					
FC	E11-3177-G36	VT-3	G				025	
FC	E11-3177-G33	VT-3	G					

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CLASS 2

INTERVAL

1 2 3 4

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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
					1st	2nd	3rd	
	E1100 Residual Heat Removal System (Cont'd)							6M721-2083 6M721-2084
	6M721-3158-5 (RHR Pump North Discharge to Heat Exchanger-North) ML 2-5							
FC	E11-3158-G06	VT-3/VT-4	SP					
FC	E11-3158-G28	VT-3/VT-4	SP					
FB	E11-3158-G33	VT-3	G			025		
FB	E11-3158-G39	VT-3	G				01C	
FL	E11-3158-G41	VT-3	R					
FB	E11-3158-G52	VT-3	R					
	6M721-3258-5 (RHR Pump South Discharge to Heat Exchanger-South) ML 2-5							
FC	E11-3518-G14	VT-3/VT-4	SP			025		
FC	E11-3518-G23	VT-3	G					
FC	E11-3518-G43	VT-3/VT-4	SP					
FB	E11-3518-G44	VT-3	G				025	
FB	E11-3518-G46	VT-3	G					
FC	E11-3518-G50	VT-3/VT-4	SP					
	6M721-3159-5 (RHR Containment Spray- North) ML 2-6							
FB	E11-3159-G06	VT-3	G			025		
FC	E11-3159-G09	VT-3	R					
FC	E11-3159-G12	VT-3/VT-4	SP					

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CODE CLASS 2

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1 2 3 4

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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
					1st	2nd	3rd	
	E1100 Residual Heat Removal System (Cont'd)							
	6M721-3164-5 (RHR Containment Spray-South) ML 2-8							
FC	E11-3164-G01	VT-3/VT-4	SP					
FC	E11-3164-G06	VT-3	G					
FC	E11-3164-G10	VT-3	R					
FC	E11-3164-G11	VT-3	G		025			
FC	E11-3164-G17A	VT-3	R					
FC	E11-3164-G20	VT-3/VT-4	SP					
FC	E11-3164-G21	VT-3/VT-4	SP		025			
	6M721-3180-5 (RHR Test and Suppression Chamber Spray Line North) ML 2-7							
FC	E11-3180-G02	VT-3	R					
FC	E11-3180-G04	VT-3	R					
FB	E11-3180-G19	VT-3	R		010			
	6M721-3181-5 (RHR Test and Suppression Chamber Spray Line South) ML 2-7							
FC	E11-3181-G01	VT-3/VT-4	SP					
FC	E11-3181-G05	VT-3/VT-4	SP					
FB	E11-3181-G11	VT-3	R					
FB	E11-3181-G15	VT-3	R		025			

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CLASS 2

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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
					1st	2nd	3rd	
	2100 Residual Heat Removal System (Cont'd)							6M721-20B3 6M721-20B4
	6M721-4612-5 (Relief Line from RHR Heat Exchanger-North) ML 208							
FC	E11-4612-G02	VT-3	G				01C	
FC	E11-4612-G05	VT-3	R					
FC	E11-4612-G09	VT-3	G					
FC	E11-4612-G10	VT-3	G					
FC	E11-4612-G12	VT-3	R				02S	
FC	E11-4612-G15	VT-3	G					
	6M721-4611-5 (Relief Line from RHR Heat Exchanger-South) ML 2-B							
FC	E11-4611-G03	VT-3	G					
FC	E11-4611-G04	VT-3/VT-4	SP					
FC	E11-4611-G07	VT-3	G				02S	
FC	E11-4611-G09	VT-3	R					
FC	E11-4611-G11	VT-3	R					
FC	E11-4611-G13	VT-3	R					
FC	E11-4611-G15	VT-3	R				02S	

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PROGRAM (PLAN) TABLES

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CLASS 2

INTERVAL

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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
					1st	2nd	3rd	
	E2100 Core Spray System							6M721-2034
	6M721-3144 (Pump Disch. to RPV Drywell Penetration North) ML 2-9							
FC	E21-3144-G03	VT-3/VT-4	SP				025	
FB	E21-3144-G05	VT-3	G				025	
FA	E21-3144-G08	VT-3	A					
FC	E21-3144-G09	VT-3/VT-4	SP					
FC	E21-3144-G11	VT-3	R					
FB	E21-3144-G13	VT-3	G				025	
FB	E21-3144-G16	VT-3	R					
FC	E21-3144-G18	VT-3/VT-4	SP					
FB	E21-3144-G20	VT-3	R					
FB	E21-3144-G22	VT-3	G					
FB	E21-3144-G24	VT-3	G				025	
FC	E21-3144-G25	VT-3	R					
FC	E21-3144-G29	VT-3	G					
	6M721-3147-5 (Pump Disch. to RPV Drywell Penetration South) ML 2-9							
FC	E21-3147-G04	VT-3/VT-4	SP				025	
FC	E21-3147-G11	VT-3	R					
FB	E21-3147-G13	VT-3	R					
FA	E21-3147-G15	VT-3	A				010	
FB	E21-3147-G17	VT-3	G					
FB	E21-3147-G18	VT-3	R					
FC	E21-3147-G20	VT-3	G				025	
FB	E21-3147-G25	VT-3	G					

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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
					1st	2nd	3rd	
	E2100 Core Spray System (Cont'd)							6M721-2034
	6M721-3147-5 (Pump Diech. To RPV Drywell Penetration South) ML 2-9 (Cont'd)							
FB	E21-3147-G31	VT-3	G					
FB	E21-3147-G33	VT-3	R					
FB	E21-3147-G35	VT-3	R		02S			
FC	E21-3147-G39	VT-3/VT-4	SP					
FC	E21-3147-G40	VT-3/VT-4	SP		02S			
	6M721-3145-5 (Core Spray Test Line- North) ML 2-10							
FC	E21-3145-G03B	VT-3	G					
FB	E21-3145-G04	VT-3	R					
FC	E21-3145-G05	VT-3/VT-4	SP					
	6M721-3150-5 (Core Spray Test Line- South) ML 2-10							
FB	E21-3150-G02	VT-3	G					
FC	E21-3150-G03	VT-3/VT-4	SP		01C			

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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	COOZ CLASS 2	INTERVAL				Type	Relief Request	PERIOD			REMARKS
			1	2	3	4			1st	2nd	3rd	
			1	X	2	3			4	1st	2nd		3rd
	E2100 Core Spray System (Cont'd)											
	6M721-3148-5 (Core Spray Pump Suction-North) ML 2-11											
FC	E21-3148-G01					VT-3/VT-4				025		
FC	E21-3148-G04					VT-3/VT-4						
FB	E21-3148-G29					VT-3						
FB	E21-3148-G31					VT-3				01C		
FB	E21-3148-G36					VT-3						
FC	E21-3148-G37					VT-3/VT-4						
FC	E21-3148-G39					VT-3/VT-4						
FB	E21-3148-G40					VT-3						
FB	E21-3148-G43					VT-3				025		
FB	E21-3148-G45					VT-3						
FB	E21-3148-G48					VT-3						
	6M721-3149-5 (Core Spray Pump Suction-South) ML 2-11											
FB	E21-3149-G03					VT-3						
FC	E21-3149-G05					VT-3/VT-4						
FB	E21-3149-G06					VT-3				025		
FC	E21-3149-G08					VT-3						
FB	E21-3149-G11					VT-3				025		
FB	E21-3149-G12					VT-3						
FB	E21-3149-G13					VT-3						

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CODE CLASS 2

INTERVAL 1 | | 2 | | 3 | | 4 | |

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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
					1st	2nd	3rd	
	N1100 Main and Reheat Steam							6M721-2002
	6M721-3258 and 6M721-3259 (Main Steam from 2nd MSIV to 3rd MSIV) ML 2-12							
	Loop "A"							
FC	N30-3258-G07	VT-3/VT-4	C			01C		
FC	N30-3258-G17	VT-3	G					
FC	N30-3259-G02	VT-3/VT-4	C					
FC	N30-3259-G09	VT-3/VT-4	SP					
	Loop "B"							
FC	N30-3258-G02	VT-3/VT-4	C			01C		
FC	N30-3258-G17	VT-3	G					
FC	N30-3259-G82	VT-3/VT-4	SP					
	Loop "C"							
FC	N30-3258-G02	VT-3/VT-4	C			02S		
FC	N30-3259-G08	VT-3/VT-4	C					
FB	N30-3259-G25	VT-3	R					
	Loop "D"							
FC	N30-3258-G17	VT-3	G					
FC	N30-3259-G02	VT-3/VT-4	C			02S		
FC	N30-3259-G10	VT-3/VT-4	SP					

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INTERVAL 1 | | 2 | | 3 | | 4 | |

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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
					1st	2nd	3rd	
	T4804 Combustible Gas Control System 6M721-2095-5 (CGC Return Header to Torus-DIV I) ML 2-13							6M721-2087
FB	T48-2095-G01	VT-3/VT-4	SP		025			
FB	T48-2095-G02B	VT-3	G					
FB	T48-2095-G04	VT-3	R					
FB	T48-2095-G05	VT-3	R					
FB	T48-2095-G07B	VT-3	G					
FC	T48-2095-G08	VT-3	R		01C			
FC	T48-2095-G09B	VT-3	R					
FC	T48-2095-G10A	VT-3	R					
FB	T48-2095-G12A	VT-3	R		025			
FB	T48-2095-G13A	VT-3	R					
FB	T48-2095-G14B	VT-3	G		01C			
FB	T48-2095-G16A	VT-3/VT-4	SP		025			
FA	T48-2095-G18	VT-3	A					
FB	T48-2095-G19	VT-3	R					
FB	T48-2095-G21C	VT-3	G					
FC	T48-2095-G22	VT-3	R					
FB	T48-2095-G24A	VT-3	R		01C			
FC	T48-2095-G25	VT-3	R					
FB	T48-2095-G26A	VT-3	R					
FB	T48-2095-G28	VT-3	R					
FB	T48-2095-G29	VT-3	G					

FERRI 2 INSERVICE INSPECTION PROGRAM (PLAN) TABLES

CODE CLASS 2

INTERVAL 1 2 3 4

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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
					1st	2nd	3rd	
	T4804 Combustible Gas Control System (Cont'd)							60721-2087
	60721-2097-5 (CGC Return Header to Torus-DIV II) ML 2-13							
FB	T48-2097-G03	VT-3	G					
FB	T48-2097-G05	VT-3	R					
FB	T48-2097-G08A	VT-3	R		01C			
FC	T48-2097-G07	VT-3	R					
FC	T48-2097-G08A	VT-3	R					
FC	T48-2097-G09A	VT-3	R		025			
FB	T48-2097-G11C	VT-3	G					
FC	T48-2097-G12	VT-3	R		01C			
FC	T48-2097-G13B	VT-3	R					
FB	T48-2097-G14B	VT-3	R					
FB	T48-2097-G15A	VT-3	R					
FB	T48-2097-G17	VT-3	R		025			
FC	T48-2097-G18	VT-3/VT-4	SP					
FA	T48-2097-G19	VT-3	A		01C			
FB	T48-2097-G21	VT-3	R		025			
FB	T48-2097-G22A	VT-3	G					
FC	T48-2097-G24A	VT-3	R					
FB	T48-2097-G25A	VT-3	R		025			
FC	T48-2097-G25C	VT-3	G					
FB	T48-2097-G31	VT-3	R					
FC	T48-2097-G33	VT-3	G					
FB	T48-2097-G34	VT-3	G					

**INSERVICE INSPECTION PROGRAM (PLAN) TABLES
FOR
CLASS 3
COMPONENT SUPPORTS**

FERMI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLES

CODE
CLASS 3

INTERVAL 1 2 3 4

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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
					1st	2nd	3rd	
	P4400 Emergency Equipment Cooling Water Division I							NK 21-5444
	6M721-3558 (EECW Return) ML 3-1							
FC	P44-3558-G11	VT-3	R		025			IWD 2.20
FC	P44-3558-G13	VT-3/VT-4	SP					
	6M721-3351-(EECW Pump Suction, Bypass and Discharge) ML 3-2							
FC	P44-3351-G03	VT-3	G		025			IWD 2.20
FC	P44-3351-G04	VT-3	R					IWD 2.20
FC	P44-3351-G08	VT-3	R					
FC	P44-3351-G12	VT-3	R		01C			
FC	P44-3351-G15	VT-3	R					
FC	P44-3351-G16	VT-3	R					IWD 2.20
FB	P44-3351-G17	VT-3	R					IWD 2.20
FB	P44-3351-G18	VT-3	R					IWD 2.20
FC	P44-3351-G23	VT-3/VT-4	SP		025			
FB	P44-3351-G28	VT-3	R		025			
FB	P44-3351-G31	VT-3	R		01C			
FC	P44-3351-G36	VT-3	R					
FB	P44-3351-G38	VT-3	G					
FC	P44-3351-G39	VT-3	R					
FB	P44-3351-G40	VT-3	G					
FC	P44-3351-G41	VT-3/VT-4	SP					IWD 2.20
FC	P44-3351-G44	VT-3	R		01C			IWD 2.20
FB	P44-3351-G47	VT-3	R		025			
FC	P44-3351-G48	VT-3	R					

FERMI 2 INSERVICE INSPECTION PROGRAM (PLAN) TABLES		CODE CLASS 3	INTERVAL	1	X	2	3	4	PERIOD	1st	2nd	3rd	REMARKS
Code Category	PIS No./System Isometric/Multiple Loop Unique Identification		Exam Req'd Exam Method Selected	Type	Relief Request								
	P4400 Emergency Equipment Cooling Water Division I (Cont'd)												6M721-5444
	6M721-3559 (EECW Supply to Drywell) ML 3-3												
FC	P44-3559-G03		VT-3/VT-4	SP					025				IWD-2.40
FC	P44-3559-G10		VT-3/VT-4	SP									IWD-2.20
FC	P44-3559-G12		VT-3	R									
	6M721-3347 and 6M721-3189 EECW Return to Heat Exchanger and RBCCW/EECW Return Header) ML 3-4												
FA	P44-3347-G01		VT-3	R					01C				IWD-2.20
FC	P44-3347-G02B		VT-3	G									
FB	P44-3347-G04		VT-3	G									IWD-2.40
FC	P44-3347-G08		VT-3	R									
FC	P44-3347-G09		VT-3/VT-4	SP					01C				
FC	P44-3347-G10		VT-3	G									IWD-2.30
FB	P44-3347-G11		VT-3	G									IWD-2.30
FB	P44-3347-G14		VT-3	G									
FB	P44-3347-G17		VT-3/VT-4	SP					025				
FC	P44-3347-G20		VT-3	G					01C				
FB	P44-3189-G24		VT-3	R									
FC	P44-3189-G25		VT-3	R									
FC	P44-3189-G25		VT-3	R									
FB	P44-3189-G26		VT-3	R									
FC	P44-3189-G29		VT-3	R									
FC	P44-3189-G32		VT-3	R									
FC	P44-3189-G32		VT-3	R									
FB	P44-3189-G33		VT-3	R									

FEMMI 2 INSERVICE INSPECTION PROGRAM (PLAN) TABLES

Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	CODE CLASS 3	INTERVAL				Type	Relief Request	PERIOD	REMARKS
			1	2	3	4				
			Exam Req'd Exam Method Selected				1st	2nd	3rd	
	P4400 Emergency Equipment Cooling Water Division I (Cont'd)									6M721-544A
	6M721-3347 and 6M721-3189 EECW Return to Heat Exchanger and RBCCW/EECW Return Header ML 3-4 (Cont'd)									
FC	P44-3189-G38		VT-3/VT-4	SP			02S			IWD-2.40
FC	P44-3189-G39		VT-3	G						
FC	P44-3189-G40		VT-3/VT-4	SP						
FB	P44-3189-G42		VT-3	G			01C			
FB	P44-3189-G47		VT-3	G						
	6M721-3340 and 6M721-3382 (RBCCW & EECW Supply Header) ML 3-5									
FA	P42-3340-G01		VT-3	R						IWD-2.20
FC	P42-3340-G06		VT-3/VT-4	SP						
FC	P42-3340-G08		VT-3/VT-4	SP			02S			IWD-2.40
FB	P42-3340-G10		VT-3	G						
FB	P44-3362-G22		VT-3	R			01C			
FB	P44-3362-G24		VT-3	R						
FB	P44-3362-G25		VT-3	R						
FB	P44-3362-G26		VT-3	R						
FB	P44-3362-G30		VT-3	G			02S			IWD-2.20
FB	P44-3362-G33		VT-3	G						
FC	P44-3362-G39		VT-3/VT-4	SP						
FB	P44-3362-G47		VT-3	G						
FB	P44-3362-G48		VT-3	G						
FB	P44-3362-G52		VT-3	R						
FB	P44-3362-G54		VT-3	G						

FERMI 2 INSERVICE INSPECTION PROGRAM (PLAN) TABLES

CODE CLASS 3

INTERVAL 1 | | 2 | | 3 | | 4 | |

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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
					1st	2nd	3rd	
	P4400 Emergency Equipment Cooling Water Division I (Cont'd)							6N721-5444
	6N721-3380 (Service Water Return to EECW Heat Exchanger) ML 3-6							
FB	P45-3380-G02	VT-3	G			01C		
FC	P45-3380-G04	VT-3	G					IWD-2.20
FB	P45-3380-G07	VT-3	R					IWD-2.20
FC	P45-3380-G09	VT-3	R			02S		IWD-2.20
FB	P45-3380-G11	VT-3	R					IWD-2.20
FB	P45-3380-G15	VT-3	R			01C		
FB	P45-3380-G18	VT-3						
FB	P45-3380-G20	VT-3						
	6N721-3359 (Service Water Supply to EECW Heat Exchanger) ML 3-7							
FB	P45-3359-G03	VT-3	G					IWD-2.20
FB	P45-3359-G05	VT-3	R					IWD-2.20
FC	P45-3359-G09	VT-3	G					IWD-2.20
FB	P45-3359-G10	VT-3				01C		
FB	P45-3359-G13	VT-3						

PERMITS INSERVICE INSPECTION PROGRAM (PLAN) TABLES

INTERVAL 1 | X | 2 | 3 | 4 |

CODE CLASS 3

Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
					1st	2nd	3rd	
FC	P4400 Emergency Equipment Cooling Water Division II							
FB	6M721-3048 (EECW Return) ML 3-1							6M721-5357
	P44-3048-G10	VT-3/VT-4	SP					IWD-2.40
	P44-3048-G22	VT-3/VT-4	R					IWD-2.20
FB	6M721-3368 and 6M721-3084 (EECW Pump Suction, Bypass and Discharge) ML 3-2							
FB	P44-3368-G02	VT-3	R					02S
FB	P44-3368-G04	VT-3	R					01C
FC	P44-3368-G07	VT-3	R					02S
FB	P44-3368-G08	VT-3	G					02S
FC	P44-3368-G09	VT-3	R					02S
FC	P44-3368-G12A	VT-3	G					01C
FC	P44-3368-G31	VT-3	G					
FB	P44-3368-G33	VT-3	G					
FB	P44-3368-G35	VT-3	G					
FB	P44-3368-G36	VT-3	G					
FB	P44-3368-G38	VT-3	G					
FC	P44-3084-G07A	VT-3	G					
FC	P44-3084-G08	VT-3/VT-4	SP					IWD-2.20
FB	P44-3084-G10	VT-3	G					
FB	P44-3084-G11	VT-3	R					
FC	P44-3084-G13	VT-3/VT-4	SP					01C
FB	P44-3084-G15	VT-3	R					
FC	P44-3084-G18	VT-3	R					
FB	P44-3084-G20	VT-3	G					02S

Code Category	FIS No./System Isometric/Multiple Loop Unique Identification	CODE CLASS	INTERVAL				PERIOD	REMARKS	
			1	2	3	4			
			Exam Req'd Exam Method Selected	Type	Relief Request	1st	2nd	3rd	
F8 F5	P4400 Emergency Equipment Cooling Water Division II (Cont'd) 6M721-3047 (EECW Supply to Drywell) ML 3-3 P44-3047-G11 P44-3047-G12	3	VT-3 VT-3	R R					6M721-5357 TWD-2.20

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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	CODE CLASS 3	INTERVAL				Type	Relief Request	PERIOD			REMARKS
			1	2	3	4			1st	2nd	3rd	
	P4400 Emergency Equipment Cooling Water Division II (Cont'd)											
	6M721-3345, 6M721-3346 and 6M721-3348 (ECW Return to Heat Exchanger and RBCCW/ECW Return Header) ML 3-4											6M721-5357
FC	P44-3345-G02					VT-3					02S	
FC	P44-3345-G04					VT-3					02S	
FB	P44-3345-G06					VT-3						
FC	P44-3345-G08					VT-3					01C	
FB	P44-3345-G21					VT-3						
FC	P44-3345-G22					VT-3/VT-4						IWD-2.40
FC	P44-3345-G26					VT-3						IWD-2.20
FB	P44-3346-G02					VT-3						IWD-2.20
FA	P44-3346-G04					VT-3						
FB	P44-3346-G07					VT-3					01C	
FB	P44-3346-G08					VT-3						
FB	P44-3346-G10					VT-3						
FC	P44-3346-G12					VT-3						
FC	P44-3348-G04					VT-3/VT-4					02S	
FC	P44-3348-G05					VT-3						
FB	P44-3348-G07					VT-3						
FB	P44-3348-G09					VT-3					01C	
FA	P44-3348-G12					VT-3						
FB	P44-3348-G13					VT-3						
FC	P44-3348-G28					VT-3						
FC	P44-3348-G29B					VT-3						
FC	P44-3348-G30B					VT-3					02S	

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FERMI 2 INSERVICE INSPECTION
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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
					1st	2nd	3rd	
	P4400 Emergency Equipment Cooling Water Division II (Cont'd)							6M721-5357
	6M721-3336 and 6M721-3337 (RBCCW and EECW Supply Header) ML 3-5							
FC	P44-3336-G01	VT-3	G					IWD-2.20
FC	P44-3336-G12	VT-3	G		01C			
FC	P44-3336-G14	VT-3	R					
FB	P44-3336-G15	VT-3	R					
FB	P44-3336-G17	VT-3	G					
FC	P44-3337-G01	VT-3	G		025			
FC	P44-3337-G03	VT-3	R					
FA	P44-3337-G04	VT-3	R					IWD-2.20
FB	P44-3337-G09	VT-3	G		025			IWD-2.20
FC	P44-3337-G13	VT-3	R		025			IWD-2.40
FC	P44-3337-G15	VT-3/VT-4	SP					
FC	P44-3337-G16	VT-3	G					
FC	P44-3337-G17	VT-3	G					
FC	P44-3337-G20	VT-3	R					
FC	P44-3337-G22	VT-3	R		025			

FERMI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLES

CODE
CLASS 3

INTERVAL 1 | | 2 | | 3 | | 4 | |

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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
					1st	2nd	3rd	
	P4400 Emergency Equipment Cooling Water Division II (Cont'd)							6M721-5357
	6M721-3353 (Service Water Return to EECW Heat Exchanger) ML 3-6							Inaccessible
FA	P45-3353-G01	VT-3	A					
FC	P45-3353-G02	VT-3	G		025			
FC	P45-3353-G05	VT-3	R					IWD-2.20
FC	P45-3353-G08	VT-3	R					
FC	P45-3353-G09B	VT-3	G		01C			
FC	P45-3353-G10A	VT-3	R					
FC	P45-3353-G12	VT-3	R					
FC	P45-3353-G15	VT-3	G		025			
FB	P45-3353-G16	VT-3	R					
FB	P45-3353-G18	VT-3	R		01C			
FB	P45-3353-G19	VT-3	R					IWD-2.20
FB	P45-3353-G23	VT-3	R					IWD-2.20
FB	P45-3353-G24	VT-3	R		025			
FB	P45-3353-G26	VT-3	G					
	6M721-3352 (Service Water Supply to EECW Heat Exchanger) ML 3-7							Inaccessible
FA	P45-3352-G01	VT-3	A					
FC	P45-3352-G02	VT-3	G					
FB	P45-3352-G06	VT-3	R		01C			IWD-2.20
FC	P45-3352-G08	VT-3	R					
FC	P45-3352-G09A	VT-3	G		025			
FC	P45-3352-G11	VT-3	R					
FC	P45-3352-G13	VT-3	G					IWD-2.20
FB	P45-3352-G15	VT-3	R		01C			
FC	P45-3352-G16	VT-3	R					
FB	P45-3352-G19	VT-3	G					

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FERMI 2 INSERVICE INSPECTION PROGRAM (PLAN) TABLES

Code Category PIS No./System Isometric/Multiple Loop Unique Identification

E1100, P4500 and R3500 RHR Service Water System Division I

6M721N-2183 (RHR Service Water Return) ML 3-8

E11-2183-G01
 E11-2183-G03
 E11-2183-G05
 E11-2183-G07
 E11-2183-G09
 E11-2183-G11
 E11-2183-G13
 E11-2183-G15
 E11-2183-G17
 E11-2183-G21

6M721-2176 (Emergency Diesel Generator Service Water Supply) ML 3-9

R30-2176-G14
 R30-2176-G17
 R30-2176-G19
 R30-2176-G21
 R30-2176-G23
 R30-2176-G25
 R30-2176-G26
 R30-2176-G28
 R30-2176-G29
 R30-2176-G31
 R30-2176-G32

Code Category	Exam Reg'd Exam Method Selected	Type	Relief Request	1st	2nd	3rd	REMARKS
FB	VT-3	G		02S			
FC	VT-3/VI-4	SP					
FB	VT-3	G					
FB	VT-3	G		01C			
FC	VT-3	G					
FB	VT-3	G		02S			
FB	VT-3	R		02S			
FC	VT-3	G					
FB	VT-3	G					
FB	VT-3	R		01C			
FB	VT-3	R		01C			1WD-2.20
FB	VT-3	R					
FB	VT-3	R		02S			
FB	VT-3	G		01C			1WD-2.20
FB	VT-3	R		01C			
FB	VT-3	R		02S			
FC	VT-3	G					

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FERMI 2 INSERVICE INSPECTION PROGRAM (PLAN) TABLES		CODE CLASS 3	INTERVAL	1	X	2	3	4	5	PERIOD	REMARKS
Code Category	PIS No./System Isometric/Multiple Loop Unique Identification		Exam Req'd Exm Method Selected	Type	Relief Request	1st	2nd	3rd			
	21100, P4500 and R3000 RHR Service Water System Division I (Cont'd)										6M721N-2052
FB	8M721N-2178 (Emergency Equipment Service Water Supply) ML 3-10		VT-3	F							
FC	P45-2178-G05		VT-3	R		01C					IWD-2.20
FA	P45-2178-G07		VT-3	R		02S					
	6M721N-2179 (RHR Service Water Supply) ML 3-11										
FB	E11-2179-G11		VT-3	G							
FC	E11-2179-G13		VT-3	G							
FA	E11-2179-G15		VT-3	A							IWD-2.20
FC	E11-2179-G18		VT-3	G		02S					IWD-2.20
FA	E11-2179-G20		VT-3	R							
	6M721N-2181 (Emergency Diesel Generator Service Water Return) ML 3-12										
FC	R30-2181-G02		VT-3	G							
FC	R30-2181-G04		VT-3	G							
FB	R30-2181-G05		VT-3	G							
FC	R30-2181-G08		VT-3	R		01C					
FC	R30-2181-G10		VT-3	R							
FC	R30-2181-G12		VT-3	R							
FC	R30-2181-G15		VT-3	R							
FC	R30-2181-G16		VT-3	R							
FC	R30-2181-G19		VT-3	G							

FERRI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLES

CODE
CLASS 3

INTERVAL 1 | | 2 | | 3 | | 4 | |

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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
					1st	2nd	3rd	
	E1100 Residual Heat Removal Division 1							6M721-2084
	6M721-3185 RHR Service Water Supply and Return to HT Exchangers ML 3-13							
FB	E11-3185-G24	VT-3	R		025			IWD-2.20
FB	E11-3185-G27	VT-3	G					
FB	E11-3185-G33	VT-3	G					
FC	E11-3185-G35	VT-3/VT-4	SP		025			IWD-2.40
FC	E11-3185-G40	VT-3	G					IWD-2.20
FC	E11-3185-G43	VT-3	G					
FC	E11-3185-G44	VT-3	R		025			
FC	E11-3185-G46	VT-3	R					
FB/FC	E11-3185-G47	VT-3/VT-4	SP		010			
FC	E11-3185-G53	VT-3/VT-4	SP					
FC	E11-3185-G58	VT-3/VT-4	SP					
FB/FC	E11-3185-G59	VT-3/VT-4	SP		025			
FB	E11-3185-G60	VT-3	G					

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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
					1st	2nd	3rd	
	E1100, P4500 and R3000 RHR Service Water System Division II							8M721N-2053
	6M721N-2184 (RHR Service Water Return) ML 3-B							
FC	E11-2184-G02	VT-3	G					
FC	E11-2184-G04	VT-3	R		025			
FB	E11-2184-G06	VT-3	R					
FC	E11-2184-G08	VT-3	R		025			
FC	E11-2184-G10	VT-3	A					IWD-2.20
FA	E11-2184-G12	VT-3	R					
FC	E11-2184-G14	VT-3	R		01C			
FC	E11-2184-G16	VT-3	G					
FC	E11-2184-G18	VT-3	R		025			
FC	E11-2184-G22	VT-3	G					
	6M721-2277 (Emergency Diesel Generator Service Water Supply) ML 3-B							
FC	R30-2177-G04	VT-3	G		025			IWD-2.20
FA	R30-2177-G05	VT-3	R					
FC	R30-2177-G09	VT-3	G		01C			
FC	R30-2177-G17	VT-3	G					
FA	R30-2177-G18	VT-3	R					IWD-2.20
FA	R30-2177-G20	VT-3	R					
FB	R30-3519-G21	VT-3	G					
FC	R30-2177-G22	VT-3	R					
FB	R30-2177-G23	VT-3	G		01C			
FC	R30-2177-G25	VT-3	G					
FC	R30-2177-G27	VT-3	G					
FB	R30-2177-G29	VT-3	R					
FB	R30-2177-G31	VT-3	G					

FERM 2 INSERVICE INSPECTION PROGRAM (PLAN) TABLES		CODE CLASS 3	INTERVAL 1	2	3	4	Page 5-30 of 41 Rev. 1 Change 0
Code Category	PIS No./System Isometric/Multiple Loop Unique Identification		Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD 1st 2nd 3rd	REMARKS
	E1100, P4500 and R3000 RHR Service Water System Division II (Cont'd)						6M721N-2053
FB	6M721-2204 (Emergency Equipment Service Water Supply) ML 3-10		VT-3	G			
FC	P45-2204-G06		VT-3	G		01C	IWD-2.20
FB	P45-2204-G08		VT-3	G			
FA	P45-2204-G10		VT-3	R			
	P45-2204-G11		VT-3				
	6M721N-2180 (RHR Service Water Supply) ML 3-11		VT-3	R			IWD-2.20
FC	E11-2180-G12		VT-3	G		02S	IWD-2.20
FB	E11-2180-G14		VT-3	G			
FC	E11-2180-G16		VT-3	R		01C	IWD-2.20
FC	E11-2180-G17		VT-3	G			
FB	E11-2180-G19		VT-3				
	6M721-2182 (Emergency Diesel Generator Service Water Return) ML 3-12						
FB	R30-2182-G01		VT-3	G			
FB	R30-2182-G02		VT-3	G			
FC	R30-2182-G06		VT-3	G			
FC	R30-2182-G09		VT-3	G			
FB	R30-2182-G12		VT-3	G		01C	IWD-2.20
FC	R30-2182-G14		VT-3	G			
FB	R30-2182-G18		VT-3	G			
FA	R30-2182-G22		VT-3	R			
FA	R30-2182-G24		VT-3	R		02S	IWD-2.20

FERMI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLES

CODE
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Code Category	PIS No./System Isometric/Multiple Loop Unique Identification	Exam Req'd Exam Method Selected	Type	Relief Request	PERIOD			REMARKS
					1st	2nd	3rd	
	E1100 Residual Heat Removal Division II							0M721-2083
	0M721-3184 RHR Service Water Supply and Return to Ht Exchangers ML 3-13							
FC	E11-3184-G01	VT-3	R					
FC	E11-3184-G02	VT-3	R					
FB/FC	E11-3184-G03	VT-3/VT-4	SP		01C			IWD-2.40
FC	E11-3184-G04	VT-3	G					
FC	E11-3184-G08	VT-3	G					IWD-2.40
FC	E11-3184-G09	VT-3	R					
FC	E11-3184-G10	VT-3	R					
FC	E11-3184-G12	VT-3	R		01C			
FC	E11-3184-G18	VT-3	G					
FC	E11-3184-G20	VT-3	G		02S			
FB	E11-3184-G21	VT-3	G					IWD-2.20
FB/FC	E11-3184-G23	VT-3	G					
FB	E11-3184-G30	VT-3	G					
FC	E11-3184-G35	VT-3	G					
FB	E11-3184-G37	VT-3	R					
FC	E11-3184-G42	VT-3	G		02S			
FB	E11-3184-G44	VT-3	G					

FERM-2 INSERVICE INSPECTION PROGRAM (PLAN) TABLES		CODE CLASS 3	INTERVAL	X	2	3	4	PERIOD	REMARKS
Code Category	PIS No./System Isometric/Multiple Loop Unique Identification		Exam Req'd Exam Method Selected	Type	Relief Request	1st	2nd	3rd	
	B2100 Nuclear Boiler System								
	B21-50 Main Steam Relief Valve Discharge Piping to Torus ML 3-14								
FC	B21-2586-G04		VT-3/VT-4	SP		02S			IWD-1.40
FC	B21-2587-G06		VT-3/VT-4	SP					IWD-1.40
FB	B21-2587-G09		VT-3	R		01C			IWD-1.40
FC	B21-2588-G04		VT-3/VT-4	SP					IWD-1.40
FC	B21-2589-G01		VT-3/VT-4	SP					IWD-1.40
FC	B21-2590-G12		VT-3/VT-4	SP					IWD-1.40
FC	B21-2590-G14		VT-3/VT-4	SP					IWD-1.40
FC	B21-2591-G06		VT-3/VT-4	SP					IWD-1.40
FC	B21-2591-G07		VT-3/VT-4	SP		01C			
FC	B21-2592-G07		VT-3/VT-4	SP					
FC	B21-2593-G10		VT-3/VT-4	SP					
FC	B21-2594-G06		VT-3/VT-4	SP		02S			
FC	B21-2595-G02		VT-3/VT-4	SP					
FC	B21-2595-G03		VT-3/VT-4	SP		01C			IWD-1.40
FC	B21-2596-G04		VT-3/VT-4	SP					IWD-1.20
FC	B21-2596-G08		VT-3/VT-G	R					IWD-1.40
FC	B21-4093-G02		VT-3	R					
FC	B21-4093-G04		VT-3/VT-4	SP					
FC	B21-4094-G03		VT-3/VT-4	SP					IWD-1.20
FC	B21-4094-G04		VT-3	R					IWD-1.40
FC	B21-4095-G06		VT-3/VT-4	SP		01C			
FC	B21-4096-G01		VT-3/VT-4	SP					

PART - C

**INSERVICE INSPECTION-NONDESTRUCTIVE
EXAMINATION (ISI-NDE) PROGRAM (PLAN)
FOR
SNUBBERS**

1.0 Applicable Code

The Inservice Inspection Program (Plan) for Nondestructive Examination (NDE) of snubbers is implemented in accordance with the requirements of the EF-2 Technical Specifications and Section XI of the ASME Boiler and Pressure Vessel Code, 1980 Edition through Winter 1987 Addenda. The ASME Section XI Code shall not be construed to supersede any Technical Specification requirements. A copy of the EF-2 Technical Specification section, applicable to snubbers, is provided in Part-E, Appendix-D, for information only.

The augmented inservice inspection requirements for snubbers are required by the EF-2 Technical Specifications, and exceed ASME Section XI requirements. Where conflicts exist between the EF-2 Technical Specifications and the ASME Section XI Code, the Technical Specifications shall supersede. Where ASME Section XI requirements are determined to be impractical, specific relief requests will be included in this program.

2.0 Program Description

Visual examinations are required of all snubbers listed in the Snubber Tables, provided in Section 5.0, and in accordance with the schedule shown in the EF-2 Technical Specifications, Section 3/4.7.5 "Snubbers". Per EF-2 Technical Specifications, snubbers may be grouped as accessible and inaccessible during normal operations and inspected independently. Additionally, an examination shall be performed on snubbers attached to sections of systems that have experienced unexpected, potentially damaging transients, within the time limitations of the Technical Specifications. The purpose of this examination is to verify freedom of motion by evaluations of the snubber retting, partial stroking, or full stroking of the mechanical snubber. The boundary for Section XI visual examinations is defined by Subarticle IWF-1300 and Fig. IWF-1300-1. This examination will require the removal of insulation, if installed. The boundary for the Technical Specification Visual Examination includes essentially 100% of the support member including the attachments to the foundation or supporting structure. The visual inspection shall ensure that there are no visual indications of damage or impaired operability. This examination will be performed without the removal of insulation.

The visual examination acceptance criteria is listed in the Technical Specifications and includes verification that the attachments to the foundation or supporting structure are secure and fasteners for attachment of the snubber to the component and to the snubber anchorage are secure. The standards of Subarticle IWF-3400 may be used for evaluation of indications.

Subarticle IWF-2430 requires that additional examinations be performed when corrective measures are required in accordance with the provisions of IWF-3000. Relief Request RR-C2 describes the licensee's application of these requirements for additional examinations.

The EF-2 Technical Specifications require that snubbers be categorized as inaccessible or accessible during reactor operation. These two categories will be separated further by the type of snubber (design, mechanical, hydraulic and manufacturer) and system. Snubbers which appear inoperable as a result of the visual examination may be determined operable for the purpose of establishing the next visual examination interval, provided that:

- 1) The cause for the rejection is clearly established and remedied for that particular snubber and for other snubbers irrespective of type that may be generically susceptible; and
- 2) The affected snubber is functionally tested in the as-found condition and determined operable per the functional testing acceptance criteria.

The number of inoperable snubbers found each inspection period are grouped by type and specific piping system to determine the subsequent visual inspection period.

Functional testing of snubbers is scheduled to coincide with scheduled refueling outages at intervals of approximately 18 months. Testing is performed utilizing the sampling plans identified in the Technical Specifications. The representative sample is randomly chosen for the various types of snubbers installed in the plant and is reviewed to ensure, as far as practical, that the samples are representative of the various configurations, operating environments, range of size and capacity of each type of snubber. The total number of snubbers functionally tested is dependent upon the sample plan chosen and the number of failures.

The functional testing acceptance criteria is listed in the Technical Specifications and satisfies the inservice test requirements of Subarticle IWF-5400, paragraphs b(1), b(2), and b(3) for snubbers less than 50 kips. Although there currently are no ASME Section XI requirements for functional testing of snubbers 50 kips or greater, functional testing is required by the EF-2 Technical Specifications. However, provision is made by the Technical Specifications for utilizing testing methods to measure parameters indirectly, or parameters other than those specified, if those results can be correlated to the specified parameters through established methods.

Snubbers which fail the inservice test require an engineering evaluation, additional testing, and corrective measures in accordance with EF-2 Technical Specification and ASME Section XI requirements.

An engineering evaluation is performed on the components to which the inoperable snubbers are attached. The purpose of this evaluation is to determine if the components to which the inoperable snubbers are attached were adversely affected by the inoperability of the snubbers, in order to ensure that the components remain capable of meeting their designed service. An engineering evaluation shall be made

of each failure to meet the functional testing acceptance criteria to determine the cause of the failure. The results of this evaluation shall be used, if applicable, in selecting snubbers to be tested in an effort to determine the operability of other snubbers, irrespective of type, which may be subject to the same failure mode. If any snubber, selected for functional testing, either fails to activate or fails to move, the cause will be evaluated and, if caused by manufacturer or design deficiency, all snubbers of the same type subject to the same defect shall be functionally tested.

If additional samples are selected in accordance with the sampling plans, the selection of snubbers shall be based upon the engineering evaluation.

If a snubber fails the inservice functional test requirements, that snubber, or its replacement, shall be retested at the time of the next scheduled functional testing but shall not be included in the sample plan.

A snubber service life program is required by the Technical Specifications. The service life of various components are established by engineering information and shall be adjusted based upon test results and failure histories. The purpose of this program is to ensure that the service life of critical components is not exceeded during a period when the snubber is required to be operable.

3.0 Exemptions - None.

4.0 Relief Requests

4.1 Relief Request Description (Format)

Relief Requests are included where specific requirements of ASME Section XI are determined to be impractical. All Relief Requests will include the following information:

- 4.1.1 Identification of the component(s) for which relief is requested.
- 4.1.2 The number of items associated with the Relief Request.
- 4.1.3 The applicable ASME Code Class.
- 4.1.4 Identification of the specific ASME Code requirement that has been determined to be impractical.
- 4.1.5 The information to support the determination that the requirement is impractical (i.e., statement and explanation of the basis for relief request).

- 4.1.6 Identification of any alternate examinations that are proposed:
- o In lieu of the requirements of ASME Section XI; or
 - o To supplement examinations performed partially in compliance with the requirements of ASME Section XI.
- 4.1.7 A description and justification of any changes expected in the overall level of plant safety by performing the proposed alternative examination in lieu of the examination required by Section XI. If it is not possible to perform an alternative examination(s), a discussion of the impact on the overall level of plant quality and safety will be presented.
- 4.1.8 A statement when the Relief Request would apply during the inspection period or interval (i.e., whether the request is to defer an examination).
- 4.1.9 A statement explaining when any proposed alternate examinations will be implemented and performed.
- 4.1.10 A statement identifying the time period for which the Relief Request is needed.

4.2 Relief Requests

4.2 Relief Request(s)

The following Relief Request(s) are included in this section:

RELIEF REQUEST NUMBER	GENERAL DESCRIPTION
RR-C1	DELETED
RR-C2	Corrective Actions (IWF-2430) - Additional Examinations

RELIEF REQUEST RR-C1

(DELETED)

RELIEF REQUEST RR-C1

(DELETED)

RELIEF REQUEST RR-C2

SYSTEM: All

NUMBER OF ITEMS: All

ASME CODE CLASS: Class 1, 2, 3 and Non Class Snubbers

ASME SECTION XI CODE REQUIREMENTS: Subarticle IWF-2430 states in part, "When the results of examinations require corrective measures in accordance with the provisions of IWF-3000, the component supports immediately adjacent to those requiring corrective action shall be examined.

BASIS FOR RELIEF: The additional examinations required by failure to satisfy the acceptance standards of IWF-3400 are not limited by Section XI to the type of indication identified, type of component being examined, or the types of adjacent components. This would require that a documented visual examination be performed on adjacent supports which, in some cases, have completely different failure characteristics and would provide no meaningful results. Also, examination personnel would receive at least twice the radiation exposure obtained from the initial examination in radiation areas. These actions cause undue hardships and increase ALARA concerns without significantly affecting the overall safety of the plant.

ALTERNATE TEST METHOD: A visual examination is performed on component supports required to be examined by ASME Section XI. When corrective actions are required as a result of these examinations not satisfying the requirements of IWF-3400, the adjacent components will be examined if, the adjacent components are generically susceptible to the same type of indication or mode of failure, regardless of support type.

JUSTIFICATION: Corrective actions are required for indications failing to satisfy the acceptance standards of IWF-3400. The acceptance standards of IWF-3400 are both generic and specific in nature and therefore, in some cases, apply only to a particular type of support. It is impractical to perform an examination on an adjacent component when the indication identified is limited to a particular type of component support and the adjacent components are not of that type.

For example, when a hydraulic snubber requires the addition of fluid due to low fluid level, in accordance with IWF-3400, it does not provide any additional assurance of system reliability to requiring that a documented examination be performed on the rigid type supports adjacent to the snubber. Another example of this impracticality would be to require the examination of an adjacent component which has no mechanical connections when the subject component examination failed to meet the acceptance criteria for mechanical connections per IWF-3400. If the indication requiring corrective measures can be generically applied to the adjacent component or components, the component or components will be examined. Since additional examinations are required and performed in accordance with

IWF-2430 and the components are reexamined per the requirements of IWF-2420 during the next inspection period, this provides a high degree of system reliability and safety while providing ALARA benefits to plant personnel.

APPLICATION: This Relief Request applies to VT-3 and VT-4 visual examinations performed on component supports.

IMPLEMENTATION: Visual examinations are performed during plant operations or normal plant outages.

TIME PERIOD: This Relief Request applies for the first ten year interval.

INSERVICE INSPECTION PROGRAM (PLAN) TABLES (SNUBBERS)

5.0 The following tables list the snubbers that are to be examined during each interval. Snubbers are grouped by the system they are associated with. The tables contain the following information:

Component Number: A unique identification number for a component support.

Serial Number: A unique identification number for each snubber furnished by the manufacturer.

Snubber Type: MECHANICAL OR HYDRAULIC DESIGN.

(Quantity) Size: Number of snubbers at one hanger location and the size of each snubber.

Building Floor: The building and floor level location of the snubber.

Hanger Elevation: The elevation of the snubber.

Accessible or Inaccessible: The accessibility of the snubber during power operation. If the snubber is inaccessible during power operation, an X will be placed in the column.

NOTE:

X	- Snubber located in Drywell
X(1)	- Snubber located in Reactor Building Steam Tunnel
X(2)	- Snubber located in Turbine Building Steam Tunnel/Deck
X(3)	- Snubber located in High Rad/Neutron Area (Locked Door)

ALARA Concerns: If a snubber is located in a radiation level greater than 60 millirem/hr, an X will be placed in the column.

Difficult to Remove: If the snubber is difficult to access or remove for functional testing, an X will be placed in the column.

List of Abbreviations: The following abbreviations are used:

Description and Unique Identification Abbreviations:

B21	- Plant Identification for Nuclear Boiler System
B31	- Plant Identification for Reactor Recirculations System
C41	- Plant Identification for Stand By Liquid Control System
E11	- Plant Identification for Residual Heat Removal System
E21	- Plant Identification for Core Spray System
E41	- Plant Identification for High Pressure Coolant Injection System

- E51 - Plant identification for Reactor Core Isolation Cooling System
- G11 - Plant identification for Radwaste System
- G33 - Plant identification for Reactor Water Cleanup System
- G41 - Plant identification for Fuel Pool Cooling and Cleanup System
- G51 - Plant identification for Torus Water Management System
- N11 - Plant identification for Main Steam Supply System

- N20 - Plant identification for Condensate System
- N21 - Plant identification for Reactor Feedwater Supply System
- N30 - Plant identification for Turbine Generator System
- P11 - Plant identification for Condensate Storage and Transfer System
- P34 - Plant identification for General Service Water System
- P42 - Plant identification for Reactor Building Closed Cooling Water System
- P44 - Plant identification for Emergency Equipment Cooling Water System
- P50 - Plant identification for Compressed Air System
- T23 - Plant identification for Containment System
- T46 - Plant identification for Standby Gas Treatment System
- T48 - Plant identification for Containment Atmosphere System
- T49 - Plant identification for Primary Containment Pneumatic Supply System
- T50 - Plant identification for Primary Containment Atmosphere Monitoring System
- T71 - Plant identification for Instrumentation

Description of Building Floor Abbreviations:

- DW - Primary Containment (Drywell)
- RB - Reactor Building Basement/Sub-Basement
- RB1 - Reactor Building First Floor
- RB2 - Reactor Building Second Floor
- RB3 - Reactor Building Third Floor
- TB1 - Turbine Building First Floor
- TB2 - Turbine Building Second Floor
- TB3 - Turbine Building Third Floor

Description of Snubber Type:

- MECH - Mechanical Snubber
- HYD - Hydraulic Snubber

Component No Serial No	Scrubber	(Quan) Size	CODE CLASS ALL	INTERVAL 1				ALARA Concerns	DIFFICULT To Remove
				X	2	3	4		
			Building Floor	Hanger Evaluation	Inaccessible				
B21-E213-SSA1 4705	MECH	(1) PSA 35	DW	613	X		X		
B21-E213-SSA2 4706	MECH	(1) PSA 35	DW	620	X		X		
B21-E213-SSA3 11277	MECH	(1) PSA 35	DW	609	X		X		
B21-E213-SSB1 6164	MECH	(1) PSA 10	DW	614	X		X		
B21-E213-SSB2 6178	MECH	(1) PSA 10	DW	615	X		X		
B21-E213-SSB3 6174	MECH	(1) PSA 10	DW	609	X		X		
B21-E213-SSB4 6179	MECH	(1) PSA 10	DW	609	X		X		
B21-E213-SSB5 4721	MECH	(1) PSA 35	DW	609	X		X		
B21-E213-SSB6 4720	MECH	(1) PSA 35	DW	609	X		X		
B21-E213-SSC1 6180	MECH	(1) PSA 10	DW	612	X		X		
B21-E213-SSC2 8982	MECH	(1) PSA 10	DW	615	X		X		
B21-E213-SSC3 6175	MECH	(1) PSA 10	DW	609	X		X		
B21-E213-SSC4 6182	MECH	(1) PSA 10	DW	609	X		X		
B21-E213-SSC5 11283	MECH	(1) PSA 35	DW	609	X		X		
B21-E213-SSC6 6176	MECH	(1) PSA 10	DW	609	X		X		
B21-E213-SSD1 4718	MECH	(1) PSA 35	DW	613	X		X		

FERMI 2 INSERVICE INSPECTION PROGRAM (PLAN) TABLES (SNUBBERS)

CODE CLASS ALL

INTERVAL 1 2 3 4

Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
B21-E213-SS02 4707	MECH	(1) PSA 35	DW	620	X	X	
B21-E213-SS03 11273	MECH	(1) PSA 35	DW	609	X	X	
B21-2174-G25B 8483 13168	MECH	(2) PSA 1/2 PSA 1/2	R/1	585	X(1)	X	
B21-2187-G43 12885 22451	MECH	(2) PSA 1/4 PSA 1/4	DW	645	X	X	
B21-2187-G48 13143 13163	MECH	(2) PSA 1/2 PSA 1/2	DW	624	X	X	
B21-2187-G52 13133	MECH	(1) PSA 1/2	DW	609	X	X	
B21-2187-G53 12678 22360	MECH	(2) PSA 1/4 PSA 1/4	DW	598	X	X	
B21-2187-G57 22388	MECH	(1) PSA 1/4	DW	597	X	X	
B21-2187-G58 18903	MECH	(1) PSA 1/4	DW	598	X	X	
B21-2187-G59 22356	MECH	(1) PSA 1/4	DW	642	X	X	
B21-2187-G60 22342 12715	MECH	(2) PSA 1/4 PSA 1/4	DW	640	X	X	
B21-2187-G61 22388	MECH	(1) PSA 1/4	DW	642	X	X	
B21-2187-G63 22439	MECH	(1) PSA 1/4	DW	642	X	X	
B21-2187-G64 12704	MECH	(1) PSA 1/4	DW	642	X	X	

FERRI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLES (SNUBBERS)

CODE
CLASS ALL

INTERVAL 1 2 3 4

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Component No Serial No	Snubber	(Open) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
B21-2187-G85 22399	MECH	(1) PSA 1/4	DW	642	X	X	
B21-2187-G68 22448	MECH	(1) PSA 1/4	DW	641	X	X	
B21-2187-G69 13108	MECH	(1) PSA 1/2	DW	640	X	X	
B21-2187-G70 13134	MECH	(1) PSA 1/2	DW	640	X	X	
B21-2187-G72 19934	MECH	(1) PSA 1/4	DW	654	X	X	
B21-2187-G73 22403	MECH	(1) PSA 1/4	DW	654	X	X	
B21-2187-G74 12708	MECH	(1) PSA 1/4	DW	654	X	X	
B21-2187-G76 22353	MECH	(1) PSA 1/4	DW	654	X	X	
B21-2187-G78A 13129	MECH	(1) PSA 1/2	DW	657	X	X	
B21-2187-G78B 13122	MECH	(1) PSA 1/2	DW	657	X	X	
B21-2187-G80 22401	MECH	(1) PSA 1/4	DW	656	X	X	
B21-2187-G81 22381	MECH	(1) PSA 1/4	DW	675	X	X	
B21-2187-G82 13118	MECH	(1) PSA 1/2	DW	629	X	X	
B21-2192-G06 20966	MECH	(1) PSA 3	DW	587	X	X	X
B21-2192-G07 12435	MECH	(1) PSA 3	DW	588	X	X	X
B21-2192-G13 20968	MECH	(1) PSA 3	DW	599	X	X	X

FERMI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLES (SNUBBERS)

CODE
CLASS ALL

INTERVAL 1 2 3 4

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
B21-2192-G14 20967	MECH	(1) PSA 3	DW	599	X	X	X
B21-2192-G15 20975	MECH	(1) PSA 3	DW	599	X	X	X
B21-2297-G08 12800	MECH	(1) PSA 10	DW	587	X	X	
B21-2297-G09 20974	MECH	(1) PSA 3	DW	587	X	X	
B21-2297-G10 8358	MECH	(1) PSA 10	DW	600	X	X	
B21-2297-G11 12770	MECH	(1) PSA 10	DW	600	X	X	
B21-2586-G02 9878	MECH	(1) PSA 35	DW	581	X	X	X
B21-2586-G03 8978	MECH	(1) PSA 10	DW	598	X	X	
B21-2586-G05 8979	MECH	(1) PSA 10	DW	604	X	X	
B21-2586-G06 12813	MECH	(1) PSA 10	DW	603	X	X	
B21-2586-G08 9868	MECH	(1) PSA 35	DW	579	X	X	
B21-2587-G03 8981	MECH	(1) PSA 10	DW	586	X	X	X
B21-2587-G04 9887	MECH	(1) PSA 35	DW	586	X	X	
B21-2587-G05 7017	MECH	(1) PSA 35	DW	590	X	X	X
B21-2577-G15 8983	MECH	(1) PSA 10	DW	582	X	X	
B21-2587-G16 8984	MECH	(1) PSA 10	DW	582	X	X	

INTERVAL 1 | X | 2 | 3 | 4 |

CODE CLASS ALL

FERRIS 2 INSERVICE INSPECTION PROGRAM (PLAN) TABLES (SNUBBERS)

Component No Serial No	Snubber	(Over) Size	Building Floor	Hanger Evaluation	Inaccessible	ALABA Concerns	DIFFICULT To Remove
B21-2587-G17 9904	MECH	(1) PSA 2/5	DW	582	X	X	X
B21-2587-G18 8986	MECH	(1) PSA 10	DW	581	X	X	
B21-2587-G19 8987	MECH	(1) PSA 10	DW	579	X	X	
B21-2587-G20 8329	MECH	(1) PSA 10	DW	582	X	X	
B21-2587-G21 10336	MECH	(1) PSA 10	DW	572	X	A	
B21-2588-G01 12771	MECH	(1) PSA 10	DW	586	X	X	
B21-2588-G02 8988	MECH	(1) PSA 10	DW	586	X	X	
B21-2588-G03 9989	MECH	(1) PSA 35	DW	591	X	X	
B21-2588-G05 12791	MECH	(1) PSA 10	DW	603	X	X	
B21-2588-G08 9857	MECH	(1) PSA 35	DW	578	X	X	
B21-2589-G02 8990	MECH	(1) PSA 10	DW	587	X	X	
B21-2589-G03 9905	MECH	(1) PSA 35	DW	586	X	X	
B21-2589-G04 9861	MECH	(1) PSA 35	DW	590	X	X	
B21-2589-G08 10345	MECH	(1) PSA 10	DW	603	X	X	
B21-2589-G09 8363	MECH	(1) PSA 10	DW	608	X	X	
B21-2589-G10 8364	MECH	(1) PSA 10	DW	582	X	X	

FERMI 2 INSERVICE INSPECTION PROGRAM (PLAN) TABLES (SNUBBERS)

Component No Serial No	Snubber	(Quem) Size	CODE CLASS ALL	INTERVAL				ALARA Concerns	Difficult To Remove
				1	2	3	4		
			Building Floor	Hangar Evaluation	Inaccessible				
821-2590-G02 8993	MECH	(1) PSA 10	DW	585	X		X	X	
821-2590-G03 9880	MECH	(1) PSA 35	DW	586	X		X	X	
821-2590-G04 9855	MECH	(1) PSA 35	DW	589	X		X	X	
821-2590-G07 12816	MECH	(1) PSA 10	DW	583	X		X	X	
821-2590-G08 9027	MECH	(1) PSA 10	DW	600	X		X	X	
821-2590-G09 8366	MECH	(1) PSA 10	DW	602	X		X	X	
821-2590-G15 8996	MECH	(1) PSA 10	DW	583	X		X	X	
821-2590-G16 8997	MECH	(1) PSA 10	DW	581	X		X	X	
821-2590-G17 8998	MECH	(1) PSA 10	DW	578	X		X	X	
821-2590-G18 8983	MECH	(1) PSA 10	DW	581	X		X	X	
821-2590-G19 9060	MECH	(1) PSA 10	DW	581	X		X	X	
821-2591-G02 9855	MECH	(1) PSA 35	DW	591	X		X	X	
821-2591-G03 9002	MECH	(1) PSA 10	DW	598	X		X	X	
821-2591-G04 9003	MECH	(1) PSA 10	DW	599	X		X	X	
821-2591-G08 8973	MECH	(1) PSA 10	DW	583	X		X	X	
821-2591-G09 8949	MECH	(1) PSA 10	DW	583	X		X	X	

FENR 7 INSERVICE INSPECTION PROGRAM (PLAN) TABLES (SNUBBERS)

Component No Serial No	Snubber (Quan) Size	Building Floor	Harzer Evaluation	Inaccessible	ALABA Concerns	Difficult To Remove
B21-2591-G10 8951	(1) PSA 10 MECH	DW	607	X	X	X
B21-2591-G11 8952	(1) PSA 10 MECH	DW	586	X	X	
B21-2591-G12 8958	(1) PSA 35 MECH	DW	605	X	X	X
B21-2591-G13 12809	(1) PSA 10 MECH	DW	577	X	X	
B21-2592-G02 9900	(1) PSA 35 MECH	DW	590	X	X	X
B21-2592-G03 9891	(1) PSA 35 MECH	DW	599	X	X	X
B21-2592-G04 9852	(1) PSA 35 MECH	DW	600	X	X	X
B21-2592-G08 8960	(1) PSA 10 MECH	DW	582	X	X	X
B21-2592-G10 8955	(1) PSA 10 MECH	DW	604	X	X	X
B21-2592-G11 8956	(1) PSA 10 MECH	DW	582	X	X	
B21-2592-G13 10339	(1) PSA 10 MECH	DW	582	X	X	
B21-2593-G02 9005	(1) PSA 10 MECH	DW	585	X	X	
B21-2593-G03 9006	(1) PSA 10 MECH	DW	586	X	X	X
B21-2593-G04 9875	(1) PSA 35 MECH	DW	590	X	X	X
B21-2593-G07 9856	(1) PSA 35 MECH	DW	601	X	X	
B21-2593-G08 8959	(1) PSA 10 MECH	DW	603	X	X	

FERMI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLES (SNUBBERS)

Component No Serial No	Snubber	(Quan) Size	CODE CLASS ALL	INTERVAL 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/>				ALARA Concerns	Difficult To Remove
				Building Floor	Hanger Evaluation	Inaccessible			
B21-2593-G13 9008	MECH	(1) PSA 10	DW	581	X		X		
B21-2593-G14 9009	MECH	(1) PSA 10	DW	581	X		X		
B21-2593-G15 8331	MECH	(1) PSA 10	DW	581	X		X		
B21-2593-G17 8325	MECH	(1) PSA 10	DW	582	X		X		
B21-2594-G03 9011 9012	MECH	(2) PSA 10 PSA 10	DW	585	X		X		
B21-2594-G04 8994	MECH	(1) PSA 10	DW	584	X		X		
B21-2594-G05 9013	MECH	(1) PSA 35	DW	601	X		X		
B21-2594-G10 9890	MECH	(1) PSA 10	DW	599	X		X		
B21-2594-G11 8961	MECH	(1) PSA 10	DW	602	X		X		
B21-2594-G12 8323	MECH	(1) PSA 10	DW	583	X		X	X	
B21-2595-G06 9898	MECH	(1) PSA 35	DW	583	X		X	X	
B21-2595-G07 9016	MECH	(1) PSA 10	DW	583	X		X	X	
B21-2595-G08 9017 9018	MECH	(2) PSA 10 PSA 10	DW	583	X		X		
B21-2595-G09 9019	MECH	(1) PSA 10	DW	599	X		X		
B21-2595-G13 7018	MECH	(1) PSA 35	DW	589	X		X		

FERMI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLES (SNUBBERS)

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
B21-2595-G14 8324	MECH	(1) PSA 10	DW	583	X	X	X
B21-2595-G15 9885	MECH	(1) PSA 35	DW	586	X	X	
B21-2595-G16 12792	MECH	(1) PSA 10	DW	583	X	X	X
B21-2595-G17 8327	MECH	(1) PSA 10	DW	603	X	X	
B21-2596-G05 9844 9864	MECH	(2) PSA 35 PSA 35	DW	585	X	X	
B21-2596-G06 7019	MECH	(1) PSA 35	DW	590	X	X	
B21-2596-G09 9903	MECH	(1) PSA 35	DW	583	X	X	
B21-2596-G10 9876	MECH	(1) PSA 35	DW	601	X	X	
B21-2596-G11 9883	MECH	(1) PSA 35	DW	599	X	X	
B21-2596-G12 9847	MECH	(1) PSA 35	DW	583	X	X	
B21-2596-G13 9882	MECH	(1) PSA 35	DW	583	X	X	X
B21-2596-G14 8335	MECH	(1) PSA 10	DW	581	X	X	X
B21-4093-G06 8334	MECH	(1) PSA 10	DW	578	X	X	
B21-4093-G07 9023	MECH	(1) PSA 10	DW	580	X	X	
B21-4093-G08 9877	MECH	(1) PSA 35	DW	581	X	X	
B21-4093-G09 9863	MECH	(1) PSA 35	DW	586	X	X	

FERMI 2 INSERVICE INSPECTION PROGRAM (PLAN) TABLES (SNIBBERS)

Component No Serial No	Snubber	(Dum) Size	Building Floor	Interval	Hangar Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
B21-4093-G10 8183	MECH	(1) PSA 10	DW	1	595	X	X	
B21-4093-G11 9862	MECH	(1) PSA 35	DW	1	598	X	X	
B21-4093-G12 8340	MECH	(1) PSA 10	DW	1	598	X	X	
B21-4093-G13 8341	MECH	(1) PSA 10	DW	1	608	X	X	
B21-4094-G05 8342	MECH	(1) PSA 10	DW	1	580	X	X	
B21-4094-G06 8343	MECH	(1) PSA 10	DW	1	580	X	X	
B21-4094-G07 6177	MECH	(1) PSA 10	DW	1	587	X	X	
B21-4094-G08 9866	MECH	(1) PSA 35	DW	1	588	X	X	
B21-4094-G09 9843	MECH	(1) PSA 35	DW	1	590	X	X	
B21-4094-G10 8347	MECH	(1) PSA 10	DW	1	603	X	X	
B21-4094-G11 8348	MECH	(1) PSA 10	DW	1	603	X	X	
B21-4095-G04 8349	MECH	(1) PSA 10	DW	1	567	X	X	
B21-4095-G05 8350	MECH	(1) PSA 10	DW	1	595	X	X	
B21-4095-G07 8352	MECH	(1) PSA 10	DW	1	605	X	X	
B21-4095-G08 8353	MECH	(1) PSA 10	DW	1	596	X	X	
B21-4096-G05 8354	MECH	(1) PSA 10	DW	1	583	X	X	

FERMI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLES (SNUBBERS)

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
B21-4096-G06 10346	MECH	(1) PSA 10	DW	583	X	X	
B21-4096-G07 9867	MECH	(1) PSA 35	DW	601	X	X	
B21-4096-G08 8963	MECH	(1) PSA 10	DW	604	X	X	
B21-4096-G09 8964	MECH	(1) PSA 10	DW	603	X	X	
B21-4096-G10 8965	MECH	(1) PSA 10	DW	587	X	X	
B21-4096-G11 8966	MECH	(1) PSA 10	DW	610	X	X	X
B21-4507-G15 12701	MECH	(1) PSA 1/4	RB1	595	X(1)	X	
B21-4507-G18 12746	MECH	(1) PSA 1/4	RB1	598	X(1)	X	
B21-4507-G100 22438	MECH	(1) PSA 1/4	RB1	593	X(1)	X	
B21-4507-G108 22392	MECH	(1) PSA 1/4	RB1	596	X(1)	X	
IW-B21-7195-G01 12676 12758	MECH	(2) PSA 1/4 PSA 1/4	RB1	600	X(1)	X	
B31-E215-SSA1 11284	MECH	(1) PSA 35	DW	579	X	X	
B31-E215-SSA2 11279	MECH	(1) PSA 35	DW	579	X	X	
B31-E215-SSA4 4713	MECH	(1) PSA 35	DW	592	X	X	
B31-E215-SSA5 4716	MECH	(1) PSA 35	DW	592	X	X	
B31-E215-SSA6 11271	MECH	(1) PSA 35	DW	592	X	X	

INTERVAL 1 | X | 2 | 3 | 4

CODE CLASS ALL

FERMI 2 INSERVICE INSPECTION PROGRAM (PLAN) TABLES (SUBBIERS)

Component No Serial No	Subbier	(Gas) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
B31-E215-SSA7 4708	MECH	(1) PSA 35	DW	590	X	X	
B31-E215-SSAB 11280	MECH	(1) PSA 35	DW	591	X	X	
B31-E215-SSA9 11281	MECH	(1) PSA 35	DW	582	X	X	
B31-E215-SSA10 11282	MECH	(1) PSA 35	DW	583	X	X	
B31-E215-SSB1 11270	MECH	(1) PSA 35	DW	579	X	X	
B31-E215-SSB2 4719	MECH	(1) PSA 35	DW	579	X	X	
B31-E215-SSB4 4714	MECH	(1) PSA 35	DW	592	X	X	
B31-E215-SSB5 4717	MECH	(1) PSA 35	DW	592	X	X	
B31-E215-SSB6 4715	MECH	(1) PSA 35	DW	590	X	X	
B31-E215-SSB7 4709	MECH	(1) PSA 35	DW	591	X	X	
B31-E215-SSB8 4710	MECH	(1) PSA 35	DW	582	X	X	
B31-E215-SSB9 722	MECH	(1) PSA 35	DW	583	X	X	
B31-E215-SSB10 4712	MECH	(1) PSA 35	DW	596			
W-B31-5084-G24 8466	MECH	(1) PSA 1/2	RB1				
W-B31-5085-G39 11975	MECH	(3) PSA 1/4 PSA 1/4	RB1	597			
12690							
22368							

FERMI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLES (SNUBBERS)

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CLASS ALL

INTERVAL 1 2 3 4

Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
W-B31-5065-G40 11466	MECH	(1) PSA 1/4	RB1	597			
W-B31-5065-G41 12703	MECH	(1) PSA 1/4	RB1	595			
W-B31-5239-G02 12681 22367	MECH	(2) PSA 1/4 PSA 1/4	RB1	596			
W-B31-5239-G06 6827	MECH	(1) PSA 1/2	DW	594	X	X	
W-B31-5239-G16 8465	MECH	(1) PSA 1/2	RB1	598			
C41-2340-G08 8498	MECH	(1) PSA 1/2	DW	610	X	X	
C41-2340-G11 13190	MECH	(1) PSA 1/2	DW	608	X	X	
C41-2340-G12 13126	MECH	(1) PSA 1/2	DW	608	X	X	
C41-2340-G15 8467	MECH	(1) PSA 1/2	DW	624	X	X	
C41-2340-G16 8493 8497	MECH	(2) PSA 1/2 PSA 1/2	DW	620	X	X	
C41-2340-G17 8460	MECH	(1) PSA 1/2	DW	619	X	X	
C41-2979-G01 12710 22411	MECH	(2) PSA 1/4 PSA 1/4	RB2	532	X(3)		
E11-2298-G10 12772 12773	MECH	(2) PSA 10 PSA 10	DW	603	X	X	
E11-2298-G11 8706	MECH	(1) PSA 35	DW	604	X	X	

FEMME 2 INSERVICE INSPECTION PROGRAM (PLAN) TABLES (SNUBBERS)

CODE CLASS ALL

INTERVAL 1 2 3 4

Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
E11-2298-G12 9872	MECH	(1) PSA 35	DW	607	X	X	
E11-2298-G13 9879	MECH	(1) PSA 35	DW	608	X	X	
E11-2298-G14 9884	MECH	(1) PSA 35	DW	608	X	X	
W-E11-2299-G02 23740	MECH	(1) PSA 1/4	DW	612	X	X	
W-E11-2299-G05 12748	MECH	(1) PSA 1/4	DW	597	X	X	
W-E11-2299-G07 22455	MECH	(1) PSA 1/4	DW	598	X	X	
E11-2299-G14 12777	MECH	(1) PSA 10	DW	591	X	X	X
E11-2299-G15 8969	MECH	(1) PSA 10	DW	605	X	X	X
E11-2299-G16 7008	MECH	(1) PSA 35	DW	604	X	X	X
E11-2299-G17 7009	MECH	(1) PSA 35	DW	604	X	X	X
E11-2299-G18 7010	MECH	(1) PSA 35	DW	605	X	X	X
E11-2299-G19 7011	MECH	(1) PSA 35	DW	602	X	X	X
E11-2299-G20 7012	MECH	(1) PSA 35	DW	602	X	X	X
E11-2299-G21 7013	MECH	(1) PSA 35	DW	609	X	X	X
E11-2299-G22 7014	MECH	(1) PSA 35	DW	609	X	X	X
E11-2327-G05 8717	MECH	(1) PSA 35	DW	604	X	X	

FERMI 2 INSERVICE INSPECTION PROGRAM (PLAN) TABLES (SNUBBERS)

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INTERVAL 1 2 3 4

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
E11-2327-G06 8728	MECH	(1) PSA 35	DW	605	X	X	
E11-2327-G07 9854	MECH	(1) PSA 35	DW	608	X	X	
E11-2327-G08 9853	MECH	(1) PSA 35	DW	607	X	X	
E11-2327-G09 8971 8972	MECH	(2) PSA 10 PSA 10	DW	602	X	X	
E11-3146-G08 7016	MECH	(1) PSA 35	RB	575		X	
E11-3146-G21 9022	MECH	(1) PSA 10	RB1	602			
E11-3146-G22 9021	MECH	(1) PSA 10	RB1	598			
E11-3146-G23 8953	MECH	(1) PSA 10	RB2	614			
E11-3146-G25 20976	MECH	(1) PSA 3	RB2	616			
E11-3146-G26 11286	MECH	(1) PSA 35	RB2	617			X
E11-3146-G29 20963	MECH	(1) PSA 3	RB2	613			
E11-3146-G33 8707	MECH	(1) PSA 35	RB	578		X	
E11-3146-G34 8992	MECH	(1) PSA 10	RB2	620			
E11-3146-G35 12789 9010	MECH	(2) PSA 10 PSA 10	RB	567		X	
E11-3146-G37 8339 8962	MECH	(2) PSA 10 PSA 10	RB	578		X	

FERMI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLES (SNUBBERS)

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
E11-3151-G10 6185 8954	MECH	(2) PSA 10 PSA 10	RB1	590			
E11-3151-G16 8967	MECH	(1) PSA 10	RB2	620			
E11-3151-G17 12442	MECH	(1) PSA 3	RB2	623			
E11-3151-G18 12802	MECH	(1) PSA 10	RB2	623			
E11-3151-G23 8718 8729	MECH	(2) PSA 35 PSA 35	RB	578		X	X
E11-3151-G31 10356	MECH	(1) PSA 10	RB1	506			
E11-3151-G33 8345	MECH	(1) PSA 10	RB	570		X	X
E11-3151-G35 8330	MECH	(1) PSA 10	RB	519		X	
E11-3152-G22 8327	MECH	(1) PSA 10	RB	547		X	X
E11-3152-G31 12447 12454	MECH	(2) PSA 3 PSA 3	RB	572		X	X
E11-3152-G32 8985	MECH	(1) PSA 10	RB	572		X	X
E11-3152-G33 12444	MECH	(1) PSA 3	RB	572		X	X
E11-3152-G34 20978	MECH	(1) PSA 3	RB	572		X	
E11-3153-G15 12812 8989	MECH	(2) PSA 10 PSA 10	RB	541			

FERMI 2 INSERVICE INSPECTI
PROGRAM (PLAN) TABLES (SNUBBER)

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
E11-3154-G12 10351	MECH	(1) PSA 10	RB	542		X	
E11-3154-G13 8974	MECH	(1) PSA 10	RB	541		X	
E11-3154-G14 8991	MECH	(1) PSA 10	RB	543		X	
E11-3154-G17 12780	MECH	(1) PSA 10	RB	541		X	
E11-3154-G19 8957	MECH	(1) PSA 10	RB	541		X	
E11-3154-G21 15290 15284	MECH	(2) PSA 3 PSA 3	RB	541		X	
E11-3154-G23 12796	MECH	(1) PSA 10	RB	542		X	
E11-3157-G16 9892	MECH	(1) PSA 35	RB	566			
E11-3157-G17 6771	MECH	(1) PSA 35	RB	575		X	X
E11-3158-G24 12803	MECH	(1) PSA 10	RB1	591			
E11-3160-G09 20983	MECH	(1) PSA 3	RB	575		X	
E11-3160-G16 12445	MECH	(1) PSA 3	RB	573		X	
E11-3161-G12 20957	MECH	(1) PSA 3	RB	578		X	
E11-3161-G14 8950	MECH	(1) PSA 10	RB	579		X	
E11-3161-G17 12441	MECH	(1) PSA 3	RB	572		X	
E11-3161-G18 20959	MECH	(1) PSA 3	RB	573		X	

FERMI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLES (SNUBBERS)

CODE
CLASS ALL

INTERVAL 1 2 3 4

Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
E11-3184-G19 20971	MECH	(1) PSA 3	RB1	588			
E11-3184-G22 12798	MECH	(1) PSA 10	RB2	631			
E11-3184-G27 20981	MECH	(1) PSA 3	RB1	595		X	
E11-3178-G13 20986	MECH	(1) PSA 3	RB	578		X	
E11-3179-G05 8482	MECH	(1) PSA 1/2	RB	546		X	
E11-3184-G24 20972	MECH	(1) PSA 3	RB	575		X	X
E11-3184-G38 6770	MECH	(1) PSA 35	RB2	615		X	
E11-3184-G39 20958	MECH	(1) PSA 3	RB2	617		X	
E11-3184-G41 8968	MECH	(1) PSA 10	RB1	597		X	
E11-3184-G45 20982	MECH	(1) PSA 3	RB1	602		X	X
E11-3185-G32 8328 6187	MECH	(2) PSA 10 PSA 10	RB	575		X	
E11-3185-G36 20970	MECH	(1) PSA 3	RB1	586			
E11-3185-G54 6172	MECH	(1) PSA 10	RB1	612			

FERMI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLES (SNUBBERS)

Component No Serial No	Snubber	(Quan) Size	Building Floor	INTERVAL 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/>				ALARA Concerns	Difficult To Remove
				Hanger Evaluation	Inaccessible				
E11-3519-G14 15291	MECH	(1) PSA 3	DW	651	X		X		
W-E11-4004-G01S 22385	MECH	(1) PSA 1/4	RB2	624					
W-E11-4004-G02 12697 22363	MECH	(2) PSA 1/4 PSA 1/4	RB3	546					
W-E11-4004-G22 22456	MECH	(1) PSA 1/4	RB2	626					
W-E11-4014-G04 22337	MECH	(1) PSA 1/4	RB2	630					
W-E11-4014-G09S 12705	MECH	(1) PSA 1/4	RB2	578			X		
E11-4251-G17 23739	MECH	(1) PSA 1/4	RB2	630					
W-E11-5166-G05 22390	MECH	(1) PSA 1/4	RB2	637					
W-E11-5302-G19 22457	MECH	(1) PSA 1/4	RB1	605			X		
E11-3035-G24 810019 810069	HYD	(2) 1 1/2 X 5 1 1/2 X 5	RB1	578			X		
E11-3035-G25 810066	HYD	(1) 1 1/2 X 5	RB	575			X		
E11-3146-G10 820213	HYD	(1) 5 X 5	RB	575			X		
E11-3146-G16 830028	HYD	(1) 5 X 5	RB	575			X		
E11-3146-G17 830046 830047	HYD	(2) 5 X 5 5 X 5	RB1	588			X		

FERMI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLES (SNUBBERS)

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INTERVAL 1 | X | 2 | | 3 | | 4 | |

Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
E11-3151-G07 820209	HYD	(1) 4 X 5	RB	575		X	
E11-3151-G08 820250	HYD	(1) 4 X 5	RB	575		X	X
E11-3151-G13 820103	HYD	(1) 2 1/2 X 5	RB1	601			
E11-3151-G15 810132	HYD	(1) 2 1/2 X 5	RB2	620			
E11-3151-G26 810177	HYD	(1) 1 1/2 X 5	RB2	615			
E11-3151-G32 820218	HYD	(1) 4 X 10	RB1	606			
E11-3152-G17 810037 810038	HYD	(2) 2 1/2 X 5 2 1/2 X 5	RB	572		X	X
E11-3152-G16 810208	HYD	(1) 2 X 5	RB	550		X	
E11-3152-G19 830025	HYD	(1) 2 X 5	RB	549		X	
E11-3152-G20 830031	HYD	(1) 4 X 5	RB	549		X	
E11-3152-G7 820220	HYD	(1) 4 X 5	RB	548		X	
E11-3152-G24 810009	HYD	(1) 2 1/2 X 5	RB	548		X	
E11-3152-G25 830030	HYD	(1) 4 X 5	RB	548		X	X
E11-3152-G29 J0040 830041	HYD	(2) 4 X 5 4 X 5	RB	572		X	X
E11-3152-G30 820254	HYD	(1) 4 X 5	RB	572		X	

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PROGRAM (PLAN) TABLES (SNUBBERS)

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Rev. 1 Change 0

Component No Serial No	Snubber	(Quan) Size	Building Floor	Range Evaluation	Inaccessible	ALARA Concerns	Difficult to Remove
E11-3153-G13 810226	HYD	(1) 2 1/2 X 5	RB	542		X	
E11-3154-G11 820205	HYD	(1) 4 X 5	RB	541		X	
E11-3154-G16 810023	HYD	(1) 2 X 5	RB	541		X	X
E11-3157-G08 810216	HYD	(1) 2 1/2 X 5	RB	575		X	X
E11-3157-G10 820203	HYD	(1) 4 X 5	RB	568		X	X
E11-3157-G11 820202	HYD	(1) 4 X 5	RB	567		X	X
E11-3157-G15 810090	HYD	(1) 4 X 5	RB	570		X	X
E11-3157-G20 820015	HYD	(1) 4 X 5	RB	561		X	X
E11-3157-G22 810026	HYD	(1) 4 X 5	RB	558			X
E11-3158-G07 810091	HYD	(1) 4 X 5	RB2	613			X
E11-3158-G08 820201	HYD	(1) 4 X 5	RB2	614			X
E11-3158-G10 820101	HYD	(1) 2 1/2 X 5	RB2	622			X
E11-3158-G12 820208	HYD	(1) 4 X 5	RB2	631			X
E11-3158-G15 820217	HYD	(1) 2 1/2 X 5	RB2	631			
E11-3158-G16 820200	HYD	(1) 4 X 10	RB2	623			
E11-3158-G17 820204	HYD	(1) 4 X 5	RB2	622			

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PROGRAM (PLAN) TABLES (SNUBBERS)

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Rev. 1 Change 5

Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
E11-3158-G19 830038	HYD	(1) 4 X 5	RB1	610			
E11-3158-G20 820224	HYD	(1) 4 X 5	RB1	609			
E11-3158-G22 810215	HYD	(1) 2 1/2 X 5	RB1	584			
E11-3158-G29 820251	HYD	(1) 4 X 5	RB2	631			
E11-3158-G30 810228	HYD	(1) 2 1/2 X 5	RB2	631			
E11-3158-G31 820112	HYD	(1) 2 X 5	RB2	631			
E11-3158-G34 810027	HYD	(1) 2 1/2 X 5	RB2	631			
E11-3159-G02 810153	HYD	(1) 2 X 5	RB1	594			
E11-3159-G03 810076	HYD	(1) 2 1/2 X 5	RB1	594			
E11-3159-G05 820172	HYD	(1) 1 1/2 X 5	RB1	594			
E11-3159-G07 820160	HYD	(1) 1 1/2 X 5	RB1	594			
E11-3159-G11 830024	HYD	(1) 2 X 5	RB1	594			
E11-3160-G10 820193	HYD	(1) 2 1/2 X 5	RB	578		X	X
E11-3160-G11 810031	HYD	(1) 1 1/2 X 5	RB	573		X	
E11-3160-G13 820135	HYD	(1) 2 X 5	RB	578		X	

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PROGRAM (PLAN) TABLES (SNUBBERS)

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Rev. 1 Change 0

Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
E11-3160-G15 820226 820227	HVD	(2) 2 X 10 2 X 5	RB	575		X	
E11-3160-G17 820060	HVD	(1) 4 X 5	RB	573		X	X
E11-3160-G18 810222	HVD	(1) 2 1/2 X 5	RB	578		X	X
E11-3161-G09 820120	HVD	(1) 1 1/2 X 10	RB	572		X	
E11-3161-G10 810150	HVD	(1) 2 X 5	RB	575		X	
E11-3161-G13 830020	HVD	(1) 2 1/2 X 5	RB	576		X	
E11-3161-G16 810049	HVD	(1) 2 X 5	RB	572		X	
E11-3164-G14 820174	HVD	(1) 2 X 10	RB2	625			
E11-3164-G18 810080	HVD	(1) 2 X 5	RB1	589			
E11-3164-G23 820070	HVD	(1) 1 1/2 X 5	RB2	622			
E11-3164-G24 810204	HVD	(1) 2 X 5	RB2	622			
E11-3164-G26 810136	HVD	(1) 2 X 5	RB2	631			
E11-3177-G09 830037	HVD	(1) 4 X 5	RB	566		X	X
E11-3177-G10 810207	HVD	(1) 4 X 5	RB	568		X	X
E11-3177-G20 820225	HVD	(1) 4 X 5	RB	561		X	X
E11-3177-G21 820181	HVD	(1) 2 X 5	RB	575		X	X

FERMI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLES (SNUBBERS)

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Rev. 1 Change 0

Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
E11-3177-G23 830029	HVD	(1) 4 x 5	RB	560		X	X
E11-3177-G25 820094	HVD	(1) 1 1/2 x 5	RB	552			
E11-3177-G27 810070	HVD	(1) 1 1/2 x 5	RB	575		X	X
E11-3177-G31 830033	HVD	(1) 4 x 5	RB	561		X	X
E11-3177-G32 830051	HVD	(1) 2 x 5	RB	556			
E11-3184-G07 810138 810158	HVD	(2) 2 x 5 2 x 5	RB2	617			
E11-3184-G15 810211 810230	HVD	(2) 2 x 5 2 x 5	RB2	617			
E11-3184-G25 810128	HVD	(1) 4 x 5	RB	575		X	
E11-3184-G31 820164	HVD	(1) 1 1/2 x 5	RB1	606			
E11-3185-G22 810199	HVD	(1) 2 x 5	RB2	617			
E11-3185-G23 820219	HVD	(1) 4 x 5	RB2	617			
E11-3185-G37 810137	HVD	(1) 2 x 5	RB	575		X	
E11-3185-G38 810174	HVD	(1) 1 1/2 x 5	RB1	603		X	
E11-3185-G41 810097	HVD	(1) 2 x 5	RB2	617			
E11-3185-G48 810175	HVD	(1) 1 1/2 x 5	RB1	606		X	

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PROGRAM (PLAN) TABLES (SNUBBERS)

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Rev. 1 Change 0

Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
E11-3185-G49 810141	HYD	(1) 2 X 5	RB1	606			
E11-3185-G50 820191	HYD	(1) 2 1/2 X 5	RB1	592			
E11-3185-G51 810213	HYD	(1) 2 X 5	RB2	617			
E11-3185-G55 810149	HYD	(1) 2 X 5	RB2	613			
E11-3185-G56 810221	HYD	(1) 2 1/2 X 5	RB1	602			
E11-3185-G57 810219	HYD	(1) 2 1/2 X 10	RB1	601			
E11-4611-G14 810210	HYD	(1) 2 X 5	RB	577		X	
E11-4612-G04 810163 810164	HYD	(2) 1 1/2 X 5 1 1/2 X 5	RB1	609			
E11-4612-G07 830026 830027	HYD	(2) 2 X 5 2 X 5	RB1	598			
E21-2199-G04 16224	MECH	(1) PSA 1/2	RB	570			
E21-2199-G05 16225	MECH	(1) PSA 1/2	RB	575			
E21-3052-G08 20569	MECH	(1) PSA 3	DW	625	X	X	X
E21-3052-G09 10334 8973	MECH	(2) PSA 10 PSA 10	DW	626	X	X	X
E21-3053-G04 10349	MECH	(1) PSA 10	DW	625	X	X	X

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
E21-3053-G10 10357 10333	MECH	(2) PSA 10 PSA 10	DW	626	X	X	X
E21-3147-G26 8357	MECH	(1) PSA 10	RB2	624			
W-E21-5300-G06 12759	MECH	(1) PSA 1/4	RB	572			
E21-2199-G10 810105	HYD	(1) 1 1/2 X 5	RB	557			
E21-2199-G11 810034	HYD	(1) 1 1/2 X 5	RB	555			
E21-3144-G23 820207	HYD	(1) 4 X 5	RB2	624			
E21-3144-G26 820007	HYD	(1) 2 X 10	RB	550			
E21-3144-G30 810209	HYD	(1) 2 X 5	RB	553			
E21-3144-G32 820171	HYD	(1) 1 1/2 X 5	RB	551			
E21-3145-G08 810151	HYD	(1) 2 X 5	RB	578			
E21-3145-G12 810098	HYD	(1) 1 1/2 X 5	RB	578			
E21-3145-G16 810106	HYD	(1) 1 1/2 X 5	RB	573			
E21-3145-G17 810102	HYD	(1) 1 1/2 X 5	RB	555			
E21-3145-G23 820165	HYD	(1) 1 1/2 X 5	RB	553			
E21-3147-G05 820118	HYD	(1) 2 X 5	RB	563			
E21-3147-G06 820180	HYD	(1) 2 X 5	RB	563			

FERMI 2 INSERVICE INSPECTION
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Rev. 1 Change 0

Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
E21-3147-G08 820186	HYD	(1) 2 X 5	RB1	591			
E21-3147-G09 820185	HYD	(1) 2 X 5	RB1	590			
E21-3147-G27 810087	HYD	(1) 2 X 5	RB	558			
E21-3147-G28 820068	HYD	(1) 1 1/2 X 5	RB	555			
E21-3147-G29 810053	HYD	(1) 2 X 5	RB	553			
E21-3147-G30 810197	HYD	(1) 2 X 5	RB	553			
E21-3147-G34 820178	HYD	(1) 2 X 5	RB	545			
E21-3147-G37 820076	HYD	(1) 1 1/2 X 5	RB	545			
E21-3148-G33 810178	HYD	(1) 1 1/2 X 5	RB	541			
E21-3150-G07 810148	HYD	(1) 2 X 5	RB	581			
E21-3150-G08 810072	HYD	(1) 2 X 5	RB	581			
E21-3150-G09 810035	HYD	(1) 1 1/2 X 5	RB	567			
E41-3162-G24 9014	MECH	(1) PSA 10	AB	555		X	
E41-3162-G25 8336	MECH	(1) PSA 10	RB	562		X	
E41-3162-G26 16340	MECH	(1) PSA 10	RB	565		X	
E41-3163-G17 8958	MECH	(1) PSA 10	RB	542		X	

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PROGRAM (PLAN) TABLES (SNUBBERS)

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Rev. 1 Change 0

Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	DIFFicult To Remove
E41-3183-G19 15289	MECH	(1) PSA 3	AB	545			
E41-3187-G14 12804	MECH	(1) PSA 10	RB	579	X(1)	X	
E41-3172-G19 10355	MECH	(1) PSA 10	RB	553		X	
E41-3172-G28 20979	MECH	(1) PSA 3	AB	550			
W-E41-5256-G02 12744	MECH	(1) PSA 1/4	AB	542			
W-E41-5256-G03 13194	MECH	(1) PSA 1/2	AB	544			
W-E41-5256-G20S 12728 22449 8496	MECH	(3) PSA 1/4 PSA 1/4 PSA 1/2	RB	561		X	
W-E41-5256-G21 8480	MECH	(1) PSA 1/2	RB	562		X	
W-E41-5256-G22S 13181	MECH	(1) PSA 1/2	RB	561		X	
E41-3182-G17 820054	H/D	(1) 4 X 5	AB	554			
E41-3182-G20 820252	HYD	(1) 2 X 5	RB	559		X	
E41-3182-G22 810073	HYD	(1) 2 X 5	RB	555			
E41-3182-G23 810139	HYD	(1) 2 X 5	AB	555			
E41-3183-G18 810220	HYD	(1) 2 1/2 X 5	AB	542			
E41-3185-G18 820078	HYD	(1) 1 1/2 X 5	RB	578			

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PROGRAM (PLAN) TABLES (SNUBBERS)

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CLASS ALL

INTERVAL 1 | | 2 | | 3 | | 4 | |

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Rev. 1 Change 0

Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
E41-3165-G28 820168	HYD	(1) 1 1/2 X 5	RB	578		X	
E41-3167-G17 810043	HYD	(1) 2 X 5	AB	553			
E41-3167-G18 810193	HYD	(1) 1 1/2 X 5	AB	553			
E41-3172-G11 810016	HYD	(1) 2 1/2 X 5	AB	550			
E41-3172-G12 810047	HYD	(1) 1 1/2 X 5	AB	550			
E41-3172-G16 810187	HYD	(1) 1 1/2 X 5	AB	550			
E41-3172-G20 810050	HYD	(1) 1 1/2 X 5	RB	553		X	
E51-3168-G44 23170	MECH	(1) PSA 1	RB	575		X	
E51-3174-G09 9899	MECH	(1) PSA 35	RB	549		X	
E51-3174-G09A 8714	MECH	(1) PSA 35	RB	549		X	
E51-3174-G09C 9869	MECH	(1) PSA 35	RB	550		X	
E51-3174-G30 23172	MECH	(1) PSA 1	RB	575		X	
E51-3175-G37 8505	MECH	(1) PSA 1/2	RB	578			
W-E51-5078-G02 12683	MECH	(1) PSA 1/4	RB	558			
E51-5307-G01 12770	MECH	(1) PSA 1/4	RB1	586	X(1)	X	
E51-3174-G17 820084	HYD	(1) 1 1/2 X 5	RB	549			

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PROGRAM (PLAN) TABLES (SNUBBERS)

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INTERVAL 1 | | 2 | | 3 | | 4 | |

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Rev. 1 Change 0

Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessibl	ALARA Concerns	Difficult To Remove
E51-3174-G21 820117	HVD	(1) 2 X 5	RB	559		X	X
E51-3174-G25 820116	HVD	(1) 1 1/2 X 5	RB	575		X	
E51-3174-G32 810064	HVD	(1) 1 1/2 X 5	RB	549			
E51-3174-G33 820162	HVD	(1) 1 1/2 X 5	RB	549		X	
E51-3174-G34 810061	HVD	(1) 1 1/2 X 5	RB	549			
E51-3174-G36 810181	HVD	(1) 1 1/2 X 5	RB	546			
E51-3174-G38 810184	HVD	(1) 1 1/2 X 5	RB	541			
E51-3174-G39 810104	HVD	(1) 1 1/2 X 5	RB	549			
E51-3174-G40 810186	HVD	(1) 1 1/2 X 5	RB	544			
E51-3175-G01 810071	HVD	(1) 2 X 5	RB	559			
E51-3175-G02 820113	HVD	(1) 2 X 5	RB	558			
E51-3175-G06 810157	HVD	(1) 2 X 5	RB	574			
E51-3175-G07 810156	HVD	(1) 2 X 5	RB	573			
E51-3175-G12 830016	HVD	(1) 1 1/2 X 5	RB	576		X	
E51-3175-G13 820183	HVD	(1) 2 X 5	RB	576		X	
E51-3175-G21 810008	HVD	(1) 2 X 5	RB	576		X	

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
E51-3175-G22 810187	HYD	(1) 1 1/2 X 5	RB	576		X	
E51-3175-G24 810144	HYD	(1) 2 X 5	RB	578			X
E51-3175-G25 820084	HYD	(1) 1 1/2 X 5	RB	578		X	X
E51-3175-G28 820072	HVD	(1) 1 1/2 X 5	RB	578		X	
E51-3175-G27 810182	HVD	(1) 1 1/2 X 5	RB	553			
E51-3176-G17 810152	HYD	(1) 2 X 5	RB	542		X	
G11-3853-G47 23171	MECH	(1) PSA 1	RB	578		X	
G11-3659-G48 18651	MECH	(1) PSA 1	RB	578		X	
G33-3096-G27 15292	MECH	(1) PSA 3	RB2	625	X(3)	X	
G33-3096-G30 12448 15288	MECH	(2) PSA 3 PSA 3	DW	575	X	X	
G33-3096-G31 12449	MECH	(1) PSA 3	DW	585	X	X	
G33-3096-G32 15282	MECH	(1) PSA 3	DW	605	X	X	
G33-3096-G33 8976	MECH	(1) PSA 10	DW	611	X	X	
G33-3096-G34 9856	MECH	(1) PSA 1	DW	592	X	X	
G33-3096-G35 9857	MECH	(1) PSA 1	DW	593	X	X	
G33-3096-G38 9858	MECH	(1) PSA 1	DW	592	X	X	

FERRI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLES (SNUBBERS)

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INTERVAL 1 | | 2 | | 3 | | 4 | |

Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
G33-3098-G38 9859	MECH	(1) PSA 1	DW	598	X	X	
G33-3244-G39 12436	MECH	(1) PSA 3	RB2	629	X(3)	X	
G33-3245-G29 9871	MECH	(1) PSA 35	RB1	587	X(1)	X	X
G33-3245-G30 9873	MECH	(1) PSA 35	RB1	587	X(1)	X	X
G33-3245-G32 9859	MECH	(1) PSA 35	RB	579		X	X
G33-3245-G33 8708	MECH	(1) PSA 35	RB	579		X	X
G33-3245-G37 23161	MECH	(1) PSA 1	RB2	628	X(3)	X	
G33-3245-G38 16230 13171	MECH	(2) PSA 1/2 PSA 1/2	RB2	628	X(3)	X	
G33-3245-G45 23163	MECH	(1) PSA 1	RB2	628	X(3)	X	
G33-3245-G47 9886	MECH	(1) PSA 35	RB1	587	X(1)	X	X
G33-3245-G48 11285	MECH	(1) PSA 35	RB1	587	X(1)	X	X
G33-3245-G49 23165 23168	MECH	(2) PSA 1 PSA 1	RB2	628	X(3)	X	
G33-3245-G67 23167	MECH	(1) PSA 1	RB2	628	X(3)	X	
G33-3244-G36 820159 820228	HYD	(2) 1 1/2 X 5 1 1/2 X 5	RB2	638	X(3)	X	X
G33-3244-G37 810227	HYD	(1) 2 1/2 X 5	RB2	638	X(3)	X	X

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INTERVAL 1 2 3 4

Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
G33-32-4-G38 810205	HYD	(1) 2 X 5	RB2	638	X(3)	X	X
G51-4055-G08 12437	MECH	(1) PSA 3	RB	541		X	
G51-4055-G20 15287	MECH	(1) PSA 3	RB	541		X	
G51-4055-G23 8970	MECH	(1) PSA 10	RB	541		X	
G51-4058-G03 18642	MECH	(1) PSA 1	RB	541		X	
G51-4058-G15 18650	MECH	(1) PSA 1	AB	541			
G51-4058-G20 20989	MECH	(1) PSA 3	RB	541		X	
G51-4058-G21 18658	MECH	(1) PSA 1	RB	541		X	
G51-4059-G17B 23168	MECH	(1) PSA 1	RB	577		X	
G51-4059-G20 23169	MECH	(1) PSA 1	RB	577		X	
G51-4059-G21 12443	MECH	(1) PSA 3	RB	577		X	
G51-4059-G15 820151	HYD	(1) 1 1/2 X 5	RB	577		X	
N21-3131-G33 12807	MECH	(1) PSA 10	TB2	635	X(2)	X	X
N21-3131-G38 12783	MECH	(1) PSA 10	TB2	638	X(2)	X	X
N21-3536-G26 9901	MECH	(2) PSA 35 PSA 35	DZ	598	X	X	X
N21-3536-G27 7020	MECH	(1) PSA 35	DW	599	X	X	X

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
N21-3536-G28 9026	MECH	(1) PSA 10	DW	609	X	X	
N21-3536-G29 10341 12821	MECH	(2) PSA 10 PSA 10	DW	609	X	X	X
N21-3536-G30 11267	MECH	(1) PSA 35	DW	609	X	X	X
N21-3536-G31 12818	MECH	(1) PSA 10	DW	621	X	X	
N21-3536-G32 10354	MECH	(1) PSA 10	DW	614	X	X	
N21-3536-G33 11278	MECH	(1) PSA 35	DW	617	X	X	
N21-3536-G34 11287	MECH	(1) PSA 35	DW	617	X	X	
N21-3536-G35 10337	MECH	(1) PSA 10	DW	625	X	X	
N21-3536-G36 10330	MECH	(1) PSA 10	DW	608	X	X	X
N21-3536-G37 10332	MECH	(1) PSA 10	DW	611	X	X	X
N21-3536-G38 12785 12820	MECH	(2) PSA 10 PSA 10	DW	632	X	X	
N21-3536-G39 9845	MECH	(1) PSA 35	DW	609	X	X	X
N21-3537-G26 9896 9897	MECH	(2) PSA 35 PSA 35	DW	598	X	X	X
N21-3537-G27 7021	MECH	(1) PSA 35	DW	599	X	X	X
N21-3537-G28 9015	MECH	(1) PSA 10	DW	609	X	X	

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
N21-3537-G29 10348 10353	MECH	(2) PSA 10 PSA 10	DW	609	X	X	X
N21-3537-G30 11268	MECH	(1) PSA 35	DW	609	X	X	X
N21-3537-G31 10352	MECH	(1) PSA 10	DW	621	X	X	
N21-3537-G32 10343	MECH	(1) PSA 10	DW	615	X	X	
N21-3537-G33 11269	MECH	(1) PSA 35	DW	617	X	X	
N21-3537-G34 11272	MECH	(1) PSA 35	DW	617	X	X	
N21-3537-G35 10347	MECH	(1) PSA 10	DW	625	X	X	X
N21-3537-G36 10329	MECH	(1) PSA 10	DW	611	X	X	X
N21-3537-G37 9007	MECH	(1) PSA 10	DW	611	X	X	
N21-3537-G38 12787 12814	MECH	(2) PSA 10 PSA 10	DW	632	X	X	
N21-3537-G39 9849	MECH	(1) PSA 35	DW	609	X	X	
N30-2186-G03 22442	MECH	(1) PSA 1/4	RB1	584	X(1)	X	
N30-2186-G04 19940	MECH	(1) PSA 1/4	RB	580		X	

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
N30-2186-G05 19933	MECH	(1) PSA 1/4	RB1	584	X(1)	X	
N30-2186-G07 13142	MECH	(1) PSA 1/2	RB	580		X	
N30-2186-G09 13112	MECH	(1) PSA 1/2	RB1	584	X(1)	X	
N30-2186-G10 20005	MECH	(1) PSA 1/4	RB1	584	X(1)	X	
N30-2186-G11 22387	MECH	(1) PSA 1/4	RB1	584	X(1)	X	
N30-2186-G13 9854	MECH	(1) PSA 1	RB1	584	X(1)	X	
N30-2186-G14 18645	MECH	(1) PSA 1	RB1	584	X(1)	X	
N30-2186-G15 18235	MECH	(1) PSA 1/2	RB1	584	X(1)	X	
N30-2186-G16 8509	MECH	(1) PSA 1/2	RB1	584	X(1)	X	
N30-2186-G17 22371	MECH	(1) PSA 1/4	RB1	584	X(1)	X	
N30-2186-G18 13186	MECH	(1) PSA 1/2	RB1	584	X(1)	X	
N30-3258-G18 8738	MECH	(1) PSA 35	AB2	632	X(1)		
N30-3258-G19 8742	MECH	(1) PSA 35	AB2	632	X(1)		
N30-3258-G20 8746	MECH	(1) PSA 35	TB2	632	X(1)		
N30-3259-G21 8719	MECH	(1) PSA 35	TB2	635	X(2)	X	X
N30-3259-G22 8730	MECH	(1) PSA 35	TB2	635	X(2)	X	X

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Component No. Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
N30-3259-G23 8709	MECH	(1) PSA 35	TB2	635	X(2)	X	X
N30-3259-G24 8720	MECH	(1) PSA 35	TB2	635	X(2)	X	X
N30-3259-G28 9860	MECH	(1) PSA 35	TB2	632	X(2)		
N30-3259-G28 8731	MECH	(1) PSA 35	TB2	632	X(2)		
N30-3259-G29 8710	MECH	(1) PSA 35	TB2	632	X(2)		
N30-3259-G30 8732	MECH	(1) PSA 35	TB2	632	X(2)		
N30-3259-G31 8721	MECH	(1) PSA 35	TB2	626	X(2)	X	
N30-3259-G32 1587	MECH	(1) PSA 100	TB2	625	X(2)	X	
N30-3259-G33 11265	MECH	(1) PSA 35	TB2	625	X(2)	X	
N30-3259-G34 9894	MECH	(1) PSA 35	TB2	626	X(2)	X	
N30-3259-G35 9885	MECH	(1) PSA 35	TB2	626	X(2)	X	
N30-3259-G38 9851	MECH	(1) PSA 35	TB2	625	X(2)	X	
N30-3259-G37 9850	MECH	(1) PSA 35	TB2	626	X(2)	X	
N30-3259-G38 1581	MECH	(1) PSA 100	TB2	626	X(2)	X	
N30-3259-G39 1580	MECH	(1) PSA 100	TB2	625	X(2)	X	
N30-3259-G40 9020	MECH	(1) PSA 10	TB2	617	X(2)	X	

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
N30-3259-G41 9004	MECH	(1) PSA 10	TB2	617	X(2)	X	
N30-3259-G44 8718	MECH	(1) PSA 35	TB2	637	X(2)	X	X
N30-3259-G45 8734	MECH	(1) PSA 35	TB2	637	X(2)	X	X
N30-3259-G48 8713	MECH	(1) PSA 35	TB2	638	X(2)	X	X
N30-3259-G47 8724	MECH	(1) PSA 35	TB2	637	X(2)	X	X
N30-3259-G48 8735	MECH	(1) PSA 35	TB2	631	X(2)	X	X
N30-3259-G49 1589	MECH	(1) PSA 100	TB2	631	X(2)	X	X
N30-3259-G50 8725	MECH	(1) PSA 35	TB2	631	X(2)	X	X
N30-3259-G51 8736	MECH	(1) PSA 35	TB2	630	X(2)	X	X
N30-3259-G52 8715	MECH	(1) PSA 35	TB2	630	X(2)	X	X
N30-3259-G53 8726	MECH	(1) PSA 35	TB2	631	X(2)	X	X
N30-3259-G54 1579	MECH	(1) PSA 100	TB2	631	X(2)	X	X
N30-3259-G55 8723	MECH	(1) PSA 35	TB2	631	X(2)	X	X
N30-3259-G56 12808	MECH	(1) PSA 10	TB2	634	X(2)	X	X

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
N30-3259-G57 8747	MECH	(1) PSA 35	TB2	631	x(2)		
N30-3259-G58 8744	MECH	(1) PSA 35	TB2	634	x(2)	x	
N30-3259-G67 1583	MECH	(1) PSA 100	TB2	631	x(2)		
N30-3259-G68 1584	MECH	(1) PSA 100	TB2	631	x(2)		
N30-3259-G75B 1586	MECH	(1) PSA 100	TB2	631	x(2)		
N30-3259-G76 9874	MECH	(1) PSA 35	TB2	631	x(2)		
N30-3259-G77 7015	MECH	(1) PSA 35	TB2	631	x(2)		
N30-3259-G78 9881	MECH	(1) PSA 35	TB2	631	x(2)		

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
N30-3259-G79 12797	MECH	(1) PSA 10	TB2	641	X(2)	X	
N30-3259-G80 8740	MECH	(1) PSA 35	TB2	641	X(2)	X	X
N30-3259-G81 9848	MECH	(1) PSA 35	TB2	631	X(2)		
N30-3259-G83 8727	MECH	(1) PSA 35	TB2	631	X(2)		
N30-3259-G84 8748	MECH	(1) PSA 35	TB2	631	X(2)		
N30-3526-G48 8474	MECH	(1) PSA 1/2	DW	598	X	X	
N30-3526-G48 12993	MECH	(1) PSA 1/4	DW	586	X	X	
N30-3526-G51 12994	MECH	(1) PSA 1/4	DW	588	X	X	
N30-3526-G52 12977	MECH	(1) PSA 1/4	DW	588	X	X	
N30-3526-G53 22458	MECH	(1) PSA 1/4	DW	588	X	X	

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
N30-3526-G54 18238	MECH	(1) PSA 1/2	DW	587	X	X	
N30-3526-G55 13141	MECH	(1) PSA 1/2	DW	587	X	X	
N30-3526-G57 13137	MECH	(1) PSA 1/2	DW	588	X	X	
N30-3526-G58 13175	MECH	(1) PSA 1/2	DW	588	X	X	
P11-3156-G05 11974	MECH	(1) PSA 1/4	RB1	587			
P11-3586-G08 9855	MECH	(1) PSA 1	DW	598	X	X	
P11-3586-G11 8487	MECH	(1) PSA 1/2	DW	802	X	X	
P11-2808-G20 830019	HYD	(1) 1 1/2 X 5	RB1	608			
P11-3586-G06 820215	HYD	(1) 1 1/2 X 5	RB1	604			
P34-7320-G02 8501	MECH	(1) PSA 1/2	RB1	593			
P34-7320-G04 22369	MECH	(1) PSA 1/4	RB1	593			
P34-7405-G02 22372	MECH	(1) PSA 1/4	RB3	649			
P34-7405-G05 12673	MECH	(1) PSA 1/4	RB3	649			
P34-7405-G07 13189	MECH	(1) PSA 1/2	RB3	650			
W-P42-4357-G22 12752	MECH	(2) PSA 1/4 PSA 1/4	DW	582	X	X	X
P42-3340-G11 820062	HYD	(1) 1 1/2 X 5	RB	575		X	

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
P44-3559-G11 19579	MECH	(1) PSA 1	DW	581	X	X	
W-P50-2163-G13 22385	MECH	(1) PSA 1/4	RB1	603			
W-P50-2163-G14 12672	MECH	(1) PSA 1/4	RB1	602			
W-P50-2163-G15 22418 22450	MECH	(2) PSA 1/4 PSA 1/4	RB1	602			
W-P50-2163-G17 22412	MECH	(1) PSA 1/4	RB1	602			
W-P50-2163-G18 19910	MECH	(1) PSA 1/4	DW	602	X	X	
W-P50-3308-G35 23162	MECH	(1) PSA 1	AB	561			
W-P50-3579-G25 19929	MECH	(1) PSA 1/4	DW	602	X	X	
T23-12837-36-G02 22406 22428	MECH	(2) PSA 1/4 PSA 1/4	DW	579	X	X	
T23-12837-36-G04 22423	MECH	(1) PSA 1/4	DW	579	X	X	
T23-12837-36-G08 13113 13187	MECH	(2) PSA 1/2 PSA 1/2	DW	587	X	X	
T23-12837-36-G13 22429	MECH	(1) PSA 1/4	DW	591	X	X	
T23-12837-36-G14 22358	MECH	(1) PSA 1/4	DW	589	X	X	
T23-12837-36-G20 22424	MECH	(1) PSA 1/4	DW	591	X	X	
T23-12837-36-G32 22422	MECH	(1) PSA 1/4	DW	597	X	X	

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
T23-12837-36-G33 22380	MECH	(1) PSA 1/4	DW	593	X	X	
T23-12837-36-G43 13205	MECH	(1) PSA 1/2	DW	581	X	X	
T23-12837-36-G45 22434	MECH	(1) PSA 1/4	DW	582	X	X	
T23-12837-36-G52 13172	MECH	(1) PSA 1/2	DW	580	X	X	
T23-12837-36-G54 22400	MECH	(1) PSA 1/4	DW	581	X	X	
T23-12837-36-G56 22374	MECH	(1) PSA 1/4	DW	581	X	X	
T23-12837-36-G58 22377	MECH	(1) PSA 1/4	DW	581	X	X	
T23-12837-36-G67 12728	MECH	(1) PSA 1/4	DW	579	X	X	
T23-12837-36-G71 13138	MECH	(1) PSA 1/2	DW	579	X	X	
T23-12837-36-G75 12756	MECH	(1) PSA 1/4	DW	581	X	X	
T23-12837-36-G79 22357 22425	MECH	(2) PSA 1/4 PSA 1/4	DW	579	X	X	
T23-12837-36-G81 18843	MECH	(1) PSA 1	DW	579	X	X	
T23-12837-36-G86 22414	MECH	(1) PSA 1/4	DW	579	X	X	
T23-12837-36-G91 12741	MECH	(1) PSA 1/4	DW	578	X	X	

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
T23-12837-38-G96 22437 22366	MECH	(2) PSA 1/4 PSA 1/4	DW	579	X	X	
T23-12837-38-G01 8470 8500	MECH	(2) PSA 1/2 PSA 1/2	DW	589	X	X	
T23-12837-38-G12 12768	MECH	(1) PSA 1/4	DW	583	X	X	
T23-12837-38-G15 12675 12694	MECH	(2) PSA 1/4 PSA 1/4	DW	589	X	X	
T23-12837-38-G18 13149	MECH	(1) PSA 1/2	DW	589	X	X	
T23-12837-39-G02 13116 13151 13183 13184	MECH	(4) PSA 1/2 PSA 1/2 PSA 1/2 PSA 1/2	DW	578	X	X	
T23-12837-39-G04 12743	MECH	(1) PSA 1/4	DW	578	X	X	
T23-12837-39-G09 22340 22391	MECH	(2) PSA 1/4 PSA 1/4	DW	579	X	X	
T23-12837-39-G16 12729	MECH	(1) PSA 1/4	DW	582	X	X	
T23-12837-39-G17 8507	MECH	(1) PSA 1/2	DW	583	X	X	
T23-12837-39-G18 19498	MECH	(1) PSA 1/4	DW	583	X	X	
T23-12837-39-G20 8494	MECH	(1) PSA 1/2	DW	590	X	X	

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
T23-12837-39-G21 22375	MECH	(1) PSA 1/4	DW	590	X	X	
T23-12837-39-G23 12699	MECH	(1) PSA 1/4	DW	591	X	X	
T23-12837-39-G24 13144	MECH	(1) PSA 1/2	DW	591	X	X	
T23-12837-39-G25 12709	MECH	(1) PSA 1/4	DW	591	X	X	
T23-12837-39-G28 22453	MECH	(1) PSA 1/4	DW	579	X	X	
T23-12837-39-G29 12764 19918	MECH	(2) PSA 1/4 PSA 1/4	DW	579	X	X	
T23-12837-39-G34 12730	MECH	(1) PSA 1/4	DW	589	X	X	
T23-12837-39-G38 12731	MECH	(1) PSA 1/4	DW	577	X	X	
T23-12837-39-G39 19919	MECH	(1) PSA 1/4	DW	577	X	X	
T23-12837-39-G43 12696	MECH	(1) PSA 1/4	DW	593	X	X	
T23-12837-39-G44 13111	MECH	(1) PSA 1/2	DW	593	X	X	
T23-12837-40-G02 19901 22352	MECH	(2) F A 1/4 PSA 1/4	DW	577	X	X	
T23-12837-40-G04 18648	MECH	(1) PSA 1	DW	581	X	X	
T23-12837-40-G08 18641	MECH	(1) PSA 1	DW	581	X	X	
T23-12837-40-G09 22430 8481	MECH	(2) PSA 1/4 PSA 1/2	DW	578	X	X	

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
T23-12837-40-G15 22427	MECH	(1) PSA 1/4	DW	578	X	X	
T23-12837-41-G01 18655	MECH	(1) PSA 1	DW	610	X	X	
T23-12837-41-G02 18854 19580	MECH	(2) PSA 1 PSA 1	DW	610	X	X	
T23-12837-41-G05 13157 13196	MECH	(2) PSA 1/2 PSA 1/2	DW	607	X	X	
T23-12837-41-G07 13152 13180	MECH	(2) PSA 1/2 PSA 1/2	DW	607	X	X	
T23-12837-41-G10 13130 13169	MECH	(2) PSA 1/2 PSA 1/2	DW	607	X	X	
T23-12837-41-G17 13153	MECH	(1) PSA 1/2	DW	598	X	X	
T23-12837-41-G25 13160	MECH	(1) PSA 1/2	DW	599	X	X	
T23-12837-42-G01 22459	MECH	(1) PSA 1/4	DW	599	X	X	
T23-12837-42-G03 12771	MECH	(1) PSA 1/4	DW	599	X	X	
T23-12837-42-G12 13206 8486	MECH	(2) PSA 1/2 PSA 1/2	DW	597	X	X	
T23-12837-42-G14 12745 22335	MECH	(2) PSA 1/4 PSA 1/4	DW	594	X	X	
T23-12837-42-G17 8469	MECH	(1) PSA 1/2	DW	594	X	X	

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Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
T23-12837-42-G20 22407	MECH	(1) PSA 1/4	DW	599	X	X	
T23-12837-42-G21 12978 27915	MECH	(2) PSA 1/4 PSA 1/4	DW	599	X	X	
T23-12837-42-G22 22341	MECH	(1) PSA 1/4	DW	598	X	X	
T23-12837-42-G23 19926 22419	MECH	(2) PSA 1/4 PSA 1/4	DW	595	X	X	
T23-12837-42-G24 8492	MECH	(1) PSA 1/2	DW	599	X	X	
T23-12837-42-G26 13182	MECH	(1) PSA 1/2	DW	599	X	X	
T23-12837-42-G27 13186	MECH	(1) PSA 1/2	DW	598	X	X	
T23-12837-42-G28 13181	MECH	(1) PSA 1/2	DW	599	X	X	
T23-12837-42-G30 13165	MECH	(1) PSA 1/2	DW	598	X	X	
T23-12837-42-G36 22349	MECH	(1) PSA 1/4	DW	599	X	X	
T23-12837-42-G41 12130	MECH	(1) PSA 1/4	DW	593	X	X	
T23-12837-42-G50 13173	MECH	(1) PSA 1/2	DW	598	X	X	
T23-12837-42-G53 22373	MECH	(1) PSA 1/4	DW	593	X	X	
T23-12837-42-G54 12749	MECH	(1) PSA 1/4	DW	598	X	X	

FERMI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLE (SNUBBERS)

IDE
CLASS ALL

INTERVAL 1 | | 2 | | 3 | | 4 | |

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Rev. 1 Change 2

Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
T23-12837-42-G62 22378	MECH	(1) PSA 1/4	DW	593	X	X	
T23-12837-43-G02 8477	MECH	(1) PSA 1/2	DW	605	X	X	
T23-12837-43-G10 18658	MECH	(1) PSA 1	DW	599	X	X	
T23-12837-43-G17 12736	MECH	(1) PSA 1/4	DW	605	X	X	
T23-12837-43-G18 12712	MECH	(1) PSA 1/4	DW	604	X	X	
T23-12837-43-G24 8490	MECH	(1) PSA 1/2	DW	604	X	X	
T23-12937-43-G26 12738	MECH	(1) PSA 1/4	DW	603	X	X	
T23-12837-43-G28 12733	MECH	(1) PSA 1/4	DW	602	X	X	
T23-12837-43-G30 8508	MECH	(1) PSA 1/2	DW	606	X	X	
T23-12837-43-G31 8478	MECH	(1) PSA 1/2	DW	603	X	X	
T23-12837-43-G45 8484	MECH	(1) PSA 1/2	DW	591	X	X	
T23-12837-43-G49 12740	MECH	(1) PSA 1/4	DW	581	X	X	
T23-12837-43-G75 8482	MECH	(1) PSA 1/2	DW	580	X	X	
T23-12837-43-G80 8499	MECH	(1) PSA 1/2	DW	604	X	X	
T23-12837-43-G82 12751 12762	MECH	(2) PSA 1/4 PSA 1/4	DW	600	X	X	

PERMI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLES (SMUBBERS)

CODE
CLASS ALL

INTERVAL 1 | | 2 | | 3 | | 4 | |

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Rev. 1 Change 0

Component No Serial No	Smubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
T23-12837-43-G83 12755	MECH	(1) PSA 1/4	DW	601	X	X	
T23-12837-43-G85 8491	MECH	(1) PSA 1/2	DW	598	X	X	
T23-12837-43-G88 8503	MECH	(1) PSA 1/2	DW	595	X	X	
T23-12837-45-G02 13150 13202	MECH	(2) PSA 1/2 PSA 1/2	DW	612	X	X	
T23-12837-45-G03 18644	MECH	(1) PSA 1	DW	610	X	X	
T23-12837-45-G04 21954	MECH	(1) PSA 1	DW	610	X	X	
T23-12837-45-G07 18646	MECH	(1) PSA 1	DW	610	X	X	
T23-12837-45-G11 13128 13155	MECH	(2) PSA 1/2 PSA 1/2	DW	598	X	X	
T23-12837-45-G12 13185 13188	MECH	(2) PSA 1/2 PSA 1/2	DW	598	X	X	
T23-12837-45-G19 13131	MECH	(1) PSA 1/2	DW	595	X	X	
T23-12837-46-G17 12714 12700 19921 18649	MECH	(4) PSA 1/4 PSA 1/4 PSA 1/4 PSA 1	DW	596	X	X	
T23-12837-46-G22 12988	MECH	(1) PSA 1/4	DW	603	X	X	
T23-12837-46-G42 13154	MECH	(1) PSA 1/2	DW	604	X	X	

FERRI 2 INSERVICE INSPECTION PROGRAM (PLAN) TABLES (SCRUBBERS)

Component No Serial No	Scrubber	(Over) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	DIFFICULT To Remove
T23-12837-46-G54	MECH	(1) PSA 1/2	DW	599	X	X	
13204							
T23-12837-46-G70	MECH	(1) PSA 1/2	DW	598	X	X	
13176							
T23-12837-46-G78	MECH	(1) PSA 1/2	DW	598	X	X	
13201							
T23-12837-46-G93	MECH	(1) PSA 1/2	DW	599	X	X	
13200							
T23-12837-46-G94	MECH	(8) PSA 1/4	DW	600	X	X	
12688		PSA 1/4					
12732		PSA 1/4					
12765		PSA 1/4					
19918		PSA 1/4					
19920		PSA 1/4					
22364		PSA 1/4					
T23-12837-46-G100	MECH	(1) PSA 1/2	DW	604	X	X	
13156							
T23-12837-48-G101	MECH	(1) PSA 1/4	DW	591	X	X	
22339							
T23-12837-48-G102	MECH	(1) PSA 1/4	DW	592	X	X	
22355							
T23-12837-48-G08	MECH	(2) PSA 1/4	DW	598	X	X	
19902		PSA 1/4					
19917		PSA 1/2					
T23-12837-48-G12	MECH	(1) PSA 1/2	DW	598	X	X	
13198							
T23-12837-51-G02	MECH	(1) PSA 1/2	DW	643	X	X	
8495							
T23-12837-51-G05	MECH	(1) PSA 1/4	DW	643	X	X	
22416							
T23-12837-51-G06	MECH	(1) PSA 1/2	DW	643	X	X	
13119							

PERMI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLES (SNUBBERS)

CODE CLASS ALL INTERVAL 1 2 3 4

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Rev. 1 Change 0

Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
T23-12837-51-G08 22440	MECH	(1) PSA 1/4	DW	643	X	X	
T23-12837-51-G09 22345	MECH	(1) PSA 1/4	DW	643	X	X	
T23-12837-51-G11 12753	MECH	(1) PSA 1/4	DW	643	X	X	
T23-12837-51-G12 19938	MECH	(1) PSA 1/4	DW	643	X	X	
T23-12837-51-G14 13147	MECH	(1) PSA 1/2	DW	643	X	X	
T23-12837-51-G17 13135	MECH	(1) PSA 1/2	DW	643	X	X	
T23-12837-51-G18 13146	MECH	(1) PSA 1/2	DW	649	X	X	
T23-12837-51-G19 12742	MECH	(1) PSA 1/4	DW	649	X	X	
T23-12837-51-G26 22354	MECH	(1) PSA 1/4	DW	643	X	X	
T23-12837-51-G28 19915	MECH	(1) PSA 1/4	DW	647	X	X	
T23-12837-51-G29 22415	MECH	(1) PSA 1/4	DW	648	X	X	
T23-12837-51-G30 19897	MECH	(1) PSA 1/4	DW	648	X	X	
T23-12837-51-G35 ¹ 19909	MECH	(1) PSA 1/4	DW	645	X	X	
T23-12837-51-G43 12739	MECH	(1) PSA 1/4	DW	671	X	X	
T23-12837-51-G55 19924	MECH	(1) PSA 1/4	DW	649	X	X	
T23-12837-51-G56 19930	MECH	(1) PSA 1/4	DW	650	X	X	

PERMI 2 (NSERVICE INSPECTION PROGRAM (PLAN) TABLES (SNUBBERS)

CODE CLASS ALL INTERVAL 1 2 3 4

Component No Serial No	Snubber	(Quen) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
T23-12837-51-G57 19923	MECH	(1) PSA 1/4	DW	650	X	X	
T23-12837-51-G61 13123	MECH	(1) PSA 1/2	DW	650	X	X	
T23-12837-51-G62 19911	MECH	(1) PSA 1/4	DW	650	X	X	
T23-12837-51-G69 19925	MECH	(1) PSA 1/4	DW	583	X	X	
T23-12837-51-G71 13170	MECH	(1) PSA 1/2	DW	586	X	X	
T23-12837-51-G78 12692	MECH	(1) PSA 1/4	DW	611	X	X	
T23-12837-51-G81 22344	MECH	(1) PSA 1/4	DW	622	X	X	
T23-12837-51-G85 27917	MECH	(1) PSA 1/4	DW	626	X	X	
T23-12837-51-G86 12718	MECH	(1) PSA 1/4	DW	625	X	X	
T23-12837-51-G87 22460	MECH	(1) PSA 1/4	DW	634	X	X	
T23-12837-51-G88 12689	MECH	(1) PSA 1/4	DW	634	X	X	
T23-12837-51-G92 22370	MECH	(1) PSA 1/4	DW	635	X	X	
T23-12837-51-G101 27916	MECH	(1) PSA 1/4	DW	610	X	X	
T23-12837-51-G110 12992	MECH	(1) PSA 1/4	DW	593	X	X	
T23-12837-51-G114 12677	MECH	(1) PSA 1/4	DW	599	X	X	
T23-12837-51-G118 12760	MECH	(1) PSA 1/4	DW	611	X	X	

FERRI 2 INSERVICE INSPECTION PROGRAM (PLAN) TABLES (SNUBBERS)

CODE CLASS ALL

INTERVAL 1 2 3 4

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Rev. 1 Change 0

Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
T23-12837-51-G122 6828	MECH	(1) PSA 1/2	DW	621	X	X	
T23-12837-51-G125 12698	MECH	(1) PSA 1/4	DW	633	X	X	
T23-12837-51-G126 22336	MECH	(1) PSA 1/4	DW	633	X	X	
T23-12837-51-G131 22417	MECH	(1) PSA 1/4	DW	635	X	X	
T23-12837-51-G133 22395	MECH	(1) PSA 1/4	DW	636	X	X	
T23-12837-51-G134 12722	MECH	(1) PSA 1/4	DW	636	X	X	
T23-12837-51-G141 19932	MECH	(1) PSA 1/2	DW	649	X	X	
T23-12837-51-G142 8434	MECH	(1) PSA 1/4	DW	651	X	X	
T23-12837-51-G144 19913	MECH	(1) PSA 1/4	DW	649	X	X	
T23-12837-53-G01 12763	MECH	(1) PSA 1/4	DW	631	X	X	
T23-12837-53-G03 22428	MECH	(1) PSA 1/4	DW	631	X	X	
T23-12837-53-G05 12716	MECH	(1) PSA 1/4	DW	631	X	X	
T23-12837-53-G07 13193	MECH	(1) PSA 1/2	DW	631	X	X	
T23-12837-53-G08 12711	MECH	(1) PSA 1/4	DW	631	X	X	
T23-12837-53-G10 13191	MECH	(1) PSA 1/2	DW	631	X	X	
T23-12837-53-G17 12757	MECH	(1) PSA 1/4	DW	625	X	X	

FERRIS 2 INSERVICE INSPECTION PROGRAM (PLANT) TABLES (SNUBBERS)		INTERVAL 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/>				ALARA Concerns	
Component No Serial No	Snubber (Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove	
T23-12837-53-G20 12720	MECH (1) PSA 1/4	DW	623	X	X		
T23-12837-53-G22 22350	MECH (1) PSA 1/4	DW	624	X	X		
T23-12837-53-G28 12674	MECH (1) PSA 1/4	DW	615	X	X		
T23-12837-53-G31 12725	MECH (1) PSA 1/4	DW	608	X	X		
T23-12837-53-G34 12985	MECH (1) PSA 1/4	DW	605	X	X		
T23-12837-53-G35 22343	MECH (1) PSA 1/4	DW	608	X	X		
T23-12837-53-G38 22436	MECH (1) PSA 1/4	DW	630	X	X		
T48-3093-G10 820100	HYD (1) 4 X 5	RB3	651				
T48-3093-G11 820102	HYD (1) 2 1/2 X 5	RB3	651				
T48-3093-G15 820189	HYD (2) 2 1/2 X 5 2 1/2 X 5	RB4	670				
T48-3093-G18 830036	HYD (2) 4 X 5 4 X 5	RB2	635				
T48-2366-G25 12434	MECH (1) PSA 3	RB	576		X		
T48-4061-G06 18652	MECH (1) PSA 1	RB	578				
T48-4061-G08 19577	MECH (1) PSA 1	RB	577				
W-T48-4062-G01 22405	MECH (1) PSA 1/4	RB	574		X		

FERMI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLES (SNUBBERS)

CODE
CLASS ALL

INTERVAL 1 | | 2 | | 3 | | 4 | |

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Rev. 1 Change 0

Component No Serial No	Snubber	(Open) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
W-T48-4062-G05 22359 22413	MECH	(2) PSA 1/4 PSA 1/4	RB	577		X	
W-T48-5225-G08 12887	MECH	(1) PSA 1/4	RB2	622			
W-T48-5225-G09 22384	MECH	(1) PSA 1/4	RB2	622			
W-T48-5314-G02 22435	MECH	(1) PSA 1/4	RB	576		X	
W-T48-5314-G03 13195	MECH	(1) PSA 1/2	RB	576		X	
W-T48-5314-G04 13174	MECH	(1) PSA 1/2	RB	576		X	
W-T48-5314-G05 19908	MECH	(1) PSA 1/4	RB	576		X	
W-T48-5314-G06 22421	MECH	(1) PSA 1/4	RB	576		X	
W-T48-5314-G07 12734	MECH	(1) PSA 1/4	RB	576		X	
W-T48-5314-G10 12724	MECH	(1) PSA 1/4	DW	576	X	X	
T48-2366-G28 830017 810107	HYD	(2) 1 1/2 X 5 1 1/2 X 5	RB	579		X	
T49-5325-G58 13167	MECH	(1) PSA 1/2	RB2	633			
T49-5325-G59 8468	MECH	(1) PSA 1/2	RB2	633			
T49-5325-G60 13197	MECH	(1) PSA 1/2	RB2	633			
T50-7114-G44 19937	MECH	(1) PSA 1/4	RB2	637			X

FERRIS 2 IN-SERVICE INSPECTION
PROGRAM (PLAN) TABLES (SNUBBERS)

CODE
CLASS ALL

INTERVAL 1 | | 2 | | 3 | | 4 | |

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Rev. 1 Change 5

Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
T71-12837-64-G47 22448	MECH	(1) PSA 1/4	RB2	630	X(3)	X	
T71-12837-64-G48 12707	MECH	(1) PSA 1/4	RB2	630	X(3)	X	
T71-12837-64-G49 12693	MECH	(1) PSA 1/4	RB2	629	X(3)	X	
T71-12837-64-G50 19907	MECH	(1) PSA 1/4	RB2	629	X(3)	X	
T71-12837-64-G51 13109	MECH	(1) PSA 1/2	RB2	630	X(3)	X	
T71-12837-64-G52 12750	MECH	(1) PSA 1/4	RB2	629	X(3)	X	

FERMI 2 INSERVICE INSPECTION
PROGRAM (PLAN) TABLES (SNUBBERS)
NON SAFETY/NON TECH SPEC RELATED

CODE CLASS ALL INTERVAL 1 2 3 4

Component No Serial No	Snubber	(Quan) Size	Building Floor	Hanger Evaluation	Inaccessible	ALARA Concerns	Difficult To Remove
N21-3109-G66 820197 820206	HYD	(2) 4 x 5 4 x 5	TB3	645		X	
N21-3109-G68 830032	HYD	(1) 4 x 5	TB1	599		X	X
N21-3109-G70 820058 820096	HYD	(2) 4 x 5 4 x 5	TB3	653		X	
N21-3109-G71 820198 820199	HYD	(2) 4 x 5 4 x 5	TB3	645		X	
N21-3109-G72 810092 810159	HYD	(2) 4 x 5 4 x 5	TB1	605		X	X
N21-3109-G76 810058	HYD	(1) 4 x 5	TB1	585		X	X
N21-3109-G77 830042 830043	HYD	(2) 4 x 5 4 x 5	TB1	586		X	
N30-3378-G25 12822 12823	MECH	(2) PSA 10 PSA 10	TB3	659	X(2)	X	
N30-3378-G26 10350 12810	MECH	(2) PSA 10 PSA 10	TB3	659	X(2)	X	
N30-3378-G27 12811 12815	MECH	(2) PSA 10 PSA 10	TB3	665	X(2)	X	
N30-3378-G28 10331 12819	MECH	(2) PSA 10 PSA 10	TB3	659	X(2)	X	

Component No Serial No	Snubber	(Quan) Size	CODE CLASS ALL	INTERVAL				ALARA Concerns	DIFFICULT To Remove
				1	2	3	4		
N30-01B1-51	MECH	(4) PSA 3	TB2	X				X	
12446		PSA 3							
12450		PSA 3							
12451		PSA 3							
12453									
N30-3618-G02	MECH	(1) PSA 3	TB1					X	
20961									
N30-3619-G20	MECH	(1) PSA 35	TB2					X	
8745									
N30-3618-G08	HYD	(1) 2 1/2 X 5	TB1					X	
810131									
N30-3619-G15	HYD	(1) 4 X 5	TB1					X	
810127									
N30-3619-G16	HYD	(1) 4 X 5	TB1					X	
810126									
N30-3619-G17	HYD	(1) 2 1/2 X 5	TB2					X	
810135									

Interval 1 Hanger Evaluation Inaccessible

Interval 2

Interval 3

Interval 4

ALARA Concerns

DIFFICULT To Remove

628

588

623

594

591

591

618

X(2)

X(2)

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

PART - D

**INSERVICE INSPECTION-NONDESTRUCTIVE
EXAMINATION (ISI-NDE) PROGRAM (PLAN)
FOR
CLASS MC COMPONENTS**

1.0 **Applicable Code**

In accordance with the supplementary information in the Federal Register/Vol. 48, No. 25/Monday, February 7, 1983, pg. 5532, "Since this amendment is only intended to update current regulatory requirements to include the latest code addenda, the requirements of Subsection IWE are not imposed on Commission licensees by this amendment.", Fermi-2's ISI Program does not include examination requirements for Class MC components. The requirements of Subsection IWE of ASME Section XI, 1980 Edition through and including the Winter 1981 Addenda (and later Editions/Addenda) have not been imposed by additional amendments to 10CFR50, therefore, Fermi-2's first ten (10) year inspection interval will not address Class MC components.

PART - E
APPENDIX A
EXCERPT FROM

SELECTION DOCUMENT FOR ISI CLASS 1
PIPING WELDS, CATEGORY B-J

ENRICO FERMI ATOMIC POWER PLANT
UNIT 2

Prepared for:
Detroit Edison Company

Prepared by:
NUTECH Engineers, Inc.
Chicago, Illinois

DET-16-0206
Revision D
(50.4016.0206)

SELECTION DOCUMENT FOR ISI CLASS 1
PIPING WELDS, CATEGORY B-J

ENRICO FERMI ATOMIC POWER PLANT
UNIT 2

Prepared for:
The Detroit Edison Company

Prepared by:
NUTECH Engineers, Inc.
Chicago, Illinois

Prepared by:

Richard C. Bean
R. C. Bean
Project Engineer

Approved by:

JMC for J. B. Martin
J. B. Martin, P.E.
Engineering Director

Approved by:

John M. Clauss
J. M. Clauss, P.E.
Engineering Manager

Date: February 19, 1985

ABBREVIATIONS FOR PIPING COMPONENT DESCRIPTIONS

<u>REFERENCE KEY</u>	<u>PIPING COMPONENT DESCRIPTIONS</u>
CP	Cap
CR	Cross
E	Elbow
FH	Flued Head
FLNG	Flange
NOZ	Nozzle
P	Pipe
PenP	Penetration Pipe
R	Reducer
REDT	Reducing Tee
SE	Safe End
SWOL	Sweepolet
T	Tee
TRANS	Transition
V	Valve

1.0

INTRODUCTION

The purpose of this document is to identify ISI Class 1, pressure retaining piping welds (Category B-J) selected for Inservice Inspection (ISI) at Enrico Fermi Atomic Power Plant, Unit 2.

Section 2.0 of this document contains a summary of the examination requirements. The tables in Section 2.0 summarize the total number of welds potentially subject to examination and itemize the welds selected for examination.

A note of clarification regarding this weld selection document has been included in Section 3.0.

2.0 ISI CLASS 1 PIPING WELD SELECTIONS

2.0.1 Regulatory Requirements

In accordance with 10CFR 50.55a (b)(2)(ii), the extent of examination for Code Class 1 piping welds may be determined by the requirements in the 1974 Edition through and including the Summer 1975 Addenda of Section XI or other requirements the NRC may adopt. The Detroit Edison Company has elected to implement the requirements of the 1980 Edition through and including the Winter 1980 Addenda of Section XI for ISI Class 1 piping.

Per Table IWB-2500-1, Examination Category B-J, the extent of examination shall include the following:

1. All terminal ends in each pipe or branch run connected to vessels,
2. All terminal ends and joints in each pipe or branch run connected to other components where the stress levels exceed the following limits under loads associated with specific seismic events and operational conditions:
 - (a) primary plus secondary stress intensity range of $2.4 S_m$ for ferritic and austenitic steel (high stress intensity);
 - (b) cumulative usage factor U of 0.4;
 - (c) Primary plus secondary stress intensity range of $2.1 S_m$ for ferritic and austenitic steel (moderate stress intensity).

3. All dissimilar metal welds between combinations of:
 - (a) carbon or low alloy steels to high alloy steels;
 - (b) carbon or low alloy steels to high nickel alloys; and
 - (c) high alloy steels to high nickel alloys.

4. Additional piping welds⁽¹⁾ (circumferential butt welds or branch connections) so the total number of welds selected for examination equals a minimum of 25%.

The total number of welds in the system and 25% of the total number of welds in a system are listed at the top of each weld selection table (Tables 2.0-2 through 2.0-15). The 25% number is a target value to help ensure that the selected welds are uniformly distributed. The actual number of welds selected in each system may be slightly higher or lower than the target value provided that 25% of the total number of welds in all systems are selected. The totals for all systems are provided at the end of Table 2.0-1.

5. Longitudinal welds intersecting the circumferential welds required to be examined.

(1) There are no ISI Class 1 socket welds subject to surface and/or volumetric examination.

2.0.2 Category B-F and Category B-J Overlap

Note that terminal ends in each pipe or branch run connected to the reactor vessel and dissimilar metal welds have been included in the extent of Category B-J examination. Since terminal ends at containment penetrations are not considered terminal ends connected to vessels, there are no other terminal ends (connected to vessels) of interest. See Section 3.0 for additional information.

TABLE 2.0-1
 ISI CLASS I WELD COUNT SUMMARY

Isometric Number (Rev. no.)	Number of Welds by Item Number						
	B9.11	B9.12	B9.21	B9.22	B9.31	B9.32	B9.40
<u>System: Core Spray</u>							
6M721-3052-5	23	0	0	0	0	0	0
6M721-3053-5	23	0	0	0	0	0	0
Total	<u>46</u>						
<u>System: Feedwater</u>							
6M721-3536-5	52	0	0	0	0	0	0
6M721-3537-5	53	0	0	0	0	0	0
Total	<u>105</u>						
<u>System: High Pressure Coolant Injection</u>							
6M721-2297-5	14	0	0	0	0	0	0
6M721-3536-5	8	0	0	0	0	0	0
Total	<u>22</u>						
<u>System: Main Steam</u>							
6M721-5352-5	23	25	0	0	4	0	0
6M721-5353-5	25	28	0	0	6	0	0
6M721-5354-5	26	30	0	0	5	0	0
6M721-5355-5	21	26	0	0	2	0	0
Total	<u>95</u>	<u>109</u>			<u>17</u>		

TABLE 2.0-2
Core Spray System Selections, Item No. B9.11

Weld Total = 46

25% of 46 = 12

WELD NUMBER	COMPONENT DESCRIPTION	SELECTION BASIS	INTERSECTING LONGITUDINAL SEAM WELD (B9.12)
1. N5B	SE-NOZ	Terminal End, Dissimilar Metal, Moderate Stress Intensity	None
2. N5A	SE-NOZ	Terminal End, Dissimilar Metal, Moderate Stress Intensity	None
3. SW-E21-3052-3WN	E-P	High Stress Intensity	None
4. SW-E21-3052-3WP	P-E	High Stress Intensity	None
5. SW-E21-3053-3WN	E-P	High Stress Intensity	None
6. SW-E21-3053-3WP	P-E	High Stress Intensity	None
7. SW-E21-3052-4WOX	TRANS-SE	Dissimilar Metal	None
8. SW-E21-3053-4WOX	TRANS-SE	Dissimilar Metal	None
9. FW-E21-3052-4WF1	R-P	Moderate Stress Intensity	None
10. FW-E21-3053-4WF2	R-P	Moderate Stress Intensity	None
11. SW-E21-3053-4WK	E-R	Moderate Stress Intensity	None
12. SW-E21-3052-4WK	E-R	Moderate Stress Intensity	None

SUMMARY OF SELECTED WELDS

1. FW-E21-3052-N5B
2. SW-E21-3052-3WN
3. SW-E21-3052-3WP
4. FW-E21-3052-4WF1
5. SW-E21-3052-4WK
6. SW-E21-3052-4WOX
7. FW-E21-3053-N5A
8. SW-E21-3053-3WN
9. SW-E21-3053-3WP
10. SW-E21-3053-4WOX
11. FW-E21-3053-4WF2
12. SW-E21-3053-4WK

DET-16-0211
Revision A
50.4016.0211

ISI CLASS 1
STRESS REPORT REVIEWS

Fermi Unit 2

Prepared for:
Detroit Edison Company

Prepared by:
NUTECH Engineers, Inc.
Chicago, Illinois

Prepared by: Richard C. Bean
R. C. Bean

Issued by: J. W. Kim
J. W. Kim, P.E.

Approved by: John M. Clauss
J. M. Clauss, P.E.
Engineering Manager

Date: December 21, 1984

1.0

INTRODUCTION

The purpose of this document is to identify Inservice Inspection Class 1 piping welds in the following categories; high stress intensity, moderate stress intensity, and high cumulative usage factor for the Enrico Fermi Atomic Power Plant, Unit 2. This document is an input document for Document DET-16-0206, "Selection Document for ISI Class 1 Piping Welds, Category B-J."

This document is the deliverable associated with NUTECH tasks DET-4306.06 and XDE-5002.

2.0

STRESS REPORT REVIEWS

Each ISI Class 1 stress report is assigned a separate sub-section in this section of the document. Each sub-section is a self-contained review of a stress report. The welds identified in each stress report review shall be entered in the Selection Document for ISI Class 1 Piping Welds, Category B-J.

2.1 STRESS REPORT NUMBER: CS-01
STRESS REPORT TITLE: Core Spray Piping Inside
Containment

2.1.1 COMPLETE STRESS REPORT NUMBER: EMD-033969-CS-01
STRESS REPORT REVISION: 02, Addendum B Dated 10/08/84

2.1.2 SUMMARY OF DESIGN CONDITIONS

Material: A333 GR6
Maximum Operating Temperature: 546°F
Design Temperature: 575°F
Reference Document: CS-01 PG 15 Revision: 02

2.1.3 DESIGN STRESS INTENSITY VALUES FROM ASME SECTION III
APPENDICES

EDITION AND ADDENDA: 1980 Edition through and including
the Winter 1980 Addenda

Table: I-1.1

Pages: 6 and 7

S_m (ksi):	18.9 @ 500°F	Interpolation
	17.3 @ 600°F	17.7 @ 575°F

2.1.4 SUMMARY OF SECTION XI REQUIREMENTS

Edition and Addenda: 1980 Edition through and including
the Winter 1980 Addenda

Table: IWB-2500-1

Category: B-J, Pressure Retaining Welds in Piping

Note (1)(b) All terminal ends and joints in
each pipe or branch run connected
to other components where the
stress levels exceed the follow
ing limits under loads associated

with specific seismic events and operational conditions:

- (1) primary plus secondary stress intensity of $2.4 S_m$, for ferritic and austenitic steel, and
- (2) cumulative usage factor (u) of 0.4.

2.1.5 STRESS REPORT DETAILS

The subject stress report was prepared in accordance with ASME Section III, 1977 Edition through and including the Winter 1979 Addenda (See CS-01, pg. 11). The equation of interest in the stress report for primary plus secondary stress intensity range is Equation 10 (Section III, 77W79, NB-3653.1, pg. 145). The cumulative usage factor is clearly labeled in the stress report output.

2.1.6 SUMMARY OF LIMITS

- o High Stress Intensity Range, Primary plus Secondary

$$S_n > 2.4 S_m = 2.4 (17.7 \text{ ksi}) @ 575^\circ\text{F}$$

$$S_n > 42,480 \text{ psi}$$

- o Moderate Stress Intensity Range, Primary plus Secondary

$$S_n > 2.1 S_m = 2.1 (17.7 \text{ ksi}) @ 575^\circ\text{F}$$

$$37,170 < S_n < 42,480 \text{ psi}$$

NOTE: Moderate Stress Intensity Range is arbitrarily defined by Detroit Edison for the selection of Class 1 welds. This is not a Code requirement.

o Cumulative Usage Factor

$$u > 0.4$$

2.1.7 ISI CLASS 1 NODE POINTS OF INTEREST

Microfiche Card Number: 1-B & 1-C

<u>NODE POINT</u>	<u>EQUATION 10</u>	<u>PG</u>	<u>CUMMULATIVE USAGE FACTOR</u>	<u>PG</u>	<u>COMMENTS (WELD NUMBER)</u>
2	-----	Outside	S&L's Scope	-----	See Class 1 Flued Heads (Section 2.23)
7	21,100	1-B;61	.343 E-03	1-B;62	
10A	24,972	1-B;71	.135 E-02	1-B;72	
10B	26,898	1-B;76	.167 E-02	1-B;77	
20A	28,912	1-B;121	.197 E-02	1-B;122	
20B	25,857	1-B;126	.142 E-02	1-B;127	
25A	27,277	1-B;146	.170 E-02	1-B;147	
25B	32,281	1-B;151	.258 E-02	1-B;152	
50	34,238	1-B;191	.462 E-02	1-B;192	
55	34,989	1-C;206	.513 E-02	1-C;207	

<u>NODE POINT</u>	<u>EQUATION 10</u>	<u>PG</u>	<u>CUMMULATIVE USAGE FACTOR</u>	<u>PG</u>	<u>COMMENTS (WELD NUMBER)</u>
60A	48,543	1-C;236	.111 E-01	1-C;237	High Stress SW-E21-3053-3WP
60B	46,272	1-C;241	.907 E-02	1-C;242	High Stress SW-E21-3053-3WN
70	35,626	1-C;256	.506 E-02	1-C;257	
75A	35,431	1-C;291	.260 E-02	1-C;292	
90A	30,166	1-C;316	.219 E-02	1-C;317	
90B	24,076	1-C;326	.102 E-02	1-C;327	
95	41,968	1-C;336	.376 E-01	1-C;337	Moderate Stress FW-E21-3053-4WF2 SW-E21-3053-4WK
99	31,372	1-C;346	.742 E-02	1-C;347	
100	37,419	1-C;351	.163 E-01	1-C;352	Moderate Stress N5A

2.1.8 PREPARER AND REVIEWER

This section (2.1) was

PREPARED BY: Richard C. Bean DATE: Dec. 4, 1984

REVIEWED BY: John M. Clauys DATE: Dec. 4, 1984

PART - E
APPENDIX B
EXCERPT FROM

SELECTION DOCUMENT FOR ISI CLASS 2
PIPING WELDS, CATEGORY C-F

ENRICO FERMI ATOMIC POWER PLANT
UNIT 2

Prepared for:
Edison Company

Prepared by:
NUTECH Engineers, Inc.
Chicago, Illinois

DET-16-0204
Revision C
(50.4016.0204)

SELECTION DOCUMENT FOR ISI CLASS 2
PIPING WELDS, CATEGORY C-F

FERMI 2

Prepared for:
Detroit Edison Company

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Chicago, Illinois

Prepared by:

Richard C. Bean
R. C. Bean
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Issued by:

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Approved by:

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L. Sage
Engineering Manager

Date: November 22, 1985

ABBREVIATIONS FOR PIPING COMPONENT DESCRIPTIONS

<u>REFERENCE ID</u>	<u>PIPING COMPONENT DESCRIPTIONS</u>
CIRC	Circumferential
CP	Cap
CR	Cross
E	Elbow
FH	Flued Head
FL	Flange
NOZ	Nozzle
P	Pipe
PEN	Penetration
PU	Pump
RED	Reducer
KEDL	Reducing Elbow
RESINT	Pipe Restraint Insert (Found in Main Steam Lines)
SE	Safe End
SEAM	Longitudinal Seam Weld
SE EXT	Safe End Extension
SWOL	Sweepolet
T	Tee
TS	Thermal Sleeve
V	Valve
WOL	Weldolet

INTRODUCTION

The purpose of this document is to identify ISI Class 2 pressure retaining piping welds in Examination Category C-F selected for Inservice Inspection (ISI) at Fermi 2 Power Station. The weld selections identified in this document address all the ISI Class 2 systems, as shown on the ISI Classification Boundary drawings (ISI-FOSS).

This document was developed from information contained in Document No. DET-16-0208, "Equivalent of One Loop Calculation for ISI Class 2 Piping Welds" which identifies the minimum number (quantity) of welds to be examined during an interval; Document No. DET-16-0213, "ISI Class 2 Stress Report Reviews" which lists specific welds that must be examined based on the stress at the weld, and the weld selection process for terminal ends, dissimilar metal, and random welds.

Section 2.0 of this document defines the basis for weld selection and identifies the welds selected for examination.

WELD SELECTION CRITERIA

In accordance with 10CFR50.55a(b)2(iv):

- (A) Code Class 2 pipe welds in Residual Heat Removal Systems, Emergency Core Cooling Systems, and Containment Heat Removal Systems shall be examined. The extent of examination for these systems shall be determined by the requirements of paragraph IWC-1220, Table IWC-2520 Category C-F and paragraph IWC-2411 in the 1974 Edition and Addenda through the Summer 1975 Addenda of Section XI of the ASME Code.
- (B) For a nuclear power plant whose application for a construction permit is docketed prior to July 1, 1978, the extent of examination for Code Class 2 pipe welds may be determined by the requirements of paragraph IWC-1220, Table IWC-2520, Category 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 or other requirements the Commission may adopt.

An alternate methodology has been developed for Class 2 weld selection that combines the requirements of the 1974 Edition through and including the Summer 1975 Addenda and the 1980 Edition through and including the Winter 1980 Addenda. This methodology, as described in Section 2.0.1, is presented in EF2 FSAR Section 5.2.8.7, Amendment 54 and has been approved by the NRC in NUREG-0798, the EF2 Safety Evaluation Report.

2.0.1 Alternate Provisions

Class 2 Weld Selections will be performed to the following alternate program. The extent of examination (number of welds to be examined) will be based upon the rules of paragraph IWC-2411 of Section XI, 1974 Edition through the Summer 1975 Addenda.

A. Weld Quantity Determination

The quantity of Class 2 welds to be examined in the first ten-year interval is determined by application of the following steps:

1. Determine which portions of Class 2 systems are single stream vs. multiple stream (piping lines of the same size, geometry and function that perform redundant functions).
2. For multiple streams the average number of welds per stream is the "equivalent of one loop".
3. In systems which circulate reactor coolant, 25% of the welds¹ on a single stream or the equivalent of one loop shall be selected for examination in accordance with the guidance provided in Section B.
4. In systems which circulate other than reactor coolant, 12.5% of the welds¹ on a single stream or the equivalent of one loop shall be

¹ Pipe to pipe welds that are at structural discontinuities and dissimilar metal pipe to pipe welds shall be included in the weld total. All other pipe to pipe welds shall not be included.

selected for examination in accordance with the guidance provided in Section B.

5. For multiple streams, the number of examinations shall be spread equally to the extent practical among each of the streams and if the number of areas subject to examination in a specific category is less than the number of streams, at least one such area shall be examined.
6. Specific details on steps 1-5, on a system basis, are provided in document DET-16-0208, "Equivalent of One Loop Calculation for Class 2 Piping Welds."
7. The equivalent of one Loop calculation defines the physical distribution of welds in the weld selection. The weld selection criteria (2.0.1.B.1) may dictate that certain welds be examined based on stress or other criteria that are independent of the physical distribution requirements. Since every Loop should be represented by at least one weld [IWC-2411(d)], the selection rules and the physical distribution requirements may not be compatible (in terms of minimizing the number of welds examined).

Since the weld selection rules (as interpreted by NUTECH) may require additional welds to be inspected, Detroit Edison may wish to consider a relief request from these requirements.

B. Specific Weld Selection Guidance

In lieu of a random selection process [IWC-2411(e) of 74S75] the following criteria will be utilized for weld selection:

1. Welds at locations where the stresses under the loadings resulting from Normal and Upset plant conditions are moderate or high stress (i.e., if the sum of Eqs. (9) and (10) in NC-3652 exceeds $0.7 (1.2S_H + S_A)$);

These welds are identified in Document No. DET-16-0213, "ISI Class 2 Stress Report Reviews".

2. Each type of terminal end in each system will be selected. In the Core Spray system, for example, there is a total of 8 terminal ends corresponding to the suction and discharge on each pump. Examining all eight terminal ends would be redundant and skew the examination sample to those particular welds. A more meaningful examination program would result from selecting only one pump suction and one pump discharge terminal end for examination.

Terminal ends are the extremities of piping runs that connect to structures, components (such as vessels, pumps, valves), or pipe anchors, each of which act as rigid restraints or provide at least two degrees of restraint to piping thermal expansion. See Appendix A for a detailed discussion of Detroit Edison's terminal end criteria.

3. Dissimilar Metal Welds

4. Additional welds (random selections) at structural discontinuities to achieve the required examination percentages identified in Section 2.0.1.A.

Examinations will be performed per the examination requirements of Table 1WB-2500-1, Examination Category C-F of the 1980 Code Edition through and including the Winter 1980 addenda (Footnote 1 excluded).

The same welds initially selected for examination shall be re-examined during subsequent inspection intervals.

By focusing the examination program on those welds having a historically higher probability of failure, this inspection program is more likely to detect incipient generic defects. Examination of the same welds each inspection interval permits meaningful data trending not possible when different welds are being examined each interval.

Table 2.0-1, "ISI Class 2 Piping Weld Summary, Welds Selected for Examination" is an overview of the number of ISI Class 2 piping welds to be examined during an interval. Tables 2.0-2 through 2.0-8 identify the number of welds to be examined in each system, the distribution of the welds in the system by loop and Item Number, and the specific welds selected.

DET-16-0204
Revision C

TABLE 2.0-1

ISI CLASS 2 PIPING WELD SUMMARY
WELDS SELECTED FOR EXAMINATION

System	Number of Welds to be Examined per Interval	Number of Welds by Item Number									
		C5.11		C5.12		C5.21		C5.22		C5.31	
		C-F	C-F*(1)	C-F	C-F*	C-F	C-F*	C-F	C-F*	C-F	C-F*
CRD	4	-	-	-	-	4	-	-	-	-	-
CGC	11	-	11	-	-	-	-	-	-	-	-
CS	16	-	13	-	-	-	1	-	-	-	2
HPCI	30	14	5	-	-	5	5	1	-	-	-
MS	7	-	-	-	-	6	-	-	-	1	-
RHR	73	37	-	-	-	30	-	-	-	6	-
SLC	<u>16</u>	<u>-</u>	<u>16</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
TOTAL	157	49	45			47	6	1		7	2

(1) Examination Category C-F* is used to identify certain ISI Class 2 Piping Welds in an ISI program based on Section XI Editions and Addenda subsequent to the 1977 Edition. Examination Category C-F* is the same as C-G (Pressuring retaining welds in piping, pumps and valves in systems which circulate other than reactor coolant) in the 1974 Edition through and including the Summer 1975 Addenda.

DET-16-0204
Revision B

2-11

TABLE 2.0-5

HPCI Selections, Category C-F
Total Welds to be Examined per Interval: 19

Loop Number (1)	Weld Number	Component Description	Selection Basis	Intersecting Longitudinal Seam Weld
A. Item No. C5.11				
HPCI-F01	1.	SW-E41-3162-1WB	P-C	No
HPCI-F02	2.	FW-E41-3162-9WF1	P-E	No
	3.	SW-E41-3162-3WE	T-P	No
	4.	FW-E41-3162-1W2	E-P	No
	5.	SW-E41-3162-1WU	P-E	No
	6.	SW-E41-3162-1WK	T-P	No
	7.	SW-E41-3162-1WJ	Fing-T	No
	8.	FW-E41-3162-9W0	E-V	Terminal End (A)	No
HPCI-F03	9.	FW-E41-3162-4W5	E-P	No
	10.	FW-E41-3162-11WF1	P-T	No
HPCI-F04	11.	FW-E41-3162-11WF4	T-Red	No
	12.	FW-E41-3162-11W0	P-E	SW-E41-3162-11W0LD
HPCI-F05	13.	SW-E41-3162-11WC	Red-E	No
	14.	FW-E41-3162-11WF5	Red-Red	No

(1) See Document DET-16-0208

DET-16-0204
Revision B

TABLE 2.0-5 (Cont'd)

HPCI Selections, Category C-F
Total welds to be Examined per Interval: 19

Loop Number (1)	Weld Number	Component Description	Selection Basis	Intersecting Longitudinal Seam Weld	
B. Item No. C5.21					
HPCI-F06	15.	FW-E41-3172-0W1	V-P	Terminal End (B)	No
	16.	FW-E41-3172-3W4	E-P	Random	No
	17.	FW-E41-3172-6W7	E-P	Random	No
	18.	FW-E41-3172-UW8	V-P	Random	No
HPCI-F07	19.	SW-E41-3172-7WH	T-P	Random	No

2-12

(1) See Document DET-16-0208

DET-16-0204
REVISION A

TABLE 2.0-5 (Cont'd)

HPCI Selections, Category C-F*
Total Welds to be Examined per Interval: 10

Loop Number ⁽¹⁾	weld Number	Component Description	Selection Basis	Intersecting Longitudinal Seam Weld
A. Item No. C5.11				
HPCI-G02	1.	SW-E41-3163-8WR	P-REDE	No
	2.	FW-E41-3163-0W9	P-E	No
HPCI-G03	3.	FW-E41-3163-8W0	REDE-PUMP	No
HPCI-G06	4.	SW-E41-5373-GW3	E-P	No
HPCI-G07	5.	FW-E41-3163-7W0	P-V	No
B. Item C5.21				
HPCI-G01	6.	FW-E41-3169-2W0	P-V	No
HPCI-G04	7.	FW-E41-3167-0W1	PUMP-P	No
HPCI-G05	8.	FW-E41-3167-9W0	P-V	No
	9.	FW-E41-3167-1W2	E-P	No
	10.	SW-E41-3167-2WC	P-E	No

2-13

(1) See Document DET-16-0208

DET-16-0204
REVISION A

TABLE 2.0-5 (Cont'd)

HPCI Selections, Category C-F*
Total Welds to be Examined per Interval: 10

<u>Loop Number (1)</u>	<u>Weld Number</u>	<u>Component Description</u>	<u>Selection Basis</u>	<u>Intersecting Longitudinal Seam Weld</u>
MODERATE AND HIGH STRESS WELDS:	None			
REPRESENTATIVE TERMINAL ENDS:	A.	Valve F049; F021		
	B.	Valve F003; F001		
	C.	Valve F008; F005; F007; F006		
	D.	Valve F042; F045; F041; F004; F019		
	E.	Pump C001B Suction		
	F.	Pump C001A Discharge		
DISSIMILAR METAL WELDS:	None			

2-14

(1) See Document DET-16-0208

Appendix A

TERMINAL END CRITERIA

TERMINAL END CRITERIA - ISI CLASS 2
PRESSURE RETAINING PIPING WELDS

A.1 Section XI Definition of a Terminal End Per Table
IWC-2500-1, Examination Category C-F, Note (1)(e):

"terminal ends are the extremities of piping runs that connect to structures, components (such as vessels, pumps, valves), or pipe anchors, each of which act as rigid restraints or provide at least two degrees of restraint to piping thermal expansion"

A.2 Vessel and Pump Terminal Ends

Representative terminal ends associated with the following components have been included in the weld selection:

- Core Spray Pumps
- HPCI Main Pump
- HPCI Booster Pump
- RHR Pumps
- RHR Heat Exchanger

A.3 Pipe Anchor Terminal Ends

All Class 2 anchors are located at major components such as pumps and heat exchangers except for the following piping anchors:

<u>Anchor</u>	<u>Description</u>
@ Hydrogen Recombiner	There is no pressure retaining piping weld associated with the anchor

<u>Anchor</u>	<u>Description</u>
e T48-2095 G18	There is no pressure retaining piping weld associated with the anchor
e T48-2097-G19	There is no pressure retaining piping weld associated with the anchor
near Ell-3151-G20	There is no pressure retaining piping weld associated with the anchor
near Ell-3146-G30	There is no pressure retaining piping weld associated with the anchor
near Ell-3158-G52	There is no pressure retaining piping weld associated with the anchor
near Ell-3158-G22	There is no pressure retaining piping weld associated with the anchor

A.4 Two Degrees of Restraint to Piping Thermal Expansion Terminal Ends

Any piping weld consisting of a thick wall component welded to a thin wall component was evaluated to determine whether the component should be considered a terminal end. The following components were considered:

- Elbows
- Flanges
- Tees
- Valves

The elbow, flange, and tee components were not considered terminal ends because they are not significantly thicker than the piping in the system and the fitting's weld prep counterbore is identical to the pipes with a smooth transition to the slightly thicker

section (e.g. 6M721-3158-1, the schedule of the piping and fittings is identical.).

This leaves only welds between valves and other components as potential terminal ends. All valves have been considered terminal ends since the wall thickness of a valve is generally much thicker than other piping components. Valves were grouped together by system temperature transients since they only act as terminal ends during a temperature transient. One valve from each temperature transient group (as identified in Table A-11) has been included in the weld selection as a terminal end.

TABLE 4-1
ESS CLASS 2 and 3 TEMPERATURE AND GROUPINGS

SYSTEM NUMBER	LOOP #	STARTING DRAWING	SYSTEM COORDINATES	SYSTEM NUMBER	STARTING NO.	REV.	ON PROFIT	SYSTEM NUMBER	TYPE	TEMPERATURE	SYSTEM NUMBER
101	101	101-1	101-1	101-1	101-1	101-1	101-1	101-1	101-1	101-1	101-1
102	102	102-1	102-1	102-1	102-1	102-1	102-1	102-1	102-1	102-1	102-1
103	103	103-1	103-1	103-1	103-1	103-1	103-1	103-1	103-1	103-1	103-1

55C

When more than one value is listed, the underlined value is used to determine the location, drawing, schematic description, etc. The other values are not underlined and assumed to be similar to the underlined value.

The Temperature Transition Group was assigned based on the designated temperature transition that the system could experience during its service life. The system process diagram in Chapter 6 of the FGD was used to determine the Gas Spray, APCD, and both groups. The APCD group was set based on engineering judgment.

DET-16-0208
Revision 1

EQUIVALENT OF ONE LOOP CALCULATION
FOR ISI CLASS 2 PIPING WELDS

FERMI 2

Prepared for:
Detroit Edison Company

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Issued by:

John M. Clauss for
J. W. Kin, P.E.
Project Engineer

Approved by:

John M. Clauss
J. M. Clauss, P.E.
Engineering Manager

Date:

May 7, 1985

X - F or G where F is for systems which circulate reactor coolant and G is for systems which circulate other than reactor coolant. The F corresponds to Examination Category C-F and the G corresponds to Examination Category C-G from ASME Section XI, 1974 Edition through and including the Summer 1975 Addenda.

Y - Numerical sequence of each single or multiple loop in the system.

Z - Alphabetical sequence of each parallel loop within a multiple loop.

1.0.3 Weld Quantity Determination

The quantity of Class 2 welds to be examined in the first ten-year interval is determined by application of the following steps:

- a) Determine which portions of Class 2 systems are single stream vs. multiple stream (piping lines of the same size, geometry and function that perform redundant functions).
- b) For multiple streams, the average number of welds per stream is the "equivalent of one loop".
- c) In systems which circulate reactor coolant, 25% of the welds¹ on a single stream or the equivalent of one loop shall be selected for examination.
- d) In systems which circulate other than reactor coolant, 12.5% of the welds¹ on a single stream or the equivalent of one loop shall be selected for examination.

- e) For multiple streams, the number of examinations shall be spread equally to the extent practical among each of the streams and if the number of areas subject to examination in a specific category is less than the number of streams, at least one such area shall be examined.

1.0.4 Equivalent of One Loop Calculation

Loop calculations for each ISI Class 2 piping system subject to the requirements of Examination Category C-F are contained in Sections 2.0 through 8.0 of this document.

PART - E
APPENDIX C

CLASS 1, 2 AND 3 LOOP SELECTIONS
FOR
COMPONENT SUPPORTS

ENRICO FERMI ATOMIC POWER PLANT
UNIT 2

CLASS - I MULTIPLE LOOP IDENTIFICATION
COMPONENT SUPPORTS

Plant System/P&ID No.	PIS No.	Isometric Dwg.	Iso Dwg. Description	No. of Supports	Multiple Loop No.
Nuclear Boiler System 6M721-2089	B21	6M721-5352-5	Main Steam Loop-"A"	3	ML-1-1
		6M721-5353-5	Loop-"B"	4*	ML-1-1
		6M721-5343-5	Loop-"C"	4	ML-1-1
		6M721-5355-5	Loop-"D"	3	ML-1-1
Reactor Recirc. System 6M721-2833	B31	6M721-5357-5	Recirc. Suction & Disch. Loop-"A"	6*	ML-1-2
		6M721-5356-5	Recirc. Ring Header Loop-"A"	2*	ML-1-7
		6M721-5359-5	Recirc. Suction & Disch. Loop-"B"	6	ML-1-2
		6M721-5358-5	Recirc. Ring Header Loop-"B"	2	ML-1-7
RHR Div. 1 & Div. 2	E11	6M721-2298-5	Low Pressure Coolant Injection {Div. 1}	4*	ML-1-3
		6M721-2327-5	Low Pressure Coolant Injection {Div. 2}	4	ML-1-3
Core Spray System 6M721-2034	E21	6M721-3052-5	Core Spray Piping (Division 1)	4*	ML-1-4
		6M721-3053-5	Core Spray Piping (Division 2)	4	ML-1-4
Reactor Water Cleanup 6M721-2046	G33	6M721-5351-5	RWCU-Suction From Recirc.-Loop-"A"	2	ML-1-5
			RWCU-Suction From Recirc.-Loop-"B"	3*	ML-1-5
Feedwater System 6M721-2023	N21	6M721-3536-5	Feedwater Piping Inside Drywell (North)	10*	ML-1-6
		6M721-3537-5	Feedwater Piping Inside Drywell (South)	10	ML-1-6
<p>* = Loop selected with the highest number of supports for determination of quantity to be inspected.</p>					

TABLE B-2.3-r2
CLASS - 2 MULTIPLE LOOP IDENTIFICATION
COMPONENT SUPPORTS

Plant System/P&ID No.	PIS No.	Isometric Dwg.	Iso Dwg. Description	No. of Supports	Multiple Loop No.
Control Rod Drive Header 6M721-5449	C11	6M721-5372-5	Scram Discharge Vol. "A"-North	11*	ML-2-1
		6M721-5375-5	Scram Discharge Vol. "B"-South	10	ML-2-1
Residual Heat Removal Sys. 6M721-2083 6M721-2084	E11	6M721-3146-5	RHR Heat Exchanger Return To Drywell Penet. (North)	12	ML-2-2
		6M721-3151-5	RHR Heat Exchanger Return To Drywell Penet. (South)	16*	ML-2-2
		6M721-3154-5	RHR Pump Suction From Suppression Chamber (North)	6*	ML-2-3
		6M721-3153-5	RHR Pump Suction From Suppression Chamber (South)	6	ML-2-3
		6M721-3157-5	RHR Pump Discharge To Heat Ex. (North)	14*	ML-2-4
		6M721-3177-5	RHR Pump Discharge To Heat Ex. (South)	12	ML-2-4
		6M721-3158-5	RHR Pump North Discharge To Heat Ex. (North)	12*	ML-2-5
		6M721-3158-5	RHR Pump South Discharge To Heat Ex. (South)	10	ML-2-5
		6M721-3159-5	RHR Containment Spray (North)	5	ML-2-6
		6M721-3164-5	RHR Containment Spray (South)	10*	ML-2-6
		6M721-3160-5	RHR Test & Suppression Chamber Spray Line (North)	6	ML-2-7
		6M721-3161-5	RHR Test & Suppression Chamber Spray Line (South)	7*	ML-2-8
		6M721-4612-5	Relief Line From RHR HT. Ex. (North)	13*	ML-2-8
		6M721-4611-5	Relief Line From RHR HT. Ex. (South)	13	ML-2-8
		Core Spray System	E21	6M721-3144-5	Pump Disch. To RPV Drywell Penetration (North)	21	ML-2-9
6M721-3147-5	Pump Disch. To RPV Drywell Penetration (South)			22*	ML-2-9
6M721-3145-5	Core Spray Test Line (North)			5*	ML-2-10
6M721-3150-5	Core Spray Test Line (South)			4	ML-2-10
6M721-3148-5	Core Spray Pump Suction (North)			19*	ML-2-11
6M721-3149-5	Core Spray Pump Suction (South)			12	ML-2-11

TABLE B-2.3-C2
 CLASS - 2 MULTIPLE LOOP IDENTIFICATION
 COMPONENT SUPPORTS

<u>Plant System/P&ID No.</u>	<u>PIS No.</u>	<u>Isometric Dwg.</u>	<u>Iso Dwg. Description</u>	<u>No. of Supports</u>	<u>Multiple Loop No.</u>
Core Spray System	N11	6M721-3258-5	Main Steam From 2nd MSIV To	9	ML-2-12
		6M721-3259-5	3rd MSIV - Loop-"A"	7	ML-2-12
			- Loop-"B"	1C*	ML-2-12
			- Loop-"C"	9	ML-2-12
			- Loop-"D"		
Combustible Gas Control	T48	6M721-2095-5	CGC Return Header To Torus - Division 1	39	ML-2-13
		6M721-2097-5	CGC Return Header To Torus - Division 2	43*	ML-2-13

* = Loop selected with the highest number of supports for determination of quantity to be inspected.

TABLE B-2.3-C3
 CLASS - 3 MULTIPLE LOOP IDENTIFICATION
 COMPONENT SUPPORTS

Plant System/P&ID No.	PIS No.	Isometric Dwg.	Iso Dwg. Description	No. of Supports	Multiple Loop No.
Emergency Equipment Cooling Water 6M721-5357 (Div. 1) 6M721-5444 (Div. 2)	P44/45	6M721-3558	EEOW Return (Div. 1)	3	ML-3-1
		6M721-3048	EEOW Return (Div. 2)	4*	ML-3-1
		6M721-3351	EEOW Pump Section Bypass and Discharge (Div. 1)	38*	ML-3-2
		6M721-3084	EEOW Pump Suction (Div. 2)	34	ML-3-2
		6M721-3368	EEOW Pump Discharge and Bypass (Div. 2)		
		6M721-3559	EEOW Supply to Drywell (Div. 1)	5*	ML-3-3
		6M721-3047	EEOW Supply to Drywell (Div. 2)	4	ML-3-3
		6M721-3347	EEOW Return to Heat Ex. (Div. 1)	42*	ML-3-4
		6M721-3189	RBCOW & EEOW Return Header (Div. 1)		
		6M721-3348	EEOW Return to Heat Ex. (Div. 2)		
		6M721-3346	RBCOW & EEOW Return Header (Div. 2)	41	ML-3-4
		6M721-3345	RBCOW & EEOW Return Header (Div. 2)		
		6M721-3340	RBCOW & EEOW Supply Header to Drywell (Div. 1)	33*	ML-3-5
		6M721-3362	RBCOW & EEOW Supply Header (Div. 1)		
		6M721-3336	RBCOW & EEOW Supply Header (Div. 2)	30	ML-3-5
6M721-3337	RBCOW & EEOW Supply Header (Div. 2)				
Emergency Equipment Water (Ht. Exch.) 6M721-5357 (Div. 2) 6M721-5444 (Div. 1)	P45	6M721-3360	Service Water Return to EEOW Heat Ex. (Div. 1)	16	ML-3-6
		6M721-3353	Service Water Return to EEOW Heat Ex. (Div. 2)	28*	ML-3-6
		6M721-3359	Service Water Supply to EEOW Heat Ex. (Div. 1)	10	ML-3-7
		6M721-3352	Service Water Supply to EEOW Heat Ex. (Div. 2)	20*	ML-3-7

TABLE B-7.3-C3
 CLASS - 3 MULTIPLE LOOP IDENTIFICATION
 COMPONENT SUPPORTS

Plant System/P&ID No.	PIS No.	Isometric Dwg.	Iso Dwg. Description	No. of Supports	Multiple Loop No.
RHR Service Water System 6M721N-2052 (Div. 1) 6M721N-2053 (Div. 2)	E11/P45 R30	6M721N-2183	RHR Service Water Return Division 1	20	ML-3-8
		6M721N-2184	RHR Service Water Return Division 2	21*	ML-3-8
		6M721N-2176	Emergency Diesel Gen. Serv. Water Supply (Div. 1)	24*	ML-3-9
		6M721N-2177	Emergency Diesel Gen. Serv. Water Supply (Div. 2)	23	ML-3-9
		6M721N-2178	Emergency Equip. Service Water Supply (Div. 1)	7*	ML-3-10
		6M721N-2204	Emergency Equip. Service Water Supply (Div. 2)	7	ML-3-10
		6M721N-2179	RHR Service Water Supply (Div. 1)	10*	ML-3-11
		6M721N-2180	RHR Service Water Supply (Div. 2)	10	ML-3-11
		6M721N-2181	Emergency Diesel Gen. Service Water Return (Div. 1)	19*	ML-3-12
		6M721N-2182	Emergency Diesel Gen. Service Water Return (Div. 2)	19	ML-3-12
Residual Heat Removal	E11	6M721-3183	RHR Service Water Supply and Return to Heat Ex. (Div. 1)		ML-3-13
		6M721-3184	RHR Service Water Supply and Return to Heat Ex. (Div. 2)		ML-3-13

TABLE B-2.3-C3
 CLASS - 3 MULTIPLE LOOP IDENTIFICATION
 COMPONENT SUPPORTS

Plant System/P&ID No.	PIS No.	Isometric Dwg.	Iso Dwg. Description	No. of Supports	Multiple Loop No.
Nuclear Boiler System 6M721-2089	B21	6M721-2586-2	Main Steam Relief Valve Discharge Piping (F013M)	3	ML-3-14
		6M721-2587-2	Main Steam Relief Valve Discharge Piping (F013C)	6	ML-3-14
		6M721-2588-2	Main Steam Relief Valve Discharge Piping (F013H)	1	ML-3-14
		6M721-2589-2	Main Steam Relief Valve Discharge Piping (F013J)	3	ML-3-14
		6M721-2590-2	Main Steam Relief Valve Discharge Piping (F013R)	6*	ML-3-14
		6M721-2591-2	Main Steam Relief Valve Discharge Piping (F013B)	4	ML-3-14
		6M721-2592-2	Main Steam Relief Valve Discharge Piping (F013E)	4	ML-3-14
		6M721-2593-2	Main Steam Relief Valve Discharge Piping (F013D)	5	ML-3-14
		6M721-2594-2	Main Steam Relief Valve Discharge Piping (F013C)	3	ML-3-14
		6M721-2595-2	Main Steam Relief Valve Discharge Piping (F013K)	7*	ML-3-14
		6M721-2596-2	Main Steam Relief Valve Discharge Piping (F013F)	6*	ML-3-14
		6M721-4093-2	Main Steam Relief Valve Discharge Piping (F013N)	5	ML-3-14
		6M721-4094-2	Main Steam Relief Valve Discharge Piping (F013L)	4	ML-3-14
		6M721-4095-2	Main Steam Relief Valve Discharge Piping (F013A)	3	ML-3-14
		6M721-4096-2	Main Steam Relief Valve Discharge Piping (F013P)	3	ML-3-14

* = Loop selected with the highest number of supports for determination of quantity to be inspected.

PART - E

APPENDIX D

EF-2 TECHNICAL SPECIFICATIONS
SECTION 3/4/7.5
SNUBBERS

FOR INFORMATION ONLY

PLANT SYSTEMS

3/4.7.5 SNUBBERS

LIMITING CONDITION FOR OPERATION

3.7.5 All* hydraulic and mechanical snubbers shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3. OPERATIONAL CONDITIONS 4 and 5 for snubbers located on systems required OPERABLE in those OPERATIONAL CONDITIONS.

ACTION:

With one or more snubbers inoperable on any system, within 72 hours replace or restore the inoperable snubber(s) to OPERABLE status and perform an engineering evaluation per Specification 4.7.5g. on the attached component or declare the attached system inoperable and follow the appropriate ACTION statement for that system.

SURVEILLANCE REQUIREMENTS

4.7.5 Each snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program in addition to the requirements of Specification 4.0.5.

a. Inspection Types

As used in this specification, type of snubber shall mean snubbers of the same design and manufacturer, irrespective of capacity.

b. Visual Inspections

Snubbers are categorized as inaccessible or accessible during reactor operation. Each of these groups (inaccessible and accessible) may be inspected independently according to the schedule below. The first inservice visual inspection of each type of snubber shall be performed after 4 months but within 10 months of commencing POWER OPERATION and shall include all hydraulic and mechanical snubbers. If all snubbers of each type on any system are found OPERABLE during the first inservice visual inspection, the second inservice visual inspection of that system shall be performed at the first refueling outage. Otherwise, subsequent visual inspections of a given system shall be performed in accordance with the following schedule:

*As described in the bases.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

<u>No. of Inoperable Snubbers of Each Type on Any System per Inspection Period</u>	<u>Subsequent Visual Inspection Period**</u>
0	18 months \pm 25%
1	12 months \pm 25%
2	6 months \pm 25%
3,4	124 days \pm 25%
5,6,7	62 days \pm 25%
8 or more	31 days \pm 25%

c. Visual Inspection Acceptance Criteria

Visual inspections shall verify that: (1) there are no visible indications of damage or impaired OPERABILITY and (2) attachments to the foundation or supporting structure are secure, and (3) fasteners for attachment of the snubber to the component and to the snubber anchorage are secure. Snubbers which appear inoperable as a result of visual inspections may be determined OPERABLE for the purpose of establishing the next visual inspection interval, provided that: (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers irrespective of type on that system that may be generically susceptible; and (2) the affected snubber is functionally tested in the as-found condition and determined OPERABLE per Specifications 4.7.5f. For those snubbers common to more than one system, the OPERABILITY of such snubbers shall be considered in assessing the surveillance schedule for each of the related systems.

d. Transient Event Inspection

An inspection shall be performed of all hydraulic and mechanical snubbers attached to sections of systems that have experienced unexpected, potentially damaging transients as determined from a review of operational data and a visual inspection of the systems within 72 hours for accessible areas and 6 months for inaccessible areas following such an event. In addition to satisfying the visual inspection acceptance criteria, freedom-of-motion of mechanical snubbers shall be verified using at least one of the following: (1) manually induced snubber movement; or (2) evaluation of in-place snubber piston setting; or (3) stroking the mechanical snubber through its full range of travel.

*The inspection interval for each type of snubber on a given system shall not be lengthened more than one step at a time unless a generic problem has been identified and corrected; in that event the inspection interval may be lengthened one step the first time and two steps thereafter if no inoperable snubbers of that type are found on that system.

#The provisions of Specification 4.0.2 are not applicable.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

4 Functional Tests

During the first refueling shutdown and at least once per 18 months thereafter during shutdown, a representative sample of snubbers shall be tested using one of the following sample plans. The sample plan shall be selected prior to the test period and cannot be changed during the test period. The NRC Regional Administrator shall be notified in writing of the sample plan selected prior to the test period or the sample plan used in the prior test period shall be implemented:

- 1) At least 10% of the total of each type of snubber shall be functionally tested either in-place or in a bench test. For each snubber of a type that does not meet the functional test acceptance criteria of Specification 4.7.5f., an additional 5% of that type of snubber shall be functionally tested until no more failures are found or until all snubbers of that type have been functionally tested; or
- 2) A representative sample of each type of snubber shall be functionally tested in accordance with Figure 4.7.5-1. "C" is the total number of snubbers of a type found not meeting the acceptance requirements of Specification 4.7.5f. The cumulative number of snubbers of a type tested is denoted by "N". At the end of each day's testing, the new values of "N" and "C" (previous day's total plus current day's increments) shall be plotted on Figure 4.7.5-1. If at any time the point plotted falls in the "Reject" region all snubbers of that type shall be functionally tested. If at any time the point plotted falls in the "Accept" region, testing of snubbers of that type may be terminated. When the point plotted lies in the "Continue Testing" region, additional snubbers of that type shall be tested until the points falls in the "Accept" region or the "Reject" region, or all the snubbers of that type have been tested. Testing equipment failure during functional testing may invalidate that day's testing and allow that day's testing to resume anew at a later time, providing all snubbers tested with the failed equipment during the day of equipment failure are retested; or
- 3) An initial representative sample of 55 snubbers shall be functionally tested. For each snubber type which does not meet the functional test acceptance criteria, another sample of at least one-half the size of the initial sample shall be tested until the total number tested is equal to the initial sample size multiplied by the factor, $1 + C/2$, where "C" is the number of snubbers found which do not meet the functional test acceptance criteria. The results from this sample plan shall be

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

plotted using an "Accept" line which follows the equation $N = 55(1 + C/2)$. Each snubber point should be plotted as soon as the snubber is tested. If the point plotted falls on or below the "Accept" line, testing of that type of snubber may be terminated. If the point plotted falls above the "Accept" line, testing must continue until the point falls in the "Accept" region or all the snubbers of that type have been tested.

The representative sample selected for the functional test sample plans shall be randomly selected from the snubbers of each type and reviewed before beginning the testing. The review shall ensure as far as practical that they are representative of the various configurations, operating environments, range of size, and capacity of snubbers of each type. Snubbers placed in the same locations as snubbers which failed the previous functional test shall be retested at the time of the next functional test but shall not be included in the sample plan. If during the functional testing, additional sampling is required due to failure of only one type of snubber, the functional testing results shall be reviewed at the time to determine if additional samples should be limited to the type of snubber which has failed the functional testing.

f. Functional Test Acceptance Criteria

The snubber functional test shall verify that:

- 1) Activation (restraining action) is achieved within the specified range in both tension and compression;
- 2) Snubber bleed, or release rate where required, is present in both tension and compression, within the specified range;
- 3) For mechanical snubbers, the force required to initiate or maintain motion of the snubber is within the specified range in both directions of travel; and
- 4) For snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand load without displacement.

Testing methods may be used to measure parameters indirectly or parameters other than those specified if those results can be correlated to the specified parameters through established methods.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

g. Functional Test Failure Analysis

An engineering evaluation shall be made of each failure to meet the functional test acceptance criteria to determine the cause of the failure. The results of this evaluation shall be used, if applicable, in selecting snubbers to be tested in an effort to determine the OPERABILITY of other snubbers irrespective of type which may be subject to the same failure mode.

For the snubbers found inoperable, an engineering evaluation shall be performed on the components to which the inoperable snubbers are attached. The purpose of this engineering evaluation shall be to determine if the components to which the inoperable snubbers are attached were adversely affected by the inoperability of the snubbers in order to ensure that the component remains capable of meeting the designed service.

If any snubber selected for functional testing either fails to lock up or fails to move, i.e., frozen-in-place, the cause will be evaluated and if caused by manufacturer or design deficiency all snubbers of the same type subject to the same defect shall be functionally tested. This testing requirement shall be independent of the requirements stated in Specification 4.7.5e. for snubbers not meeting the functional test acceptance criteria.

h. Functional Testing of Repaired and Replaced Snubbers

Snubbers which fail the visual inspection or the functional test acceptance criteria shall be repaired or replaced. Replacement snubbers and snubbers which have repairs which might affect the functional test result shall be tested to meet the functional test criteria before installation in the unit. Mechanical snubbers shall have met the acceptance criteria subsequent to their most recent service, and the freedom-of-motion test must have been performed within 12 months before being installed in the unit.

i. Snubber Seal Replacement Program

The service life of hydraulic and mechanical snubbers shall be monitored to ensure that the service life is not exceeded between surveillance inspections. The maximum expected service life for various seals, springs, and other critical parts shall be determined and established based on engineering information and shall be extended or shortened based on monitored test results and failure history. Critical parts shall be replaced so that the maximum service life will not be exceeded during a period when the snubber is required to be OPERABLE. The parts replacements shall be documented and the documentation shall be retained in accordance with Specification 6.10.3.

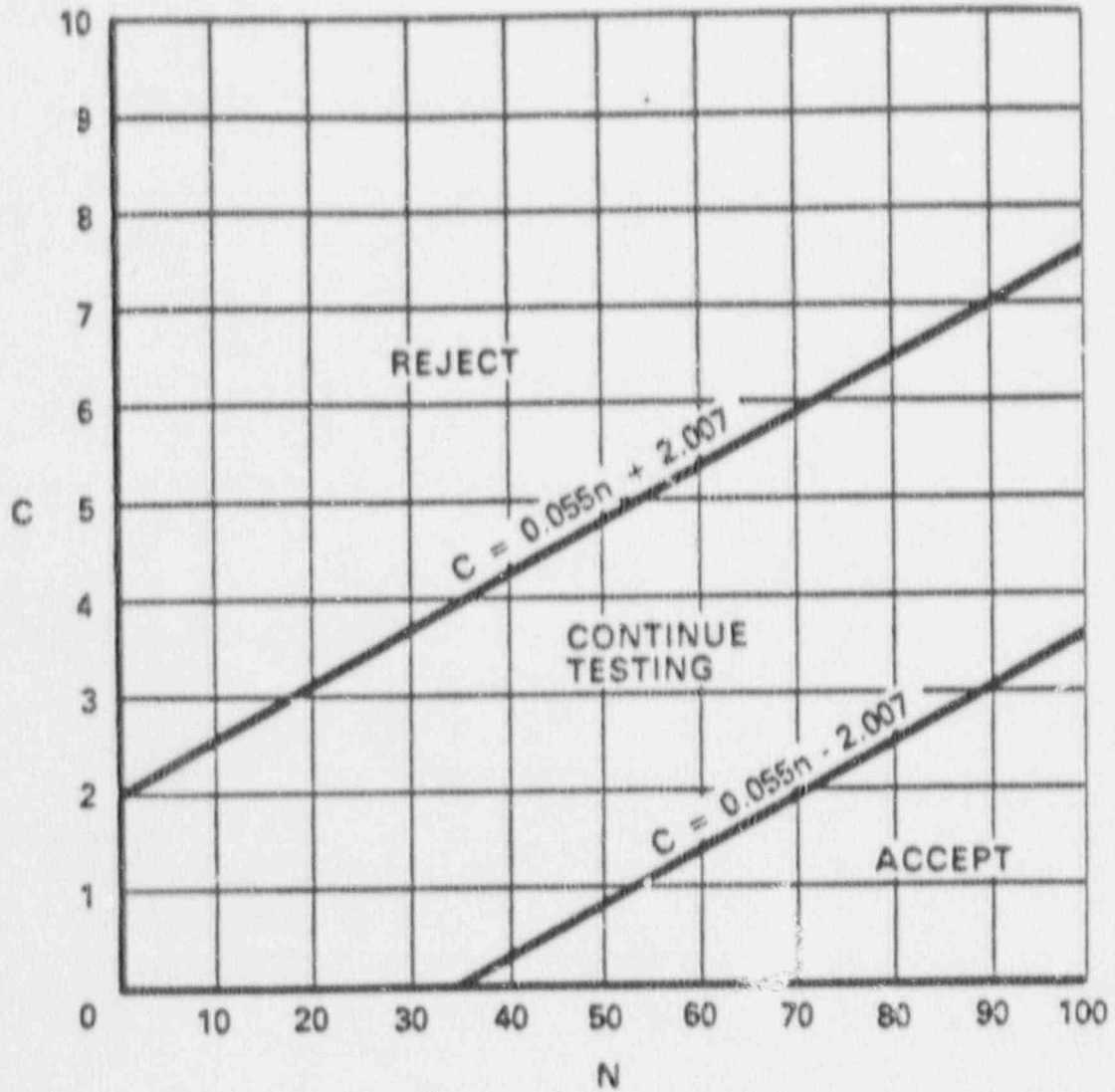


FIGURE 4.7.5-1
SAMPLE PLAN 2) FOR SNUBBER FUNCTIONAL TEST

PART - E
APPENDIX E

REFERENCES
FOR THE

INSERVICE INSPECTION - NONDESTRUCTIVE
EXAMINATION (ISI-NDE) PROGRAM (PLAN)

FOR

FERMI 2 POWER PLANT
DOCUMENT NO. ISI-NDE Program

REFERENCES

1. Code of Federal Regulations, Title 10 "Energy", Part 50.55a "Codes and Standards".
2. ASME Boiler and Pressure Vessel Code, Section XI, 1974 Edition with addenda through Summer 1975.
3. ASME Boiler and Pressure Vessel Code, Section XI, 1980 Edition with addenda through Winter 1981.
4. NUREG-0619, "BWR Feedwater Nozzle and Control Rod Drive Return Line Nozzle Cracking".
5. NUREG-0313, Rev. 2, "Technical Report on Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping". (Jan 1988)
6. IE Bulletin No. 83-02, "Stress Corrosion Cracking In Large-Diameter Stainless Steel Recirculation System Piping at BWR Plants".
7. IE Bulletin No. 80-07, "BWR Jet Pump Assembly Failure".
8. Reg. Guide 1.26, "Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants".
9. NRC Generic Letter 84-11 - "Inspection of BWR Stainless Steel Piping".
10. Detroit Edison Letter No. EF-269,210, dated 7-13-84, "Response to Generic Letter 84-11, to the NRC.
11. NRC Generic Letter 88-01 - "NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping"

PART - E
APPENDIX F
ADOPTED
CODE CASES
FOR THE
INSPECTION - NONDESTRUCTIVE
EXAMINATION (ISI-NDE) PROGRAM (PLAN)
FOR
FERMI 2 POWER PLANT
DOCUMENT NO. ISI-NDE Program

ADOPTED CODE CASES:

- | | | |
|----|--------------|----------------------|
| 1. | Case N-356 | E-F-3 |
| 2. | Case N-427 | E-F-3 |
| 3. | Case N-308 | E-F-4 and E-F-5 |
| 4. | Case N-62-4 | E-F-6 through E-F-20 |
| 5. | Case N-307-1 | E-F-21 and E-F-22 |

Case N-356
Certification Period for Level III NDE Personnel
Section XI, Divisions 1, 2, and 3

Inquiry: Is it permissible to extend the certification period for Level III NDE personnel to five years?

Reply: It is the opinion of the Committee that the certification period for Level III NDE personnel may be extended to five years.

Case N-427
Code Cases in Inspection Plans
Section XI, Division 1

Inquiry: Under what conditions may Section XI Code Cases be used in Inspection Plans?

Reply: It is the opinion of the Committee that Section XI Code Cases which are proposed for use in Inspection Plans shall satisfy the rules and conditions described below.

(a) *General*

(1) Code Cases shall be identified in the Owner's Inspection Plan.

(2) Code Cases shall be applicable to the edition and addenda specified in the Inspection Plan.

(3) Code Cases shall be in effect at the time the Inspection Plan is filed with the regulatory and enforcement authorities having jurisdiction at the plant site except as provided in (4).

(4) Code Cases issued subsequent to filing the Inspection Plan may be proposed for use in amendments to the Inspection Plan.

(5) The use of any Code Case is subject to acceptance by the regulatory and enforcement authorities having jurisdiction at the plant site.

(b) *Revised Code Cases*

(1) Superseded Code Cases approved for use in accordance with (a) may continue to be used.

(2) Revisions to a previously approved Code Case may be substituted for that Code Case only with the approval of the regulatory and enforcement authorities having jurisdiction at the plant site.

(c) *Annulled Code Cases.* Code Cases approved for use in accordance with (a) or (b) may be used after annulment for the duration of that Inspection Plan.

Case N-308

Documentation of Repairs and Replacements of Components in Nuclear Power Plants

Section XI, Division 1

Inquiry: When performing repairs or replacements as required in Section XI, Division 1, IWA-4000 and IWA-7000, what Data Report may be filed by the Owner to document that the repair or replacement has been performed?

Reply: It is the opinion of the Committee that when repairs or replacements of components in a nuclear power plant are performed as required in IWA-4000 and IWA-7000, the NIS-2 Report may be used by the Owner to document that a repair or replacement has been performed.

(See next page for Form NIS-2)

CASE (continued)
 N-308

FORM NIS-2 OWNER'S REPORT OF REPAIR OR REPLACEMENT
 As Required by the Provisions of ASME Code Section XI

1. Owner _____ Date _____
 _____ (Name) _____
 _____ (Address) _____ Sheet _____ of _____
 2. Plant _____ Unit _____
 _____ (Name) _____
 _____ (Address) _____
 3. Work Performed by _____ Repair Organization P.O. No., Job No., etc.
 _____ (Name) _____
 _____ (Address) _____

4. Identification of System _____
 5. (a) Applicable Construction Code _____ 19____ Edition _____ Addenda, Code Cases _____
 (b) Applicable Edition of Section XI Utilized for Repairs or Replacements - 19____, Addenda, Code Cases _____
 6. Identification of Components Repaired or Replaced, and Replacement Components

Name of Component	Name of Mfr.	Mfrs. Ser. No.	Nat'l. Bd. No.	CRN No.	Other Identification	Year Built	Repaired, Replaced, or Replacement	ASME Code Stamped (Yes or No)

7. Description of Work _____
 8. Tests Conducted: Hydrostatic Pneumatic Nominal Operating Pressure Other
 Pressure _____ psi Test Temp. _____ °F
 9. Remarks _____
 (Applicable Manufacturer's Data Reports to be attached)

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and this _____ conforms to Section XI of the ASME Code.
 Signed _____ Title _____ Date _____
 (Owner or Owner's Designee)

CERTIFICATE OF INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of _____, employed by _____, have inspected the _____ described in this Report on _____, 19____ and state that to the best of my knowledge and belief, this repair or replacement has been constructed in accordance with Section XI of the ASME Code. By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the repair or replacement described in this Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
 Date _____ Commissions _____
 (Inspector) (State or Province, National Board)

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8 1/2 in. X 11 in., (2) information in items 1 through 4 on this date report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

Case N-82-4
Internal and External Valve Items
Section III, Division 1, Classes 1, 2, and 3

Inquiry: Under what rules shall line valve items other than valve bodies, valve bonnets, valve items welded to valve bodies and bonnets and bolting which joins valve bodies and bonnets be constructed? Also, what alternate rules may be used for Class 1 valve items, such as (a) disks covered by NB-3546.2 and (b) stems covered by NB-3546.3(a) of Section III?

Reply: It is the opinion of the Committee that internal and external valve items for Section III, Class 1, 2 and 3 line valves may be constructed in accordance with the following rules.

1.0 INTRODUCTION

1.1 These rules apply to materials, design, fabrication, inspection and examination of internal and external valve items for Class 1, 2 and 3 line valves. Internal and external valve items are those items of a valve other than valve bodies, valve bonnets, valve items welded to valve bodies and bonnets (but not including internal permanent attachments), and bolting which joins valve bodies and bonnets. As an alternative to the requirements of Section III, internal permanent attachments, disks and those valve items covered by NB-3546.3(a) may be constructed in accordance with the requirements of this Case.

1.2 Category as used herein is the grouping of various internal and external valve items for the purpose of applying the rules of this Case. Categories for typical valve types are shown in Figs. 1 through 10. The figures are not to scale, and are not intended to convey any preference for valve type or design, but are provided as a guide to the Manufacturer to identify the various internal and external items of a valve for categorization. In determining categories for valve items of valve types not specifically illustrated, a valve or valve detail which is

most nearly representative shall apply. Categories 1 and 2 are those valve items presently covered by Subsections NB, NC and ND. Categories 3 through 8 are internal and external valve items which may be constructed in accordance with this Case.

2.0 GENERAL REQUIREMENTS

2.1 Responsibilities and Duties

It is the responsibility of the Valve Manufacturer to assign each valve item of a valve to the proper category and to indicate the categories in the Design Report and/or on a general assembly drawing.

2.2 Category 3 through 8 items for Class 1, 2 and 3 valves shall be manufactured under the Valve Manufacturers Quality Assurance Program or Quality Control System, as applicable, except that Material Manufacturers or material suppliers for Category 4 through 8 valve items are not required to comply with NCA-3800.

2.3 The Design Report for Class 1 valves (NB-3562) shall include an analysis of the primary stresses for Category 3, 4, 5 and 6 items (see Par. 4.0).

2.4 Use of this Case number shall be shown on the applicable Code Data Form.

3.0 MATERIALS

3.1 General Requirements for Materials

3.1.1 Scope of Principal Terms Employed

The term *material* as used in this Case applies to those valve items produced to material specifications permitted by Section III, and other material permitted by this Case.

3.1.2 Permitted Material Specifications

(a) Materials used for Category 3 and 4 valve items shall conform to the requirements of one of the specifications for materials given in Table 3.1.2-1 of this Case for Class 1, 2 and 3 valves; materials listed in Tables 1-7.0 for Class 1 and 2 valves; materials listed in Tables 1-7.0

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or 1-8.0 for Class 3 valves; and to the special requirements of this Case which apply to the valve items for which the material is used. All of the requirements of the material specification and of this Case shall be satisfied.

(b) Materials used for Category 6 valve items shall conform to the requirements of one of the specifications for materials listed in Tables 1-7.0 for Class 1 and 2 valves, and materials listed in Tables 1-7.0 or 1-8.0 for Class 3 valves.

(c) Category 5, 7 and 8 valve items may be made from any material suitable for the intended service. Consideration shall be given to stress relaxation when selecting materials for Category 5 items.

(d) The Valve Manufacturer shall provide a list which identifies the material used for each Category 3, 4, 5, 6, 7 or 8 valve item. This list may be a bill of materials or a separate list.

(e) Where the tensile strength, yield strength, hardness, tempering temperature or aging temperature listed in Table 3.1.2-1 differ from the requirements of the material specification, the minimum requirements listed in Table 3.1.2-1 shall apply.

3.1.3 Special Requirements Conflicting with Permitted Material Specifications

(a) Special requirements stipulated in this Case shall apply in lieu of the requirements of the materials specifications wherever the special requirements conflict with the material specification requirements. Where the special requirements include an examination, test or treatment which is also required by the material specification, the examination, test or treatment need be performed only once. Any required nondestructive examinations shall be performed as specified in Par. 5.2. Any examination, repair, test or treatment required by the material specification or this Case may be performed by the Material Manufacturer or the Valve Manufacturer. The Material Manufacturer shall obtain approval from the Valve Manufacturer for the weld repair of materials (Par. 5.4).

(b) For materials listed in Table 3.1.2-1 for Category 3 and 4 valve items, the tensile test requirements of the material specification may be performed on representative samples of each heat of material used, for each specified heat treatment. The tensile strength, yield strength, and hardness results shall meet or exceed the minimum specified values listed in the table. Where the material will be used to fabricate various valve items

of different heat treated thickness, the Manufacturer shall assure himself that the heat treatment specified will be effective for the entire size range.

3.1.4 Allowable Stress Values

Allowable Stress Values, S , are listed in Table 3.1.2-1 of this Case or Tables 1-7.0 and 1-8.0 of Section III (Par. 3.1.2(a)). For Table 3.1.2-1, the allowable stress values are based on trend curves adjusted to the minimum specified room temperature tensile and yield strengths shown in the table. (The listed values are allowable stress values and are not design stress intensity values.)

3.1.5 Certification of Materials

(a) Materials for Category 3 and 4 valve items, including all welding and brazing materials shall be certified in accordance with NA-3767.4 of Section III. Copies of all Certified Material Test Reports shall be made available to the Inspector.

(b) For Category 5 and 6 valve items, a Certificate of Compliance with the Material Specification, Grade, Class and heat treated condition, as applicable, shall be provided.

(c) Certified Material Test Reports or Certificates of Compliance are not required for Category 7 and 8 valve items.

3.1.6 Welding, Brazing and Hardsurfacing Materials

All welding and brazing materials used on Category 3 and 4 valve items shall meet the requirements of NB-2400. Hardsurfacing materials shall meet the requirements of AWS-A5.13 or as otherwise specified by the Valve Manufacturer (5.6.2).

3.1.7 Material Identification**3.1.7.1 Class 1 and 2 Valve Items**

(a) The identification of materials for Category 3 and 4 valve items used for Class 1 and 2 valves shall consist of marking or tagging the material with the applicable specification number, grade, heat number or heat code and any additional marking required to facilitate traceability of the reports of the results of all tests and examinations performed on the material, except that heat number identification is not required for valves with piping connections 2-in. nominal pipe size and less. Alternatively, a marking symbol and/or code may be used which identifies the material with the Material Certification and such symbol or code shall be explained in the certificate (Par. 3.1.5). For identification

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and marking during fabrication by the Valve Manufacturer, see Par. 5.2.

(b) The identification of materials for Category 5, 6, 7 and 8 valve items used for Class 1 and 2 valves shall consist of marking or tagging the material or its container in accordance with the marking requirements of the applicable material specification.

(c) Materials may be marked by any method which will not result in any harmful contamination or sharp discontinuities. Stamping, when used, shall be done with blunt-nosed-coil stamps or blunt-nosed-interrupted-dot die stamps.

3.1.7.2 Class 3 Valve Items

The identification of materials for Category 3 through 8 valve items used for Class 3 valves shall consist of marking the material or its container in accordance with the requirements of the applicable material specification.

3.1.7.3 Welding, Brazing and Hardsurfacing Material Identification

Welding, brazing and hardsurfacing materials shall be clearly identified by legible marking on the package or container to ensure positive identification of the material.

3.2 Fracture Toughness Requirements for Materials

3.2.1 Materials to Be Impact Tested

3.2.1.1 Materials for Which Impact Testing is Required

Material for Category 1 valve items for Class 1 valves and for Class 2 and 3 valves when required by the design specification shall be impact tested in accordance with the requirements of Par. 5.2, except that materials meeting any of the following conditions do not require impact testing.

- (a) Materials with a nominal section thickness of 5/8 in. and less;
- (b) Bars with a nominal cross-sectional area of 1 sq in. and less;
- (c) All thicknesses of materials for valves with a nominal pipe size 6-in. diameter and smaller;
- (d) Materials for valves with all pipe connections of 5/8-in. nominal wall thickness and less;
- (e) Austenitic stainless steels;
- (f) Nonferrous materials.

3.2.2 Impact Test Procedure

3.2.2.1 Charpy V-Notch Tests

The Charpy V-Notch test shall be performed in accordance with SA-370. Specimens shall be in accordance with SA-370, Fig. 11, Type A. A test shall consist of a set of 3 full-size 10X10mm specimens. The test temperature, lateral expansion, absorbed energy and percent shear fracture shall be reported in the Certified Materials Test Report.

3.2.2.2 Location and Orientation of Test Specimens

Impact test specimens shall be removed from the locations and orientations specified by the Materials Specification for tensile test specimens in each product form.

3.2.2.3 Material Conditions for Impact Testing

Impact testing shall be performed on specimens representing the condition of the item after final heat treatment and material forming operations.

3.2.3 Test Requirements and Acceptance Standards

Three Charpy V-Notch specimens shall be tested at a temperature equal to or lower than the lowest service temperature. All three specimens shall meet or exceed 15 mils lateral expansion (0.015 in.). Lowest service temperature is the minimum temperature of the fluid retained by the valve. Alternatively, the calculated volumetric average metal temperature expected during normal operation, whenever the pressure within the valve exceeds 20% of the preoperational system hydrostatic test pressure. The lowest service temperature shall be specified in the Design Specification.

3.2.4 Retests

(a) One retest at the same temperature may be conducted provided:

- (1) the average of the test results meet the minimum requirements,
- (2) not more than one specimen per test is below the minimum requirements, and
- (3) the specimen not meeting the minimum requirements is not lower than 5 mils below the specified requirements.

(b) A retest consists of two additional specimens taken as near as practicable to the failed specimens. For acceptance of the retest, both specimens shall meet the minimum requirements.

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4.0 DESIGN REQUIREMENTS

4.1 General Design Requirements

The requirements of Par. 4.0 apply to Category 3, 4, 5 and 6 valve items used for Class 1 valves; Category 3, 4 and 5 valve items used for Class 2 valves; and Category 3 and 4 valve items used for Class 3 valves. Only Class 1 valve items for valves larger than 4-in. nominal pipe size are required to be included in a Design Report.

4.2 Design Conditions

The design pressure and temperature conditions are defined in Par. 4.2.1 or 4.2.2. The design pressure and temperature for the valve items covered by this Case shall be determined by either 4.2.1 or 4.2.2.

4.2.1 Design Pressure and Temperature

The design pressure shall be taken equal to the standard calculation pressure, P_1 , according to NB-3545.1. The associated design metal temperature shall be 500 F and the allowable stresses of the materials at that temperature shall apply.

4.2.2 Alternative Design Pressure and Temperature

As an alternative to 4.2.1, the design calculation pressure may be taken as that pressure corresponding to the 100 F valve pressure rating for Class 1 valves in accordance with Tables NB-3531.1 through NB-3531.7. The associated design temperatures shall be 100 F and the allowable stresses of the materials at that temperature shall apply. For Class 2 and 3 valves, NC-3500 and ND-3500 shall be used for pressure-temperature ratings.

4.3 Design Computations

The specific combinations and values of loadings, including mechanical loadings, which are considered in evaluating the primary stresses (Par. 4.2) are those anticipated during normal operating conditions. When variations in pressure or temperature in excess of normal operating conditions are expected to occur, they shall be included in the design specification. The actual mechanical loads resulting from these conditions shall be used in the computations made to show compliance with the stress limits of Pars. 4.3.1, 4.3.2 and 4.3.3. Upset, emergency and faulted conditions shall be considered and shall be in accordance with NB-3520.

4.3.1 Design of Category 3, 4 and 6 Valve Items

4.3.1.1 Stress Limits

The stress limits for materials for Category 3, 4 and 6 valve items for normal operating conditions shall be as follows:

- (a) The primary-membrane stress shall not exceed the design allowable stress, S , (see Par. 3.1.4).
- (b) The primary-membrane plus primary bending stress shall not exceed $1.5 S$.
- (c) Localized stresses associated with contact loading of seating surfaces do not require substantiation by analysis.

4.3.2 Design of Category 5 Valve Items

The Valve Manufacturer shall perform an analysis which shall include stress and fatigue considerations.

4.3.3 Design of Category 7 and 8 Valve Items

This Case does not specify design rules, stress limits or analytical requirements for Category 7 and 8 Valve items.

4.4 Fatigue Evaluation

For Class 1 valves, when the Design Specification (NA-3250) includes such operating conditions that the valve is not exempted from fatigue analysis by the rules of NB-3222.4(d), it is recommended that consideration be given to cyclic stress duty.

5.0 FABRICATION REQUIREMENTS

Category 3 through 8 valve items shall be fabricated in accordance with the requirements of Par. 5.0 and shall be manufactured from materials which meet the requirements of Par. 3.0.

5.1 Certification of Materials and Fabrication by Valve Manufacturer

The Valve Manufacturer shall provide certification that all treatments, tests, repairs or examinations performed on valve items are in compliance with the requirements of this Case. Reports of all required treatments and the results of all required tests, repairs and examinations performed shall be maintained in accordance with NA-4900.

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B.2 Materials Identification

Material for Category 3 and 4 valve items for Class 1 and 2 valves shall carry identification markings, either directly on the item or on a separate tag that accompanies the item, which will remain distinguishable until the item is assembled in the valve. All other materials shall be identified by a control procedure, as specified by a Quality Assurance program, which ensures that the specified materials are used.

B.3 Examination of Materials

Materials for Category 3, 4 and 5 valve items for Class 1 valves and cast materials for Category 3 valve items for Class 2 valves with piping connections over 2-in. nominal pipe size shall be examined by the magnetic particle or liquid penetrant method in accordance with Section V. In addition, cast materials for Category 3 valve items and all disks for Class 1 valves with piping connections over 2-in. nominal pipe size shall be examined by the applicable radiographic or ultrasonic methods and acceptance standards in accordance with NB-2500. The examination may be performed by the Material Manufacturer or the Valve Manufacturer (Par. 3.3.1). Acceptance standards for magnetic particle and liquid penetrant examination shall be as follows:

(a) Only indications with major dimensions greater than 1/16 in. shall be considered relevant.

(b) The following relevant indications are unacceptable:

(1) Any linear indications greater than 1/16-in. long for materials less than 5/8-in. thick; greater than 1/8-in. long for materials from 5/8-in. thick to under 2-in. thick; and 3/16-in. long for materials 2-in. thick and greater.

(2) Rounded indications with dimensions greater than 1/8 in. for thicknesses less than 5/8 in. and greater than 3/16 in. for thicknesses 5/8 in. and greater.

(3) Four or more indications greater than 1/16 in. in a line separated by 1/16 in. or less edge to edge.

(4) Ten or more indications greater than 1/16 in. in any 6 sq in. of area whose major dimension is no more than 6 in. with the dimensions taken in the most unfavorable location relative to the indications being evaluated.

Materials for Category 7 and 8 valve items for Class 1 valves and for Category 3 through 8 valve items for Class 2 and 3 valves shall be examined in accordance with the material specification.

B.3.1 Time of Examination

Magnetic particle or liquid penetrant examination shall be performed on the final surfaces of the items, except that threaded items may be examined prior to threading. Examinations shall be performed prior to any coating or plating. Lapping of seating surfaces to reduce leakage or lapping of bearing surfaces shall not require re-examination. Radiographic or ultrasonic examinations of cast materials, when required, shall be performed in accordance with NB-2577.

B.3.2 Elimination of Surface Defects

(a) Unacceptable surface defects shall be removed by grinding or machining, provided:

(1) The remaining thickness of the section is not reduced below the minimum required by the design;

(2) The depression, after grinding or machining, is blended uniformly into the surrounding surface and the depression does not alter the function of the item;

(3) After grinding or machining, the area is examined by the method with which originally disclosed the defect to assure that the defect has been removed or the indication reduced to an acceptable size.

(b) If grinding or machining reduces the thickness of the section below the minimum required by the design, the item may be repaired in accordance with Par. 5.4.

B.4 Repair by Welding of Class 1, 2 and 3 Valve Items

Category 5 valve items may not be repair welded. Category 3, 4, 6, 7 and 8 valve items for Class 1, 2 and 3 valves may be repaired by welding provided the requirements of the following subparagraphs are met:

B.4.1 Defect Removal

The defect shall be removed or reduced to an acceptable size by suitable mechanical or thermal cutting or gouging methods and the cavity prepared for repair.

B.4.2 Qualification of Welding Procedures and Welders

B.4.2.1 Except as permitted in Par. 5.4.2.2, the welding procedure and welders or welding operators shall be qualified in accordance with Section IX and NB, NC, ND-4000 as applicable.

B.4.2.2 Heat-treated materials listed in Table 3.1.2-1 which are not capable of passing bend tests required by Section IX for procedure or performance qualification

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may be qualified as required for fillet welding in accordance with QW-180. In addition, a minimum of two cross sections of the qualification test plate (assembly) shall be ground and etched with a suitable etchant and visually examined at 10X magnification. The weld metal and adjacent base material of the ground and etched cross sections shall be free of cracks.

5.4.3 Blending of Repaired Areas

After repair, the surface shall be blended into the surrounding surface.

5.4.4 Examination of Repair Welds

Each repair weld of materials listed in Table 3.1.2-1, Category 3 and 4 valve items for Class 1 valves and cast Category 3 valve items for Class 2 valves, shall be examined by the method that originally exposed the defect and the finished surface shall be examined by either the magnetic particle or liquid penetrant method in accordance with Section V. The acceptance standards shall be those specified in Par. 5.3(a) and (b).

5.4.5 Heat Treatment After Repair

(a) Materials listed in Table 3.1.2-1, which are repaired by welding shall be heat treated after repair. Such heat treatment shall be the heat treatment specified for the finished item. The heat treatment shall be verified by a hardness test performed on the item showing hardness conforming to the minimum hardness value, or equivalent hardness value, listed in Table 3.1.2-1 for the material.

(b) Materials listed in Tables I-7.0 and I-8.0 which are repaired by welding shall be heat treated after repair in accordance with the heat treatment requirements of NB, NC, ND-2500.

5.4.6 Repair Weld Report

A record shall be made of each defect repair of Category 3 and 4 valve items in which the depth of the repair cavity exceeds the lesser of 3/8 in. or 10% of the section thickness. The record shall include the location and size of the repaired cavity, the welding materials, the welding procedure, the heat treatment and the examination results.

5.5 Internal Permanent Attachment Welds

Items which are attached by welding to the internal surface of the body or bonnet may be attached by full

penetration, partial penetration or fillet welds. The attachment and weld joint shall meet the design requirements of Par. 4.0.

5.6 Welding Requirements

Except as permitted in Pars. 5.4.2 and 5.6.1, all welds shall be made using qualified welding procedures and welders or welding operators in accordance with Section IX.

5.6.1 Special Welds

Fillet welds and partial penetration welds 1/4 in. and less in size may be made in the fabrication of valve items or between valve items where either of the items is a material listed in Table 3.1.2-1 provided the procedures and welders are qualified as follows:

(a) A test assembly shall be made for each combination of materials to be welded.

(b) The test assembly shall be a duplicate of the production weld joint or a groove butt weld 1/4 in. minimum thickness.

(c) The test assembly shall be sectioned (a minimum of four cross sections), ground, etched with a suitable etchant, and visually examined at 10X magnification. All surfaces of the weld and adjacent base material(s) shall be free of cracks.

5.6.2 Hardsurfacing

Hardsurfacing shall be performed using qualified procedures and personnel in accordance with NB-4380 of Section III.

5.6.3 Examination of Welds

All welds including hardsurfacing shall be examined by the magnetic particle or liquid penetrant method in accordance with Section V. Except for seating surfaces for which all indications shall be removed, acceptance standards shall be as follows:

5.6.3.1 Acceptance Standards

(a) Only indications with major dimensions greater than 1/16 in. shall be considered relevant.

(b) The following relevant indications are unacceptable:

- (1) Any linear indications greater than 1/16 in. long;
- (2) Rounded indications greater than 3/16 in.;

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(3) Four or more rounded indications greater than 1/16 in. in a line separated by 1/16 in. or less edge to edge;

(4) Ten or more rounded indications greater than 1/16 in. in any 6 sq in. of surface with the major dimension of this area not to exceed 6 in., with the area taken in the most unfavorable location relative to the indications being evaluated.

5.6.4 Heat Treatment of Welds

5.6.4.1 Postweld heat treatment of welds which join materials listed in Tables I-7.0 and I-8.0 shall be in accordance with the postweld heat treatment requirements of NB-4620.

5.6.4.2 Postweld heat treatment of welds which join materials listed in Table 3.1.2-1 to materials listed in Tables I-7.0 and I-8.0 shall be in accordance with the postweld heat treatment requirements of NB-4620. Special techniques, such as local postweld heat treatment, may be necessary to avoid changing the base material properties of the item in locations not adjacent to the weld.

5.6.4.3 Postweld heat treatment of welds for joining materials listed in Table 3.1.2-1 shall be in accordance with the heat treatment specified for the material of the finished item; i.e., the heat treatment required to obtain the tensile strength, yield strength or hardness listed in Table 3.1.2-1. For fillet welds and partial penetration welds 1/4 in. and less in size, postweld heat treatment is neither required nor prohibited.

(Continued on next page)

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Table 3.1.2.1
 Allowable Stress Values, S, for Materials, for Internal and External Items
 for Cases 1, 2 and 3 Values (4)

Material	Product Form	Spec. No.	Type or Grade	Orientation or Thickness, In.	Condition	Tensile Strength, ksi	Yield Strength, ksi	Brinell Hardness	Minimum Temp., as Spec. Temp., °F	Allowable Stress, ksi, S , for Temp. Not Exceeding T						
										100	200	300	400	500	600	650
18Cr	Flt. BS	A 182-75	18			135,000	110,000	213	900	(15,100)	53.0	50.0	49.0	47.0	46.5	44.0
	Plate	A 240-75	18Cr 10105			135,000	110,000	213	900	(15,100)	53.0	51.0	50.0	49.0	48.0	46.0
	Tube	A 240-75	747-08			135,000	110,000	213	900	(15,100)	53.0	51.0	50.0	49.0	48.0	46.0
	Bar, Shapers	A 275-75	603-119			128,000	105,000	205	875	(14,800)	51.0	49.0	48.0	47.0	46.0	44.0
	Bar, Rods	A 275-75	603-119			128,000	105,000	205	875	(14,800)	51.0	49.0	48.0	47.0	46.0	44.0
50-Cr 20Ni	Bar, Rods	A 314-75	402-110			110,000	92,000	210	875	(14,800)	48.0	46.0	45.0	44.0	43.0	41.0
	Bar, Rods	A 314-75	402-110			110,000	92,000	210	875	(14,800)	48.0	46.0	45.0	44.0	43.0	41.0
	Castings	A 317-75	C-415			100,000	85,000	210	875	(14,800)	46.0	44.0	43.0	42.0	41.0	39.0
	Bar, Shapers	A 275-75	619			100,000	85,000	210	875	(14,800)	46.0	44.0	43.0	42.0	41.0	39.0
	Bar, Shapers	A 275-75	619			100,000	85,000	210	875	(14,800)	46.0	44.0	43.0	42.0	41.0	39.0
50-Cr	Bar, Shapers	A 275-75	620		A	95,000	79,000	199	N/A	(14,800)	45.0	43.0	42.0	41.0	40.0	38.0
	Bar, Shapers	A 275-75	620		A	95,000	79,000	199	N/A	(14,800)	45.0	43.0	42.0	41.0	40.0	38.0
	Bar, Rods	A 275-75	620		A	95,000	79,000	199	N/A	(14,800)	45.0	43.0	42.0	41.0	40.0	38.0
	Bar, Rods	A 275-75	620		A	95,000	79,000	199	N/A	(14,800)	45.0	43.0	42.0	41.0	40.0	38.0
	Bar, Rods	A 275-75	620		A	95,000	79,000	199	N/A	(14,800)	45.0	43.0	42.0	41.0	40.0	38.0
50-Cr 40Ni 40Co	Bar, Shapers	A 354-75	630			140,000	115,000	230	900	(19,200)	60.0	58.0	57.0	56.0	55.0	53.0
	Bar, Shapers	A 354-75	630			140,000	115,000	230	900	(19,200)	60.0	58.0	57.0	56.0	55.0	53.0
	Bar, Rods	A 354-75	630			140,000	115,000	230	900	(19,200)	60.0	58.0	57.0	56.0	55.0	53.0
	Bar, Rods	A 354-75	630			140,000	115,000	230	900	(19,200)	60.0	58.0	57.0	56.0	55.0	53.0
	Bar, Rods	A 354-75	630			140,000	115,000	230	900	(19,200)	60.0	58.0	57.0	56.0	55.0	53.0
50-Cr 40Ni 40Co	Bar, Shapers	A 354-75	630			140,000	115,000	230	900	(19,200)	60.0	58.0	57.0	56.0	55.0	53.0
	Bar, Shapers	A 354-75	630			140,000	115,000	230	900	(19,200)	60.0	58.0	57.0	56.0	55.0	53.0
	Bar, Rods	A 354-75	630			140,000	115,000	230	900	(19,200)	60.0	58.0	57.0	56.0	55.0	53.0
	Bar, Rods	A 354-75	630			140,000	115,000	230	900	(19,200)	60.0	58.0	57.0	56.0	55.0	53.0
	Bar, Rods	A 354-75	630			140,000	115,000	230	900	(19,200)	60.0	58.0	57.0	56.0	55.0	53.0
50-Cr 15Ni 15Cu	Bar, Shapers	A 366-75	630			130,000	105,000	225	900	(18,800)	58.0	56.0	55.0	54.0	53.0	51.0
	Bar, Shapers	A 366-75	630			130,000	105,000	225	900	(18,800)	58.0	56.0	55.0	54.0	53.0	51.0
	Bar, Rods	A 366-75	630			130,000	105,000	225	900	(18,800)	58.0	56.0	55.0	54.0	53.0	51.0
	Bar, Rods	A 366-75	630			130,000	105,000	225	900	(18,800)	58.0	56.0	55.0	54.0	53.0	51.0
	Bar, Rods	A 366-75	630			130,000	105,000	225	900	(18,800)	58.0	56.0	55.0	54.0	53.0	51.0
50-Cr 15Ni 15Cu	Bar, Shapers	A 366-75	630			130,000	105,000	225	900	(18,800)	58.0	56.0	55.0	54.0	53.0	51.0
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50-Cr 15Ni 15Cu	Bar, Shapers	A 366-75	630													

CASE (continued)
N-62-4

Refer to Table 3.1.2-1

- (1) Not to be used for Category 3 Valve Items, except for valves 2 in. and less nominal pipe size.
- (2) Welding of these materials is not permitted.
- (3) For those materials in this table which do not have allowable stresses assigned, use 1/4 of room temperature specified minimum tensile strength, up to 650 F inclusive.
- (4) The material shall be identified with this Case number in addition to the identification requirements of 3.1.7.1. Where the tensile strength, yield strength, hardness, tempering temperature or aging temperature listed in Table 3.1.2-1 differ from the requirements of the material specification, the minimum requirements listed in Table 3.1.2-1 shall apply.
- (5) The maximum tensile strength shall not exceed the specified minimum tensile strength by more than 40.0 ksi.
- (6) In addition to the requirements of 3.1.7.1 these materials shall be marked with the minimum specified tensile strength, in ksi, and the Case number.
- (7) This material shall not be used at temperatures higher than 450 F.
- (8) Carbon content shall not exceed 0.35%.

Summary of Requirements

Typical Valve Items	Category No. & Valve Class	Design Report (2)	Certified Materials Test Report	Mag. Part./ Liq. Penet. Examination	Impact Charpy V	Material Identif.
Body	Category 1					
Bonnet	Class (all)	Subsection NB, NC and ND				
Bonnet-Bolting	Category 2					
	Class (all)	Subsection N3, NC and ND				
Disc	Category 3					
Stems	Class 1	X	X	X(4)	X	X
	Class 2	--	X	X(5)	X*	X
	Class 3	--	X	--	X*	(1)
Seat-Rings	Category 4					
	Class 1	X	X	X	--	X
	Class 2	--	X	--	--	X
	Class 3	--	X	--	--	(1)
Springs	Category 5					
	Class 1	X	(3)	X	--	(1)
	Class 2	--	(3)	--	--	(1)
	Class 3	--	(3)	--	--	(1)
Yokes	Category 6					
Gland-Flange	Class 1	X	(3)	--	--	(1)
Gland-Bolts	Class 2	--	(3)	--	--	(1)
	Class 3	--	(3)	--	--	(1)
Lantern-Ring	Category 7					
Gland	Class 1	--	--	--	--	(1)
Yoke Nut	Class 2	--	--	--	--	(1)
Grease Fitting	Class 3	--	--	--	--	(1)
Packing Gaskets	Category 8					
Seals	Class (all)	--	--	--	--	--
Piston Rings						

* When required for the valve per Design Specification.
 (1) The quality control system shall cover identification in accordance with 3.1.7.1 and 4.7.2.
 (2) A Design Report is required for Class 1 valves larger than 4 in. NPS (NB-3560).
 (3) Material Manufacturer's Certificate of Compliance.
 (4) Radiography or ultrasonic examination of cast materials and valve disks for valves over 2 in. NPS is required.
 (5) Cast materials only.

CASE (continued)
 N-62-4

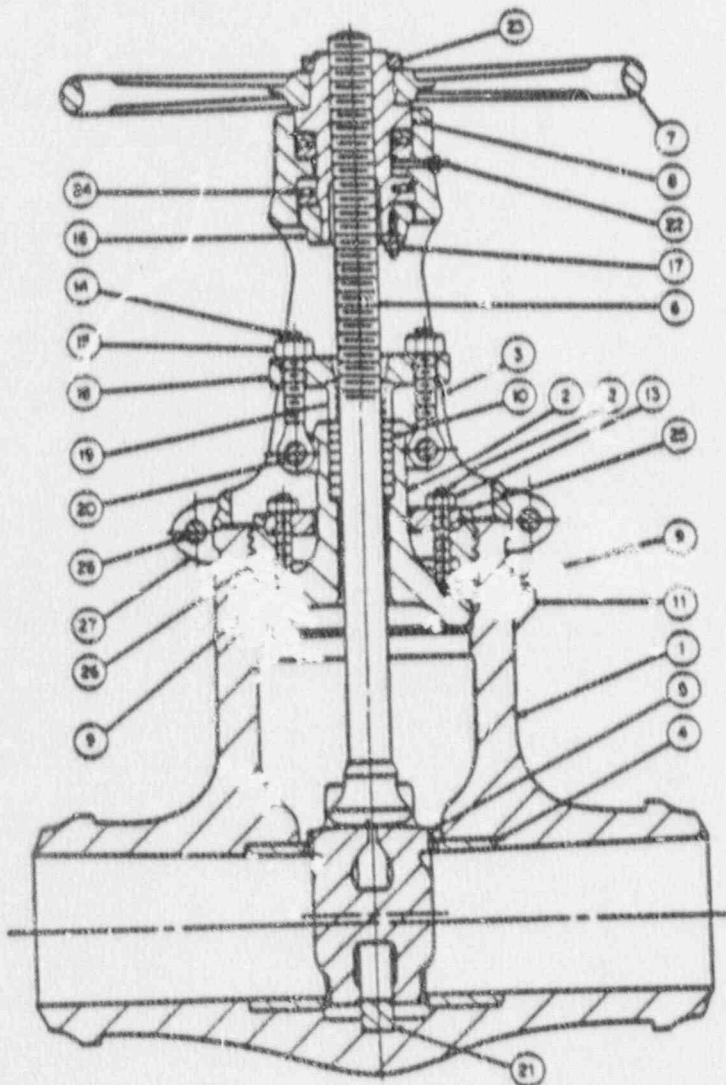


Fig. 1 Gate valve

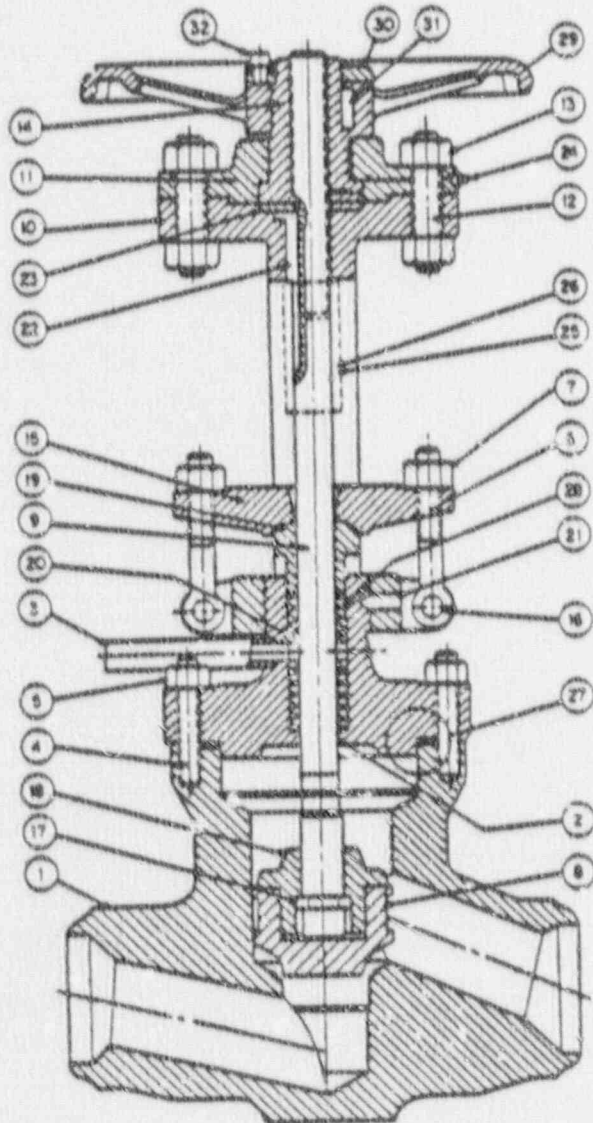
Key to Fig. 1

Valve	Part	Name (Typical)
1	1	Body
	2	Bonnet
	11	Lifting Lug
3	5	Gate (Wedge)
	6	Stem
	26	Gasket Retaining Ring
4	4	Seat Ring
	21	Guide (when welded to body)
6	14	Gland Bolt
	15	Gland Nut
	3	Yoke
	18	Gland Flange
	20	Hinge Pin
	27	Clamp Ring
	28	Clamp Ring Bolting
	9	Gasket
7	12	Lifting Stud (Bolt)
	13	Lifting Nut
	16	Yoke Retaining Nut
	8	Yoke Nut
	19	Gland
	22	Grease Fitting
	17	Lock Bolting
	24	Bearings
	21	Guide (when mechanically held)
	25	Lifting Plate
8	9	Gasket
	10	Packing

Not covered by Code requirement.

- 7 Handwheel
- 23 Handwheel Nut

CASE (continued)
 N-62-4



Key to Fig. 2

Case	Value Item	Name (Typical)
1	1	Body
	2	Bonnet
	3	Auxiliary Connection
2	4	Bonnet Stud (Bolt)
	5	Bonnet Nut
3	8	Disc
	9	Stem
4	17	Disc Stem Union
	18	Stem Collar
6	10	Yoke (when nonintegral)
	11	Yoke Cover (Flange)
	12	Yoke Cover Bolt
	13	Yoke Cover Nut
	15	Gland Flange
	6	Gland Bolt
	7	Gland Nut
	14	Hinge Pin
7	19	Gland
	20	Latern Ring
	21	Set Screw-Locking
	23	Key
	24	Grease Fitting
	25	Name Plate
	26	Rivet
8	14	Yoke Nut
	23	Washer
8	27	Gasket
	28	Packing

Not included in this Case.

- 25 Name Plate
- 26 Rivet
- 29 Handwheel
- 30 Handwheel Nut
- 31 Yoke Nut Key
- 32 Lock Screw

Fig. 2 Globe valve

CASE (continued)
 N-62-4

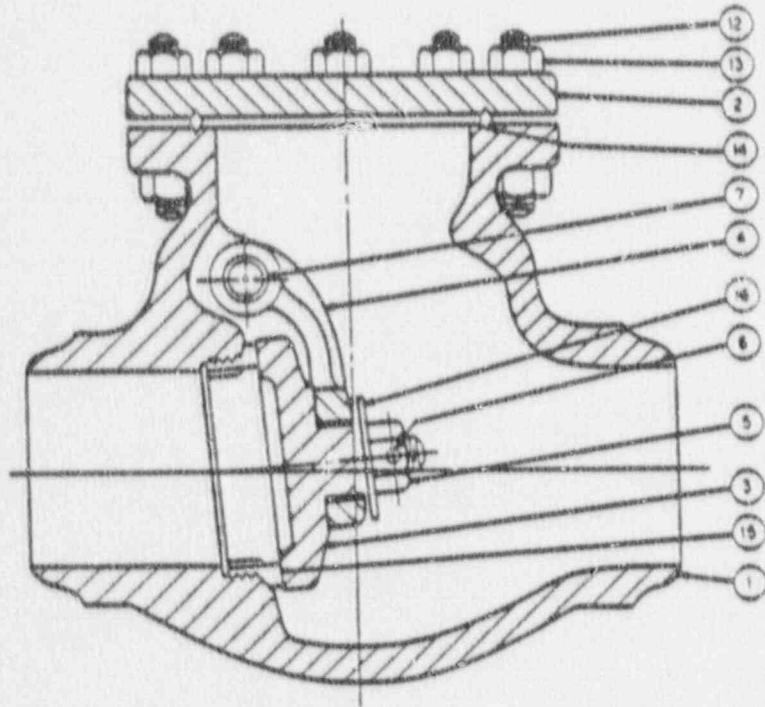


Fig. 3 Spring check valve

Key to Fig. 3

Valve Cat.	Item	Name (Typical)
1	1	Body
	2	Cap
2	12	Cap Bolt Studs
	13	Cap Bolt Stud Nuts
3	3	Disc
	7	Hinge Pin
	4	Hinge
4	15	Seat Ring
6	8	Disc Nut
7	6	Disc Nut Pin
8	16	Disc Washer
	14	Cap Ring Gasket

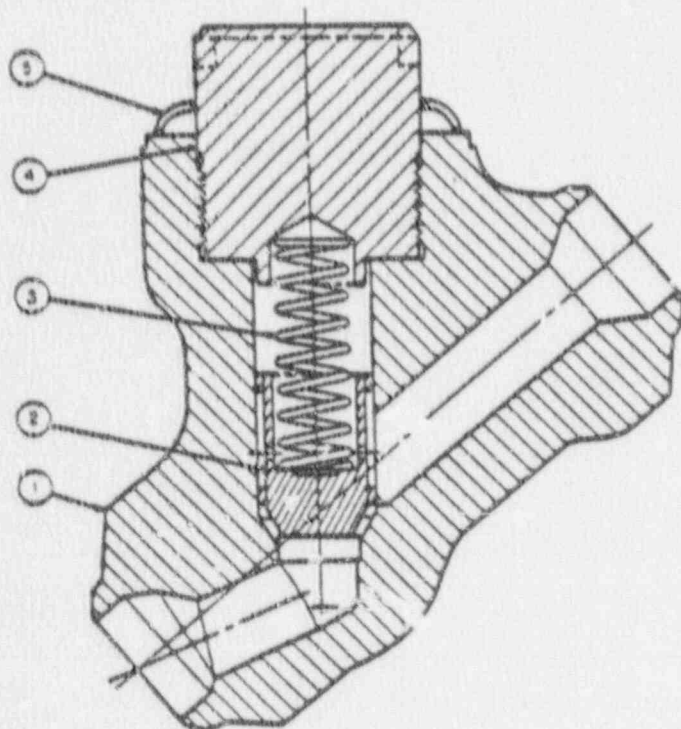


Fig. 4 Globe check valve

Key to Fig. 4

Valve Cat.	Item	Name (Typical)
1	1	Body
	6	Cover
	5	Canopy
3	2	Disc
4	3	Spring

CASE (continued)
 N-62-4

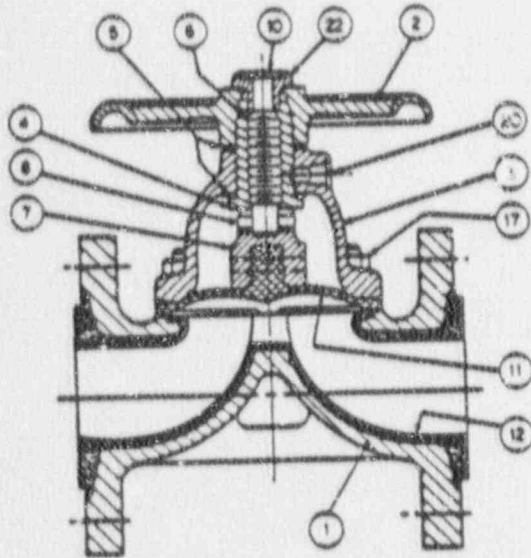


Fig. 6 Diaphragm valve

Key to Fig. 6

Cat.	Item	Name (Typical)
1	1	Body
	3	Bonnet
	20	Pipe Plug
2	17	Flange Bolting
3	6	Stem
	7	Compressor
	8	Compressor Pin
7	4	Stem Nut
	5	Spacer
8	11	Diaphragm
	12	Liner

Not included in this Case.

- 2 Handwheel
- 22 Handwheel Retainer
- 10 Name Plate

Note: This figure is shown for definition of items only. It is to be used only when this type valve is permitted in Section III, Division 1 construction.

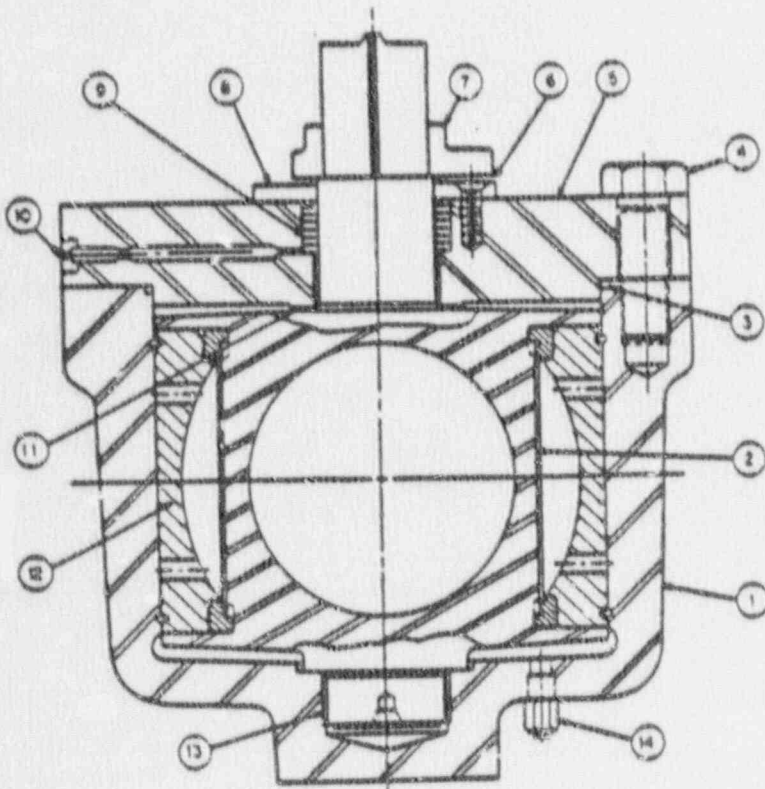


Fig. 6 Plug valve

Key to Fig. 6

Cat.	Item	Name (Typical)
1	1	Body
	5	Cover
	14	Yoke Plug
2	4	Cover Cap screw
3	2	Plug
6	6	Gland Cap screw
	8	Gland
7	7	Stop Collar
	10	Grease Fitting
	11	Thrust Bearing
	13	Bushing
8	3	Cover O-Ring
	9	Stem Packing
	12	Seat Insert

CASE (continued)
 N-62-4

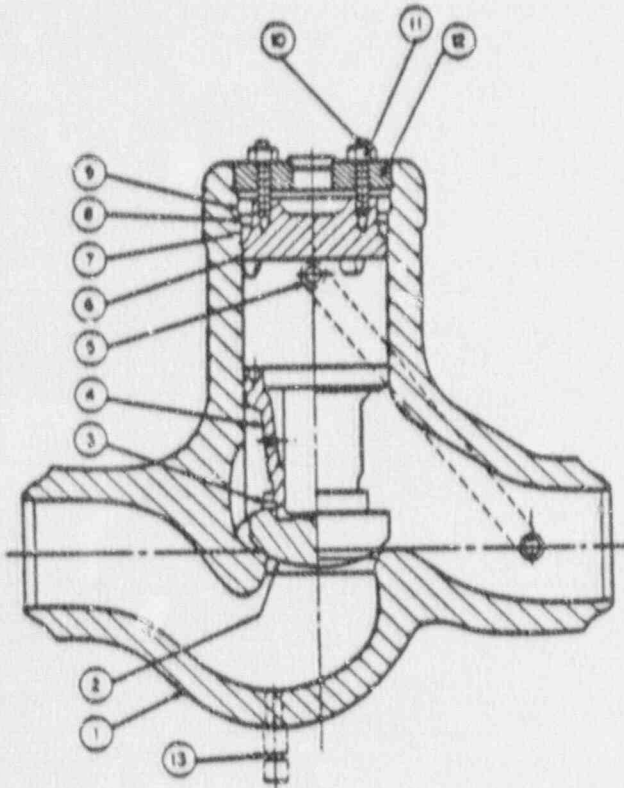


Fig. 7 Globe check valve

Key to Fig. 7

Valve Item	Part No.	Name (Typical)
1	1	Body
	5	Equalizer
	6	Pressure Seal Cover
	13	Drain Nipple
8	9	Gasket Retainer
	2	Disc
6	4	Body Guided Disc Nut
7	3	Locking Key
	8	Spacer Ring
	10	Cover Retainer Fasteners
	11	
	12	Cover Retainer
8	7	Pressure Seal Gasket

Key to Fig. 8

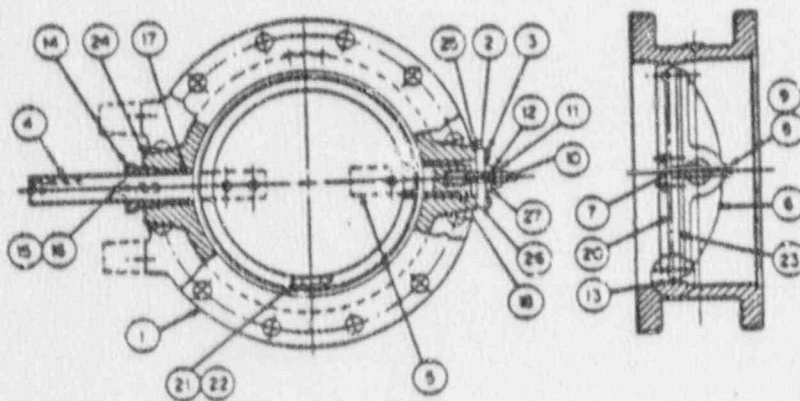


Fig. 8 Butterfly valve

Key to Fig. 8

Valve Item	Part No.	Name (Typical)
1	1	Body
	2	Shaft Cover
	10	Thrust Adjustment Screw
2	3	Shaft Cover Bolting
3	4	Front Shaft
	5	Stub Shaft
	6	Disc
	7	Disc Pin
4	8	Disc Pin Nut
	13	Body Liner
	20	Clamping Ring
	21	Clamping Ring Bolt
	22	Clamping Ring Bolt Lock
	23	Disc Seat (Metallic)
6	15	Stuffing Box Stud
	16	Stuffing Box Nut
7	9	Disc Pin Washer
	11	Thrust Adjustment Nut
	12	Thrust Adjustment Washer
	14	Stuffing Box Gland
	17	Shaft Bearing
	18	Thrust Bearing
8	23	Disc Seat (Non-Metallic)
	24	Packing
	25	Gasket
	26	O-Ring
	27	Retaining Ring
	13	Body Liner (Non-Metallic)

CASE (continued)
 N-62-4

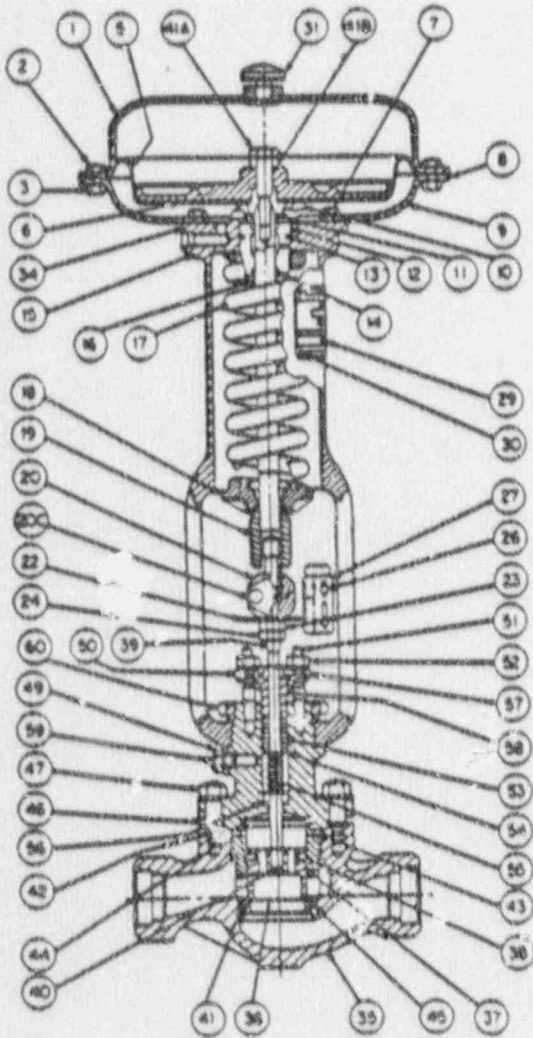


Fig. 9 Control valve

Key to Fig. 9

Call.	View from	Name (Typical)
1	85	Body
	49	Bonnet
	59	Pipe Plug
2	46	Bonnet Stud (Bolt)
	47	Bonnet Nut
3	36	Disc (Plug)
	39	Disc (Stem)
4	41	Seat Ring
	37	Cage (when seat retaining)
5	17	Actuator Spring
	55	Packing Spring
6	18	Spring Seat
	15	Yoke
	60	Yoke Lock Nut
	50	Packing Flange
	51	Packing Flange Bolt
	52	Packing Flange Nut
	58	Packing Follower
	56	Packing Box Ring
	40	Groove Pin
	16	Actuator Stem
7	19	Spring Adjuster
	20	Stem Connector
	20C	Stem Connector Cap Screw
	23	Nut
	24	Jam Nut
	37	Cage (when not seat retaining)

Call.	View from	Name (Typical)
8	9	Gasket
	42	Gasket
	44	Gasket, Spiral Wound
	45	Gasket, Seat Ring
	43	Gasket, Cage
	53	Packing
	57	Upper Washer
	38	Flange Ring

Not included in this Case.

12	Seal Bushing
13	O-Ring
14	O-Ring
8	Diaphragm Case (Lower)
1	Diaphragm Case (Upper)
2	Diaphragm Case Bolt
3	Diaphragm Case Nut
5	Diaphragm
7	Diaphragm Stud
54	Washer
22	Travel Indicator
27	Travel Indicator Seal
26	Indicator Screw
10	Diaphragm Plate (Lower)
6	Diaphragm Plate (Upper)
11	Snap Ring
29	Name Plate
30	Screw
31	Vent
34	Travel Stop
41A	Nut
41B	Locknut

Case N-307-1

Revised Ultrasonic Examination Volume for Class 1 Bolting, Table IWB-2500-1, Examination Category B-G-1, When the Examinations Are Conducted From the Center-Drilled Hole
Section XI, Division 1

Inquiry: When ultrasonic examinations are conducted from the center-drilled hole of Class 1 bolts or studs to satisfy the examination requirements of Section XI, Division 1, Table IWB-2500-1, Examination Category B-G-1, may the examination volume be limited to the cylindrical region defined by A-B-C-D-E-F-A in Fig. 1?

Reply: It is the opinion of the Committee that, when conducting ultrasonic examinations from the center-drilled hole of Class 1 bolts or studs to satisfy the examination requirements of Section XI, Division 1, Table IWB-2500-1, Examination Category B-G-1, the examination volume may be limited to the cylindrical region defined by A-B-C-D-E-F-A in Fig. 1 if the center bore hole surface is examined with a qualified supplemental ultrasonic, surface, or eddy current procedure. The examination procedure shall be qualified to cover the entire inner bore surface. If eddy current examination is used, the following requirements shall apply.

(a) The procedure qualification shall demonstrate the ability to detect and measure the length of the maximum allowable flaws of IWB-3515-1. Qualification of the procedure shall include detection of at least one crack in each material type (ferromagnetic or nonferromagnetic) to be examined. The length of the crack open to the surface shall not exceed the maximum allowable length of IWB-3515-1 for nonaxial flaws. The crack shall be located in a bore hole surface and oriented circumferentially. Alternatively, the crack may be located in a block with different geometry if the qualification demonstrates cracks can be detected in bore holes. Demonstration may be performed by showing equivalent response in both geometries (bore hole and block) using calibration discontinuities specified by the qualified procedure.

(1) The procedure qualification shall be documented in a Certification Report. Procedure qualification

records shall be retained for the service life of the bolt or stud examined. The Certification Report shall include at least the following items:

- (a) identification of procedure qualified;
- (b) personnel performing and witnessing the qualification tests;
- (c) description and drawings of the qualification specimens and the calibration blocks, as applicable;
- (d) calibration and sensitivity details;
- (e) methods of identifying flaw indications and discriminating between flaw indications and non-relevant indications such as indications from probe lift-off, plating thickness changes, or permeability changes in ferromagnetic material;
- (f) procedure for interpretation of results;
- (g) qualification results; and
- (h) signature of the Authorized Nuclear Inservice Inspector (ANII).

(2) Eddy current examinations shall be performed in accordance with a written procedure. Each procedure shall include at least the following information:

- (a) bolt or stud configuration to be examined, including, as applicable, length, diameters, thread sizes, plating and base materials, and product forms (e.g., forging, bar bolt or stud, rolled or cut threads);
- (b) surface condition requirements and any applicable preparation methods;
- (c) sizes and types of probes, including description and part or drawing numbers, and lengths of probe cable;
- (d) manufacturers and models of eddy current equipment qualified;
- (e) data recording equipment and methods;
- (f) examination frequencies;
- (g) maximum scanning speed permitted and demonstrated by procedure qualification;
- (h) calibration procedure and calibration standards;
- (i) examination technique (e.g., scanning instructions, hand probe, and mechanized probe device);
- (j) reporting instructions;
- (k) personnel qualification requirements;
- (l) reference to the Certification Report.

CASE (continued)
N-307-1

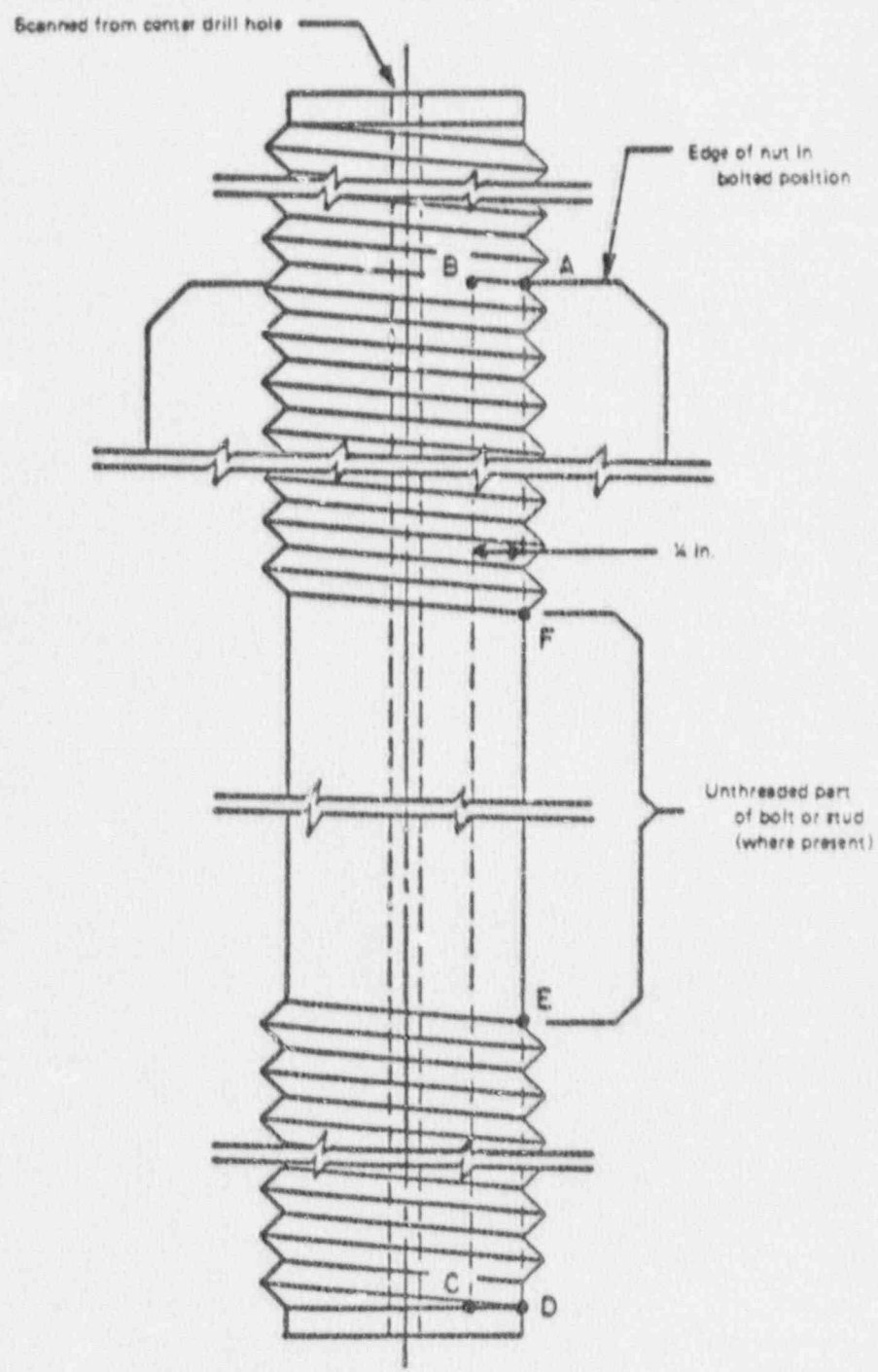


FIG. 1 REVISED EXAMINATION VOLUME FOR CLASS 1 BOLTING WHEN
SCANNED FROM THE CENTER-DRILLED HOLE