



Kewaunee Nuclear Power Plant
Operated by Nuclear Management Company, LLC

June 23, 2005

NRC-05-081
10 CFR 50.55a

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

Kewaunee Nuclear Power Plant
Docket 50-305
License No. DPR-43

Inservice Inspection Third 10-Year Interval June 16, 1994 - June 16, 2004 Limitation
To Examination Relief Requests of the Kewaunee Nuclear Power Plant

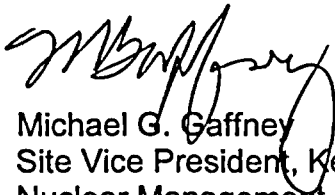
Kewaunee Nuclear Power Plant (KNPP) is required to have an Inservice Inspection (ISI) Program for examination of American Society of Mechanical Engineers (ASME) Class 1, 2, and 3 systems and their supports. During the third Inservice Inspection interval, ISI examinations were performed on the required number of components in accordance with 10 CFR 50.55a and ASME Section XI, 1989 Edition with no Addenda.

On June 16, 2005, KNPP ended its third interval ISI Program (incorporating the ASME Boiler and Pressure Vessel Code Section XI 1989 Edition Section IWA-2430(d) One Year Extension).

All examinations were completed by November 30, 2004. The required examinations were conducted in a manner that met all Section XI Code requirements to the extent practical. There were areas where the Code required coverage could not be obtained. Where possible, KNPP substituted other welds and supports to avoid those situations where complete Code compliance could not be attained. In some cases, KNPP was successful with finding an alternate area where full Code compliance could be achieved. This Request for Relief details those areas where the Code required examination criteria could not be completely met, and to what extent Code compliance was achieved.

A047

Photographs showing the Examination Limitations in most cases were taken well after the actual performance of the examinations. This was due to improved technology from the start of the third Ten-Year Interval, the desire to document the limitation in addition to the required procedure sketch, and to supply an actual photograph of the limitation as a process improvement for better understanding of the restriction. Nuclear Management Company, LLC requests relief in accordance with 10 CFR 50.55a(g)(5)(iii), as these areas either could not be examined in accordance with Section XI Code requirements or without significant modifications to the plant.



Michael G. Gaffney
Site Vice President, Kewaunee Nuclear Power Plant
Nuclear Management Company, LLC

Enclosure (1)

cc: Administrator, Region III, USNRC
Project Manager, Kewaunee Nuclear Power Plant, USNRC
Resident Inspector, Kewaunee, USNRC
Mr. Mike Verhagen, Department of Commerce, State of Wisconsin

ENCLOSURE 1

**INSERVICE INSPECTION THIRD 10-YEAR INTERVAL
JUNE 16, 1994 - JUNE 16, 2004 LIMITATION TO EXAMINATION RELIEF
REQUESTS OF THE KEWAUNEE NUCLEAR POWER PLANT**

408 pages follow

KEWAUNEE NUCLEAR POWER PLANT

Component Identification

Code Class: 1, 2

Examination Categories: Reference attached RR-G-7-1 through RR-G-7-73

Item Numbers: Reference attached RR-G-7-1 through RR-G-7-73

Description: Limited Section XI Code examinations during Code required examinations

Code Requirements

Third Inservice Inspection Interval

1989 Edition of Section XI, no Addenda

ASME Code Case N-460, Alternative Examination Coverage for Class 1 and 2 Welds

Volumetric and surface examinations of welds and base material will be examined in accordance with the applicable Examination Category and Item Number.

Basis for Relief

During the third inservice inspection interval, Kewaunee Nuclear Power Plant (KNPP) used the requirements of the 1986 Edition of ASME Section XI for examination of components. This edition of Section XI has specific requirements for what components will be examined and to what extent they will be examined. This edition of Section XI was followed with the exception of the selection of Class 1 piping welds. In accordance with 10 CFR 50.55a(b)(2)(ii), KNPP used the 1974 Edition of Section XI for selection of Class 1 Category B-J piping welds. This selection criteria states that for each inservice inspection interval, a different 25% of the population of class 1 piping welds shall be examined. Since this was the third 10-year interval, essentially 50% of the Class 1 piping welds had already been examined, leaving only 50% of the total Class 1 welds available for selection and examination. This factor led to many of the welds being examined having a higher probability of having limited examinations. For all other Examination Categories, KNPP used the Section XI required examination selection criteria.

During the performance of scheduled examination, there were numerous instances where examiners reported some type of interference. KNPP personnel evaluated every instance where this situation was reported, and when possible, alternative examination areas were selected to avoid having to examine restricted areas. This reduced the population of welds where a limited examination would be encountered. On welds where alternatives were not available, additional techniques were performed to increase coverage where possible, such as using steeper angle beam ultrasonic techniques or approaching the examination area from a different direction. In each case, this increased examination area coverage to the extent practicable and reduced the number of welds with limited examinations.

In order to gain additional access to the areas where limited examinations were encountered, major modification of components would be required. These modifications could be extensive, up to and including complete replacement. In cases where minor grinding would allow additional coverage, this was performed.

Major modification of components is not a feasible approach nor is it required to obtain additional coverage. Modifying systems and components to improve examination area coverage would result in additional dose with marginal improvement in quality or safety.

10 CFR 50.55a(g)(1) states that plants of KNPP's vintage (construction permit before January 1, 1971) must meet the requirements, except design and access provisions and preservice examination requirements, set forth in ASME Section XI. Access has been improved over the years to many areas of the plants, further reducing those areas with limitations, but it is not a requirement to make every area available for examination.

Removal of structural interferences to gain additional examination area coverage is costly in time and dose with little impact to quality or safety. Structural steel and component supports, were not designed for removal. If any were removed, temporary support structures would need to be designed and installed to compensate for the reduction in load bearing capacity. Temporary modifications, such as these, could require extensive scaffold building and temporary structural components, resulting in additional accumulated radiation dose.

For volumetric examinations, KNPP examined the required areas to the extent practical using ultrasonic examination techniques. Since May 22, 2000, many of these components were examined using personnel qualified in accordance with Appendix VIII of Section XI and as implemented by the Performance Demonstration Initiative (PDI). All examinations performed prior to the implementation of the 10 CFR 50.55a(g)(6)(i)(C) Appendix VIII requirements, show the limitations of the 1989 Edition of Section XI. All examinations performed after the implementation of the Appendix VIII requirements show limitations based on component configuration, material, or limitations in the PDI procedures being used. Where possible and allowed by the applicable PDI Generic Procedure, additional angles were used to increase coverage. In many cases, no combination of ultrasonic angle beam examinations would cover the entire examination area. In each case, the maximum feasible coverage was obtained.

KNPP performs system leakage tests in accordance with the Pressure test requirements of Section XI, Examination Categories B-P and C-H. These pressure tests cover every component within the Code boundaries established by KNPP. Where leakage was noted at mechanical connections, these were corrected in accordance with maintenance procedures.

Proposed Alternative

KNPP proposes to use the examination volume or surface coverage obtained during the third interval examinations on the listed components in lieu of the Code required volumes and surfaces (Reference RR-G-7-1 through RR-G-7-73 (see attachments). The coverage obtained meets the intent of ASME Section XI and provides an acceptable level of quality and safety.

Conclusion

The examinations performed during the third inservice inspection interval were performed to the extent possible. Additional coverage was impractical, as modification of systems, structures, and components would have resulted in significant radiation exposure with minimal increase in the level of quality and safety.

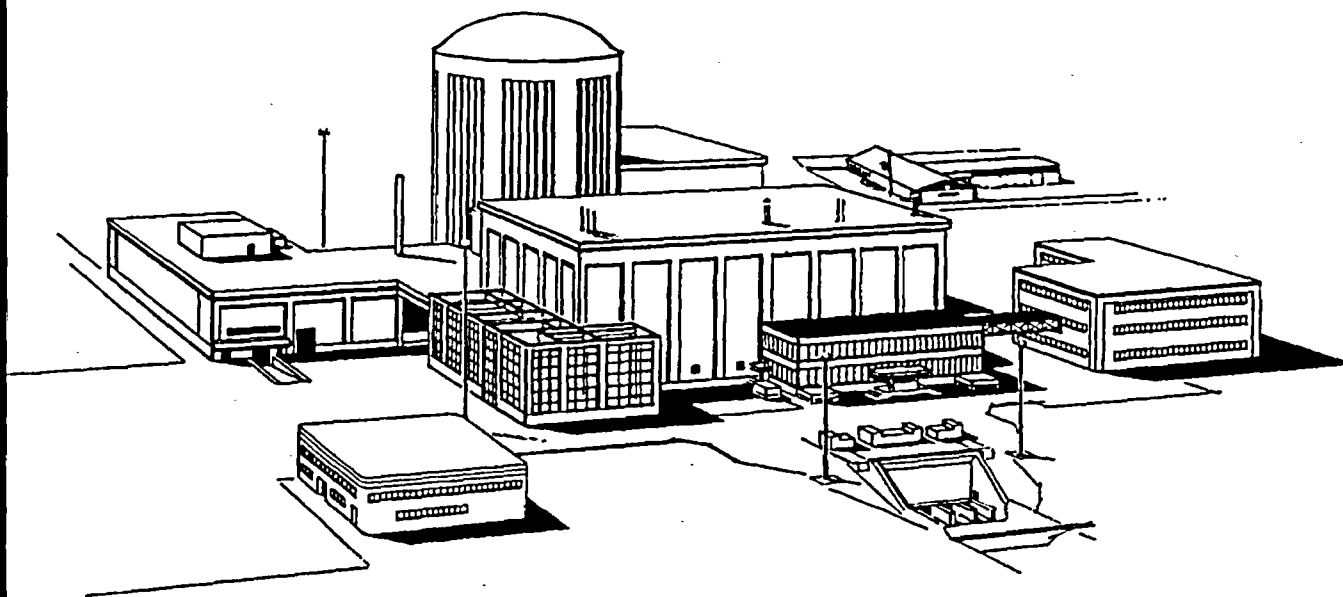
Period for Which Relief is Requested

Relief is requested for the third inservice inspection interval at KNPP, which ended on June 16, 2005 incorporating the ASME Boiler and Pressure Vessel Code Section XI 1989 Edition Section IWA-2430(d) One Year Extension.

Attachments

RR-G-7-1 through RR-G-7-73 – Listing and sketches of Limited Examinations for the Third Inservice Inspection Interval

**INSERVICE INSPECTION
3RD 10-YEAR INTERVAL
JUNE 16, 1994 – JUNE 16, 2004
LIMITATION TO EXAMINATION
RELIEF REQUESTS
OF THE
KEWAUNEE NUCLEAR POWER PLANT
N490 HIGHWAY 42
KEWAUNEE, WISCONSIN 54216-9511**



INSERVICE INSPECTION

3RD 10-YEAR INTERVAL

JUNE 16, 1994 – JUNE 16, 2004

LIMITATION TO EXAMINATION

RELIEF REQUESTS

OF THE

KEWAUNEE NUCLEAR POWER PLANT

N490 HIGHWAY 42

KEWAUNEE, WISCONSIN 54216-9511

PREPARED BY:

KEWAUNEE NUCLEAR POWER PLANT

ENGINEERING PROGRAMS

N490 HIGHWAY 42

KEWAUNEE, WISCONSIN 54216-9511

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-1

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Integrally Welded Attachment
AHRS1-SW1 and AHRS1-SW2
to Residual Heat Exchanger AHRS1-1A**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category
C-C; Item No. C3.10**
- 4. Impracticality of Compliance: 20.7% of the Integrally Welded Attachments
were inaccessible due to configuration of the Welded Attachment in close
proximity to the Residual Heat Exchanger thus restricting application of
the Surface Examination Liquid Penetrant.**
- 5. Burden Caused by Compliance: To provide for access to the 20.7% weld
area between the welded attachment and the Residual Heat Exchanger
would require modification from the Original Design of the Residual Heat
Exchanger and the Welded Attachment.**

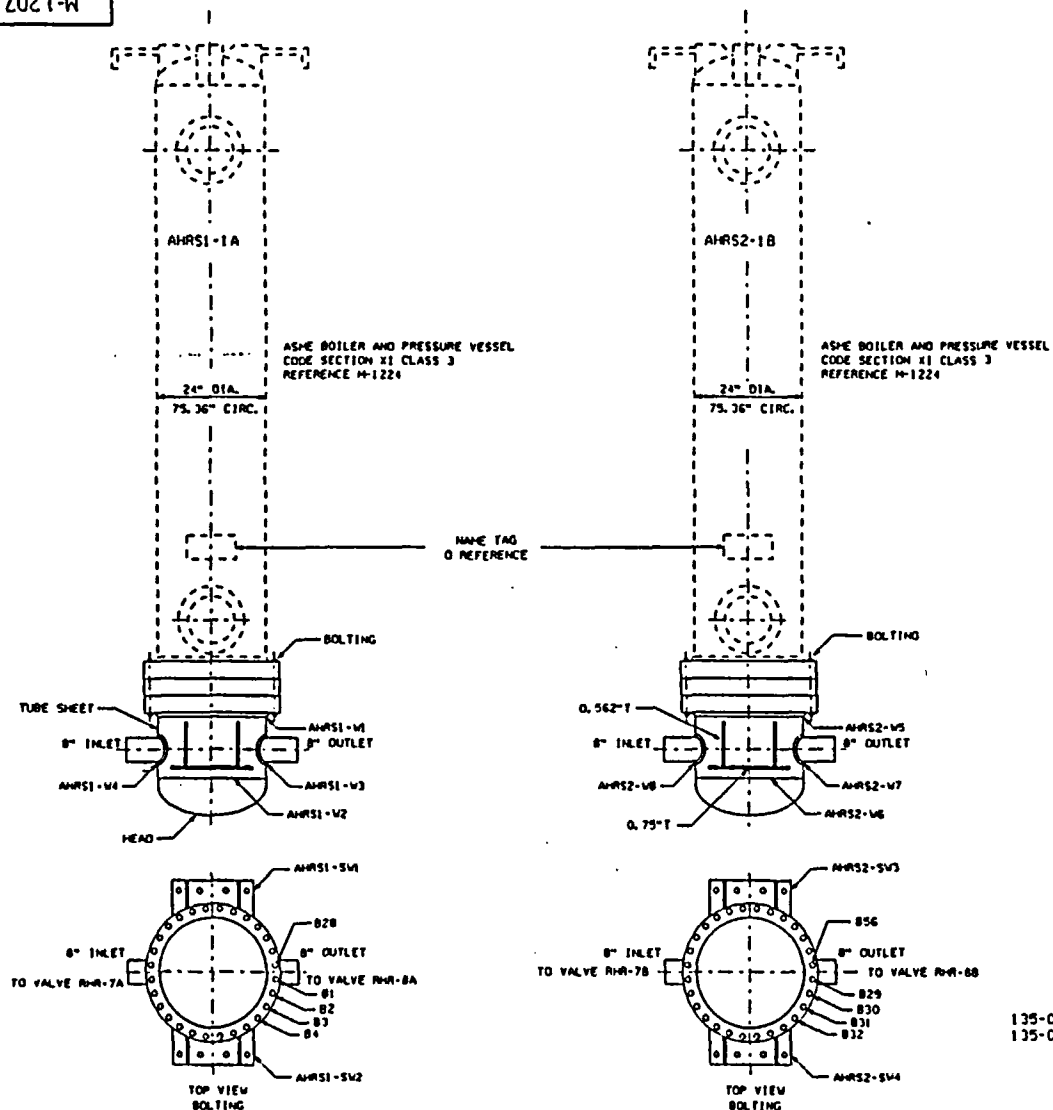
KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-1

- 6. Proposed Alternative and Basis for Use: No alternative Code required
Surface examination is available due to limited access. VT-2 and VT-3
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: VT-2 Table
IWC-2500-1; Examination Category C-H; Item C7.10 each 3 1/3 Year
Period for evidence of leakage and VT-3 as required by Table IWF-2500-1;
Examination Category F-A; Item No. F1.40B for general mechanical and
structural condition.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**

M-1207



LOCATION: AUXILIARY BUILDING 606; RESIDUAL HEAT EXCHANGER AHR1-1A GATE 256 AND RESIDUAL HEAT EXCHANGER AHR2-1B GATE 173

BOLTING DATA EACH HEAT EXCHANGER	
STUDS / DIA. / LGTH (IN)	
28 / 1.125" / 6.0"	1/6

COMPONENT WELD DATA		
I.D.	THICKNESS	MATERIAL
AHR1-W1	0.5"	A240 TP304SS
AHR1-W2	0.5"	A240 TP304SS
AHR1-W3	0.5"	A240 TP304SS
AHR1-W4	0.5"	A240 TP304SS
AHR2-W5	0.5"	A240 TP304SS
AHR2-W6	0.5"	A240 TP304SS
AHR2-W7	0.5"	A240 TP304SS
AHR2-W8	0.5"	A240 TP304SS

INTEGRALLY WELDED ATTACHMENT DATA		
I.D.	THICKNESS	MATERIAL
AHR1-SV1	1/2" & 7/8"	A289 CA. C
AHR1-SV2	1/2" & 7/8"	A289 CA. C
AHR2-SV3	1/2" & 7/8"	A289 CA. C
AHR2-SV4	1/2" & 7/8"	A289 CA. C

CALIBRATION BLOCK		
I.D.	DIMENSION / SQUARE	MATERIAL
1/2" & 3/4"	0.5" x 0.5" x 2.0" & 2.0" x 2.0"	A240 TP304SS

REVISION

B

PDO 0011 COMPL
SEE REV. 0-1
APP'D: CAT 10/23/89
FILM'D: (WPS) 11/7/89

B-1

REDRAFTED TO CAD
PER ESR 92-177
OWN: E. SANTON 4/1/93
CHK: D. B. TROTTER 5/12/93
APP'D: CAT 8-4-93

C

ESR 92-177 COMP.

SEE REV. 8-1
FILMED: WPS 8-17-93

C-1

RE PUR 0295

ADDED REF NO'S.
BY: BJD 7-19-99
APP'D: DAK 7-26-99

D

RE PUR 0295 COMP.

SEE REV. C-1
FILMED: WPS 8-3-99

D-1

KAP 01-001639

REVISED NOTE 1.
BY: ABF 06-03-02
APP'D:

E

KAP 01-001639
COMPLETE
SEE REV. D-1.
FILMED: (WPS)

D-1
KAP 01-001639

DRAWING APPLICABLE FOR 3RD AND 4TH 151
INTERVAL ASME BOILER AND PRESSURE
VESSEL CODE SECTION XI CLASS 2

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

RESIDUAL HEAT EXCHANGERS AHR1-1A AND AHR2-1B

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	PHILLIP E. BUKES	12/1/92
CHECKED		PROJECT APPROVED
D. H.	1/17/83	
ESS	1/1/93	DWG. NO.
ONE	ONE	M-1207
REV.		E

CADD

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

RESIDUAL HEAT EXCHANGERS

SYSTEM OR COMPONENT: AHRS1-1A AND AHRS2-1B DRAWING NO.: M-1207

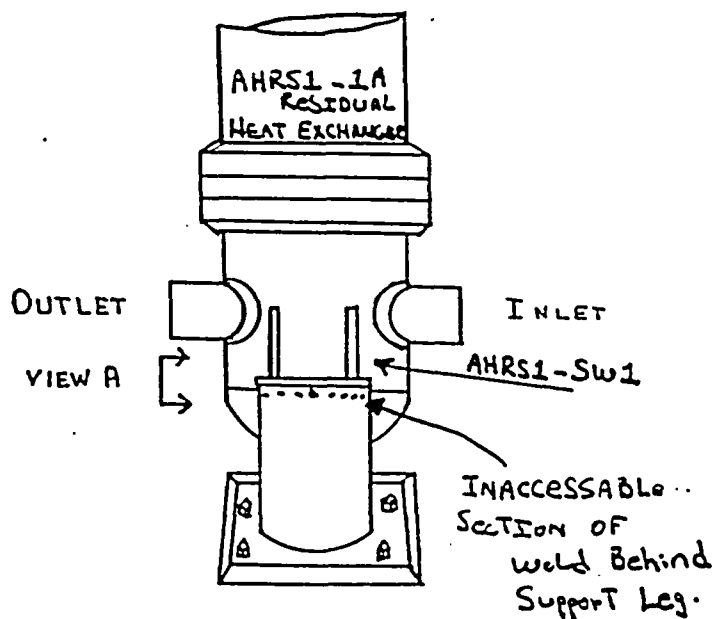
COMPONENT IDENTIFICATION: AHRS1-SW1 PROCEDURE: QCP-901 REVISION: ORIG.

ULTRASONIC: _____ LIQUID PENETRANT: X MAGNETIC PARTICLE: _____ VISUAL: _____

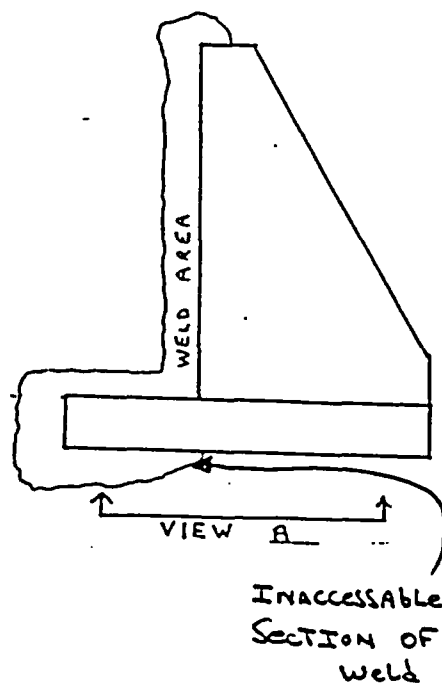
EXAMINER: NLA. By II DATE: 4.25.95
LEVEL

EXAMINER: NA NA DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



PERCENTAGE OF REDUCED
EXAMINATION COVERAGE = 20.7%



KEWAUNEE NUCLEAR POWER PLANT REVIEW: Eric A. Balstad DATE: 4/27/95
AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Rayn Trifun DATE: 4/27/95

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: RESIDUAL HEAT EXCHANGER AHRS1-1A AND AHRS2-1B

DRAWING NO.: M-1207

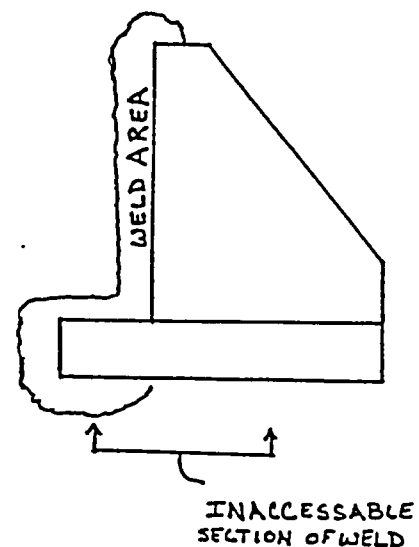
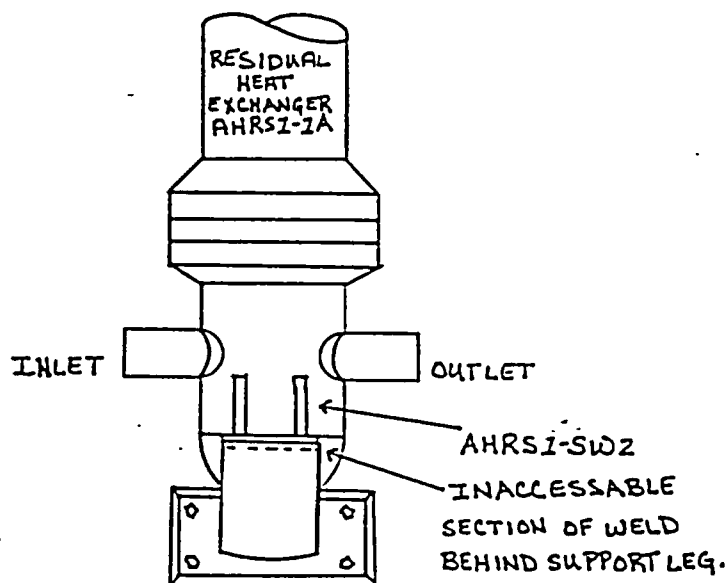
COMPONENT IDENTIFICATION: AHRS1-SW2 PROCEDURE: NEP NO. 15.6 REVISION: ORIG.

ULTRASONIC: LIQUID PENETRANT: X MAGNETIC PARTICLE: VISUAL:

EXAMINER: *Em J. Paul* II DATE: 10-23-98
LEVEL

EXAMINER: NA DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

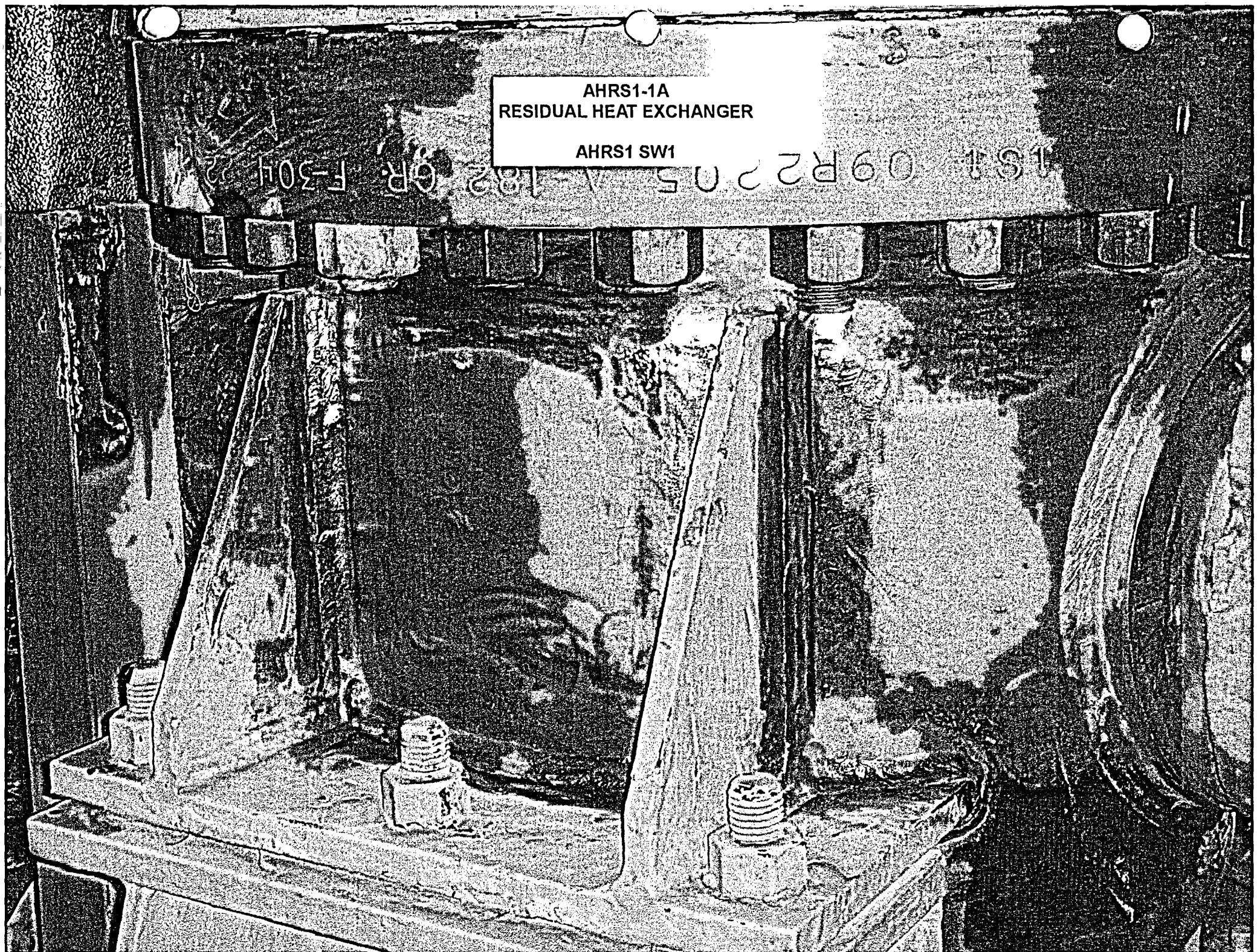


PERCENTAGE OF REDUCED
EXAMINATION COVERAGE = 20.7%

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: *Phillip C. Bukes* DATE: October 30, 1998
AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: *Rayn McQueen* DATE: 11-30-98

AHRS1-1A
RESIDUAL HEAT EXCHANGER

AHRS1 SW1



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-2

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Integrally Welded Attachments
APSI-1A-S1, APSI-1A-S3 and APSI-1A-S4 to Safety Injection Pump APSI-1A
and APSI-1B-S1, APSI-1B-S2 and
APSI-1B-S4 to Safety Injection Pump
APSI-1B**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category
C-C; Item No. C3.30**
- 4. Impracticality of Compliance: 14.6% of each Integrally Welded Attachment
was inaccessible due to configuration of the Welded Attachment in close
proximity to the Safety Injection Pump thus restricting application of
the Surface Examination Magnetic Particle.**
- 5. Burden Caused by Compliance: To provide for access to the 14.6% weld
area between the welded attachments and the Safety Injection Pump
would require modification from the Original Design of the Safety Injection
Pump and the Welded Attachments.**

KEWAUNEE NUCLEAR POWER PLANT

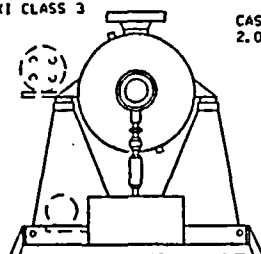
THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-2

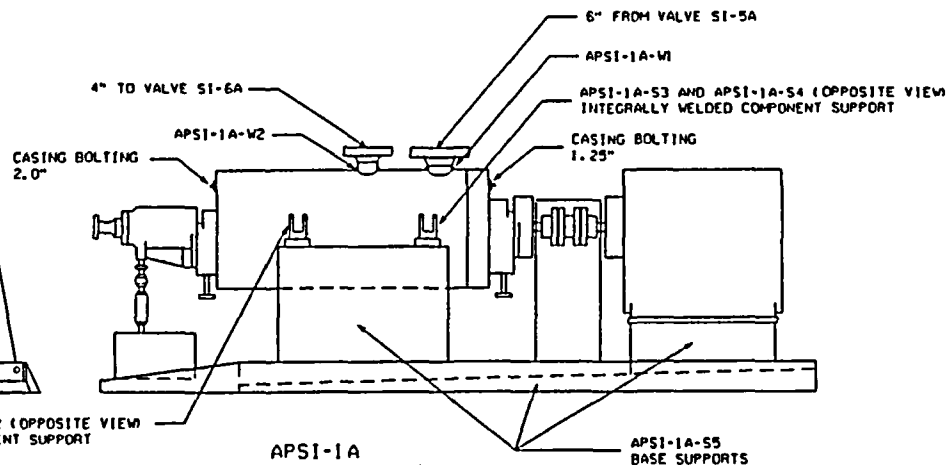
- 6. Proposed Alternative and Basis for Use: No alternative Code required
Surface examination is available due to limited access. VT-2 and VT-3
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: VT-2 Table
IWC-2500-1; Examination Category C-H; Item C7.50 each 3 1/3 Year
Period for evidence of leakage and VT-3 as required by Table IWF-2500-1;
Examination Category F-A; Item No. F1.40B for general mechanical and
structural condition.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**

2021-W

ASME BOILER AND PRESSURE VESSEL
CODE CLASS XI CLASS 3

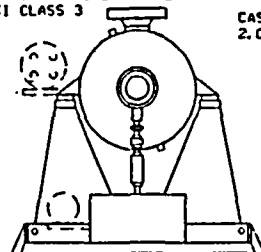


APSI-1A-S1 AND APSI-1A-S2 (OPPOSITE VIEW)
INTEGRALLY WELDED COMPONENT SUPPORT

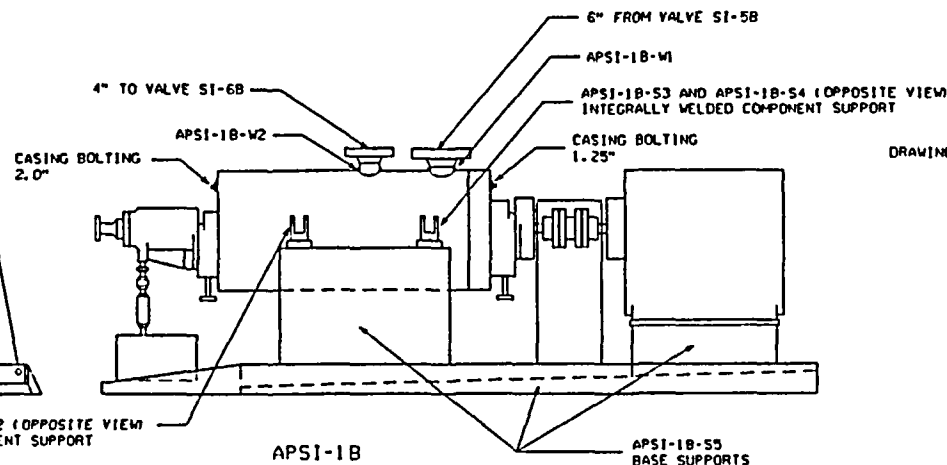


APSI-1A
145-031

ASME BOILER AND PRESSURE VESSEL
CODE CLASS XI CLASS 3



APSI-1B-S1 AND APSI-1B-S2 (OPPOSITE VIEW)
INTEGRALLY WELDED COMPONENT SUPPORT



APSI-1B
145-032

CASING BOLTING DATA (NOM APP)
SIZE / DIA. / LENGTH / NUTS
1/2" / 1.0" / 8.0" / 1/2"
1/2" / 1.0" / 8.0" / 1/2"

COMPONENT NOZZLE CASING WELD DATA		
I.D.	THICKNESS	MATERIAL
APSI-1A-S1	NOZZLE TO CASING	ASTM A286 CL
APSI-1A-S2	NOZZLE TO CASING	ASTM A286 CL
APSI-1B-S1	NOZZLE TO CASING	ASTM A286 CL
APSI-1B-S2	NOZZLE TO CASING	ASTM A286 CL

INTEGRALLY WELDED ATTACHMENT DATA		
I.D.	THICKNESS	MATERIAL
APSI-1A-S1	0.75"	A216 WC A
APSI-1A-S2	0.75"	A216 WC A
APSI-1A-S3	0.75"	A216 WC A
APSI-1A-S4	0.75"	A216 WC A
APSI-1B-S1	0.75"	A216 WC A
APSI-1B-S2	0.75"	A216 WC A
APSI-1B-S3	0.75"	A216 WC A
APSI-1B-S4	0.75"	A216 WC A

REVISION

FILMED FIRST ISSUE
BY WPS
PER ESR 92-177
APP'D: CAT 8-4-93
FILMED: WPS: 8-17-93

D-1 RE PUR 0295

ADDED REF NO'S.
BY: BJO 7-19-99
APP'D: DAK 7-26-99

A RE PUR 0295 COMPL.

SEE REV: 0-1
FILMED: WPS: 8-3-99

A-1 YAP 01-001639

REVISED NOTE 1.
BY: ABF 06-03-02
APP'D:

B KAP 01-001639
COMPLETE
SEE REV. A-1.
FILMED: WPS:

A-1
KAP 01-001639

DRAWING APPLICABLE FOR 3RD AND 4TH ISI INTERVAL

ASME BOILER AND PRESSURE VESSEL CODE
SECTION XI CLASS 2

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

SAFETY INJECTION PUMPS
APSI-1A AND APSI-1B

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	APPROVED
PHILLIP E. BUVES	12/21/93
ENGINEER	PROJECT APPROVED
B. TROTTER	5/12/93

DATE	ISS	NO.	REV.
5/12/93	1	M-1707	B

LOCATION: AUXILIARY BUILDING ELEVATION 586'

CADD

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: SAFETY INJECTION PUMPS APSI-1A AND APSI-1B

DRAWING NO.: m-1707

COMPONENT IDENTIFICATION: APSI-1A-33
APSI-1B-31
APSI-1B-34 PROCEDURE: NEP NO. 15.7 REVISION: ORIG

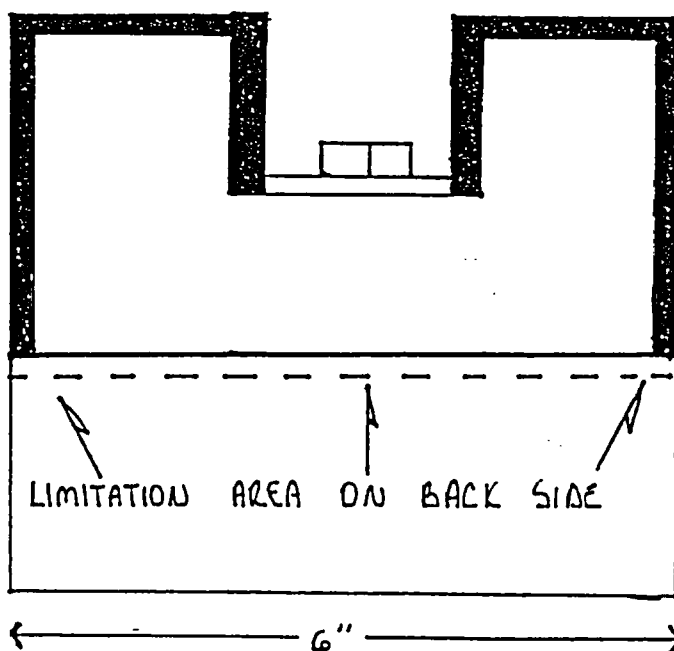
ULTRASONIC: _____ LIQUID PENETRANT: _____ MAGNETIC PARTICLE: X VISUAL: _____

EXAMINER: Travis Thomas II DATE: 10-27-01
LEVEL

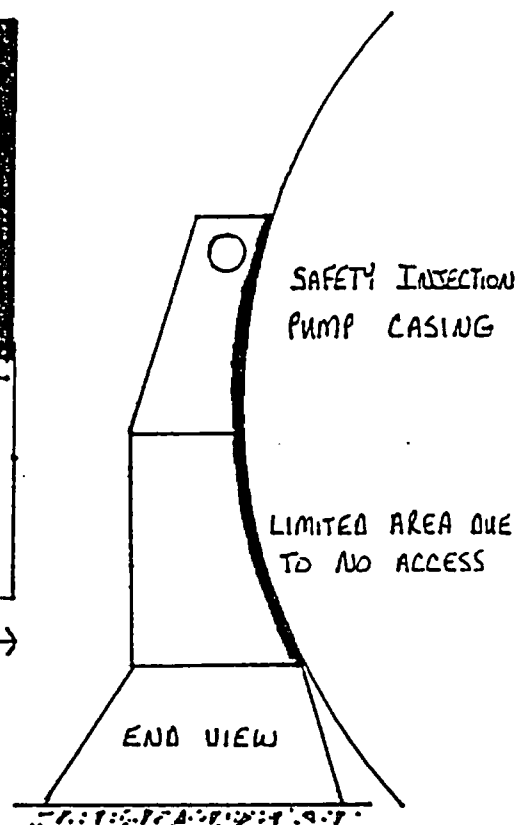
EXAMINER: NA _____ DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

TYP. OF 3 SUPPORTS EXAMINED



AREA NOT EXAMINED = 14.6 %



KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip E. Baker DATE: October 29, 2001
AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger Myer DATE: 10/30/01

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

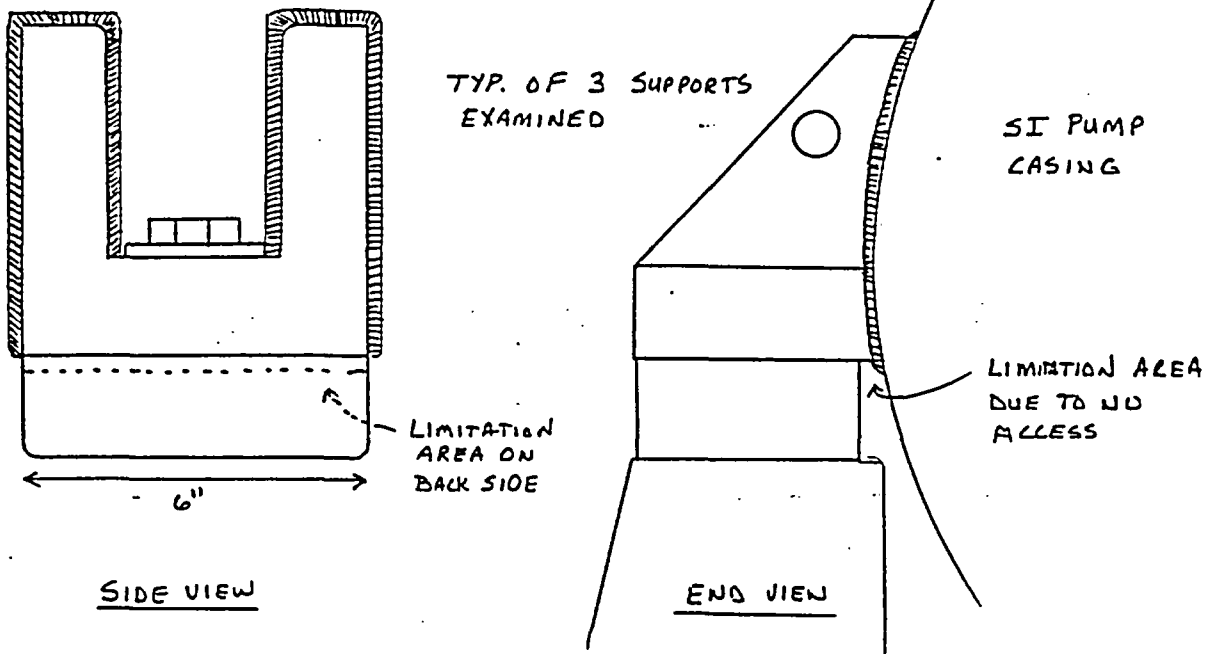
SAFETY INJECTION PUMPS

SYSTEM OR COMPONENT: APSI-1A AND APSI-1B DRAWING NO.: M-1707
COMPONENT IDENTIFICATION: APSI-1B-S2
APSI-1A-S1
APSI-1A-S4 PROCEDURE: QCP-902 REVISION: ORIG
ULTRASONIC: _____ LIQUID PENETRANT: _____ MAGNETIC PARTICLE: X VISUAL: _____

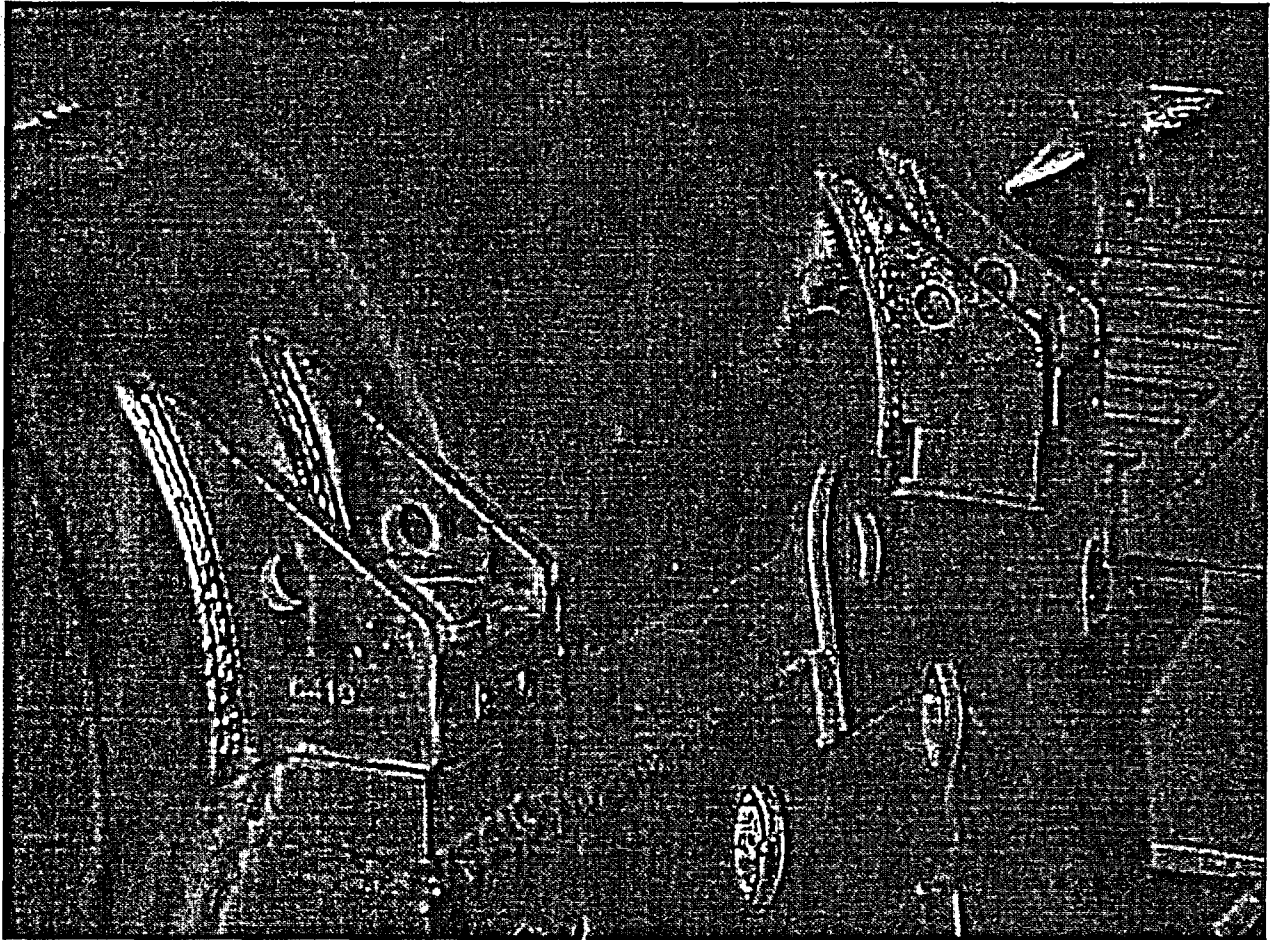
EXAMINER: James P. Wm II DATE: 4-22-95
LEVEL
EXAMINER: Nick Boly II DATE: 4-22-95
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

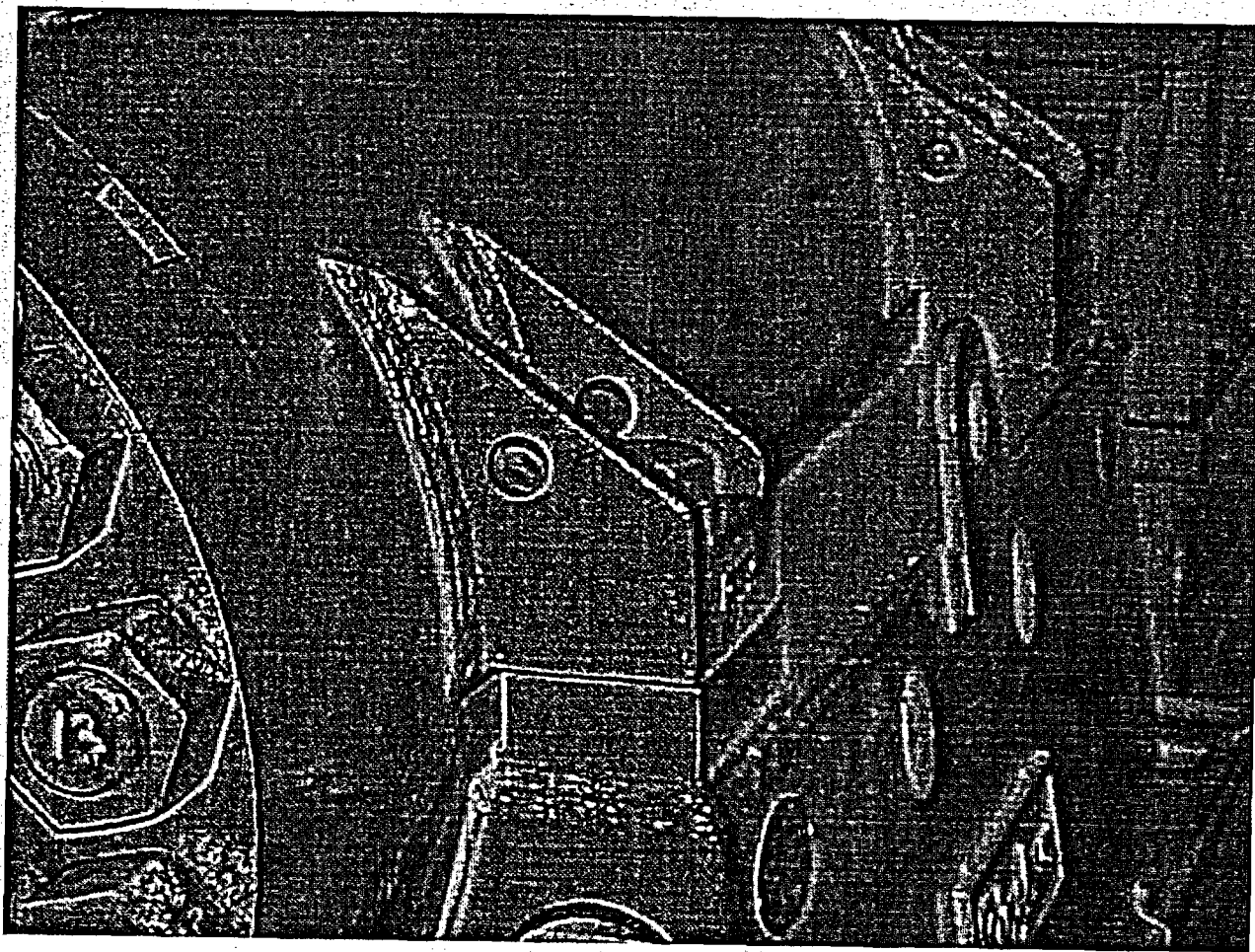
PERCENTAGE OF REDUCED EXAM COVERAGE 85.4% EXAMINED
14.6% NOT EXAMINED



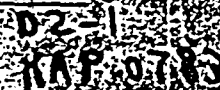
KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip C. Baker DATE: April 24, 1995
AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Alvin M. Griffin DATE: 4/24/95



SaFeTY INJecTion PuMp aPSI-1a
INTEGRALLY WELDED ATTACHMENTS
TYPICAL

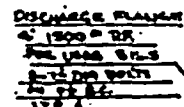
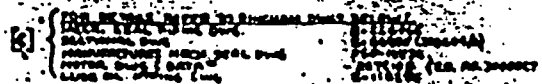
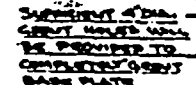


SAFETY INJECTION PUMP PSI-1B
INTEGRALLY WELDED ATTACHMENTS
TYPICAL - PRIOR TO PAINT REMOVAL



LE-SPM-BENTON

24. 07 LEAP/DOX. BIRN
24. 07 LEAP/DOX. BIRN
24. 07 LEAP/DOX. BIRN



CONFIDENTIAL FOR CONSTRUCTION
 No. 10000
 No. 10000
 No. 10000
 No. 10000
 No. 10000

EQUIPMENT DATA
 DESIGN HEAD 700' GUST 2760 cfm 1200 ft
 DESIGN CAPACITY 634700 700 gpm 1200 ft
 OPER. TEMP 65°-70°-80°-90°-100°-110°-120°-130°-140°-150°-160°-170°-180°-190°-200°-210°-220°-230°-240°-250°-260°-270°-280°-290°-300°-310°-320°-330°-340°-350°-360°-370°-380°-390°-400°-410°-420°-430°-440°-450°-460°-470°-480°-490°-500°-510°-520°-530°-540°-550°-560°-570°-580°-590°-600°-610°-620°-630°-640°-650°-660°-670°-680°-690°-700°-710°-720°-730°-740°-750°-760°-770°-780°-790°-800°-810°-820°-830°-840°-850°-860°-870°-880°-890°-900°-910°-920°-930°-940°-950°-960°-970°-980°-990°-1000°-1010°-1020°-1030°-1040°-1050°-1060°-1070°-1080°-1090°-1100°-1110°-1120°-1130°-1140°-1150°-1160°-1170°-1180°-1190°-1200°-1210°-1220°-1230°-1240°-1250°-1260°-1270°-1280°-1290°-1300°-1310°-1320°-1330°-1340°-1350°-1360°-1370°-1380°-1390°-1400°-1410°-1420°-1430°-1440°-1450°-1460°-1470°-1480°-1490°-1500°-1510°-1520°-1530°-1540°-1550°-1560°-1570°-1580°-1590°-1600°-1610°-1620°-1630°-1640°-1650°-1660°-1670°-1680°-1690°-1700°-1710°-1720°-1730°-1740°-1750°-1760°-1770°-1780°-1790°-1800°-1810°-1820°-1830°-1840°-1850°-1860°-1870°-1880°-1890°-1900°-1910°-1920°-1930°-1940°-1950°-1960°-1970°-1980°-1990°-2000°-2010°-2020°-2030°-2040°-2050°-2060°-2070°-2080°-2090°-2100°-2110°-2120°-2130°-2140°-2150°-2160°-2170°-2180°-2190°-2200°-2210°-2220°-2230°-2240°-2250°-2260°-2270°-2280°-2290°-2300°-2310°-2320°-2330°-2340°-2350°-2360°-2370°-2380°-2390°-2400°-2410°-2420°-2430°-2440°-2450°-2460°-2470°-2480°-2490°-2500°-2510°-2520°-2530°-2540°-2550°-2560°-2570°-2580°-2590°-2600°-2610°-2620°-2630°-2640°-2650°-2660°-2670°-2680°-2690°-2700°-2710°-2720°-2730°-2740°-2750°-2760°-2770°-2780°-2790°-2800°-2810°-2820°-2830°-2840°-2850°-2860°-2870°-2880°-2890°-2900°-2910°-2920°-2930°-2940°-2950°-2960°-2970°-2980°-2990°-3000°-3010°-3020°-3030°-3040°-3050°-3060°-3070°-3080°-3090°-3100°-3110°-3120°-3130°-3140°-3150°-3160°-3170°-3180°-3190°-3200°-3210°-3220°-3230°-3240°-3250°-3260°-3270°-3280°-3290°-3300°-3310°-3320°-3330°-3340°-3350°-3360°-3370°-3380°-3390°-3400°-3410°-3420°-3430°-3440°-3450°-3460°-3470°-3480°-3490°-3500°-3510°-3520°-3530°-3540°-3550°-3560°-3570°-3580°-3590°-3600°-3610°-3620°-3630°-3640°-3650°-3660°-3670°-3680°-3690°-3700°-3710°-3720°-3730°-3740°-3750°-3760°-3770°-3780°-3790°-3800°-3810°-3820°-3830°-3840°-3850°-3860°-3870°-3880°-3890°-3900°-3910°-3920°-3930°-3940°-3950°-3960°-3970°-3980°-3990°-4000°-4010°-4020°-4030°-4040°-4050°-4060°-4070°-4080°-4090°-4100°-4110°-4120°-4130°-4140°-4150°-4160°-4170°-4180°-4190°-4200°-4210°-4220°-4230°-4240°-4250°-4260°-4270°-4280°-4290°-4300°-4310°-4320°-4330°-4340°-4350°-4360°-4370°-4380°-4390°-4400°-4410°-4420°-4430°-4440°-4450°-4460°-4470°-4480°-4490°-4500°-4510°-4520°-4530°-4540°-4550°-4560°-4570°-4580°-4590°-4600°-4610°-4620°-4630°-4640°-4650°-4660°-4670°-4680°-4690°-4700°-4710°-4720°-4730°-4740°-4750°-4760°-4770°-4780°-4790°-4800°-4810°-4820°-4830°-4840°-4850°-4860°-4870°-4880°-4890°-4900°-4910°-4920°-4930°-4940°-4950°-4960°-4970°-4980°-4990°-5000°-5010°-5020°-5030°-5040°-5050°-5060°-5070°-5080°-5090°-5100°-5110°-5120°-5130°-5140°-5150°-5160°-5170°-5180°-5190°-5200°-5210°-5220°-5230°-5240°-5250°-5260°-5270°-5280°-5290°-5300°-5310°-5320°-5330°-5340°-5350°-5360°-5370°-5380°-5390°-5400°-5410°-5420°-5430°-5440°-5450°-5460°-5470°-5480°-5490°-5500°-5510°-5520°-5530°-5540°-5550°-5560°-5570°-5580°-5590°-5600°-5610°-5620°-5630°-5640°-5650°-5660°-5670°-5680°-5690°-5700°-5710°-5720°-5730°-5740°-5750°-5760°-5770°-5780°-5790°-5800°-5810°-5820°-5830°-5840°-5850°-5860°-5870°-5880°-5890°-5900°-5910°-5920°-5930°-5940°-5950°-5960°-5970°-5980°-5990°-6000°-6010°-6020°-6030°-6040°-6050°-6060°-6070°-6080°-6090°-6100°-6110°-6120°-6130°-6140°-6150°-6160°-6170°-6180°-6190°-6200°-6210°-6220°-6230°-6240°-6250°-6260°-6270°-6280°-6290°-6300°-6310°-6320°-6330°-6340°-6350°-6360°-6370°-6380°-6390°-6400°-6410°-6420°-6430°-6440°-6450°-6460°-6470°-6480°-6490°-6500°-6510°-6520°-6530°-6540°-6550°-6560°-6570°-6580°-6590°-6600°-6610°-6620°-6630°-6640°-6650°-6660°-6670°-6680°-6690°-6700°-6710°-6720°-6730°-6740°-6750°-6760°-6770°-6780°-6790°-6800°-6810°-6820°-6830°-6840°-6850°-6860°-6870°-6880°-6890°-6900°-6910°-6920°-69

WESTINGHOUSE SPIN NO.
Pump no 220696 301N 120 WFL-242N-0
Pump no 220697 301N 120 WFL-242N-0

NY-100-486-03

WEIGHTS	
Wage	7750
Food	4500
Rent	3210
TOTAL	15460

OUTLINE		PAGE		CP		H-1717X	
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D0-1RB PURCHASING
 REVISED PURCHASING
 ATTACHED TO D0-1
 CANCELED: 10-30-67
 APPROVED: 11-6-67
 D1 RE PURCHASING
 SEE REV D0-1
 FILMED: 11-6-67
 D2-1 RAP 0471
 ADDED INFORMATION
 TO FLOW ORIGINATOR
 BY: 11-6-67
 APPROVED: 11-6-67
 D2 RAP 0471
 COMPL. SEE REV D0-1
 FILMED: 11-6-67
 D2-1 RAP 0783
 REVISED INFORMATION
 AT LEGEND
 BY: 11-6-67
 APPROVED: 11-6-67
 D3 RAP 0783 COMPL
 SEE REV. D2-1
 FILMED: (WPS) 11-6-67

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-3

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Integrally Welded Attachments
APSI-1A-S2 to Safety Injection Pump
APSI-1A and APSI-1B-S3 to Safety
Injection Pump APSI-1B**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category
C-C; Item No. C3.30**
- 4. Impracticality of Compliance: 17.0% of each Integrally Welded Attachment
was inaccessible due to configuration of the Welded Attachment in close
proximity to the Safety Injection Pump thus restricting application of
the Surface Examination Magnetic Particle.**
- 5. Burden Caused by Compliance: To provide for access to the 17.0% weld
area between the welded attachments and the Safety Injection Pump
would require modification from the Original Design of the Safety Injection
Pump and the Welded Attachments.**

KEWAUNEE NUCLEAR POWER PLANT

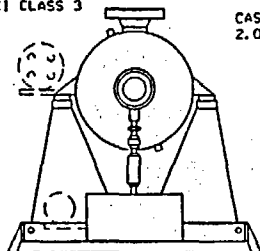
THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-3

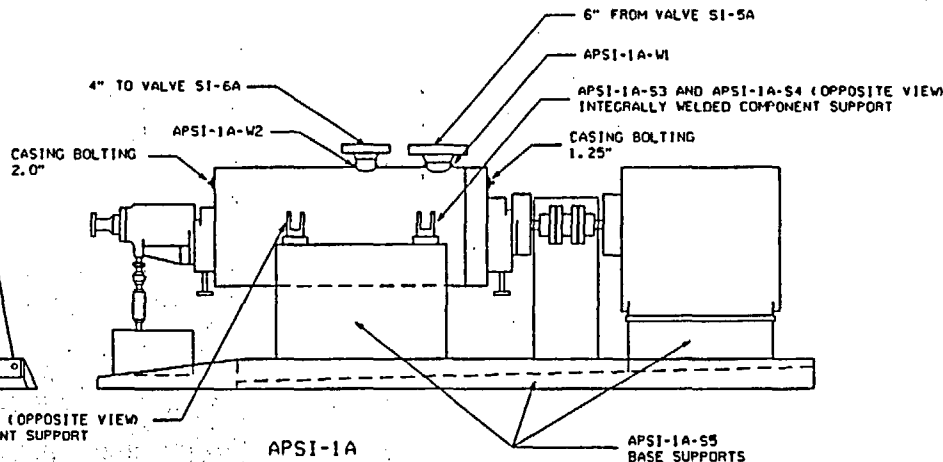
- 6. Proposed Alternative and Basis for Use: No alternative Code required
Surface examination is available due to limited access. VT-2 and VT-3
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: VT-2 Table
IWC-2500-1; Examination Category C-H; Item C7.50 each 3 1/3 Year
Period for evidence of leakage and VT-3 as required by Table IWF-2500-1;
Examination Category F-A; Item No. F1.40B for general mechanical and
structural condition.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**

2021-W

ASME BOILER AND PRESSURE VESSEL
CODE CLASS XI CLASS 3

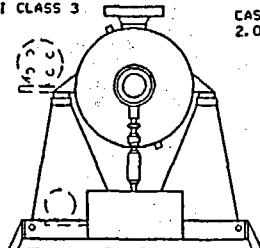


APSI-1A-S1 AND APSI-1A-S2 (OPPOSITE VIEW)
INTEGRALLY WELDED COMPONENT SUPPORT

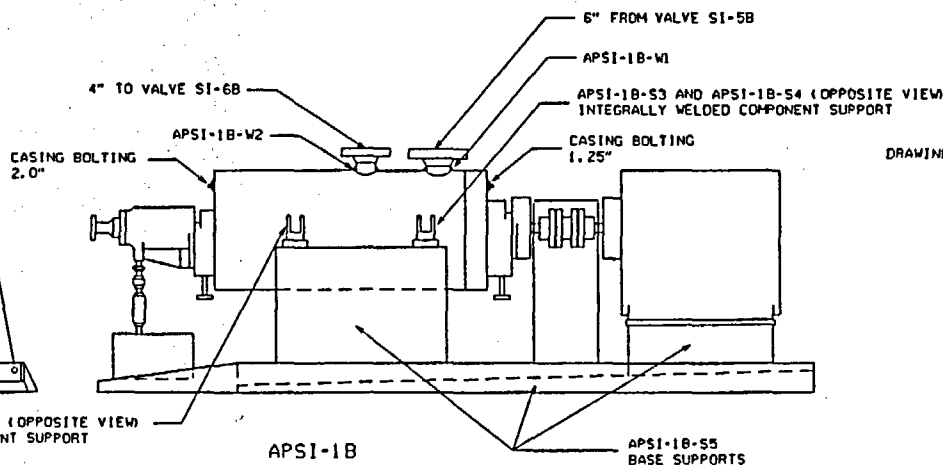


APSI-1A
145-031

ASME BOILER AND PRESSURE VESSEL
CODE CLASS XI CLASS 3



APSI-1B-S1 AND APSI-1B-S2 (OPPOSITE VIEW)
INTEGRALLY WELDED COMPONENT SUPPORT



APSI-1B
145-032

CASING BOLTING DATA EACH PLAP		
SIZES / DIA. / LGTH. INCHES		
1A - 2.0" / 8.0" / 118		
1B - 2.0" / 8.0" / 118		

COMPONENT NOZZLE CASING WELD DATA		
I.D.	THICKNESS	MATERIAL
APSI-1A-W1	MOZZLE TO CASING	ASTM A266 CL. 1
APSI-1A-W2	MOZZLE TO CASING	ASTM A266 CL. 1
APSI-1B-W1	MOZZLE TO CASING	ASTM A266 CL. 1
APSI-1B-W2	MOZZLE TO CASING	ASTM A266 CL. 1

INTEGRALLY WELDED ATTACHMENT DATA		
I.D.	THICKNESS	MATERIAL
APSI-1A-S1	0.75"	A216 WC A
APSI-1A-S2	0.75"	A216 WC A
APSI-1A-S3	0.75"	A216 WC A
APSI-1A-S4	0.75"	A216 WC A
APSI-1B-S1	0.75"	A216 WC A
APSI-1B-S2	0.75"	A216 WC A
APSI-1B-S3	0.75"	A216 WC A
APSI-1B-S4	0.75"	A216 WC A

REVISION

FILMED FIRST ISSUE
BY WPS
PER ESR 92-177
APP'D: CAT 8-4-93
FILMED: WPS 8-17-93

D-1 RE PUR 0295

ADDED REF NO'S.
BY: BJO 7-19-99
APP'D: DAK 7-26-99

A RE PUR 0295 COMPL.

SEE REV: 0-1
FILMED: WPS 8-3-99

A-1 KAP 01-001639

REVISED NOTE 1.

BY: ABF 06-03-02

APP'D:

B KAP 01-001639

COMPLETE

SEE REV. A-1.

FILMED: WPS

A-1
KAP 01-001639

DRAWING APPLICABLE FOR 3RD AND 4TH ISI INTERVAL

ASME BOILER AND PRESSURE VESSEL CODE
SECTION XI CLASS 2

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

SAFETY INJECTION PUMPS
APSI-1A AND APSI-1B

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	APPROVED	
CHECKED	PHILLIP E. BUKES	12/21/93
B. TROTTER	PROJECT APPROVED	
DATE	5/12/93	
ESS	DWG. NO.	REV.
SCALE	M-1707	8
NONE		

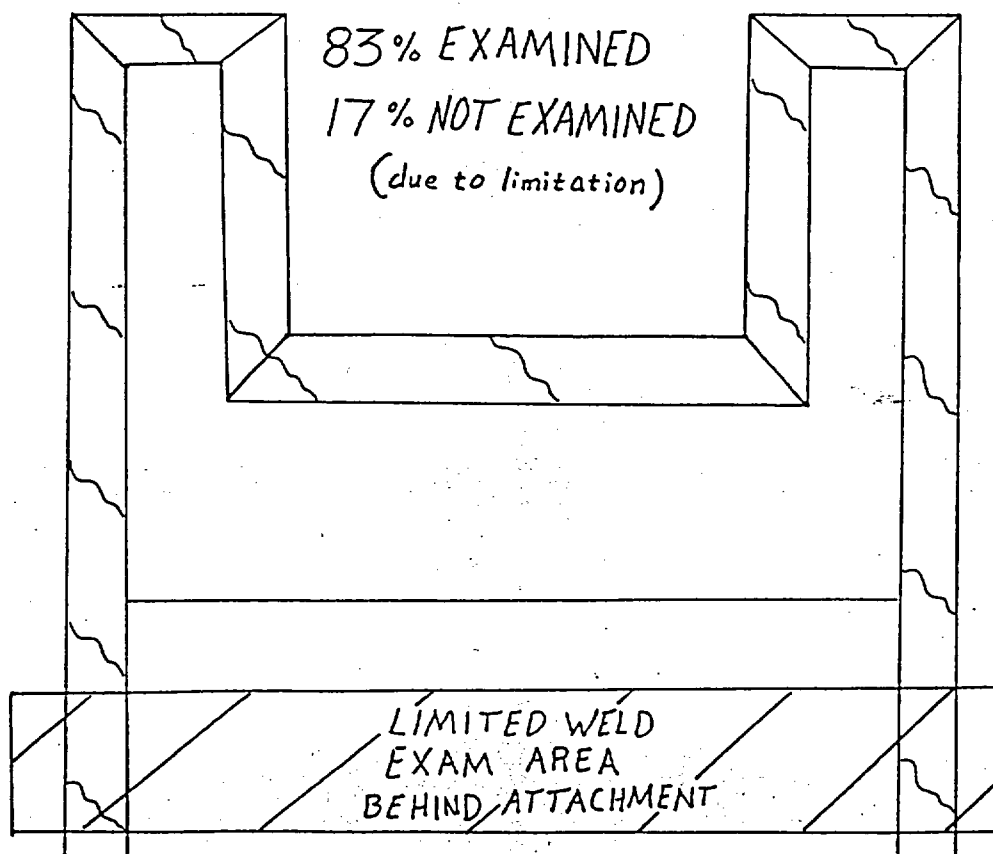
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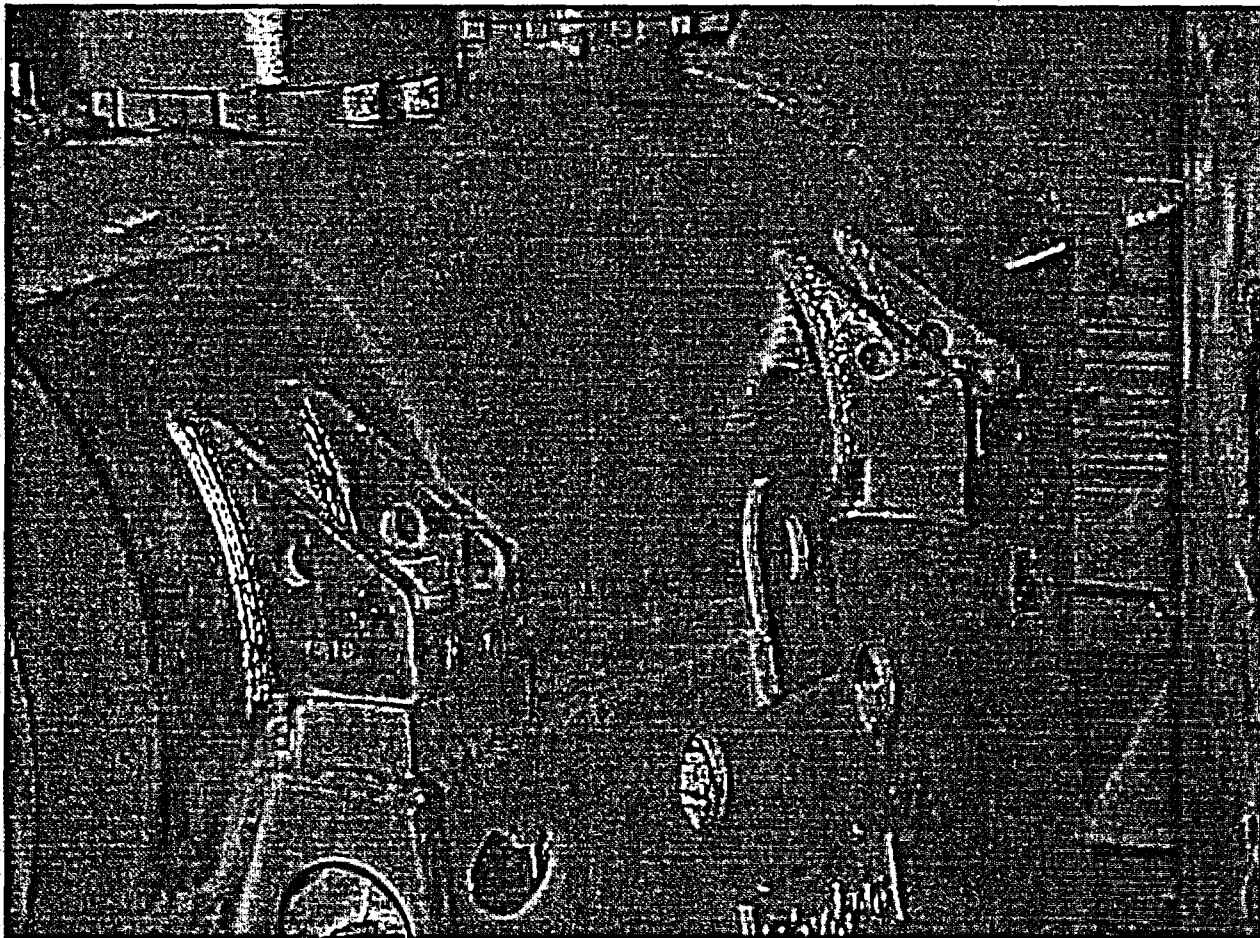
LOCATION: AUXILIARY BUILDING ELEVATION 586'

WISCONSIN PUBLIC SERVICE CORPORATION

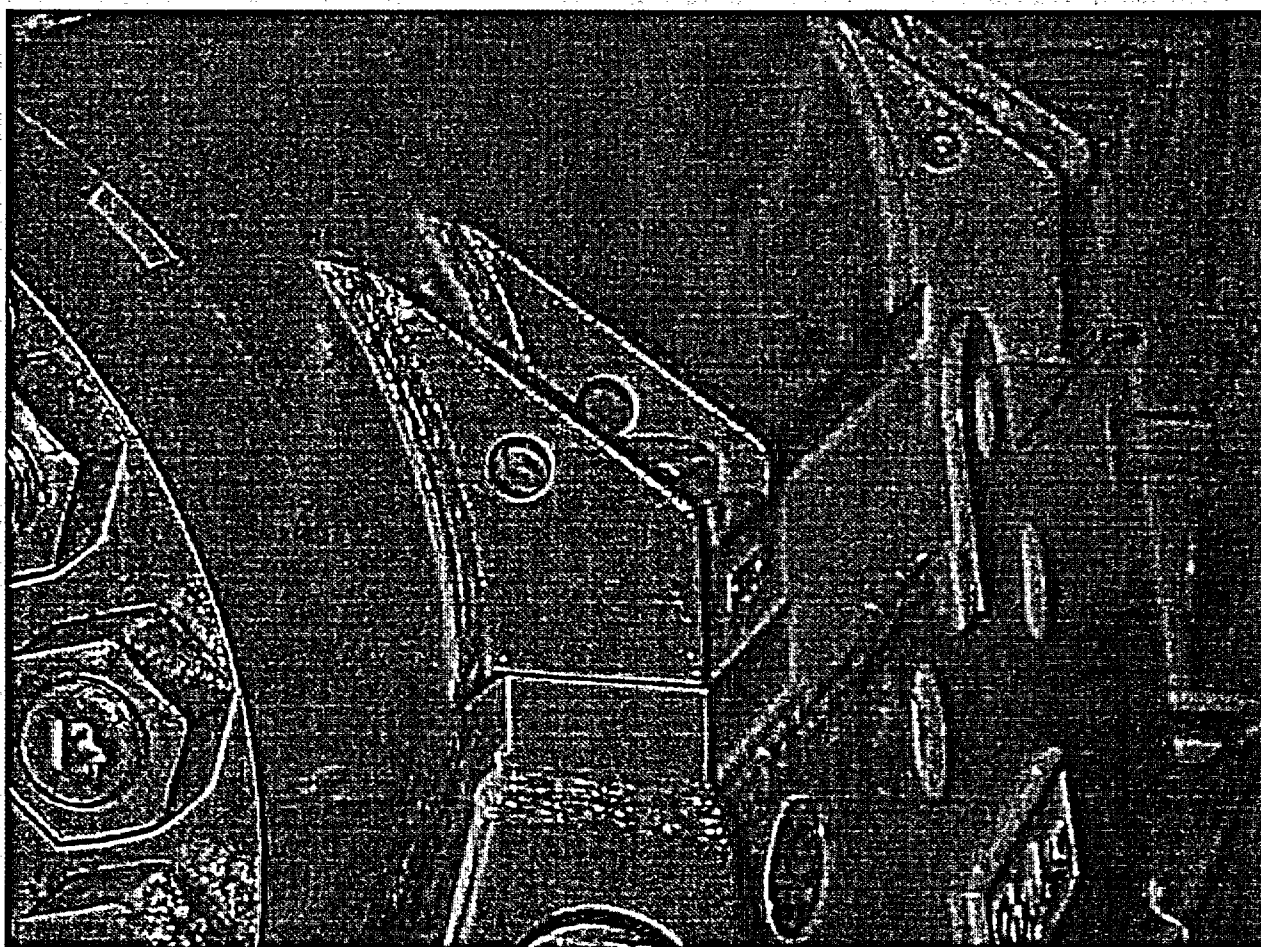
REV.: ORIG.

KEWAUNEE NUCLEAR POWER PLANT

ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORDSYSTEM OR COMPONENT: SAFETY INJECTION PUMPS APSI - 1A AND APSI - 1BDRAWING NO.: M-1707COMPONENT IDENTIFICATION: APSI - 1B - 53
APSI - 1A - 52 PROCEDURE: NEP No. 15.7 REVISION: Orig.ULTRASONIC: _____ LIQUID PENETRANT: _____ MAGNETIC PARTICLE: X VISUAL: _____EXAMINER: [Signature] II DATE: 11-3-98
LEVELEXAMINER: [Signature] II DATE: 11-3-98
LEVELSKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND
PERCENTAGE OF REDUCED EXAMINATION COVERAGE.KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bures DATE: November 5, 1998AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: [Signature] DATE: 11-6-98



Safety Injection Pump APSI-1A
Integrally Welded Attachments
Typical



SAFETY INJECTION PUMP APSI-1B
INTEGRALLY WELDED ATTACHMENTS
TYPICAL - PRIOR TO PAINT REMOVAL

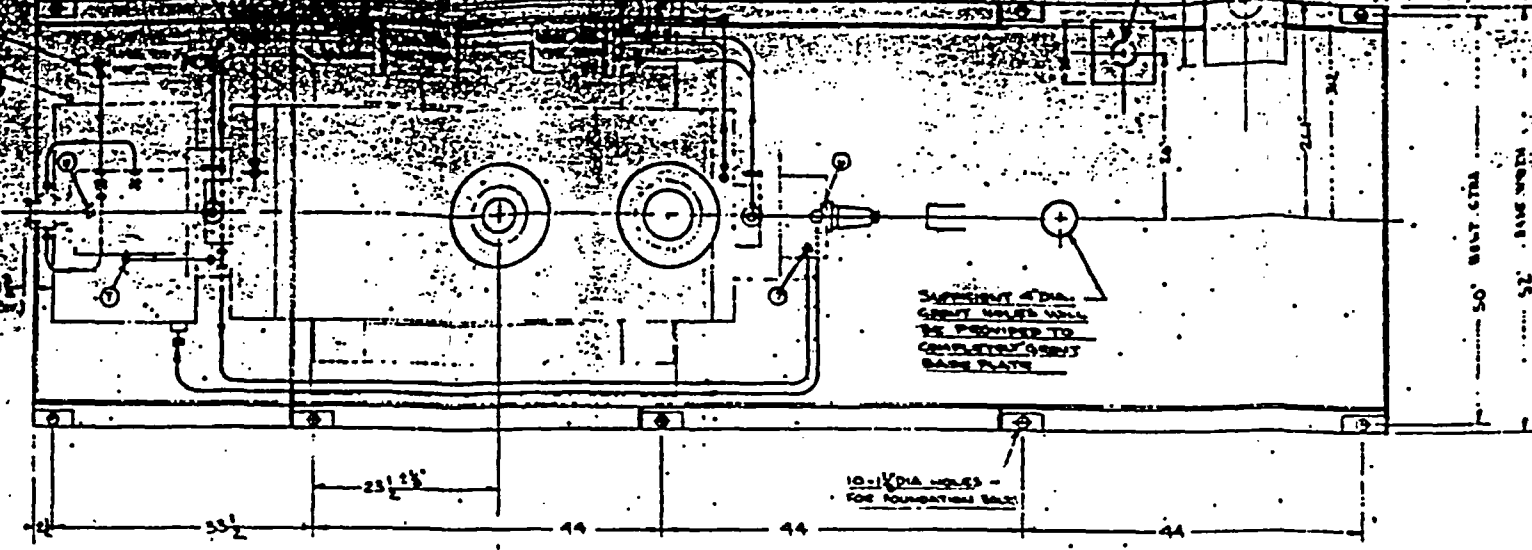
SCHEMATIC LUBRICATION SYSTEM

LEGEND

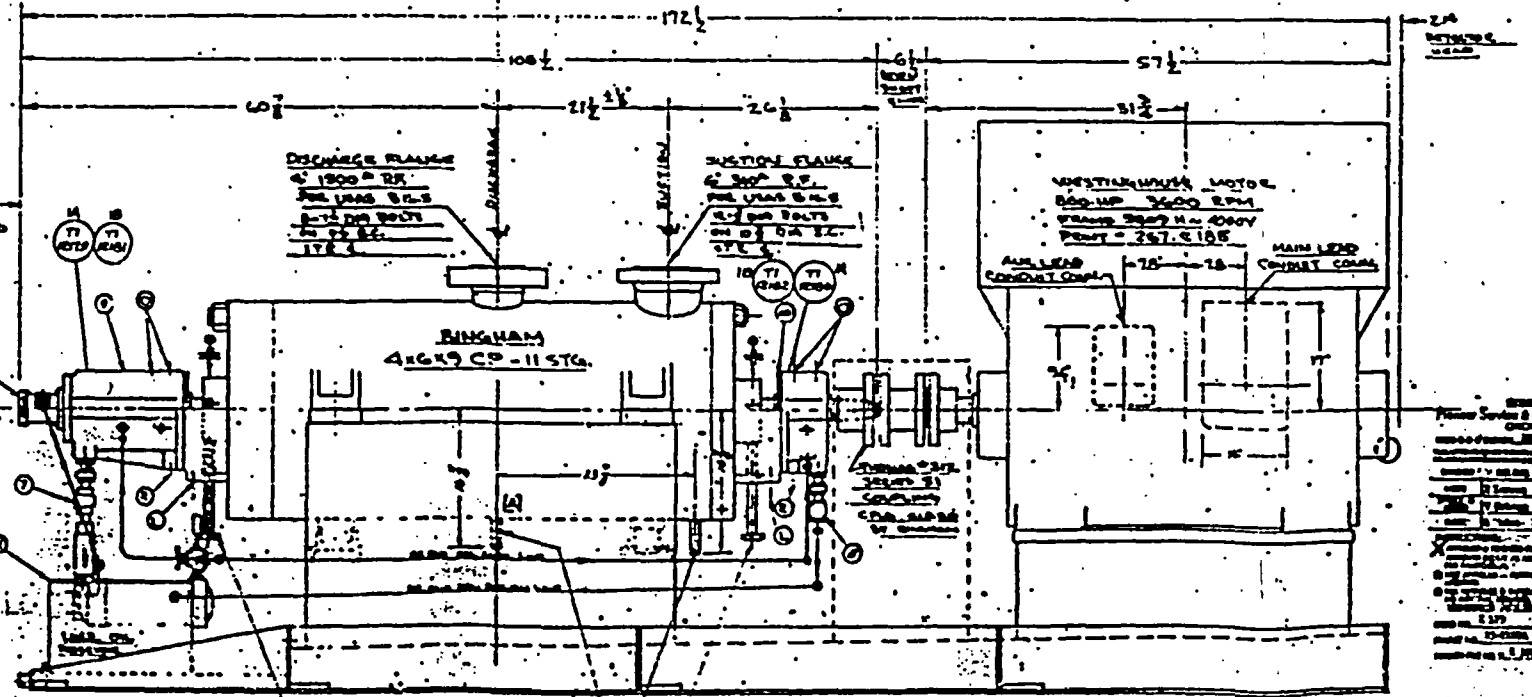
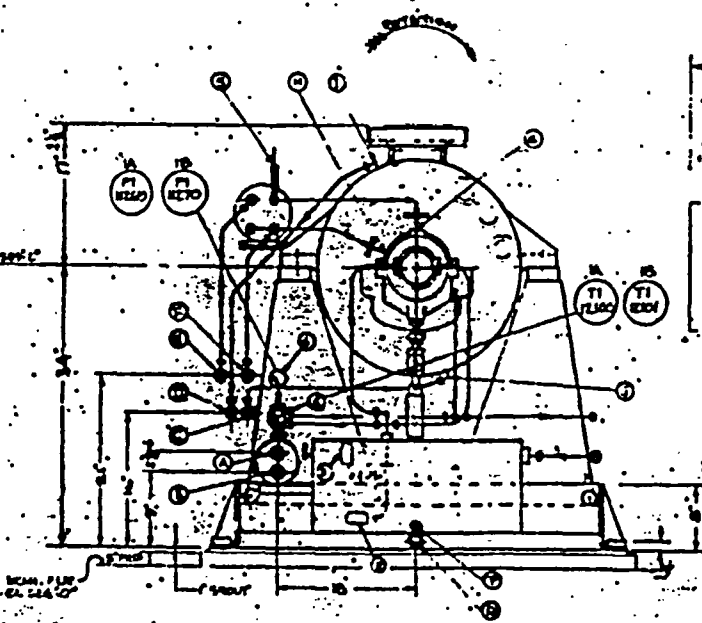
A. COOLING WATER INLET, LUBE OIL	24 PT.
B. COOLING WATER OUTLET, LUBE OIL	24 PT.
C. COOLING WATER INLET, STEAM OIL	24 PT.
D. COOLING WATER OUTLET, STEAM OIL	24 PT.
E. COOLING WATER INLET, SEAL WASH OIL	24 PT.
F. COOLING WATER OUTLET, SEAL WASH OIL	24 PT.
G. SEAL PUMP INLET, OIL	24 PT.
H. SEAL PUMP OUTLET, OIL	24 PT.
I. STEAM OIL INLET - OIL	24 PT.
J. STEAM OIL INLET - H ₂ O	24 PT.
K. OUTER CASE DRAIN	24 PT. 100
L. AVALANCH PUMP DRAIN	24 PT.
M. SEAL LEAKAGE COIL	24 PT. 100 LAP JOINT
N. OIL LEVEL INDICATOR	24 PT.
O. OIL INSPECTION PLUG	24 PT.
P. OIL EXTERIOR DRAIN	24 PT.
Q. BASE DRAIN	24 PT.
R. SEAL WASH DRAIN	24 PT.
S. SEAL PUMP VENT COIL STEWEL END	24 PT. 100
T. LUBE OIL INLET	24 PT.
U. LUBE OIL OUTLET	24 PT.

D2-1
KAP 0783

1.5 GPM MINIMUM
1.5 GPM MAXIMUM



NO. 100-1000
REVISED PUMP NO.
CHD: 10-30-07
APPD: 10-30-07
D1 RE PUMP NO.
SEE REV. 01-10-07
D1 KAP 0471
ADDED INFORMATION
TO FLOW OIL
BY: 10-30-07
APPD: 10-30-07
D2 KAP 0471
COMPL. SEE REV. 01-10-07
FILMED: 10-30-07
D2-1 KAP 0783
REVISED INFORMATION
AT: LEGEND
BY: 10-30-07
APPD: 10-30-07
D3 KAP 0783 COMPL.
SEE REV. D2-1
FILMED: (WPS) 11-10-07



WESTINGHOUSE MOTOR
800 HP 3600 RPM
FRAME 3600 H 4000V
PUMP - 257.5105
MAIN LEAD
CONDUIT COIL

EQUIPMENT DATA
DESIGN CAPACITY: 1000 GPM
DESIGN HEAD: 100 FT
DESIGN SPEED: 3600 RPM
DESIGN TEMPERATURE: 100°F
DESIGN PRESSURE: 100 PSI
DESIGN MATERIAL: 304 STAINLESS STEEL

WESTINGHOUSE SPIN NO.
PUMP NO. 290686 SPIN NO. WPS-1000-01
PUMP NO. 290687 SPIN NO. WPS-1000-02

WEIGHTS	
PUMP	7750
MOTOR	4500
BASE	3250
TOTAL	15500

100-1000-03

10-17-17 X

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-4

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Reactor Vessel Closure Head To Flange Weld RV-W12**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-A; Item No. B1.40**
- 4. Impracticality of Compliance: 23.0% of the Reactor Vessel Head to Flange Weld RV-W12 was inaccessible due to configuration of the Reactor Vessel Closure Head Flange and the 3 Welded Lifting Lugs thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 23.0% of the Head to Flange Weld RV-W12 would require modification from the Original Design of the Reactor Vessel Closure Head and removal of the 3 Welded Lifting Lugs. During the Fall 2004 Refueling Outage Kewaunee Nuclear Power Plant replaced it's Reactor Vessel Closure Head. The Replacement Reactor Vessel Closure Head was manufactured as a one piece forging. Thus a Reactor Vessel Closure Head to Flange Weld does not exist and ASME Boiler and Pressure Vessel Code Section XI 1989 Edition Table IWB-2500-1 Examination Category B-A, Item No. B1.40 no longer applies.**

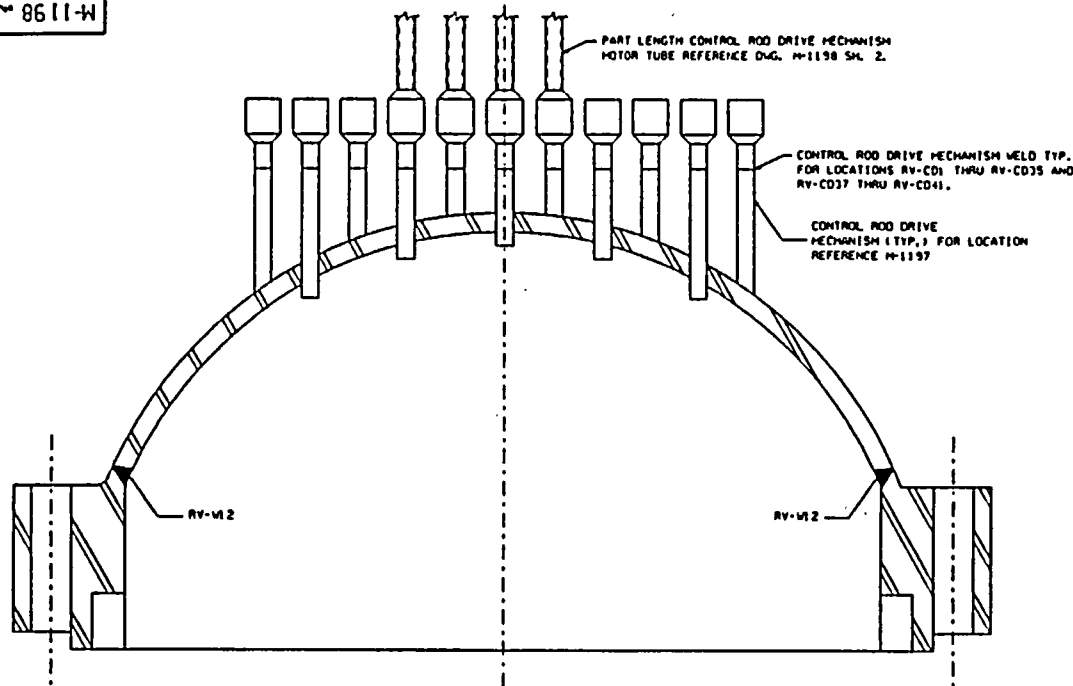
KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

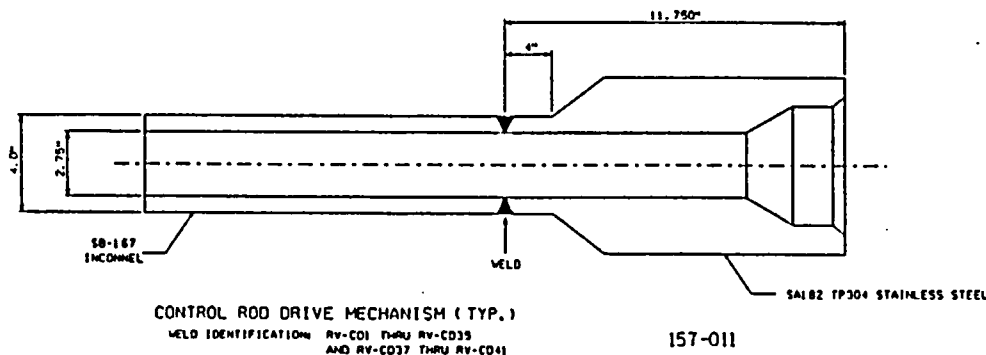
RELIEF REQUEST NO: RR-G-7-4

- 6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: VT-2 Table
IWB-2500-1; Examination Category B-P; Item B15.10 each Refueling
Outage for evidence of leakage. Surface Magnetic Particle Examinations
were performed as required by ASME Boiler and Pressure Vessel Code
Section XI 1989 Edition Table IWB-2500-1; Examination Category B-A;
Item No. B1.40. During the Fall 2004 Refueling Outage Kewaunee Nuclear
Power Plant replaced it's Reactor Vessel Closure Head. The Replacement
Reactor Vessel Closure Head was manufactured as a one piece forging.
Thus a Reactor Vessel Closure Head to Flange Weld does not exist and
ASME Boiler and Pressure Vessel Code Section XI 1989 Edition Table
IWB-2500-1 Examination Category B-A, Item No. B1.40 no longer applies.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**

8611-W



REACTOR VESSEL CLOSURE HEAD FLANGE



CONTROL ROD DRIVE MECHANISM (TYP.)
WELD IDENTIFICATION RV-CD1 THRU RV-CD35
AND RV-CD37 THRU RV-CD41

157-011

LOCATION: CONTAINMENT

COMPONENT WELD DATA	
I.D.	THICKNESS
RV-M2	6.0"
CRDM WELD RV-CD1 THRU RV-CD35 AND RV-CD37 THRU RV-CD41	.625"

REACTOR VESSEL CLOSURE HEAD
FLANGE.....6.0" T A508-84 CLASS 2 CARBON STEEL
DOME.....SA533 GR. B CLASS 1 CARBON STEEL
DIAMETER.....137.5"
CIRCUM.....432.0"

CALIBRATION BLOCK	
I.D.	DIMENSION/SCHEDULE MATERIAL
WPS-75	6.0" T ± .025" ± .005" SA-508 CL. 2 CS
WPS-18	1" SCH 80 S.S. 316 L A376 TP 316 SS

E-1
KAP 01-001639

- NOTES:
- DRAWING APPLICABLE FOR 3rd (AND 4th) ISI INTERVAL
 - ASME BOILER AND PRESSURE VESSEL CODE SECTION XI CLASS 1

REVISION	
F	KAP 01-001639 COMPLETE SEE REV. E-1. FILMED:WPS
A-1	REDRAFTED TO CAD PER ESR 92-177 OWN E. SAXTON 4/1/93 CHK'D B. TROTTER 5/12/93 APP'D CAT 7-23-93
B	ESR 92-177 COMPL. SEE REV. A-1 FILMED:WPS 08-03-93
B-1	REV. NOTES PER ESR 92-177 BY: LNL 10-1-93 CHK'D RJS 10-4-93 APP'D CAT 10-07-93
C	ESR 92-177 COMPL. SEE REV. B-1 FILMED:WPS 10-19-93
C-1	KAP 1560 ADDED PART LENGTH CONTROL ROD DRIVE MECH. & DWG. TO COMP. WELD DATA & CALIBRATION BLOCK LISTS & MADE DWG. SH 1 OF 2. BY: SJD 4-1-98 APP'D FEB 04-07-98
D	KAP 1560 COMPL. SEE REV. C-1. FILMED:WPS 04-14-98
D-1	RE PLR 0295 ADDED ITEM NO. BY: BJD 7-19-99 APP'D DAR 7-26-99
E	RE PLR 0295 COMPL. SEE REV. D-1. FILMED:WPS 8-3-99
E-1	KAP 01-001639 REVISED NOTE 1. BY: ABF 06-03-02 APP'D

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

REACTOR VESSEL CLOSURE HEAD FLANGE AND CONTROL ROD DRIVE MECHANISM

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	APPROVED
CHECKED	PHILLIP E. BUKES 5/13/93
DRAWN	PROJECT APPROVED
DATE	1/17/83
Q.R./D.S. 1/13/93	DWG. NO. M-1198
NONE	REV. 1 OF 2 F

CADD

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

SYSTEM OR COMPONENT: REACTOR VESSEL CLOSURE HEAD FLANGE AND CONTROL ROD DRIVE MECHANISM DRAWING NO.: M-1198

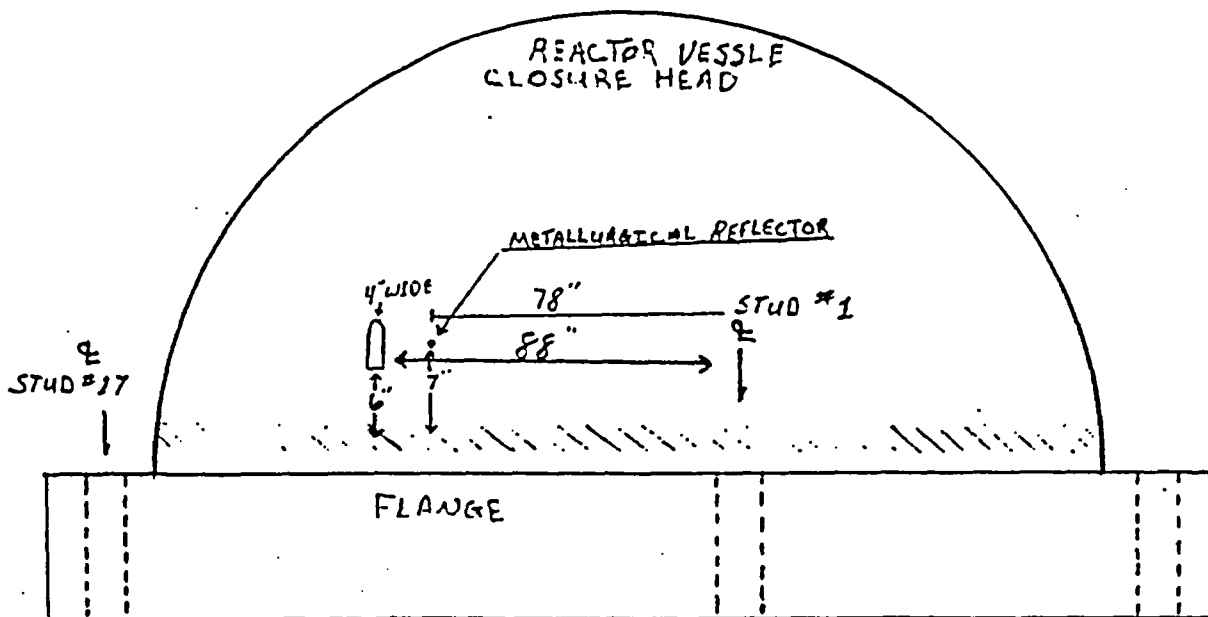
COMPONENT IDENTIFICATION: RV-W12 PROCEDURE: QCP 904 REVISION: ORIG.

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: Jeffrey M. Johnson II DATE: 4-11-95
LEVEL

EXAMINER: Michael J. Allen II DATE: 4-11-95
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



ULTRASONIC SCAN LIMITATIONS → LIFTING LUG AT 88" CW FROM WELD OF #1 STUD.

SCAN LIMITED ON FLANGE SIDE TO 3" FROM WELD &
REFLECTOR IS OF METALLURGICAL ORIGIN AND DID NOT INTERFERE WITH THE
45° OR 60° EXAMS

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Eric A. Balstad DATE: 4/13/95

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Raymond J. Johnson DATE: 4/14/95

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: REACTOR VESSEL CLOSURE HEAD

DRAWING NO.: M-1198 SH. 1 of 2

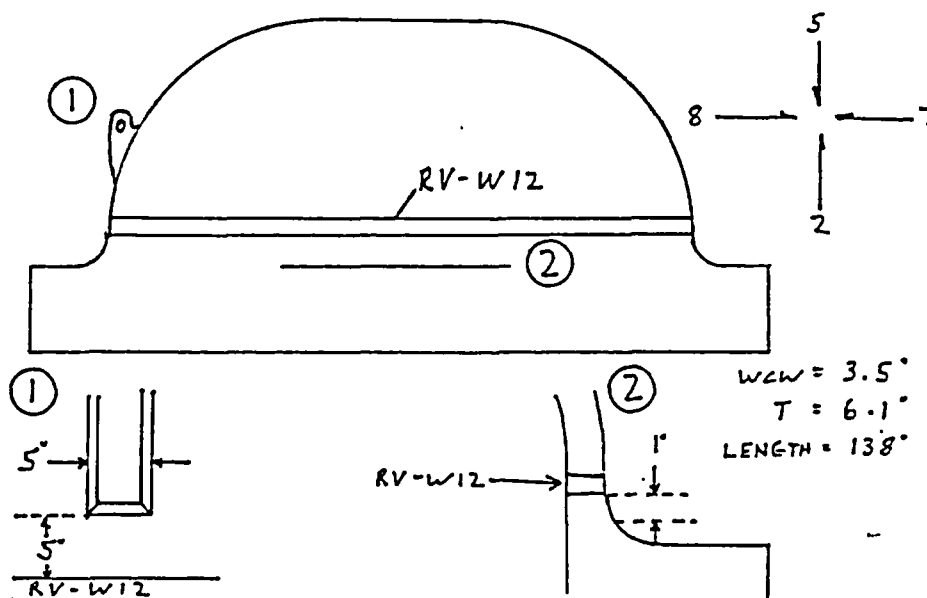
COMPONENT IDENTIFICATION: RV-W12 PROCEDURE: NEP-15.09 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: _____ MAGNETIC PARTICLE: _____ VISUAL: _____

EXAMINER: Brian D. Krott II DATE: 10/2/01
 LEVEL

EXAMINER: Simon Cothran II DATE: 10-2-01
 LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



① SCAN 5, 45° + 60° EXAMS LIMITED DUE TO LIFTING LUG AT STUD HOLE 43.

② ALL SCANS 0° 45° + 60° EXAMS LIMITED DUE TO HEAD TO FLANGE CONFIGURATION.

COVERAGE: REDUCED CODE/PROCEDURE COVERAGE = 23% OF 138" EXAM LENGTH,
 FROM $\frac{1}{2}$ OF STUD HOLE 33 TO $\frac{1}{2}$ OF STUD HOLE 1.

KEWAUNEE NUCLEAR
 POWER PLANT REVIEW: Phillip C. Bures

DATE: October 3, 2001

AUTHORIZED NUCLEAR
 INSERVICE INSPECTOR REVIEW: Brian Majumdar

DATE: 10-4-01

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: REACTOR VESSEL CLOSURE HEAD FLANGE
AND CONTROL ROD DRIVE MECHANISM

DRAWING NO.: M-1198 SH.1 of 2

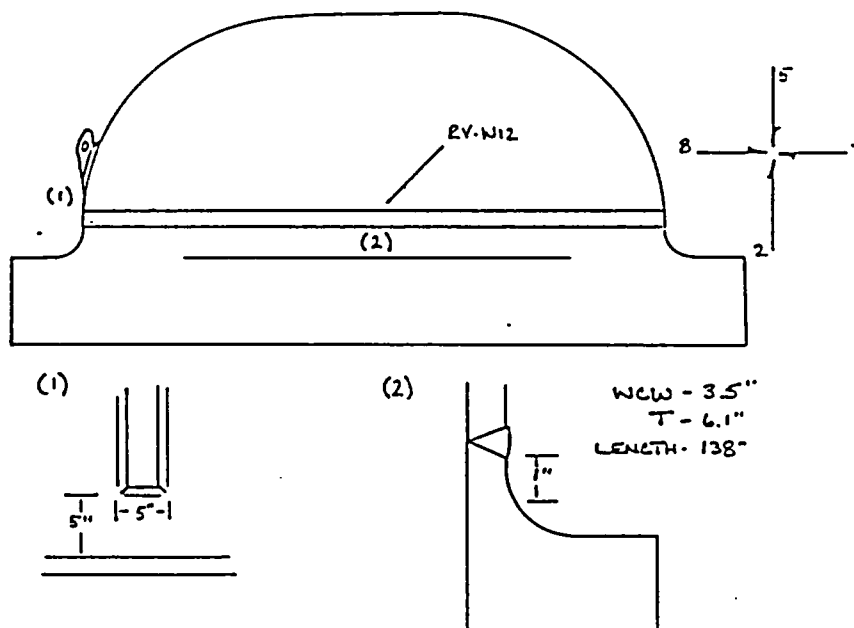
COMPONENT IDENTIFICATION: RV-W12 PROCEDURE: NEP NO. 15.9 REVISION: ORIG

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: Jeff Davis II DATE: 10/27/98
LEVEL

EXAMINER: James P. Wynn III DATE: 10-27-98
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



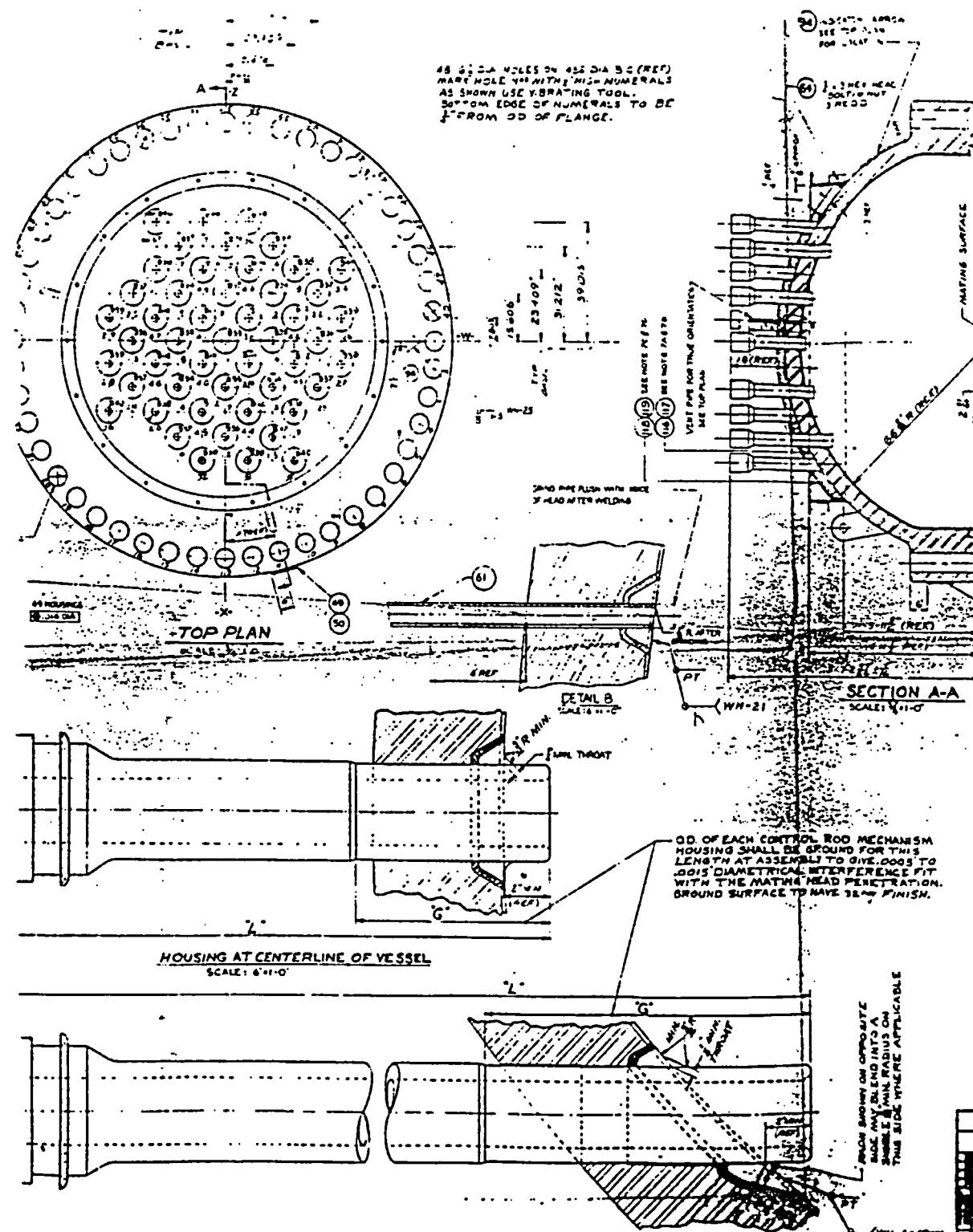
NOTE: ALL SCANS, 0°, 45°, & 60° EXAMINATIONS LIMITED DUE TO REACTOR HEAD TO FLANGE CONFIGURATION.
SCAN 5, 45° & 60° EXAMINATIONS LIMITED DUE TO INTEGRAL WELDED ATTACHMENT (LIFTING WLG) LOCATED AT STUD HOLE 27 (85.5°).

REDUCED CODE / PROCEDURAL COVERAGE: 23% *

* 23% OF 138" (E OF STUD HOLE 17 TO E OF STUD HOLE 33)

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip C. Becker DATE: October 29, 1998

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Rayn McQueen DATE: 10-30-98



NO.	ITEM	QTY	UNIT	NO.	ITEM	QTY	UNIT
1	B33-1	2	PC	26	B33-26	2	PC
2	B33-2	2	PC	27	B33-27	2	PC
3	B33-3	2	PC	28	B33-28	2	PC
4	B33-4	2	PC	29	B33-29	2	PC
5	B33-5	2	PC	30	B33-30	2	PC
6	B33-6	2	PC	31	B33-31	2	PC
7	B33-7	2	PC	32	B33-32	2	PC
8	B33-8	2	PC	33	B33-33	2	PC
9	B33-9	2	PC	34	B33-34	2	PC
10	B33-10	2	PC	35	B33-35	2	PC
11	B33-11	2	PC	36	B33-36	2	PC
12	B33-12	2	PC	37	B33-37	2	PC
13	B33-13	2	PC	38	B33-38	2	PC
14	B33-14	2	PC	39	B33-39	2	PC
15	B33-15	2	PC	40	B33-40	2	PC
16	B33-16	2	PC	41	B33-41	2	PC
17	B33-17	2	PC	42	B33-42	2	PC
18	B33-18	2	PC	43	B33-43	2	PC
19	B33-19	2	PC	44	B33-44	2	PC
20	B33-20	2	PC	45	B33-45	2	PC
21	B33-21	2	PC	46	B33-46	2	PC
22	B33-22	2	PC	47	B33-47	2	PC
23	B33-23	2	PC	48	B33-48	2	PC
24	B33-24	2	PC	49	B33-49	2	PC
25	B33-25	2	PC				

NOTES

- FOR GENERAL NOTES SEE DMS 13340C
- ALL WELDING TO BE IN ACCORDANCE WITH INSTRUCTIONS FROM QUALITY CONTROL
- SYMBOL DESIGNATIONS:
WM - WELD SPECIFICATION
PT - DYE PENETRANT
- DIMENSIONS AS INDICATED ARE TO BE FOR ALL HOUSING LOCATIONS
- ALL CONTROL HOUSINGS SHALL BE COVERED WITH 1/2" THICK INSULATION TO MATCH SURFACE FINISH OF VESSEL
- AN ULTRASONIC EXAMINATION SHALL BE PERFORMED ON THE CLOSURE HEAD FOR AREAS WHERE THE HOUSING INTERFERES. THIS EXAMINATION SHALL BE AFTER HYDRO TEST.

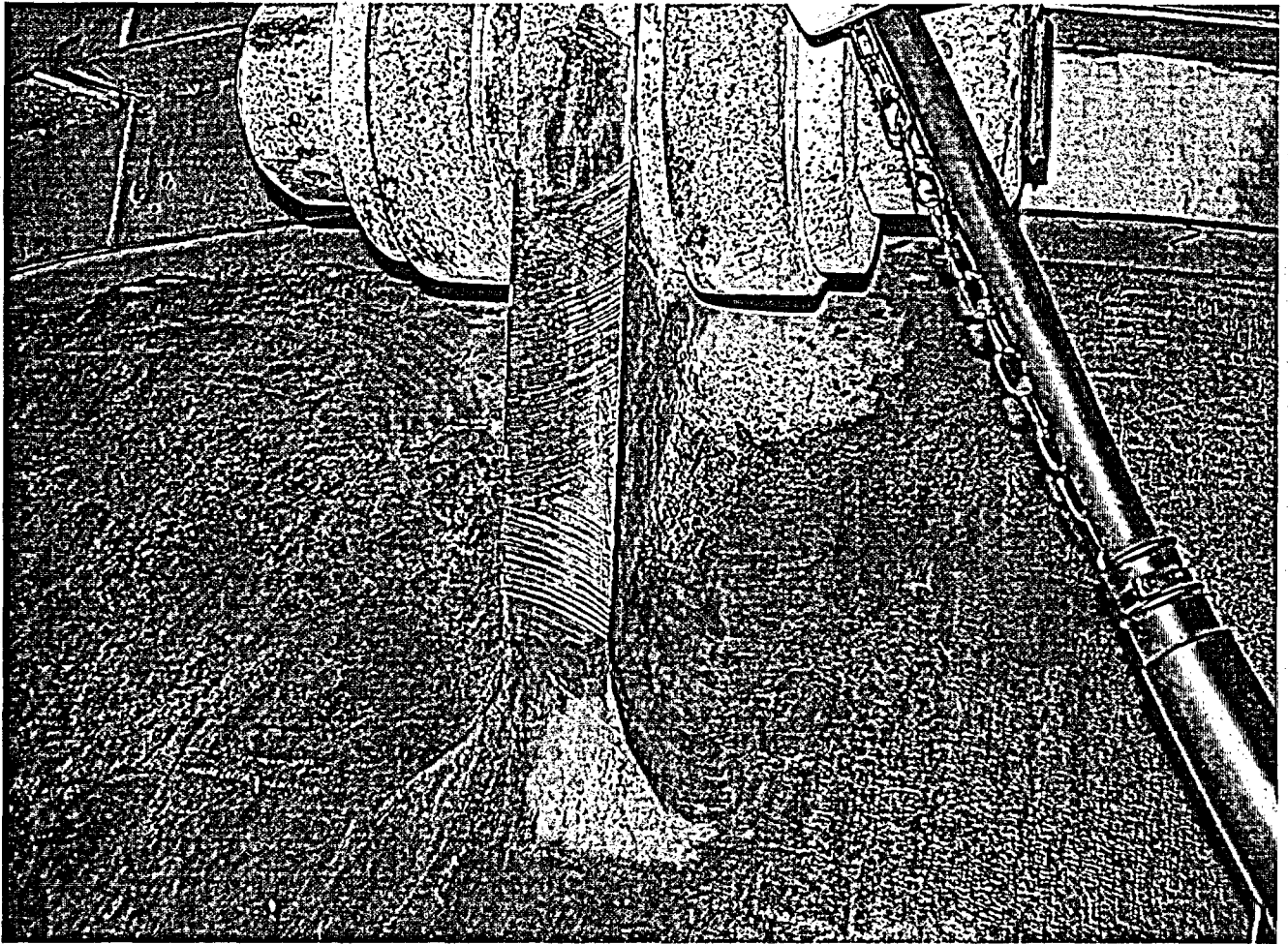
THE INSULATION APPLIED TO THE CLOSURE HEAD SHALL BE:

- (1) 2" LAYERS OF 85% RAHWOL DENSITY 3 LBS/CLFT (MA-116)
- (2) THE INSULATION SHALL BE COVERED WITH "FIBERFRAX" CLOTH, TYPE L40T 36" WIDE (BA-117)
- (3) A 1/2" THK. COATING OF "FIBERFRAX" CEMENT, TYPE CP-100 (MA-116)
- (4) WATERPROOF CEMENT WITH ONE COAT OF 50-200 SILICON EMULSION (BA-119)

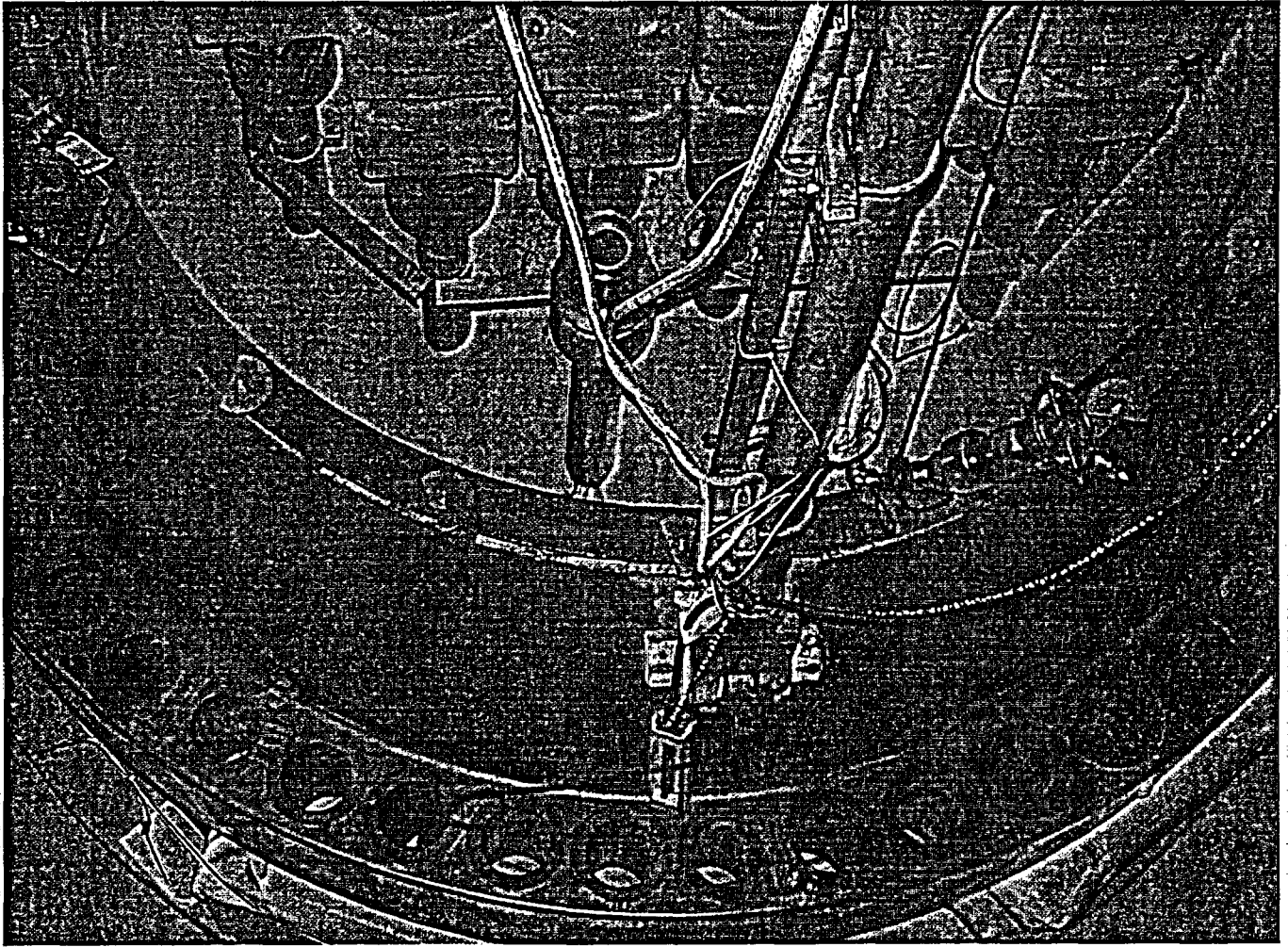
NO.	TITLE	DATE
1	DESIGN OF CLOSURE HEAD	12/25/72
2	HOUSING AT CENTERLINE OF VESSEL	12/25/72
3	INDICATOR ARROW	12/25/72
4	SECTION A-A	12/25/72

NO.	ITEM	QTY	UNIT
1	B33-1	2	PC
2	B33-2	2	PC
3	B33-3	2	PC
4	B33-4	2	PC
5	B33-5	2	PC
6	B33-6	2	PC
7	B33-7	2	PC
8	B33-8	2	PC
9	B33-9	2	PC
10	B33-10	2	PC
11	B33-11	2	PC
12	B33-12	2	PC
13	B33-13	2	PC
14	B33-14	2	PC
15	B33-15	2	PC
16	B33-16	2	PC
17	B33-17	2	PC
18	B33-18	2	PC
19	B33-19	2	PC
20	B33-20	2	PC
21	B33-21	2	PC
22	B33-22	2	PC
23	B33-23	2	PC
24	B33-24	2	PC
25	B33-25	2	PC

CLOSURE HEAD



Reactor Vessel Closure Head LIFTING LUG



Reactor Vessel Closure Head Flange To Head Configuration

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-5

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Head Circumferential Weld APD-1A-W1 to Charging Pump Pulsation Dampener 1A; Head Circumferential Weld APD-1B-W4 to Charging Pump Pulsation Dampener 1B and Head Circumferential Welds Top and Bottom to Spare Charging Pump Pulsation Dampener**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category C-A; Item No. C1.20**
- 4. Impracticality of Compliance: 9.0% of the Weld APD-1A-W1, 8.6% of Weld APD-1B-W4 and 9.0% of Top and Bottom Spare Head Welds were inaccessible due to a Welded Name Plate in close proximity to the Charging Pump Pulsation Dampener Circumferential Head Welds thus restricting the Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide access to the 9.0% of APD-1A-W1, 8.6% of APD-1B-W4 and 9.0% of Top and Bottom Spare Head weld scan area between the Welded Name Plate and circumferential weld on the Charging Pump Pulsation Dampener would require removal and reinstallation of the Welded Name Plate.**

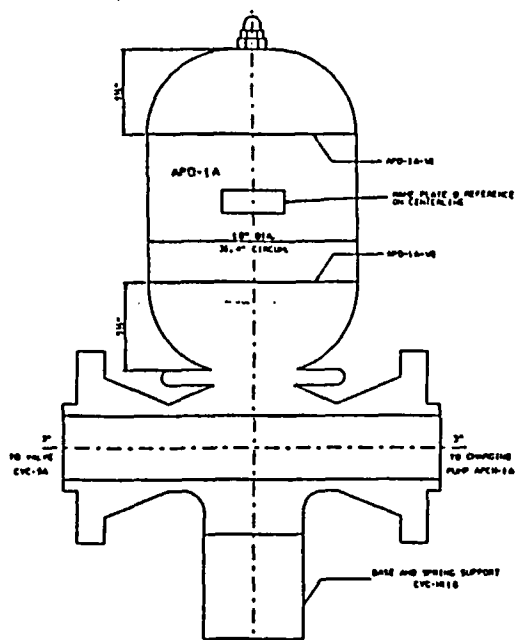
KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

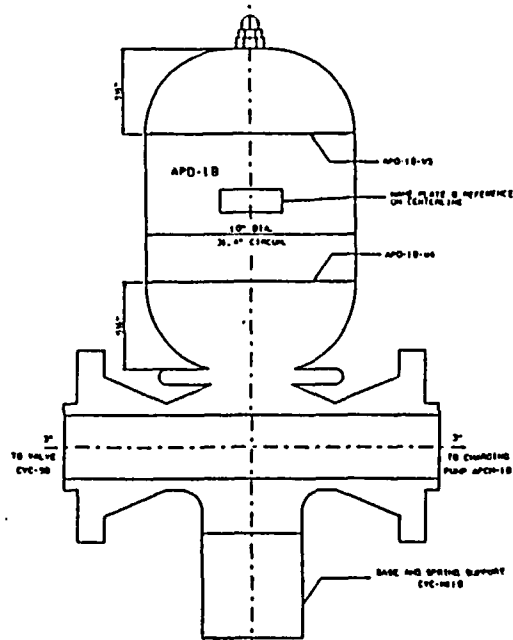
RELIEF REQUEST NO: RR-G-7-5

- 6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWC-2500-1; Examination Category C-H; Item C7.10 each 3 1/3 Year
Period for evidence of leakage.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**

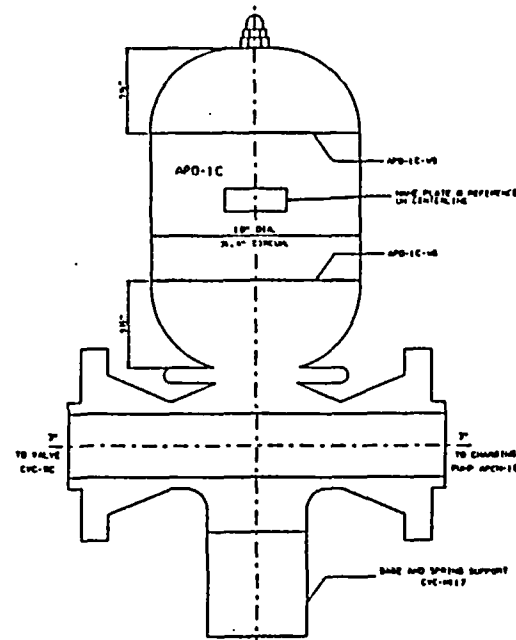
0121-W



101-021



101-022



101-023

COMPONENT WELD DATA		
I.D.	THICKNESS	MATERIAL
APD-1A-W1	1.0"	SA240 TP304SS
APD-1A-W2	1.0"	SA240 TP304SS
APD-1B-W3	1.0"	SA240 TP304SS
APD-1B-W4	1.0"	SA240 TP304SS
APD-1C-W5	1.0"	SA240 TP304SS
APD-1C-W6	1.0"	SA240 TP304SS

CALCULATION BLOCK		
I.D.	DIAMETER/SCHEDULE	MATERIAL
W5-10	10" SCH 140 1.0" I	ASME 2 TP304SS

NOTES:

- DRAWING APPLICABLE FOR 3RD AND 4TH 151 INTERVAL ASME BOILER AND PRESSURE VESSEL CODE SECTION XI CLASS 2
- APD-1A-W1, APD-1A-W2, APD-1B-W3, APD-1B-W4, APD-1C-W5 AND APD-1C-W6 LOCATION PER DATA RECEIVED FROM MANUFACTURER.
- NO BOLTING OR INTEGRALLY WELDED ATTACHMENTS ON CHARGING PUMP PULSATION DAMPERS APD-1A, APD-1B AND APD-1C.

LOCATION: AUXILIARY BUILDING 586' ELEVATION CHARGING PUMP ROOM GATE 208

CADD

REVISION

A	PDO 0011 COMPL SEE REV 0-1 APP'D: CAT 10/23/89 FILM'D: (WPS) 11/7/89
A-1	REDRAFTED TO CAD PER ESR 92-177 OWN: E. SAXTON 4/1/93 CHK'D: B. TROTTER 5/12/93 APP'D: CAT 8-6-93
B	ESR 92-177 COMP. SEE REV. A-1 FILM'D: WPS 8-17-93
B-1	REVISED NAME PLATE LOCATION, ADDED NOTES 2 & 3 AND DIM. PER RE PUR 0283 BY: BCY 3/9/95 CHK'D: DOG 3/9/95 APP'D: RHM 3/9/95
C	RE PUR 0283 COMP. SEE REV. B-1 FILM'D: WPS 3/21/95
C-1	KAP 01-001639 REVISED NOTE 1. BY: ABF 06-03-02 APP'D:
D	KAP 01-001639 COMPLETE SEE REV. C-1. FILM'D: (WPS)

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

CHARGING PUMP PULSATION DAMPENERS APD-1A, APD-1B AND APD-1C

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	P. E. BUKES	5/13/93
CHECKED		
D. H.	1/17/93	PROJECT APPROVED
DATE	1/17/93	
BY	J. R. / D. S.	DWG. NO.
HOME	1/13/93	M-1210
		REV.
		0

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

CHARGING PUMP DISASSEMBLY

SYSTEM OR COMPONENT: DAMPENER S/N 641 1848 DRAWING NO.: M-1210

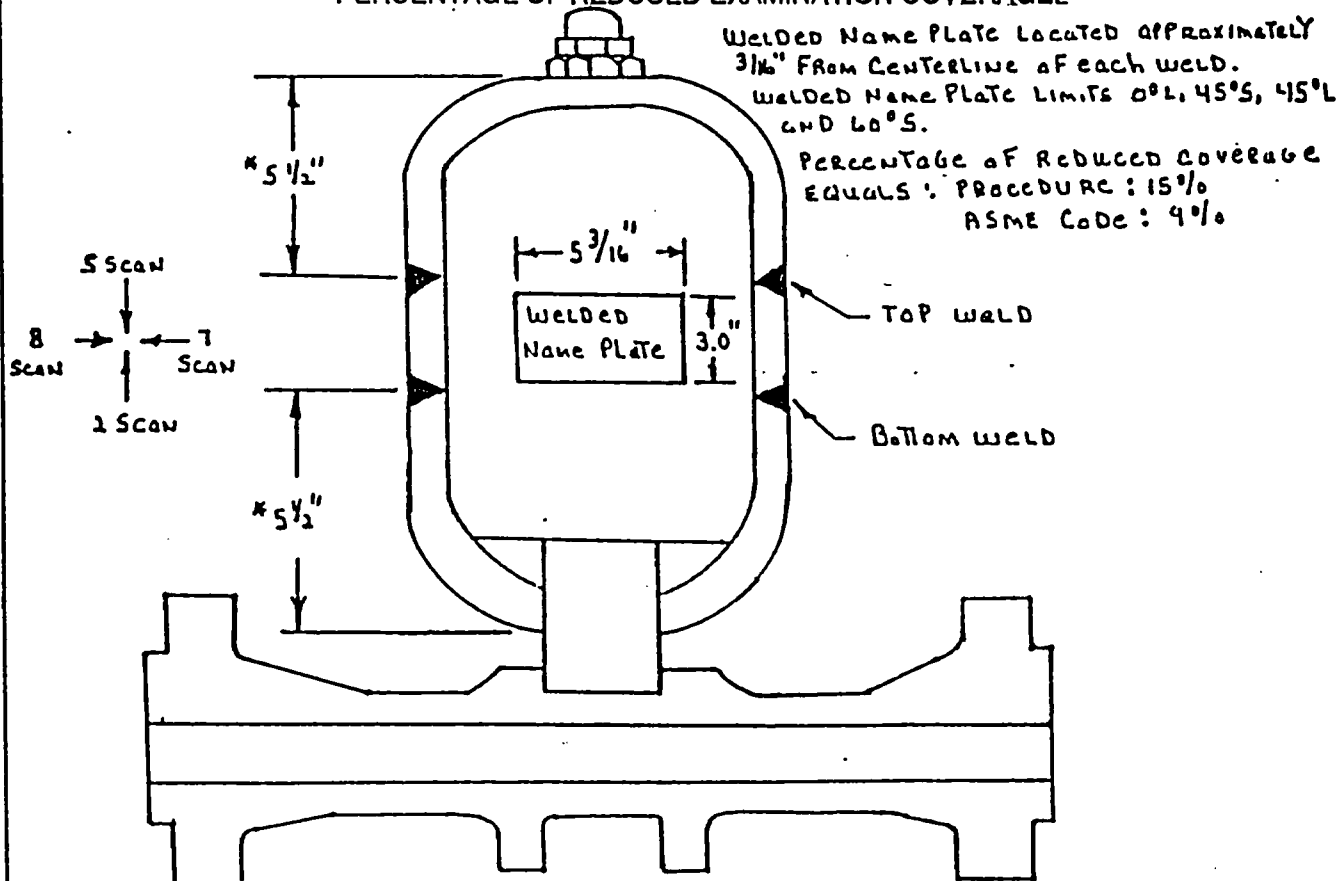
COMPONENT IDENTIFICATION: APD-1A-W1 PROCEDURE: GCP-911 REVISION: 0216

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: Todd P. Self II DATE: 4-3-95
LEVEL

EXAMINER: Jeff Jensen II DATE: 04/03/95
LEVEL

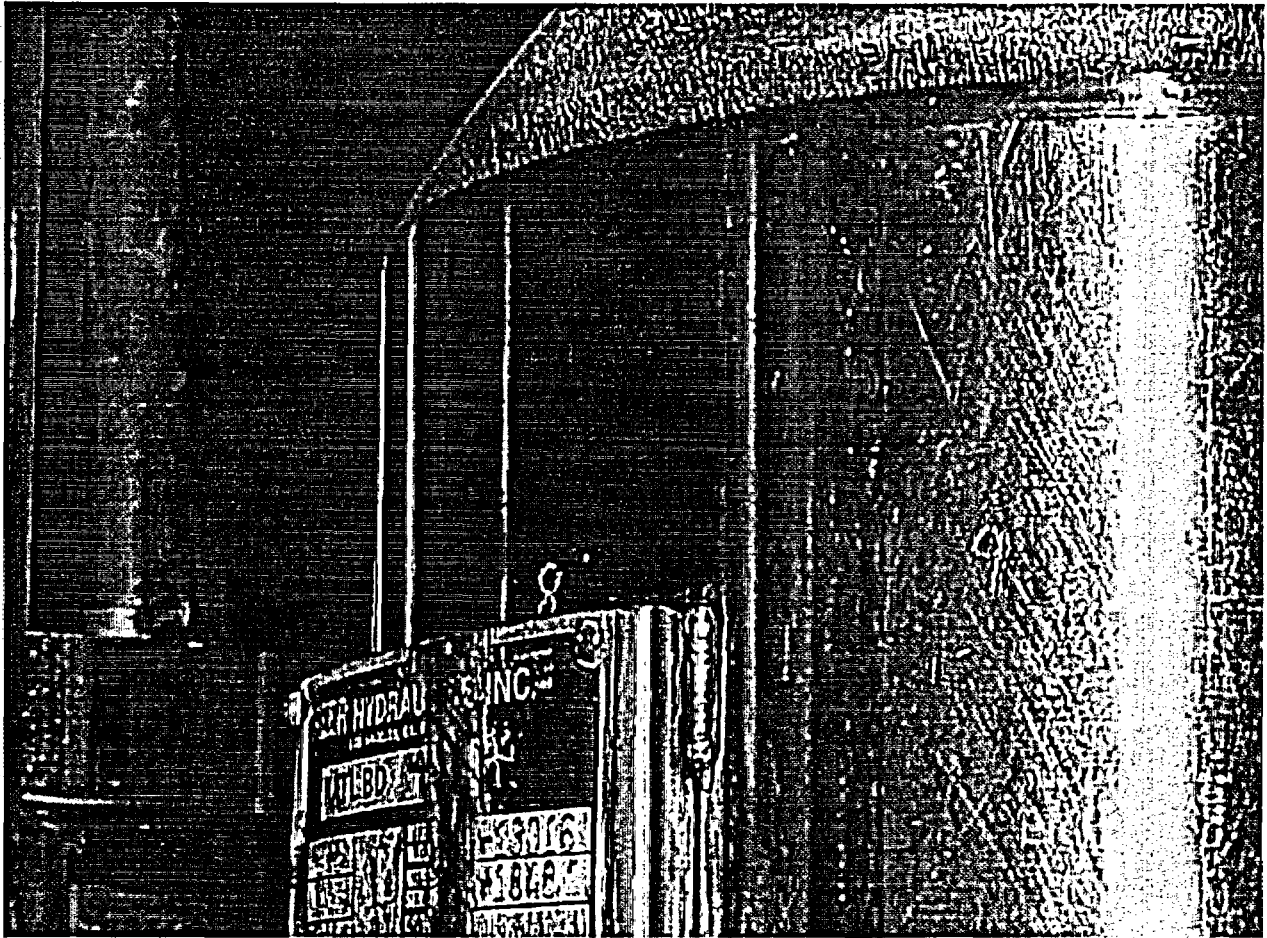
SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



* Weld Location Per Vendor (GREER HYDRAULICS) INFORMATION RECEIVED FEBRUARY 24, 1995.

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Eric A. Balstad DATE: 4/5/95

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger M. Jensen DATE: 4/6/95



**Charging Pump Pulsation Dampener 1A
Weld APD-1A-W1**

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: CHARGING PUMP PULSATION DAMPENERS APD-1A, APD-1B AND APD-1C

DRAWING NO.: M-1210

COMPONENT IDENTIFICATION: APD-1B-W4 PROCEDURE: NEP-15.41 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: _____ MAGNETIC PARTICLE: _____ VISUAL: _____

EXAMINER: MT Kilpel II DATE: 10-18-01

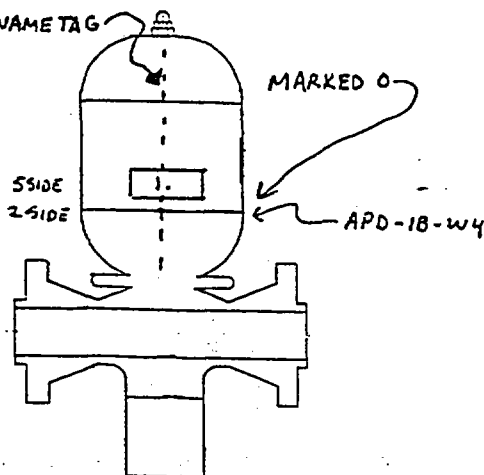
LEVEL

EXAMINER: TIM COBURN II DATE: 10/18/01

LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

REFERENCE & OF NAME TAG



1. NAME TAG - LIMITS 45° SCANS 5, 7, 8 ON S SIDE FOR 5½"
NAME TAG IS LOCATED 4" TO 9½" FROM MARKED O
AND ¼" FROM & ON S SIDE AND IS WELDED TO
CHARGING PUMP PULSATION DAMPENER 1B

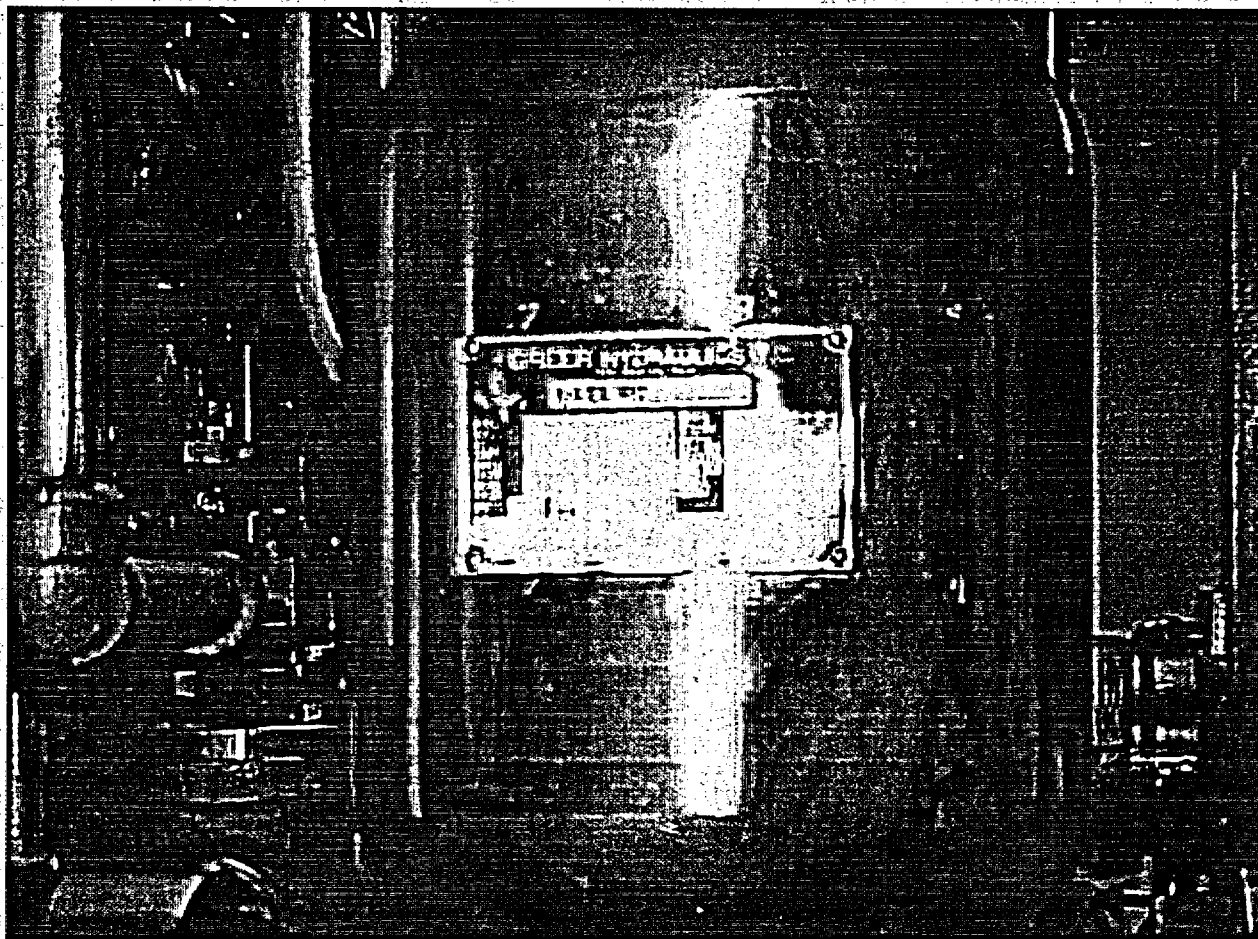
REDUCED CODE COVERAGE 8.6%

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bakes

DATE: October 22, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Lynn M. Green

DATE: 10-22-01



Charging Pump Pulsation Dampener 1B
Weld APD-1B-W4

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

SPARE CHARGING PUMP PULSATION

SYSTEM OR COMPONENT: Damper S/N GH 1 1846 DRAWING NO.: M-1210

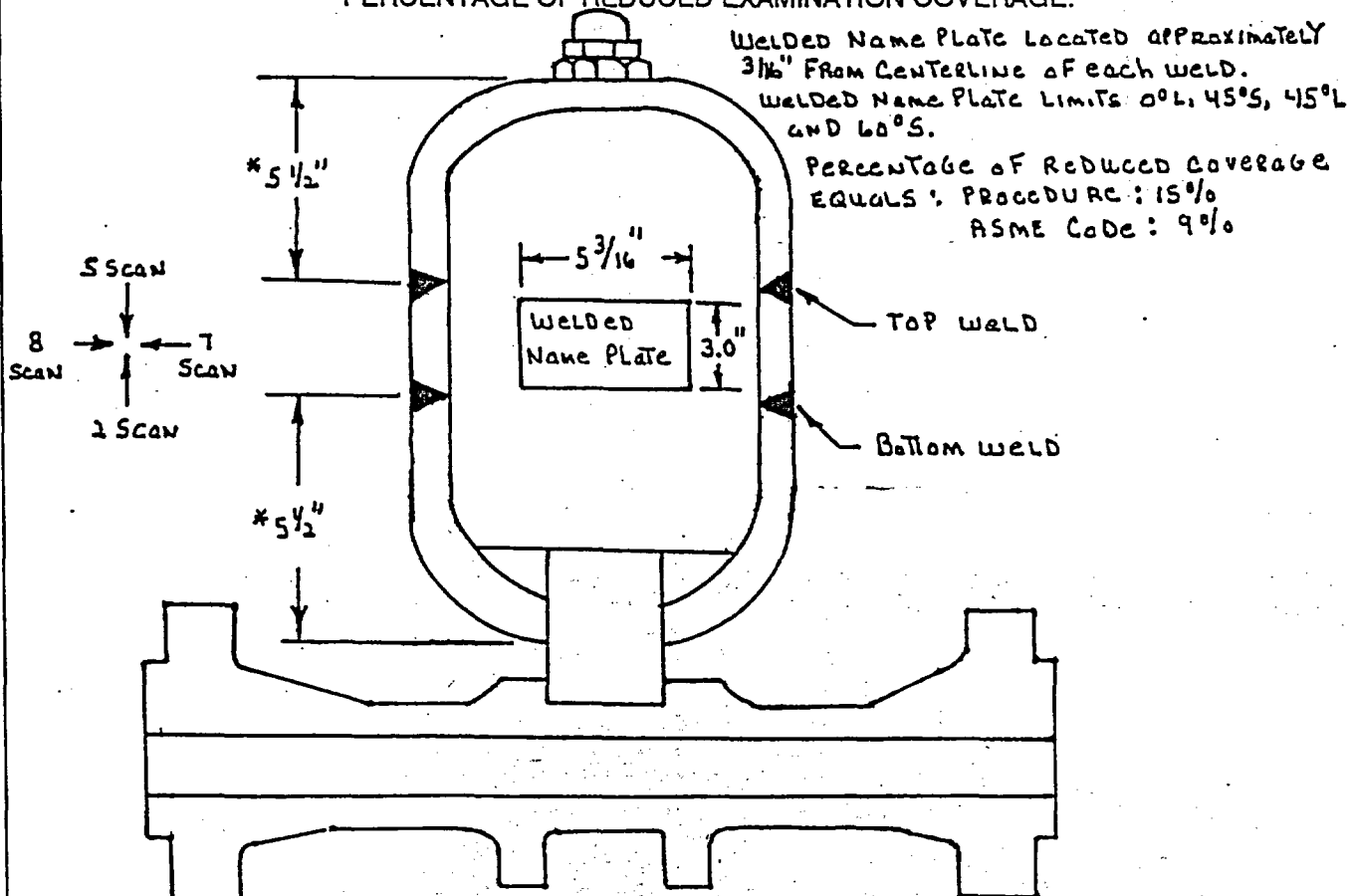
COMPONENT IDENTIFICATION: TOP WELD: BOTTOM WELD PROCEDURE: GCP 911 REVISION: ORIG.

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: Phillip C. Bures II DATE: Jan. 19, 23, 24, 1995
LEVEL

EXAMINER: James E. Rettmann III DATE: Jan 19, 24, 1995
LEVEL

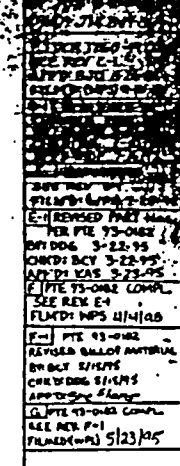
SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



* Weld Location Per Vendor (Greer Hydraulics) Information Received February 24, 1995.

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Eric Balstad DATE: 2/28/95

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger Myer DATE: 2/28/95



5. ESTIMATED DRY WEIGHT: 350 LBS.
6. FOR CLEANING & PACKAGING PROCEDURES,
SEE GEAR SPEC. NO. 7-10-10-1
7. ALL WASTED MATERIALS ARE TO BE RECYCLED OR
ELASTOMER COMPOUND. SEE GEAR SPEC. NO. 7-10-10-1

[illegible]

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-6

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Pressurizer Head Circumferential Welds P-W3 and P-W5**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-B; Item No. B2.11**
- 4. Impracticality of Compliance: Approximately 2.0% of the scheduled examination of 100% of Weld P-W3 and 2.0% of the scheduled examination of 100% of Weld P-W5 were inaccessible due to Integral Welded Attachment Pads, 1" and 3/4" Instrumentation Lines, Curvature of the Pressurizer Head, or a 3" ground area in close proximity to the Pressurizer Circumferential Head Welds thus restricting the Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide access to the 2.0% of PW-W3 and P-W5 weld scan area between the Integral Welded Attachment Pads, 1" and 3/4" Instrument Line, Curvature of the Pressurizer Head or 3" ground area would require modification of the original design of the Pressurizer.**

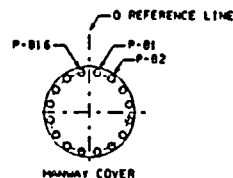
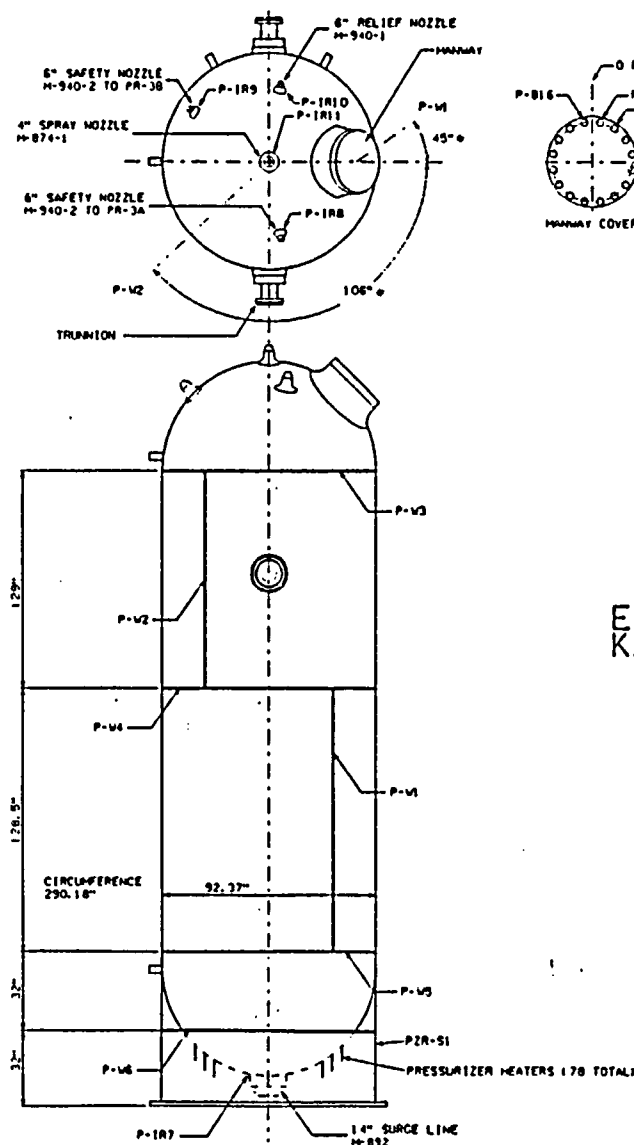
KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-6

- 6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWB-2500-1; Examination Category B-P; Item B15.20 each 3 1/3 Year
Period for evidence of leakage.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**

0021-W



ROLLING DATA		
ROLLS / DIA / LGTH	INCHES	INCHES
16 / 1.38 / 8.0	11/16	

E-1
KAP 01-001639

COMPONENT WELD DATA		
I.D.	THICKNESS	MATERIAL
P-11	4.5"	SA 533 GR. A CL. 1 CS
P-12	4.5"	SA 533 GR. A CL. 1 CS
P-13	4.5"	NOTE 4
P-14	4.5"	SA 533 GR. A CL. 1 CS
P-15	4.5"	NOTE 4
P-16	1.5"	SA 516 GR. 70 CS
P-17	INNER RADIUS SECTION	SA 216 GR. WCC CS
P-18	INNER RADIUS SECTION	SA 216 GR. WCC CS
P-19	INNER RADIUS SECTION	SA 216 GR. WCC CS
P-20	INNER RADIUS SECTION	SA 216 GR. WCC CS
P-21	INNER RADIUS SECTION	SA 216 GR. WCC CS

CALIBRATION BLOCK		
I.D.	DIAMETER/SCHEDULE	MATERIAL
WPS-23	5.0" / 10.0" / 1.5" / 0.125"	SA 533 GR. A CL. 1 CS
WPS-24	1.5" / 1.3" / 0.125" / 0.125"	SA 516 GR. 70 CS
WPS-45	18.25" / 11.68" / 1.5" / 0.125"	SA 216 GR. WCC CS
WPS-46	18.25" / 11.68" / 1.5" / 0.125"	SA 216 GR. WCC CS

E-1
KAP 01-001639

NOTES:

- DRAWING APPLICABLE FOR 3rd AND 4th ISI INTERVAL
 - ASME BOILER AND PRESSURE VESSEL CODE SECTION XI CLASS I
 - PZR HEATER PENETRATION ID = 5; PZR-P1 THRU PZR-P78
 - MATERIAL - SHELL: SA 533 GRADE A CLASS 1 CARBON STEEL
HEAD: SA 216 GR. WCC CARBON STEEL
- MEASURED WITHOUT INSULATION.

REVISION

E-1 KAP 01-001639
ADDED 4TH INTERVAL.
REVISED MATERIAL.
BY: NTH 02-12-02
APP'D: PEB 04-05-02
F KAP 01-001639 COMPL.
SEE REVISION E-1.
FILMED: WPSI 04-16-02

B-1

ADD PRESSURIZER
HEATERS & REV. NOTES
PER ESR 92-177
BY: LNL 10-1-93
CHK'D: RJS 10-4-93
APP'D: CAT 10-07-93

C ESR 92-177 COMPL.
SEE REV. B-1
FILMED: WPSI 10-19-93

C-1

PDR 0149
ADDED CALIBR. DATA
WPS-45, WPS-46, DFO
AND PRESS. HEATERS
78 WAS 72.
BY: J.S.PICE 2-21-97
APP'D: PCM 02-21-97

D PDR 0149 COMPL.
SEE REV. C-1
FILMED: WPSI 02-25-97

D-1

RE PUR 0295
ADDED ITEM NO.
BY: BJD 7-19-99
APP'D: DAK 7-26-99

E RE PUR 0295 COMPL.
SEE REV. D-1
FILMED: WPSI 8-3-99

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

PRESSURIZER
PZR

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	APPROVED	
CHECKED	PHILLIP E. BUKES	5/13/03
D.P.	PROJECT APPROVED	
DATE	1/17/03	
SCALE	0.8" / 0.5" (1/12" = 1')	
NO.	OWG. NO.	REV.
CADD	M-1200	F

LOCATION: CONTAINMENT PRESSURIZER VAULT

163-011

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: PRESSURIZER PZR

DRAWING NO.: M-1200

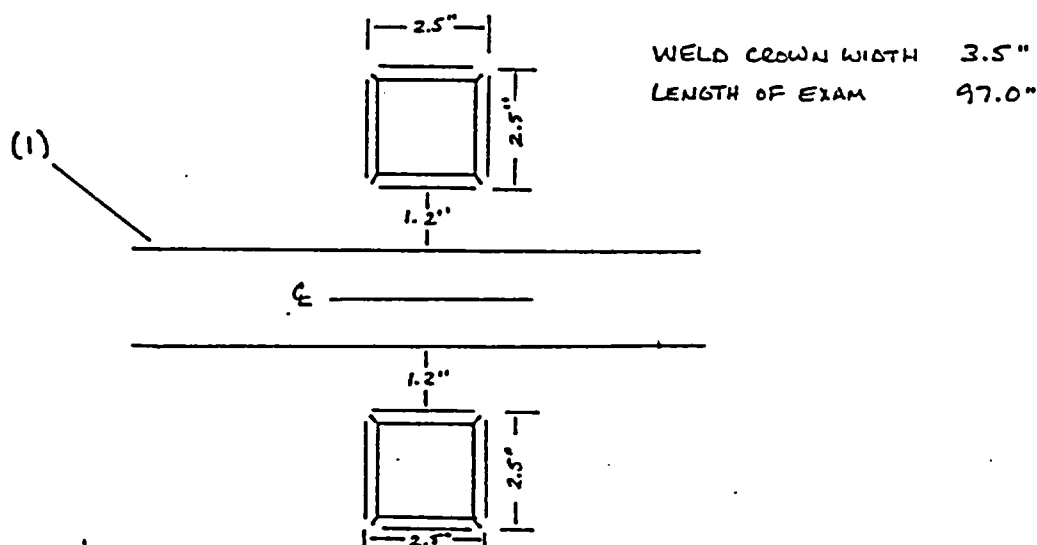
COMPONENT IDENTIFICATION: P-W3 / P-W5 PROCEDURE: NEP No. 15.9 REVISION: orig

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: Jeff Owe II DATE: 10/31/98
LEVEL

EXAMINER: NA DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



NOTE: 0°, 45°, & 60° EXAMINATIONS LIMITED IN EACH SCAN DIRECTION DUE TO INTEGRAL WELDED ATTACHMENTS AT 145.5" CLOCKWISE WITH DIMENSIONS SHOWN ABOVE.

(1) DIMENSIONS / LOCATIONS ARE THE SAME FOR WELD P-W3 AND WELD P-W5.

PERCENTAGE OF PROCEDURAL CODE LIMITATION: 1.4% OF 97.0"

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip C. Bures DATE: November 3, 1998

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Ryan M. Myers DATE: 11-3-98

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT**

COMPONENT IDENTIFICATION: P-W3 PROCEDURE: Q-P 904 REVISION: ORIG

EXAMINER: Jeffrey Mc John II DATE: 4-12-75 4:19-PM

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

Diagram illustrating a trench layout with dimensions and labels:

- Top Section:** A horizontal line with a dimension of $53\frac{1}{2}"$ between two points. The right point is labeled "RW3".
- Left Point:** A circle with a vertical dimension of $4"$ below it. An arrow points to it from the text "AREA GROUND 3' IN DIA. APPROX. 3" DEEP".
- Right Point:** A square with a vertical dimension of $3"$ below it. An arrow points to it from the text "LUG 2 1/2 x 2 1/2 Typ OF 4".
- Bottom Section:** A horizontal line with a dimension of $73\frac{1}{2}"$ between two points.
- Center Section:** A shaded rectangular area with diagonal hatching, representing a trench. It is bounded by two vertical lines, each with a dimension of $4"$ from the bottom line to the top of the shaded area.
- Top Right:** A small diagram showing a corner with a dimension of $0"$ and a label "CW".

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: *Ron Martin* DATE: 4/24/95

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: PRESSURIZER PZR

DRAWING NO.: M-1200

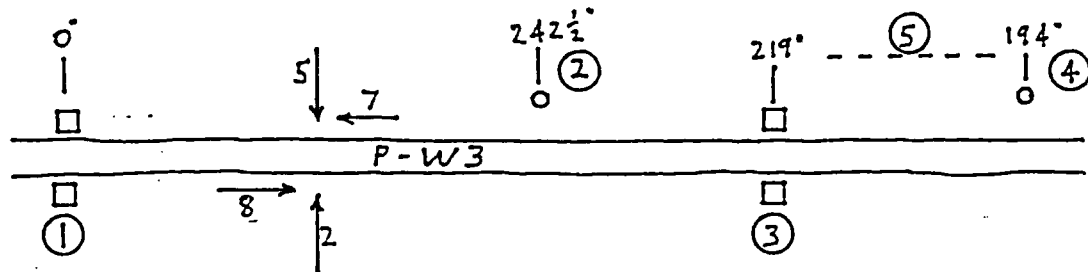
COMPONENT IDENTIFICATION: P-W3 PROCEDURE: NEP-15.09 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: Brian A. Knott II DATE: 10-3-01
 LEVEL

EXAMINER: Simon Crothers II DATE: 10-3-01
 LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



EXAM AREA: 194° TO 0° = 120°

①③ WELDED PADS: 2" x 2", 1" FROM EACH TOE OF WELD.
 LIMITED: 0° / 45° (SCANS 2, 5, 7 + 8) / 60° (SCANS 2, 5, 7 + 8)

②④ INSTRUMENTATION LINES: 1" DIAM, 3.5" FROM TOE OF WELD.
 LIMITED: 45° (SCAN 5) / 60° (SCAN 5)

⑤ CURVATURE OF HEAD: 9" FROM TOE OF WELD.
 LIMITED: 60° (SCAN 5)

REDUCED PROCEDURE COVERAGE = 3%.

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip C. Duker DATE: October 8, 2001

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Bryan McGinnis DATE: 10-9-01

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

SYSTEM OR COMPONENT: PRESSURIZER DRAWING NO.: M-12C0

COMPONENT IDENTIFICATION: P-W5 PROCEDURE: QCP-904 REVISION: ORIG

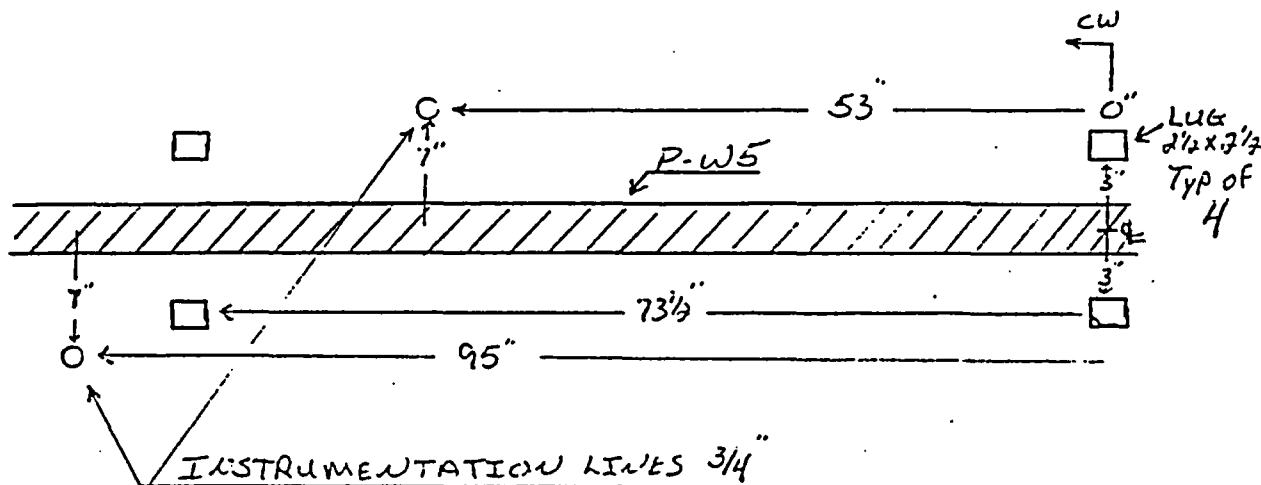
ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: [Signature] II DATE: 4-18-95 4-19-95
LEVEL

EXAMINER: [Signature] IV DATE: 4-18-95 4-19-95
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

REDUCED EXAMINATION COVERAGE LESS THAN 2%



KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip C. Bakes DATE: April 23, 1995

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: [Signature] DATE: 4/24/95

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: PRESSURIZER PZR

DRAWING NO.: M-1200

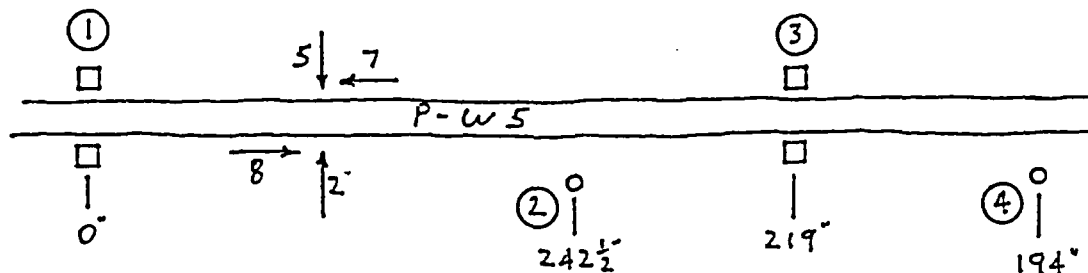
COMPONENT IDENTIFICATION: P-W5 PROCEDURE: NEP-15.09 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: _____ MAGNETIC PARTICLE: _____ VISUAL: _____

EXAMINER: Brian D. Knott II DATE: 10-3-01
LEVEL

EXAMINER: Simon Crothers II DATE: 10-3-01
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



EXAM AREA: 194° TO 0° = 120°

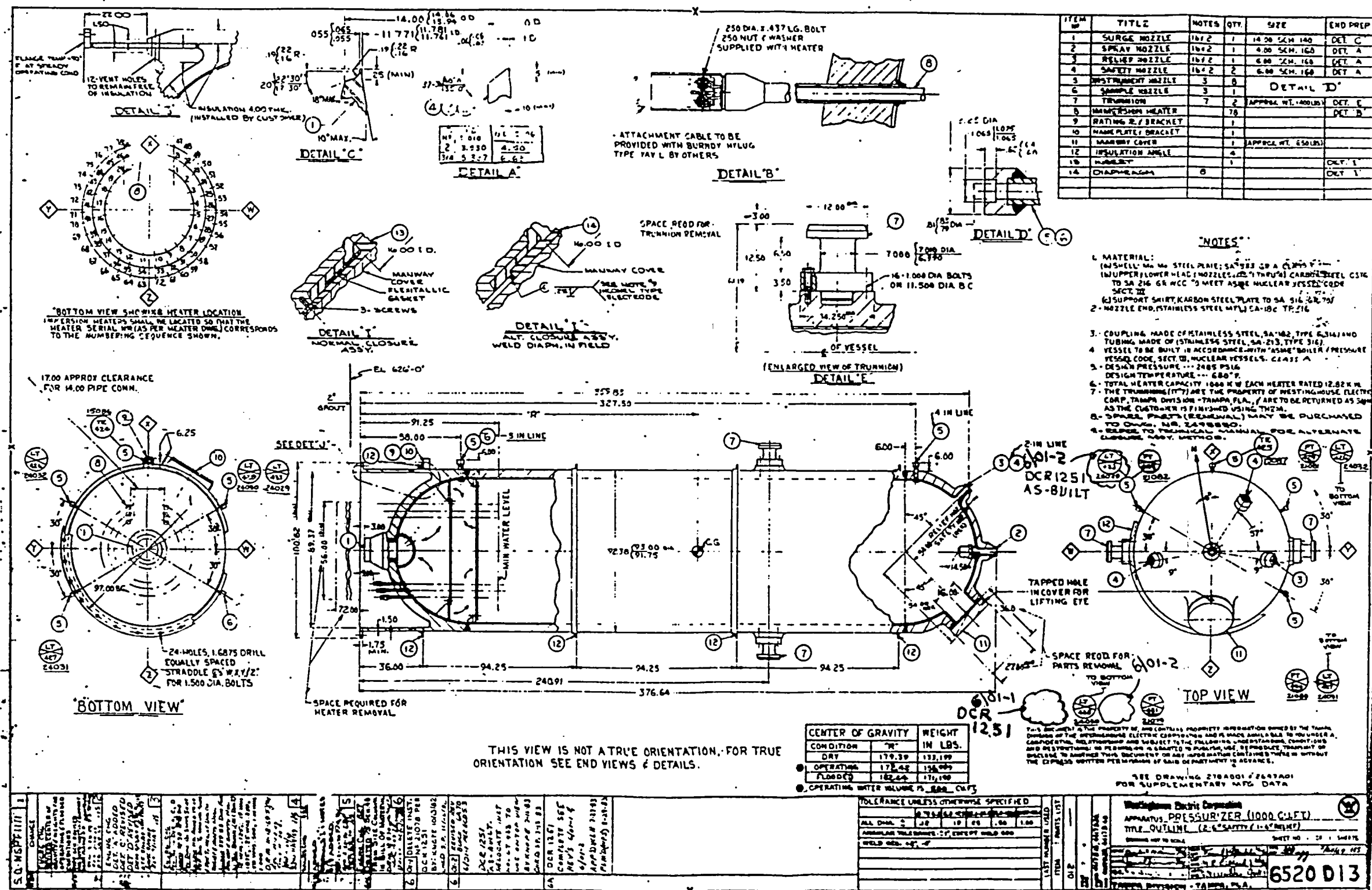
①③ WELDED PADS: 2" x 2" 1" FROM EACH TOE OF WELD.
LIMITED: 0° / 45° (SCANS 2, 5, 7 + 8) / 60° (SCANS 2, 5, 7 + 8)

②④ INSTRUMENTATION LINES: 1" DIAM, 3.5" FROM TOE OF WELD.
LIMITED: 45° (SCAN 2) / 60° (SCAN 2)

REDUCED PROCEDURE COVERAGE = 2%.

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip C. Baker DATE: October 8, 2001

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger McGinnis DATE: 10-9-01



FILMED 7-16-72 | AM 100-2 (6A)

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-7

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Pressurizer Head Longitudinal Weld
P-W2**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category
B-B; Item No. B2.12**
- 4. Impracticality of Compliance: 3.0% of the scheduled examination of 12" of
Weld P-W2 was inaccessible due to an insulation support ring in close
proximity to the Pressurizer Longitudinal Weld thus restricting the
Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide access to the 3.0% of PW-W2
would require removal of the insulation support ring and the insulation
panels being supported on the ring. Removal of the insulation support ring
and the insulation panels could cause a unsafe condition and an increase in
personnel exposure due to the amount of time requiring Kewaunee Nuclear
Power Plant to construct a temporary support to maintain the remaining
Pressurizer Insulation Panels and the difficulty in removing and reinstalling
the Insulation Support Ring and Insulation Panels in the correct location.**

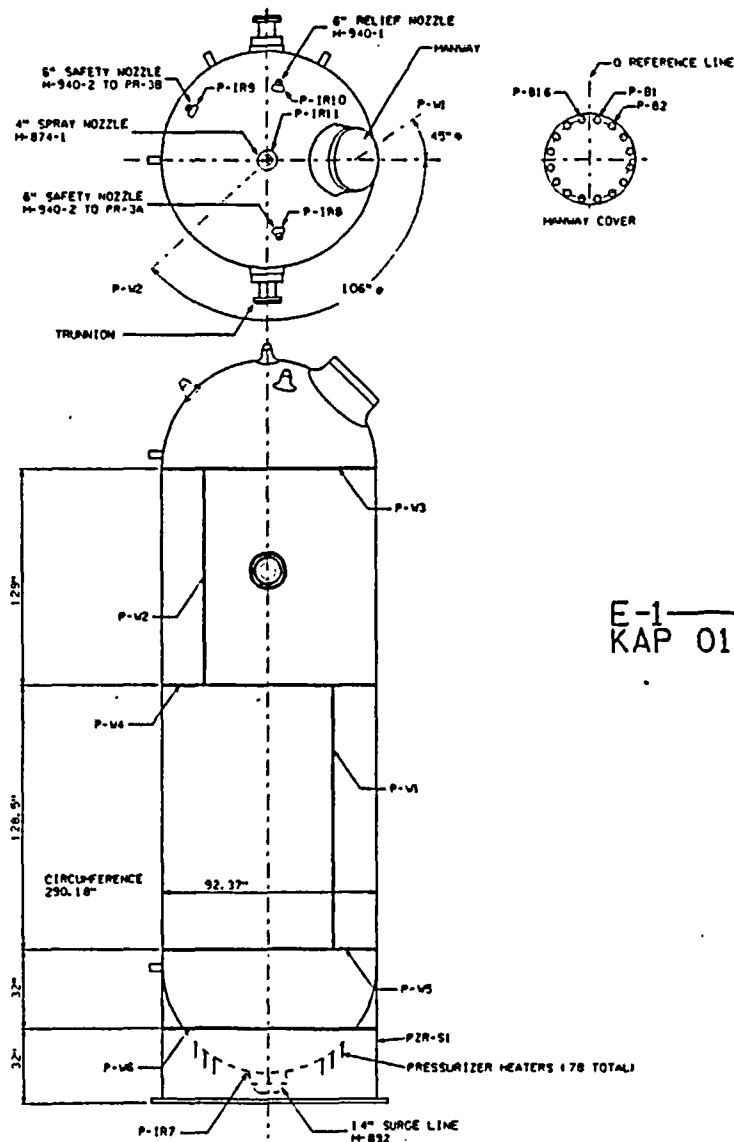
KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-7

- 6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWB-2500-1; Examination Category B-P; Item B15.20 each 3 1/3 Year
Period for evidence of leakage.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**

0021-W



BOOTS / DIA. / LGTH	INCHES
18 / 1.89 / 8.0	1/4

E-1
KAP 01-001639

COMPONENT WELD DATA		
I.D.	THICKNESS	MATERIAL
P-10	4.5"	SA 533 GR. A CLASS 1 CS
P-12	4.5"	SA 533 GR. A CLASS 1 CS
P-13	4.5"	NOTE 4
P-14	4.5"	SA 533 GR. A CLASS 1 CS
P-15	4.5"	NOTE 4
P-16	1.0"	SA 516 GR. 70 CS
P-17	INNER RADIUS SECTION	SA 216 GR. WCC CS
P-18	INNER RADIUS SECTION	SA 216 GR. WCC CS
P-19	INNER RADIUS SECTION	SA 216 GR. WCC CS
P-110	INNER RADIUS SECTION	SA 216 GR. WCC CS
P-111	INNER RADIUS SECTION	SA 216 GR. WCC CS

CALIBRATION BLOCK		
I.D.	DIAMETER/SCHEDULE	MATERIAL
WPS-23	5.0" / 18.0" / 18.0" W	SA 533 GR. A CLASS 1 CS
WPS-26	1.5" / 1.5" / 1.5" W	SA 516 GR. 70 CS
WPS-45	18.2" / 11.67" / 11.67" W	SA 216 GR. WCC CS
WPS-46	18.375" / 11.125" / 11.67" W	SA 216 GR. WCC CS

E-1
KAP 01-001639

NOTES:

- DRAWING APPLICABLE FOR 3rd AND 4th ISI INTERVAL
 - ASME BOILER AND PRESSURE VESSEL CODE SECTION XI CLASS I
 - PZR HEATER PENETRATION ID #S: PZR-P1 THRU PZR-P78
 - MATERIAL - SHELL: SA 533 GRADE A CLASS 1 CARBON STEEL
HEAD: SA 216 GR. WCC CARBON STEEL
- MEASURED WITHOUT INSULATION

REVISION

E-1 KAP 01-001639
ADDED 4TH INTERVAL.
REVISED MATERIAL.
BY: NTH 02-12-02
APP'D: PEB 04-05-02
F) KAP 01-001639 COMPL.
SEE REVISION E-1.
FILMED (WPS) 04-16-02

B-1

ADD PRESSURIZER
HEATERS & REV. NOTES
PER ESR 92-177
BY: LRL 10-1-93
CHK'D: RJS 10-4-93
APP'D: CAT 10-07-93

C) ESR 92-177 COMPL.
SEE REV. B-1
FILMED (WPS) 10-19-93

C-1 POR 0149

ADDED CALIBR. DATA
WPS-45, WPS-46 INFO
AND PRESS. HEATERS
78 WAS 72
BY: JSPICE 2-21-97
APP'D: PCM 02-21-97

D) POR 0149 COMPL.
SEE REV. C-1
FILMED (WPS) 02-25-97

D-1 RE PUR 0295

ADDED ITEM NO.
BY: BJD 7-19-99
APP'D: OAK 7-26-99

E) RE PUR 0295 COMPL.
SEE REV. D-1
FILMED (WPS) 8-3-99

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

PRESSURIZER
PZR

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	APPROVED
CHECKED	PHILLIP E. BUKES (1/13/03)
D. PL.	PROJECT APPROVED
DATE	1/17/03
BY: O. R. Z. S. (1/17/03)	DWG. NO.
SCALE	M-1200
NONE	REV.
	F

CADO

LOCATION: CONTAINMENT PRESSURIZER VAULT

163-011

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: PRESSURIZER PZR

DRAWING NO.: M-1200

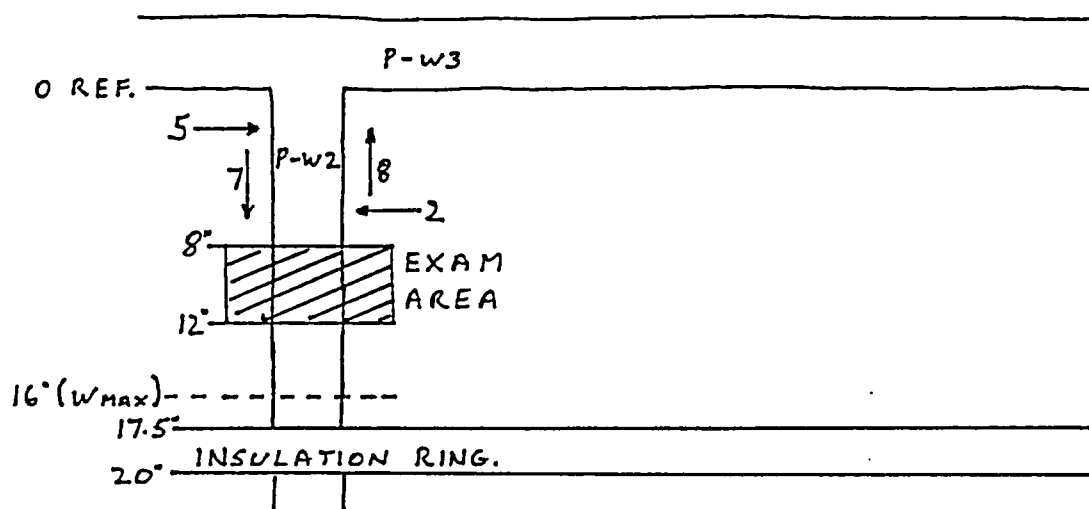
COMPONENT IDENTIFICATION: P-W2 PROCEDURE: NEP-15.09 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: Simon Crothers II DATE: 10-5-01
LEVEL

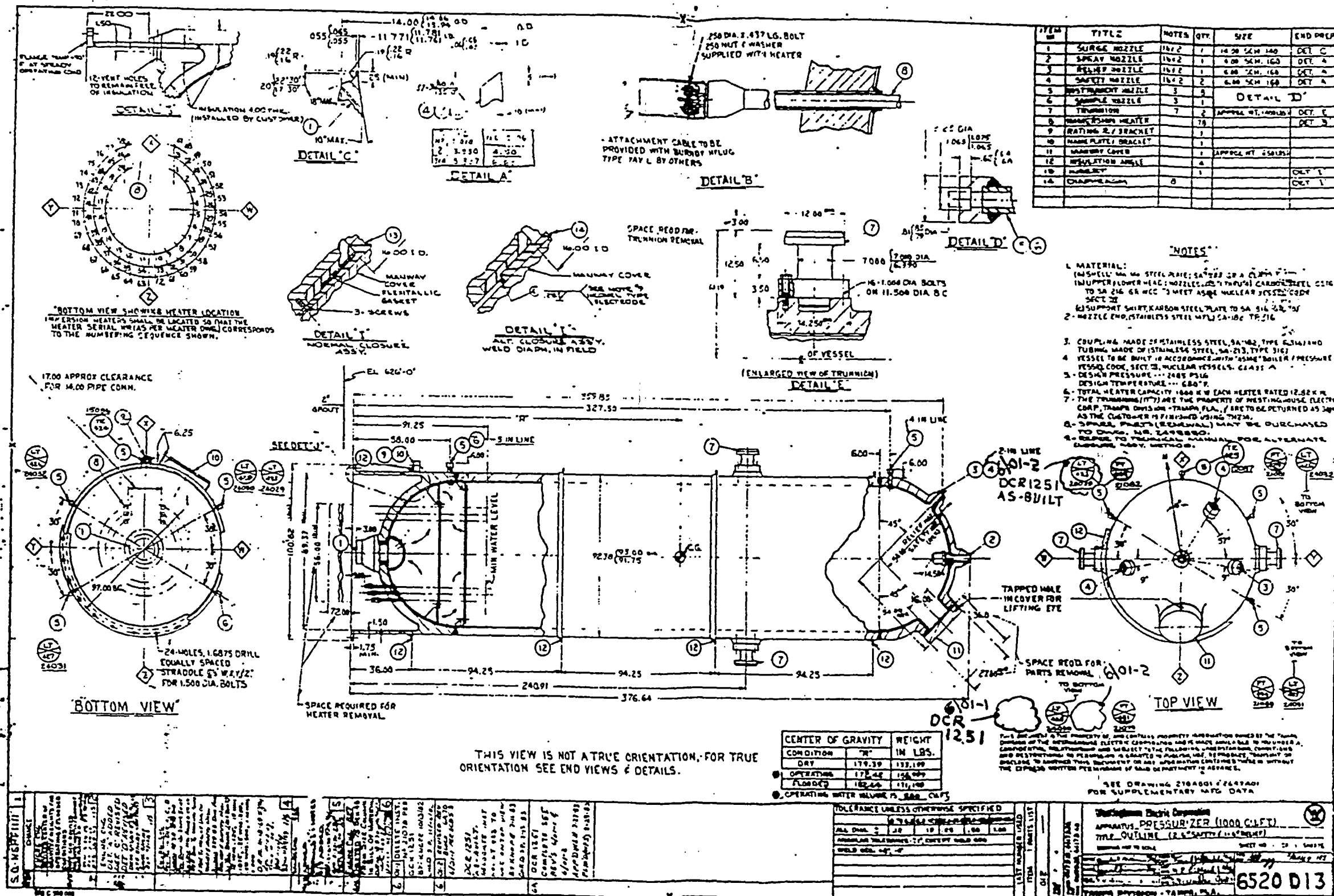
EXAMINER: Brian D. Knott II DATE: 10/5/01
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



SCAN 8: 45° + 60° LIMITED TO A W_{max} OF 4", BY INSULATION RING.
REDUCED CODE/PROCEDURE COVERAGE = 3%.

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip E. Bikes DATE: October 8, 2001
AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Lynne M. Quinn DATE: 10-9-01



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-8

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Residual Heat Exchanger AHRS1-1A
Shell Circumferential Weld AHRS1-W1**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category
C-A; Item No. C1.10**
- 4. Impracticality of Compliance: 77.0% of the Residual Heat Exchanger Shell
Circumferential Weld AHRS1-W1 was inaccessible due to configuration of
the Residual Heat Exchanger Flange to Shell, 2 Welded Supports and the 8"
Inlet Nozzle and the 8" Outlet Nozzle thus restricting Ultrasonic
Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 77.0% of the
Shell Circumferential Weld AHRS1-W1 would require modification from
the Original Design of the Residual Heat Exchanger.**

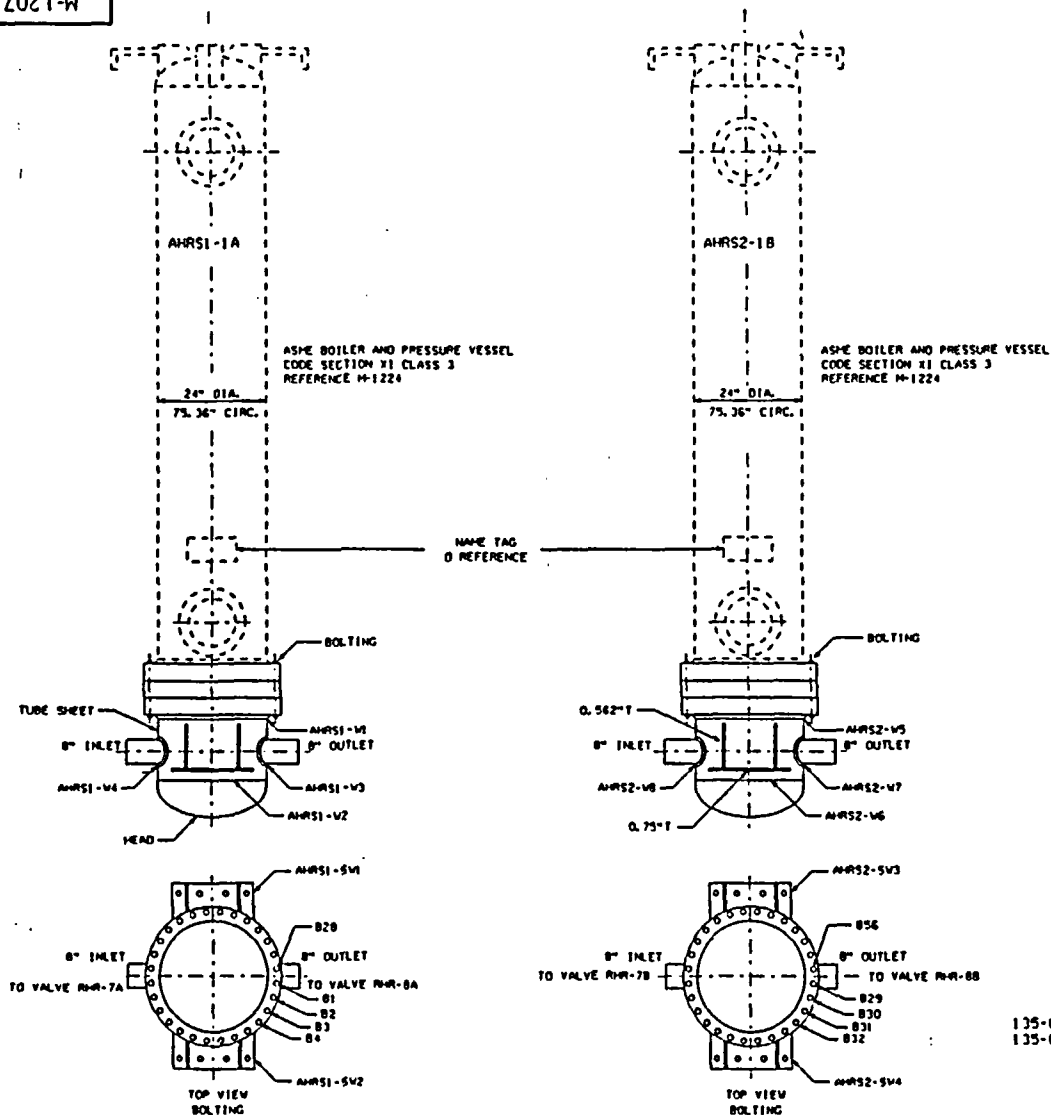
KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-8

- 6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWC-2500-1; Examination Category C-H; Item C7.10 each 3 1/3 Year
Period for evidence of leakage.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**

M-1207



BOLTING DATA EACH HEAT EXCHANGER		
STUDS / DIA / LGTH	INITS	
24 / 1.125" / 8.0"	156	

COMPONENT WELD DATA		
I.D.	THICKNESS	MATERIAL
AHRS1-V1	0.5"	A240 TP304SS
AHRS1-V2	0.5"	A240 TP304SS
AHRS1-V3	0.5"	A240 TP304SS
AHRS1-V4	0.5"	A240 TP304SS
AHRS2-V1	0.5"	A240 TP304SS
AHRS2-V2	0.5"	A240 TP304SS
AHRS2-V3	0.5"	A240 TP304SS
AHRS2-V4	0.5"	A240 TP304SS

INTEGRALLY WELDED ATTACHMENT DATA		
I.D.	THICKNESS	MATERIAL
AHRS1-SV1	.562" B.75"	A285 C.A.C.
AHRS1-SV2	.562" B.75"	A285 C.A.C.
AHRS2-SV1	.562" B.75"	A285 C.A.C.
AHRS2-SV2	.562" B.75"	A285 C.A.C.

CALIBRATION BLOCK		
I.D.	DIAMETER/SCHEDULE	MATERIAL
WPS-30	0.5" to 0.0" L x 2.5" W	A240 TP304SS

REVISION

B
 PDD 0011 COMPL
 SEP REV 0-1
 APP'D: CAT 10/23/89
 FILM'D: (WPS) 11/7/89

B-1
 REDRAFTED TO CAD
 PER ESR 92-177
 DWN: E. SARTON 4/1/93
 CHK'D: B. TROTTER 5/12/93
 APP'D: CAT 8-4-93

C
 ESR 92-177 COMP.

SEE REV. B-1
 FILM'D: WPS 8-17-93

C-1
 RE PUR 0295
 ADDED REF NO. 5.
 BY: BJD 7-19-93
 APP'D: DAK 7-26-93

D
 RE PUR 0295 COMP.

SEE REV. C-1
 FILM'D: WPS 8-3-93

D-1
 KAP 01-001639
 REVISED NOTE 1.
 BY: ABF 06-03-02
 APP'D: D

E
 KAP 01-001639
 COMPLETE
 SEE REV. D-1.
 FILM'D: (WPS)

D-1
 KAP 01-001639
 DRAWING APPLICABLE FOR 3RD AND 4TH 151
 INTERVAL ASME BOILER AND PRESSURE
 VESSEL CODE SECTION XI CLASS 2

WISCONSIN PUBLIC SERVICE CORPORATION
 KEWAUNEE NUCLEAR POWER PLANT
 CARLTON, KEWAUNEE COUNTY, WISCONSIN

RESIDUAL HEAT EXCHANGERS
 AHRS1-1A AND AHRS2-1B

DESIGNED BY
 WISCONSIN PUBLIC SERVICE CORP.
 GREEN BAY, WISCONSIN

DESIGNED	PHILLIP E. BUKES	6/1/93
CHECKED		
U. H.	1/17/83	
ESS	SCALE	DWG. NO.
NONE		M-1207
		REV.
		E

LOCATION: AUXILIARY BUILDING 606; RESIDUAL HEAT EXCHANGER AHRS1-1A GATE 256
 AND RESIDUAL HEAT EXCHANGER AHRS2-1B GATE 173

CADD

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

RESIDUAL HEAT EXCHANGERS

SYSTEM OR COMPONENT: AHRS1-1A AND AHRS2-1B DRAWING NO.: M-1207

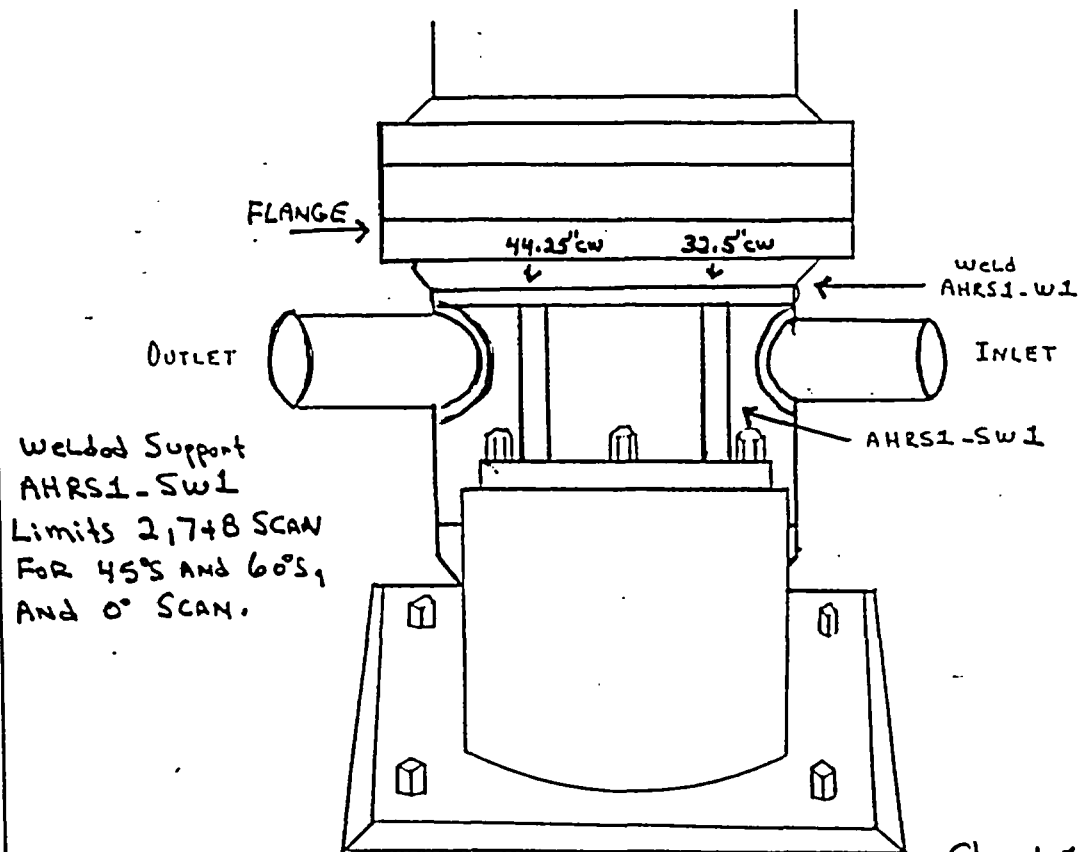
COMPONENT IDENTIFICATION: AHRS1-W1 PROCEDURE: QCP-911 REVISION: ORIG.

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: N.A. Bly II DATE: 4-25-95
LEVEL

EXAMINER: NA NA DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND
PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



Sheet 1 of 3

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Eino A. Balstad DATE: 4/27/95
AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Roger Myer DATE: 4/29/95

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

RESIDUAL HEAT EXCHANGERS

SYSTEM OR COMPONENT: AHRS1-1A AND AHRS2-1B DRAWING NO.: M-1207

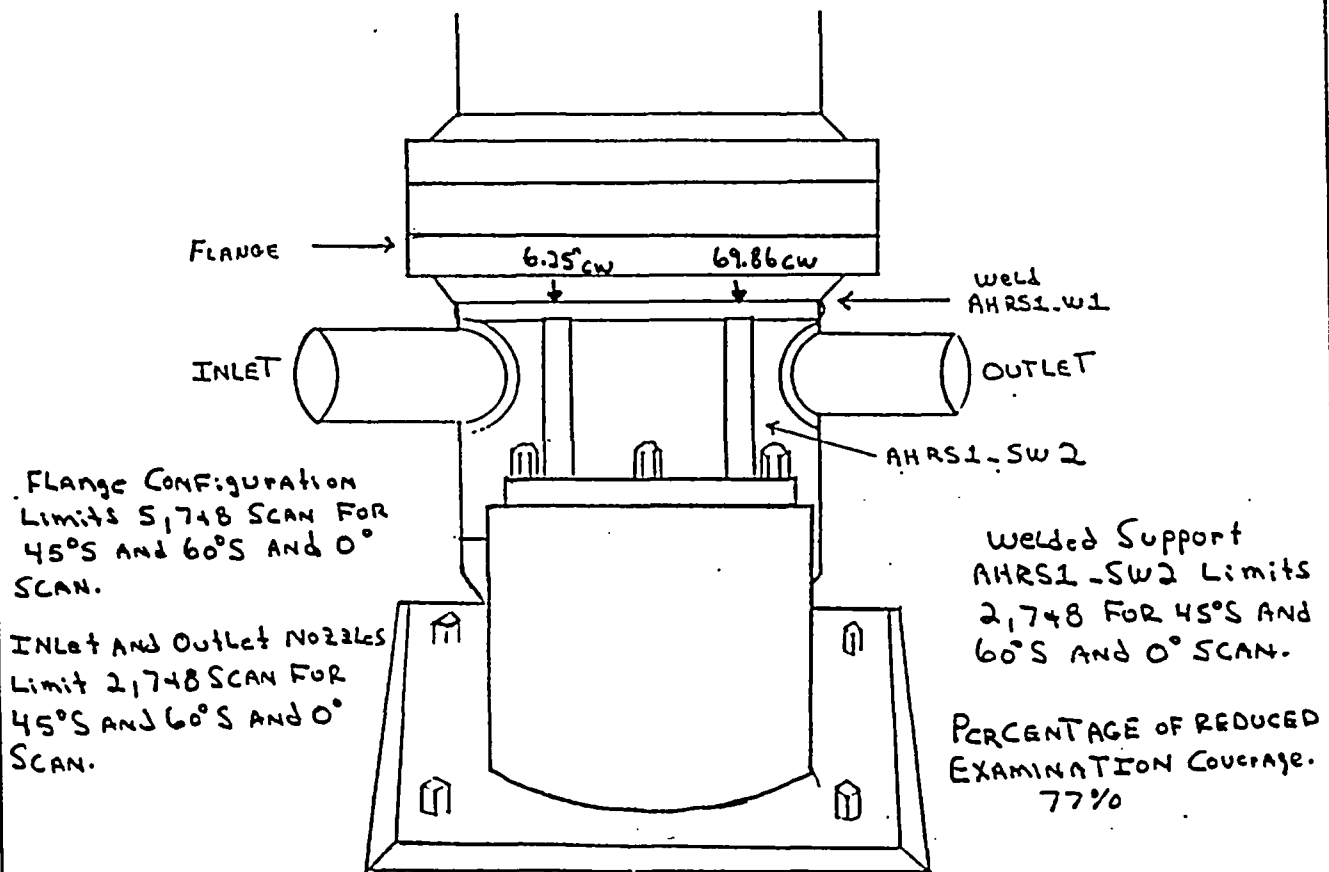
COMPONENT IDENTIFICATION: AHRS1-W1 PROCEDURE: QCP-911 REVISION: ORIG.

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: N.A. B. G. II DATE: 4-25-95
LEVEL

EXAMINER: NA NA DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



Sheet 2 of 3

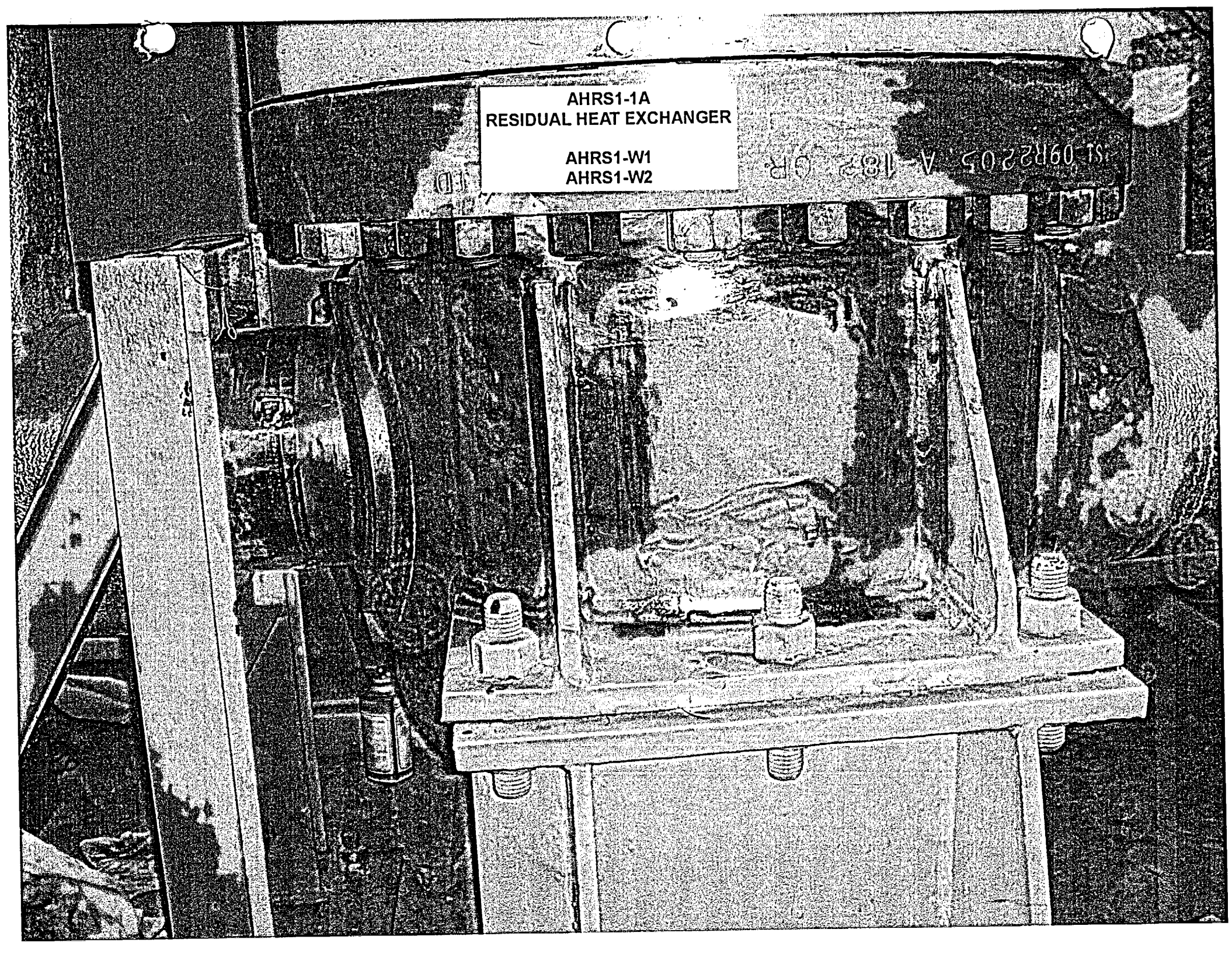
KEWAUNEE NUCLEAR POWER PLANT REVIEW: E. J. A. Balstad DATE: 4/27/95

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roy McQuinn DATE: 4/27/95

AHRS1-1A
RESIDUAL HEAT EXCHANGER

AHRS1-W1
AHRS1-W2

SI 09R2205 A-182 OR



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-9

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Residual Heat Exchanger AHRS1-1A
Head Circumferential Weld AHRS1-W2**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category
C-A; Item No. C1.20**
- 4. Impracticality of Compliance: 37.6% of the Residual Heat Exchanger Head
Circumferential Weld AHRS1-W2 was inaccessible due to configuration of
the Residual Heat Exchanger Welded Support thus restricting Ultrasonic
Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 37.6% of the
Head Circumferential Weld AHRS1-W2 would require modification from
the Original Design of the Residual Heat Exchanger.**

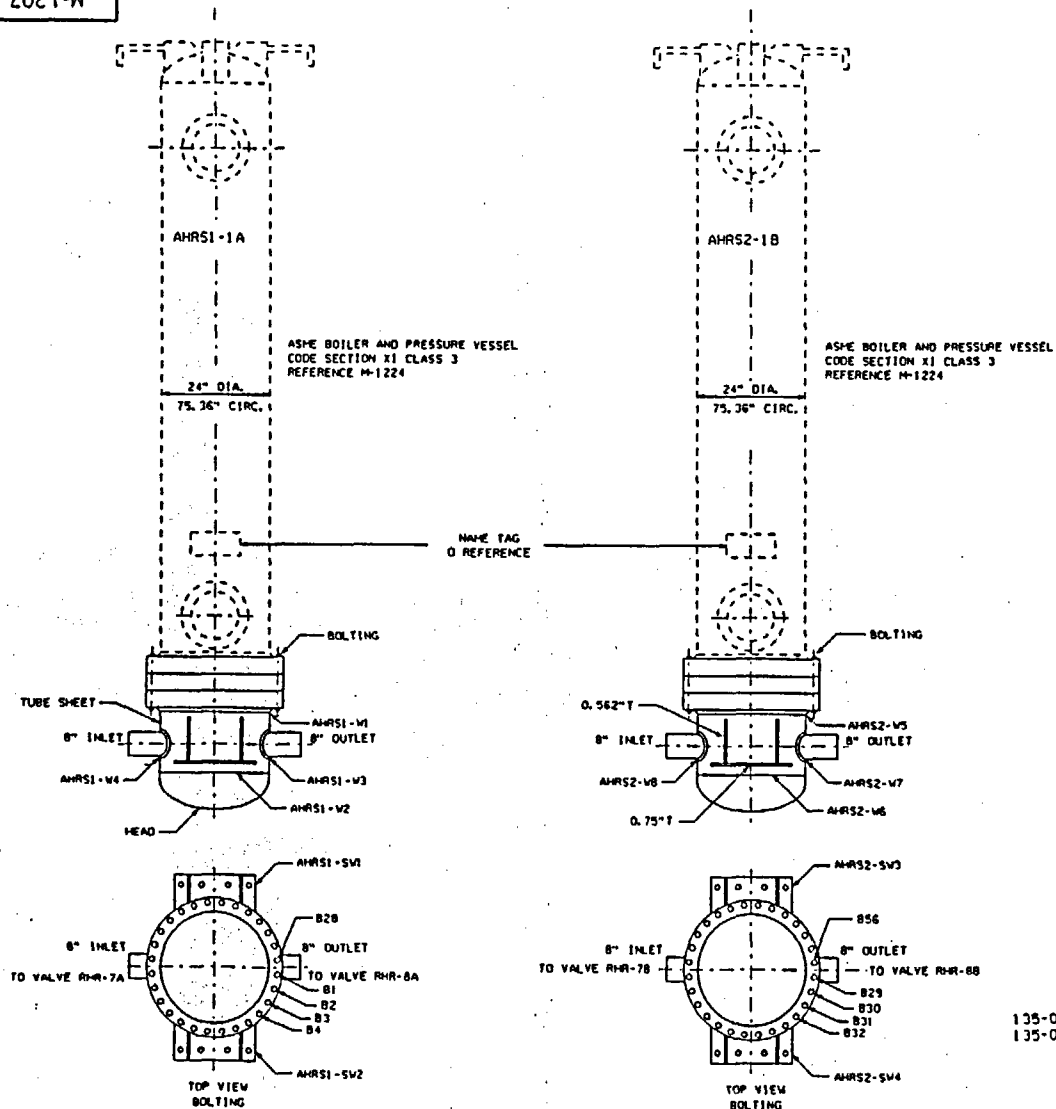
KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-9

- 6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWC-2500-1; Examination Category C-H; Item C7.10 each 3 1/3 Year
Period for evidence of leakage.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**

M-1207



LOCATION: AUXILIARY BUILDING 606: RESIDUAL HEAT EXCHANGER AHRS1-1A GATE 256
AND RESIDUAL HEAT EXCHANGER AHRS2-1B GATE 173

BOLTING DATA EACH HEAT EXCHANGER		
STUDS / DIA. / LGTH INCHES		
28 / 1.125" / 8.0"	156	

COMPONENT WELD DATA		
I.D.	THICKNESS	MATERIAL
AHRS1-W1	0.5"	A240 TP304SS
AHRS1-W2	0.5"	A240 TP304SS
AHRS1-W3	0.5"	A240 TP304SS
AHRS1-W4	0.5"	A240 TP304SS
AHRS2-W5	0.5"	A240 TP304SS
AHRS2-W6	0.5"	A240 TP304SS
AHRS2-W7	0.5"	A240 TP304SS
AHRS2-W8	0.5"	A240 TP304SS

INTEGRALLY WELDED ATTACHMENT DATA		
I.D.	THICKNESS	MATERIAL
AHRS1-SW1	.562" 8.75"	A285 GR. C
AHRS1-SW2	.562" 8.75"	A285 GR. C
AHRS2-SW3	.562" 8.75"	A285 GR. C
AHRS2-SW4	.562" 8.75"	A285 GR. C

CALIBRATION BLOCK		
I.D.	DIAMETER/SCHEDULE	MATERIAL
WPS-30	0.5" 1x3.0" Lx2.5" W	SA240 TP304SS

D-1
KAP 01-001639
DRAWING APPLICABLE FOR 3RD AND 4TH ISI
INTERVAL ASME BOILER AND PRESSURE
VESSEL CODE SECTION XI CLASS 2

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

RESIDUAL HEAT EXCHANGERS AHRS1-1A AND AHRS2-1B

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	APPROVED	DATE
	PHILLIP E. BUKES	6/1/93
CHECKED	PROJECT APPROVED	
U.M.	DATE	REV.
	1/17/83	
ESS	SCALE	OWG. NO.
NONE		M-1207

CADD

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: RESIDUAL HEAT EXCHANGERS AHR51-1A AND AHR52-1B

DRAWING NO.: M-1207

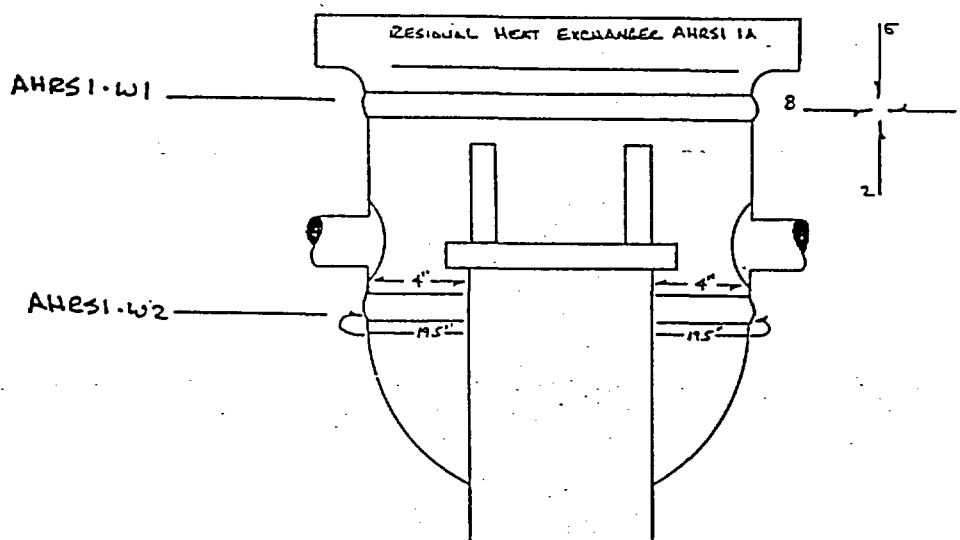
COMPONENT IDENTIFICATION: AHR51-W2 PROCEDURE: NEP No. 15.16 REVISION: 0715

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: G. Carlini III DATE: 10/24/98
LEVEL

EXAMINER: Jeff Dines II DATE: 10/24/98
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

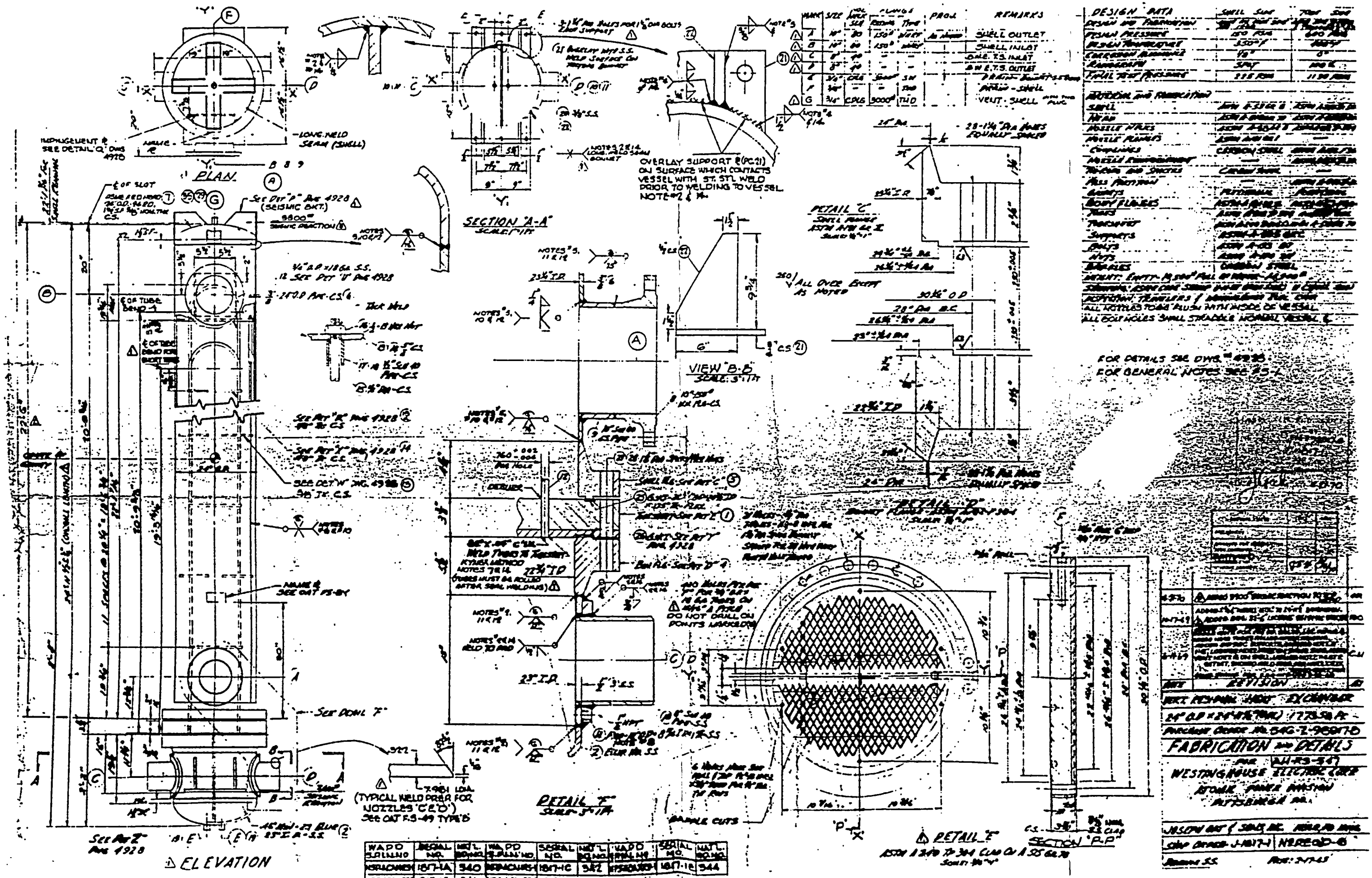


NOTE: SCAN 2, 5, 7, 8; 0° EXAMINATION LIMITED TO AREAS NOTED ABOVE DUE TO SUPPORTS & SADDLE WELD INTERFERENCE.

REDUCED PROBE/AXIAL COVERAGE: 36.2%
REDUCED CODE COVERAGE: 37.6%

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip C. Bakes DATE: October 30, 1998

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger Mitzgum DATE: 10-30-98



WADO SERIAL NO	SERIAL NO.	MO. L DO. NO.	WADO SERIAL NO	SERIAL NO.	MO. L DO. NO.	WADO SERIAL NO	SERIAL NO.	MO. L DO. NO.
WACRONE	187-1A	340	WACRONE	187-1C	342	WACRONE	187-1E	344

DESIGN DATA	SMALL SIZE	7000 SIZE
DESIGN AND TRANSMISSION	500 HP AND 2000 RPM	1000 HP AND 1000 RPM
DESIGN PRESSURE	250 PSI	500 PSI
DESIGN TEMPERATURE	350°F	700°F
EXCESSIVE ALLOWANCE	1/8"	0"
REMARKS	SMALL	800 LB.
FINAL TEST PRESSURE	315 PSI	1150 PSI

[illegible]

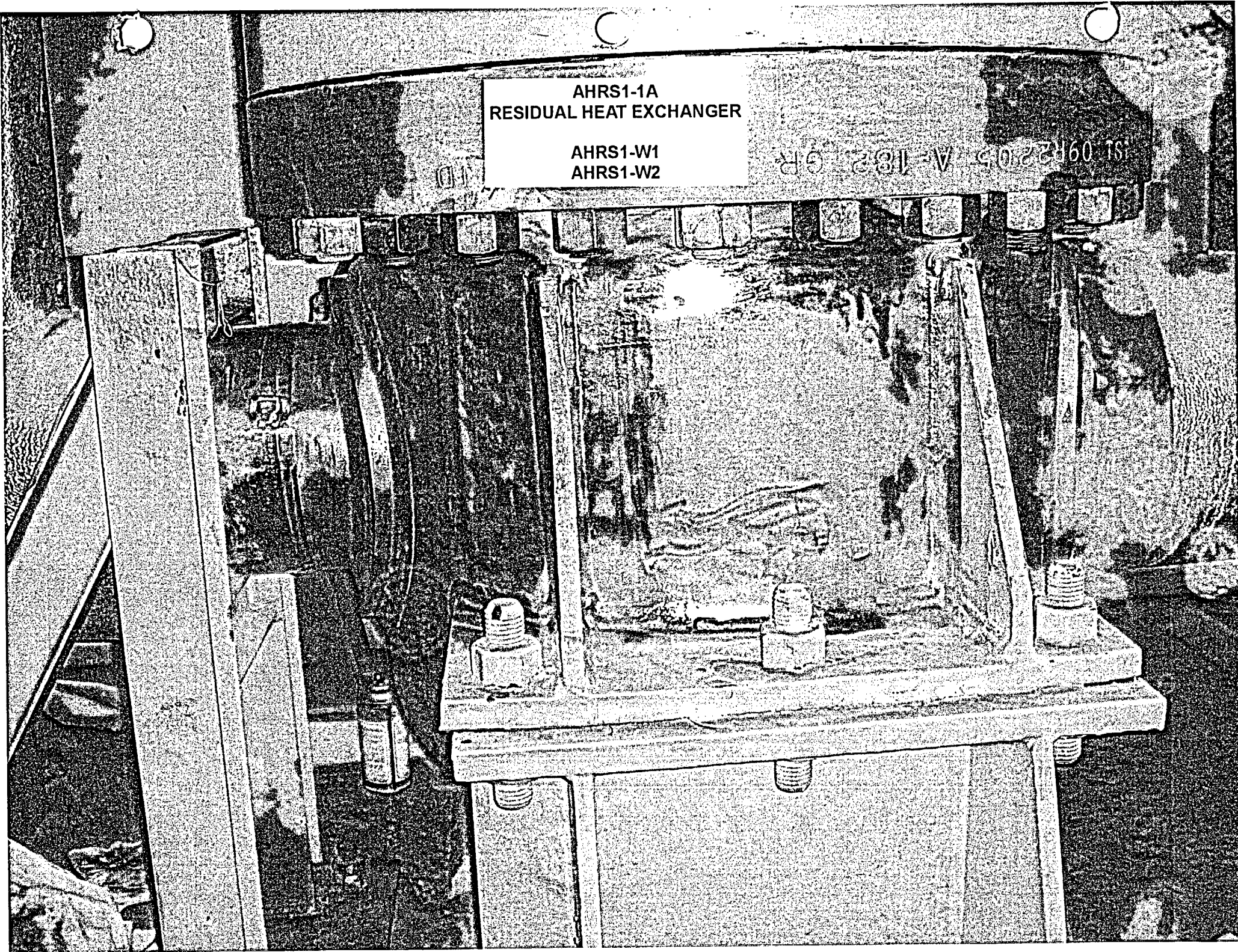
FOR DETAILS SEE DWG. #4225.
FOR GENERAL NOTES SEE #3.

[illegible]

AHRS1-1A
RESIDUAL HEAT EXCHANGER

AHRS1-W1
AHRS1-W2

ST 09122105 A-182 GR



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-10

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Reactor Coolant Pump 1A Main Flange Bolting RCP-B1 through RCP-B8, RCP-B9 and RCP-B11 through RCP-17**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-G-1; Item No. B6.180**
- 4. Impracticality of Compliance: 7.3% of each Reactor Coolant Pump 1A Main Flange Bolt was inaccessible due to configuration of Main Flange Bolt thus restricting Bore Hole Probe Ultrasonic Examination during the 1st and 2nd Period.**
- 5. Burden Caused by Compliance: To provide for access to the 7.3% of the Main Flange Bolt would require modification from the Original Design of the Reactor Coolant Pump Main Flange Bolt.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-10

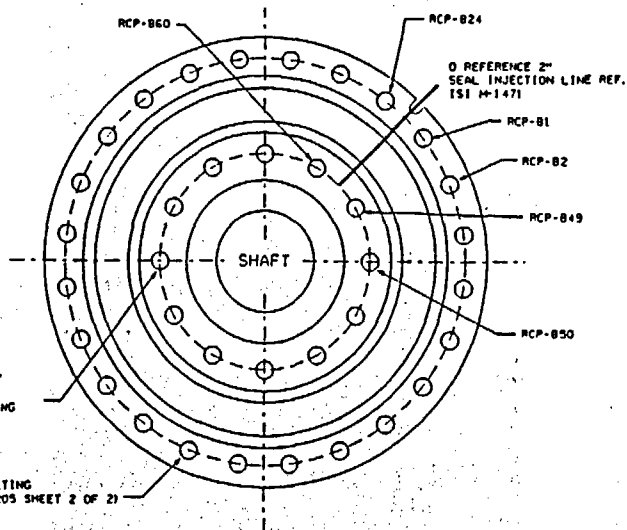
6. Proposed Alternative and Basis for Use: Kewaunee Nuclear Power Plant
Bore Hole Probe examinations required a 70° Forward, 70° Reverse and 90° Surface Scan to cover 100% of the required length of the Main Flange Bolt during the 1st and 2nd Examination Periods. Configuration of the Main Flange Bolt limited by 7.3% the 70° Forward and 90° Surface Scans. Alternative Code required 0° Straight Beam Examination per ASME Boiler and Pressure Vessel Code Section XI 1995 Edition Appendix VIII Supplement 8 was performed on the remaining 8 Main Flange Bolts during the 3rd Examination Period. The 0° Straight Beam Examination although less restrictive in number of transducers requires less access and thus No Limitations were recorded. If KNPP would have continued use of the Ultrasonic Probe technique as permitted by ASME Boiler and Pressure Vessel Code Section XI 1995 Edition Appendix VIII Supplement 8 during the 3rd Period limit to examinations would have been encountered and additional identical Relief Requests would require submittal. 4TH Interval Examinations will be performed utilizing the approved Appendix VIII Supplement 8 - 0° Straight Beam to eliminate the Limitation on the Reactor Coolant Pump Main Flange Bolting and the need for Relief Request Submittal.

7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 – June 16, 2004

8. Precedents: Not Applicable

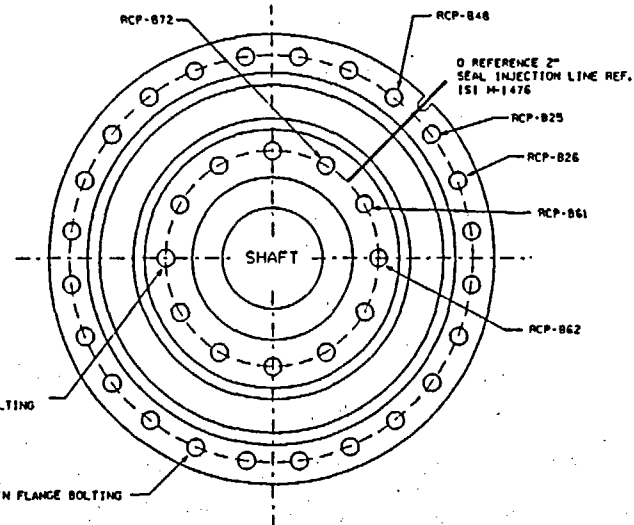
9. References: Not Applicable

1 HS 5021-W



REACTOR COOLANT PUMP RCP-1A

145-021



REACTOR COOLANT PUMP RCP-1B

145-022

C-1
KAP 01-001639

DRAWING APPLICABLE FOR 3RD (AND 4TH) ISI
INTERVAL ASME BOILER AND PRESSURE
VESSEL CODE SECTION XI CLASS I

NO. 1 SEAL HOUSING BOLTING DATA			
BOLTS/ DIA.	LGTH.	NUTS	MATERIAL
12 / 2.0" / 9.0"	N/A		SA-193 GR. B7

MAIN FLANGE BOLTING DATA			
BOLTS/ DIA.	LGTH.	NUTS	MATERIAL
24 / 4.5" / 30.5"	N/A		SA-540 GR. B24 CL. 4

LOCATION: CONTAINMENT

REVISION

A	
PDD 0011 COMPL SEE REV 0-1 APP'D: CAT 10/23/89 FILM'D: (WPS) 11/7/89	
A-1	
REDRAFTED TO CAD PER ESR 92-177 DWG. E. SAXTON 4/1/93 CHK'D: B. TROTTER 5/12/93 APP'D: CAT 8-4-93	
B	ESR 92-177 COMP.
SEE REV. A-1 FILM'D: WPS 8-17-93	
B-1	RE PUR 0295
ADDED REF NO'S. BY: BJD 7-19-99 APP'D: DAK 7-26-99	
C	RE PUR 0295 COMP.
SEE REV. B-1 FILM'D: WPS 8-3-99	
C-1 KAP 01-001639 REVISED NOTE 1. BY: ABF 06-03-02 APP'D:	
D KAP 01-001639 COMPLETE SEE REV. C-1. FILM'D: (WPS)	

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

REACTOR COOLANT PUMPS
RCP-1A AND RCP-1B MAIN FLANGE
AND NO. 1 SEAL HOUSING BOLTING

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

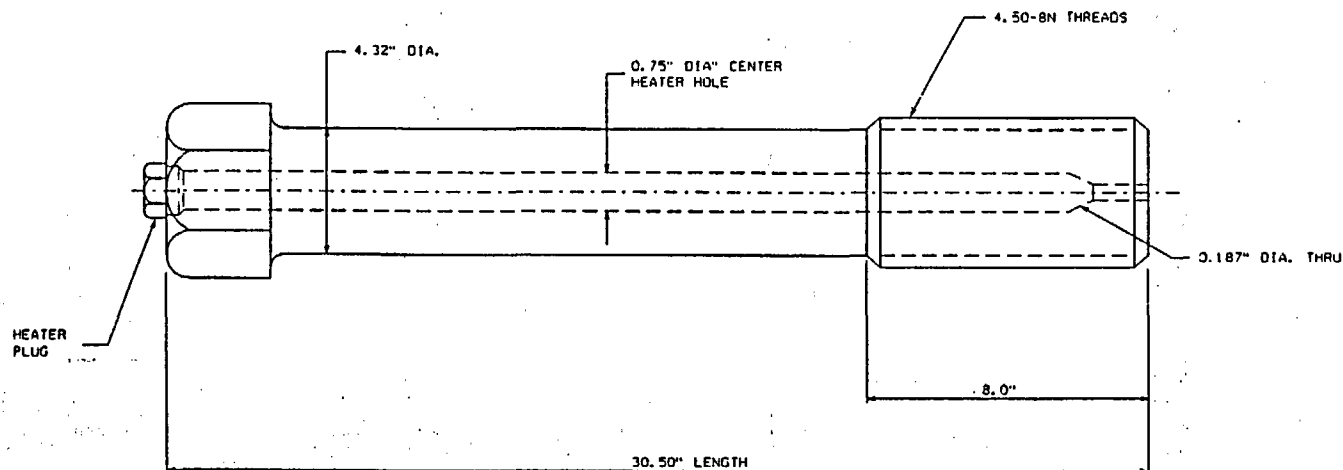
DESIGNED: _____ APPROVED: PHILLIP E. BUKES 1/23/93
CHECKED: _____ PROJECT APPROVED: _____

D.H. 1/17/93

Q.R./O.S. 1/17/93 DWG. NO. M-1205 SHT. 1 OF 2 REV. 0
NONE SCALE

CADD

2 HS 9021-W



MAIN FLANGE BOLTING DATA EACH REACTOR COOLANT PUMP			
BOLT SIZE	DIA.	PLG IN.	MATERIAL
2 1/2"	4.5"	30.5"	N/A
			SA-540 GR. 924 CL. 4

CALIBRATION BLOCK			
I.D.	DIA.	LENGTH	MATERIAL
1.0"	4.5"	30.5"	SA-540 GR. 924

145-021
145-022

LOCATION: CONTAINMENT

B-1
KAP 01-001639
DRAWING APPLICABLE FOR 3RD (AND 4TH) ISI
INTERVAL ASME BOILER AND PRESSURE
VESSEL CODE SECTION XI CLASS 1

WISCONSIN PUBLIC SERVICE CORPORATION KEWAUNEE NUCLEAR POWER PLANT CARLTON, KEWAUNEE COUNTY, WISCONSIN			
REACTOR COOLANT PUMP RCP-1A AND RCP-1B MAIN FLANGE BOLT			
DESIGNED BY WISCONSIN PUBLIC SERVICE CORP. GREEN BAY, WISCONSIN			
DESIGNED	APPROVED		
	PHILLIP E. BUKES		1/21/93
CHECKED	PROJECT APPROVED		
D. H.	1/17/93		
DATE	Q. R. / D. S. 1/13/93	DWG. NO.	REV.
SCALE	NONE	M-1205	SHT. 2 OF 2
CADD			C

REVISION	
0-1	REDRAFTED TO CAD PER ESR 92-177 DWN: E. SAXTON 4/1/93 CHK'D: B. TROTTER 5/12/93 APP'D: CAT 8-4-93
A	ESR 92-177 COMP. SEE REV. 0-1 FILMED: WPS 8-17-93
A-1	RE PUR 0295 ADDED REF. NO'S BY: BJD 7-19-99 APP'D: DAK 7-26-99
B	RE PUR 0295 COMP. SEE REV. A-1 FILMED: (WPS) 8-3-99 B-1 KAP 01-001639 REVISED NOTE 1. BY: ARF 06-03-02 APP'D:
C	KAP 01-001639 COMPLETE SEE REV. B-1. FILMED: (WPS)

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

SYSTEM OR COMPONENT: R.C. PUMP BOLT DRAWING NO.: M1205

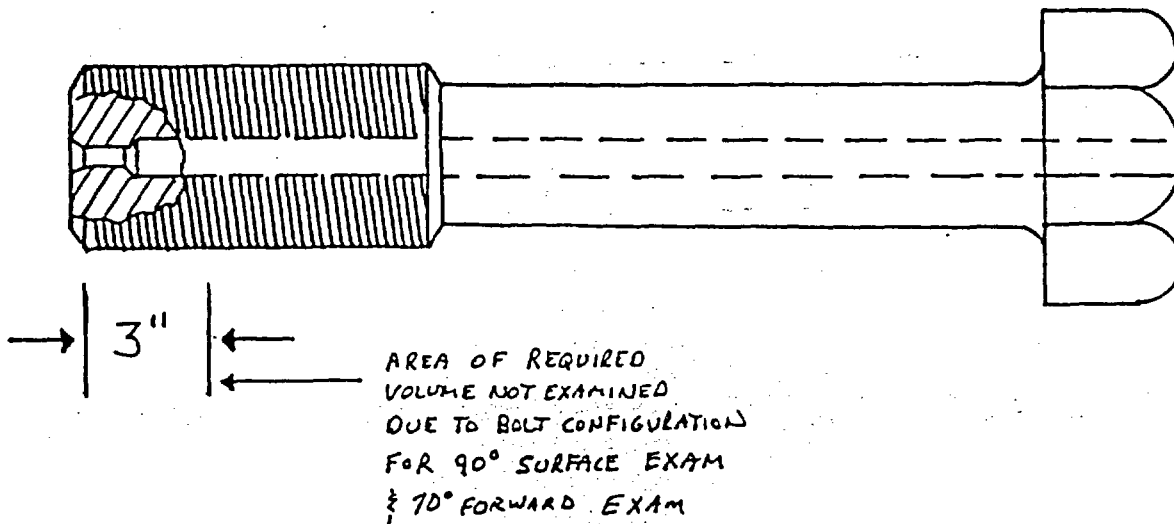
COMPONENT IDENTIFICATION: WPS-41 PROCEDURE: QCP-910 REVISION: ORIG

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: Jerry P. White II DATE: 4-21-95
LEVEL

EXAMINER: N.A. Boy II DATE: 4-21-95
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



PERCENTAGE OF REDUCED EXAMINATION COVERAGE 92.7% EXAMINED
7.3% NOT EXAMINED

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip C. Burke DATE: April 23, 1995
AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Ray Morgan DATE: 4/24/95

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: RC PUMPS RCP-1A AND RCP-1B MAIN FLANGE AND No. 1 SEAL HOUSING BOLTING

DRAWING NO.: M-1205 SHT 1 of 2

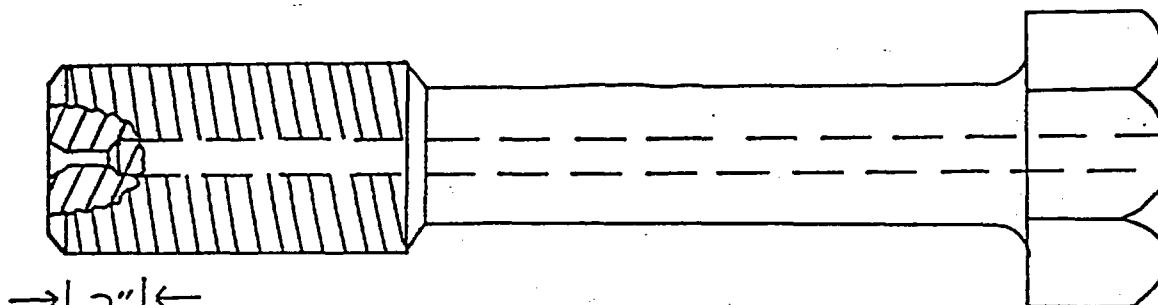
COMPONENT IDENTIFICATION: RCP-B9, RCP-B11
THRU RCP-B17 PROCEDURE: NEP No. 15.15 REVISION: Orig.

ULTRASONIC: X LIQUID PENETRANT: _____ MAGNETIC PARTICLE: _____ VISUAL: _____

EXAMINER: W. Carlson TII DATE: 10-30-98
LEVEL

EXAMINER: Greg Williams II DATE: 10-30-98
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



AREA OF REQUIRED VOLUME
NOT EXAMINED DUE TO
BOLT CONFIGURATION FOR
90° SURFACE EXAM AND
70° FORWARD EXAM

7.3% NOT EXAMINED
(PER STUD)

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bukes DATE: November 5, 1998

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Roger M. Jensen DATE: 11-6-98

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-11

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Regenerative Heat Exchanger
Head Circumferential Weld ARG-W9**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category
C-A; Item No. C1.20**
- 4. Impracticality of Compliance: 1.5% of the Regenerative Heat Exchanger
Head Circumferential Weld ARG-W9 was inaccessible due to configuration
of the Regenerative Heat Exchanger 2" Nozzle thus restricting Ultrasonic
Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 1.5% of the
Head Circumferential Weld ARG-W9 would require modification from
the Original Design of the Regenerative Heat Exchanger.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-11

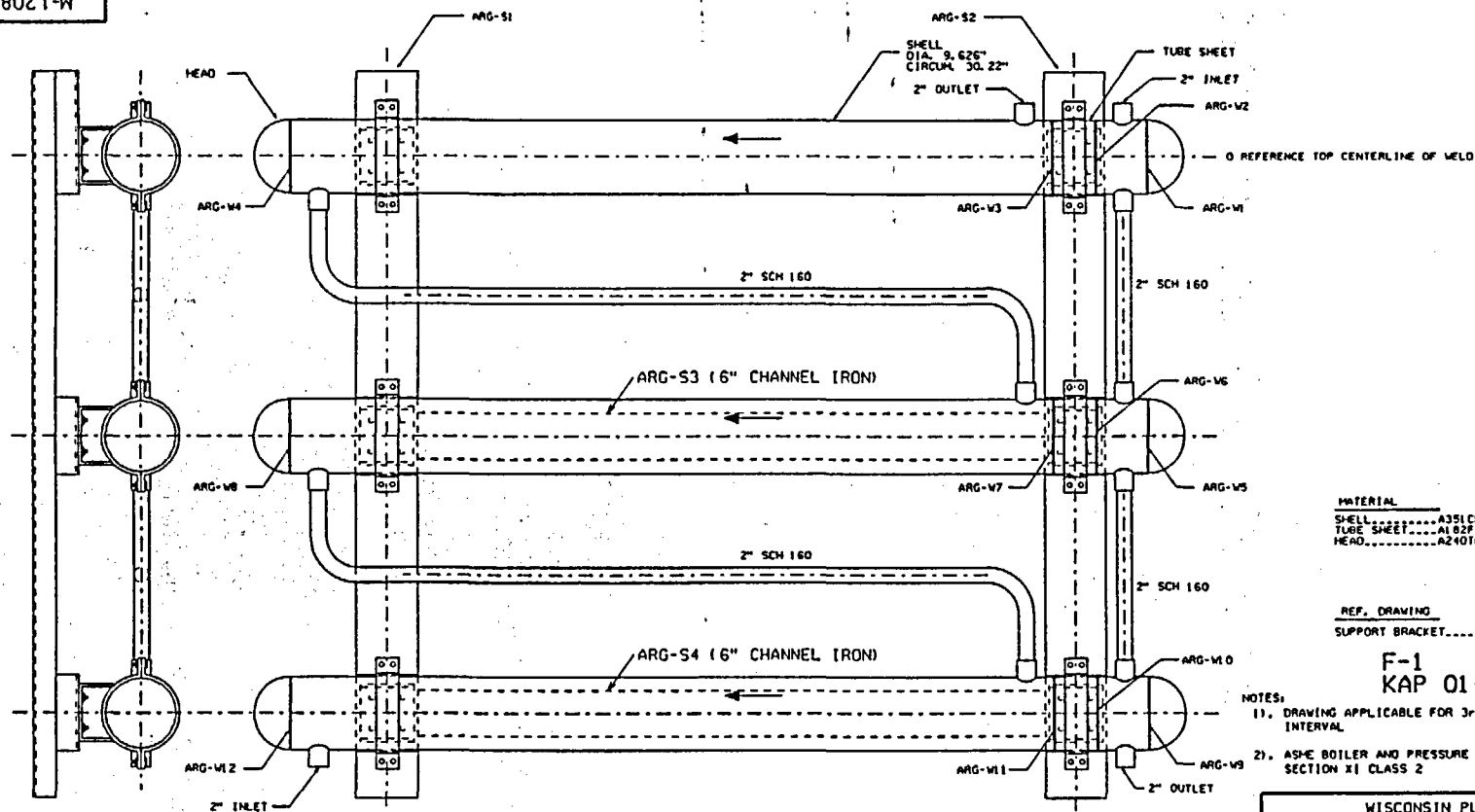
**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWC-2500-1; Examination Category C-H; Item C7.10 each 3 1/3 Year
Period for evidence of leakage.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

8021-W



CALIBRATION BLOCK			
I.D.	DIAMETER / SCHEDULE	MATERIAL	
WPS-27	9.5" 0.875" T	A351 CF8	

135-031

LOCATION: CONTAINMENT 593' ELEVATION

COMPONENT WELD DATA		
I.D.	THICKNESS	
ARG-V1	.900"	
ARG-V2	.900"	
ARG-V3	.900"	
ARG-V4	.938"	
ARG-V5	.938"	
ARG-V6	.938"	
ARG-V7	.938"	
ARG-V8	.938"	
ARG-V9	.938"	
ARG-V10	.938"	
ARG-V11	.938"	
ARG-V12	.900"	
ARG-S3	.900"	
ARG-S4	.900"	
ARG-S5	.900"	

MATERIAL
SHELL.....A351CF8
TUBE SHEET.....A182F304
HEAD.....A240TP304

REF. DRAWING
SUPPORT BRACKET.....XK-100-492

F-1
KAP 01-001639

- NOTES:
1. DRAWING APPLICABLE FOR 3rd (AND 4th) TEST INTERVAL
2. ASME BOILER AND PRESSURE VESSEL CODE SECTION XI CLASS 2

REVISION

E-1	POR 0175 ADDED ARG-S3 & S4 (16" CHANNEL IRON) BY: JMS 06-06-00 APP'D: DAK 06-09-00
F	POR 0175 COMP. SEE REV. E-1 FILMED: (WPS) 06-13-00
F-1	KAP 01-001639 REVISED NOTE 1. BY: ABF 06-03-02 APP'D:
G	KAP 01-001639 COMPLETE SEE REV. F-1. FILMED: (WPS)
C	ESR 92-177 COMP. SEE REV. B-1 FILMED WPS: 10-19-93
C-1	REVISED NOTE 2 PER ESR 92-177 BY: DOG 11-17-93 CHK'D: RJS 11-17-93 APP'D: CAT 11-19-93
D	ESR 91-277 COMP. SEE REV. C-1 FILMED: WPS 11-30-93
D-1	RE PUR 0295 ADDED REF NUMBER BY: BJO 7-19-99 APP'D: DAK 7-26-99
E	RE PUR 0295 COMP. SEE REV. D-1 FILMED: WPS 8-3-99

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

REGENERATIVE HEAT EXCHANGER ARG

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

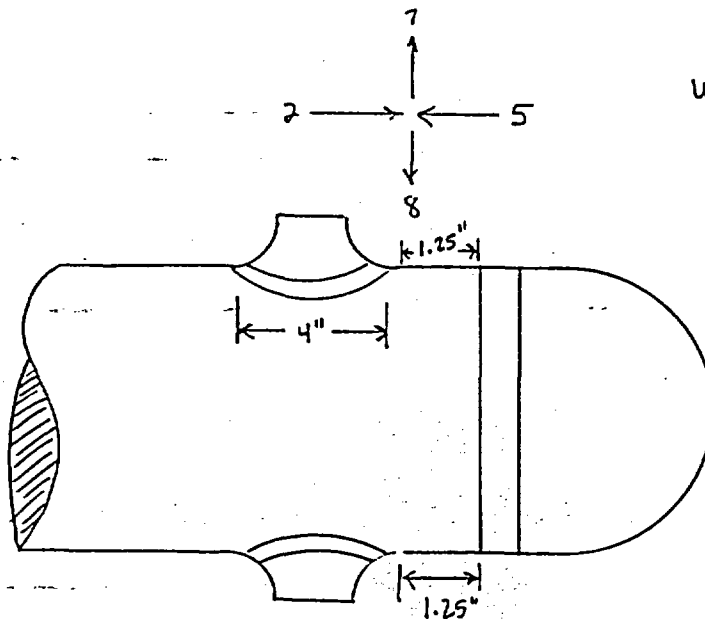
DESIGNED		APPROVED	
CHECKED		PROJECT APPROVED	
D. H.	1/17/83	DWG. NO.	M-1208
DATE	1/13/83	REV.	G

CADD

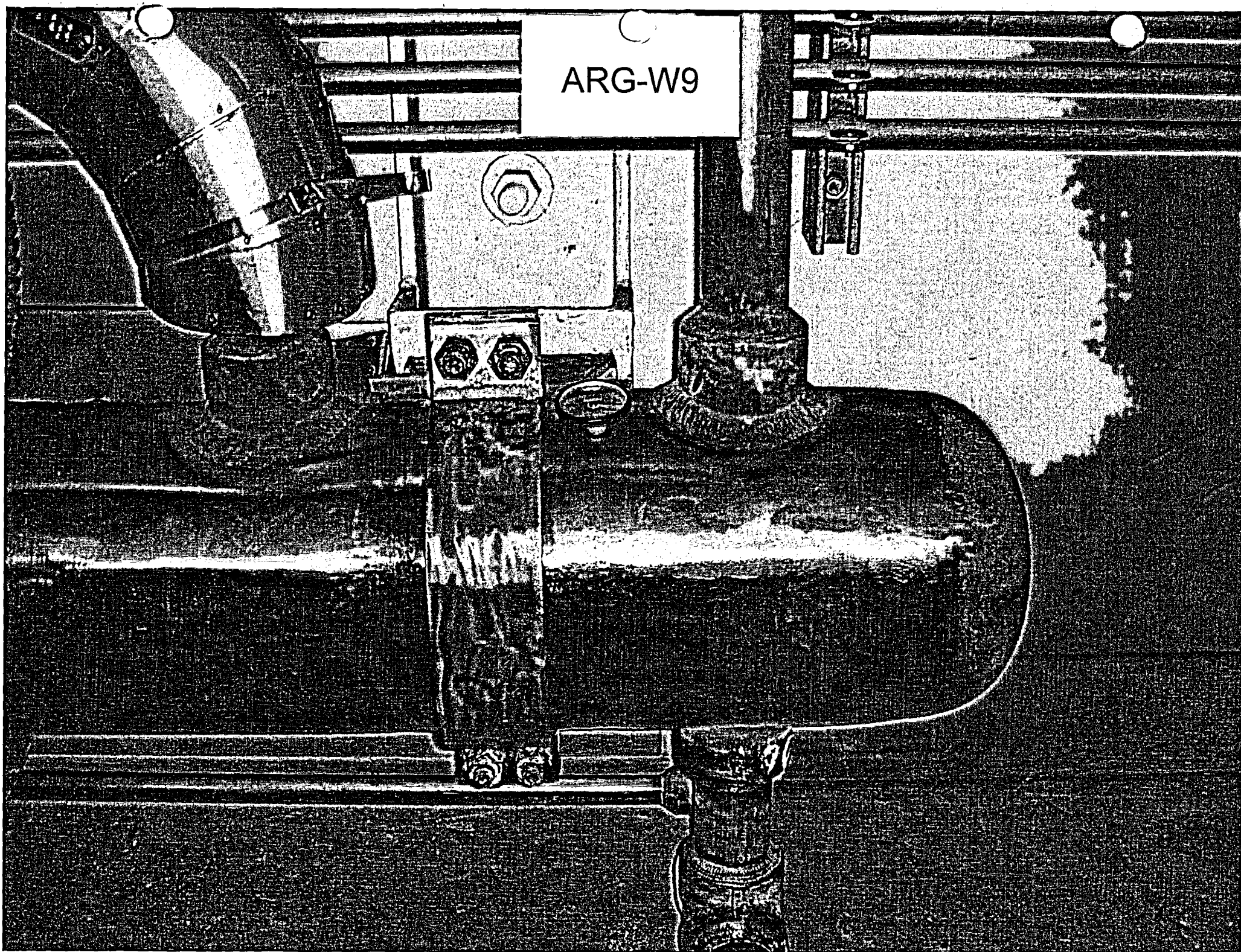
WISCONSIN PUBLIC SERVICE CORPORATION

REV.: ORIG.

KEWAUNEE NUCLEAR POWER PLANT

ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORDSYSTEM OR COMPONENT: REGENERATIVE HEAT EXCHANGER ARGDRAWING NO.: M-1208COMPONENT IDENTIFICATION: ARG-W9 PROCEDURE: NEP NO. 15.17 REVISION: ORIGULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL: EXAMINER: James P. Ware III DATE: 11-11-98
LEVELEXAMINER: NA DATE: NA
LEVELSKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND
PERCENTAGE OF REDUCED EXAMINATION COVERAGE.45° SCAN 2 LIMITED DUE TO NOZZLE CONFIGURATIONS
ON TOP AND BOTTOM.REDUCED CODE COVERAGE 1.5%
REDUCED PROCEDURAL COVERAGE .8%KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. BakerDATE: November 11, 1998AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Roger MatsumiDATE: 11-12-98

ARG-W9



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-12

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Steam Generator 1A Nozzle Inside Radius Sections SG-IR25 and SG-IR26 and Steam Generator 1B Nozzle Inside Radius Section SG-IR27 and SG-IR28**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-D; Item No. B3.140**
- 4. Impracticality of Compliance: 6.3% of each of the 4 Nozzle Inside Radius Sections SG-IR25, SG-IR26, SG-IR27 and SG-IR28 were inaccessible due to the configuration of the Steam Generator Nozzle Inside Radius Section Integrally Welded Attachment thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 6.3% of each of the Steam Generator 1A and 1B Nozzle Inside Radius Sections would require modification from the Original Design of the Steam Generators and the Integrally Welded Attachments supporting the Steam Generators.**

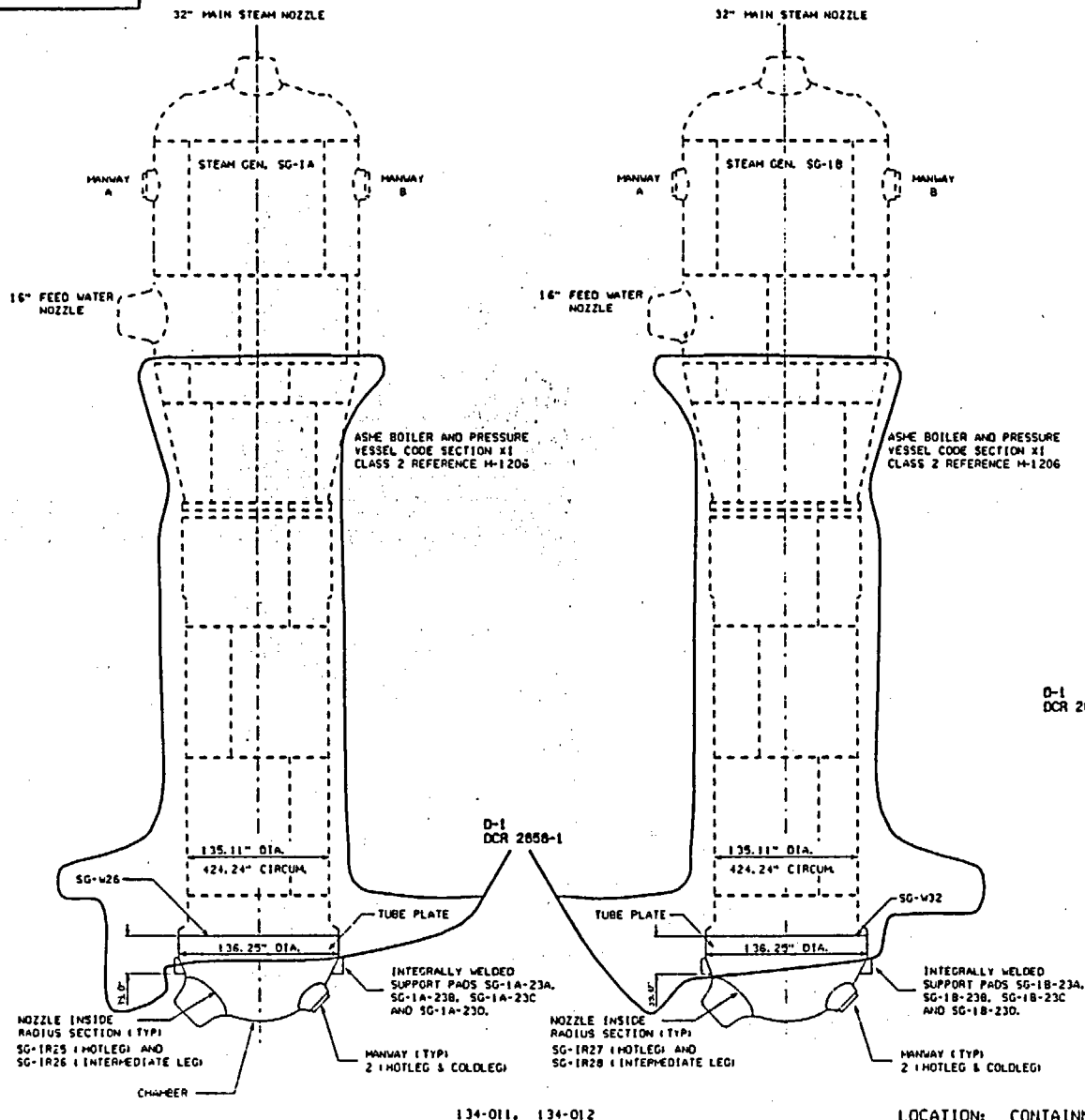
KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-12

- 6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: VT-2 Table
IWB-2500-1; Examination Category B-P; Item B15.10 each Refueling
Outage for evidence of leakage.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**

1021-W



MANWAY BOLTING DATA EACH MANWAY

STUDS = 7 DIA. / 1.5 IN. HITS *	WASHERS *
16 / 1.88" / 15.9" / 16	32
* INDIVIDUALLY STAMPED I.D.'s	

COMPONENT DATA

I.D.	THICKNESS	MATERIAL
SG-W26	5.25"	SA508 CL. 3A CS
SG-W32	5.25"	SA508 CL. 3A CS
SG-1R25 (HOTLEG)	8.18" MAX.	SA508 CL. 3A CS
SG-1R26 (INTER. LEG)	8.18" MAX.	SA508 CL. 3A CS
SG-1R27 (HOTLEG)	8.18" MAX.	SA508 CL. 3A CS
SG-1R28 (INTER. LEG)	8.18" MAX.	SA508 CL. 3A CS
SG-1A-23A	13.13"	AS508 C26 CS
SG-1A-23B	13.13"	AS508 C26 CS
SG-1A-23C	13.13"	AS508 C26 CS
SG-1A-23D	13.13"	AS508 C26 CS
SG-1B-23A	13.13"	AS508 C26 CS
SG-1B-23B	13.13"	AS508 C26 CS
SG-1B-23C	13.13"	AS508 C26 CS
SG-1B-23D	13.13"	AS508 C26 CS

CALIBRATION BLOCK

I.D.	DIAMETER/SCHEDULE	MATERIAL
WPS-54	5.0" F x 18.9" L x 7.51" W	SA508 CL. 3A CS
WPS-55	2.27" F x 15.74" L x 19.64" W	SA508 CL. 3A CS / SA378 CL. F 316 LND

D-1
DCR 2858-1

NOTES:

- DRAWING APPLICABLE FOR 3rd & 4th 1ST INTERVAL
- ASME BOILER AND PRESSURE VESSEL CODE SECTION XI CLASS 1
- STEAM GENERATOR SG-1A AND SG-1B INTEGRALLY WELDED SUPPORT PADS NUMBERED CLOCKWISE FROM CENTERLINE OF HOTLEG MANWAY: 23A, 23B, 23C & 23D
- 0 REFERENCE: TOP CENTERLINE OF HOTLEG MANWAY FOR SG-W26 AND SG-W32
- SG-W26 AND SG-W32 WELD CENTERLINE LOCATED 18.0" ABOVE BOTTOM CURVATURE OF CHANNEL HEAD.

D-1
DCR 2858-1WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSINREPLACEMENT
STEAM GENERATORS
SG-1A AND SG-1BDESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	PHILLIP E. BUKES	6/1/93
CHECKED	PROJECT APPROVED	
D. H.	1/17/93	
ESS	SCALE	OWG. NO.
NONE		M-1201
		REV.
		E

REVISION

A	PDO 0011 COMPL SEE REV 0-1 APP'D: CAT 10/23/89 FILM'D: (WPS) 11/7/89
A-1	REDRAFTED TO CAD PER ESR 92-177 OWN: E. SAXTON 4/1/93 CHK'D: B. TROTTER 5/12/93 APP'D: CAT 7-23-93
B	ESR 92-177 COMPL. SEE REV. A-1 FILMED (WPS) 08-03-93
B-1	REV. NOTES PER ESR 92-177 BY: LNL 10-1-93 CHK'D: RJS 10-4-93 APP'D: CAT 10-07-93
C	ESR 92-177 COMPL. SEE REV. B-1 FILMED (WPS) 10-19-93
C-1	RE PUR 0295 ADDED ITEM NO'S. BY: BJD 7-19-99 APP'D: DAK 7-26-99
D	RE PUR 0295 COMPL. SEE REV. C-1 FILMED (WPS) 8-3-99
D-1	DCR 2858-1 ADDED REVISIONS FOR FUTURE AS BUILTS. BY: JMS 01-29-01 APP'D:
	ADDED 4th INTERVAL TO NOTE 1. REFERENCE KAP 01-001639 APP'D:
E	DCR 2858-1 COMPL. SEE REV. D-1 FILMED (WPS)

FUTURE
AS BUILT
FOR DCR 2858

134-011, 134-012

LOCATION: CONTAINMENT

CADD

WISCONSIN PUBLIC SERVICE CORPORATION

REV.: ORIG.

KEWAUNEE NUCLEAR POWER PLANT

ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORDSYSTEM OR COMPONENT: REPLACEMENT STEAM GENERATORS SG-1A AND SG-1BDRAWING NO.: M-1201COMPONENT IDENTIFICATION: SG-1R 25 PROCEDURE: NEP-15.44 REVISION: AULTRASONIC: X LIQUID PENETRANT: _____ MAGNETIC PARTICLE: _____ VISUAL: _____EXAMINER: JEFF JOHNSON II DATE: 6-22-01

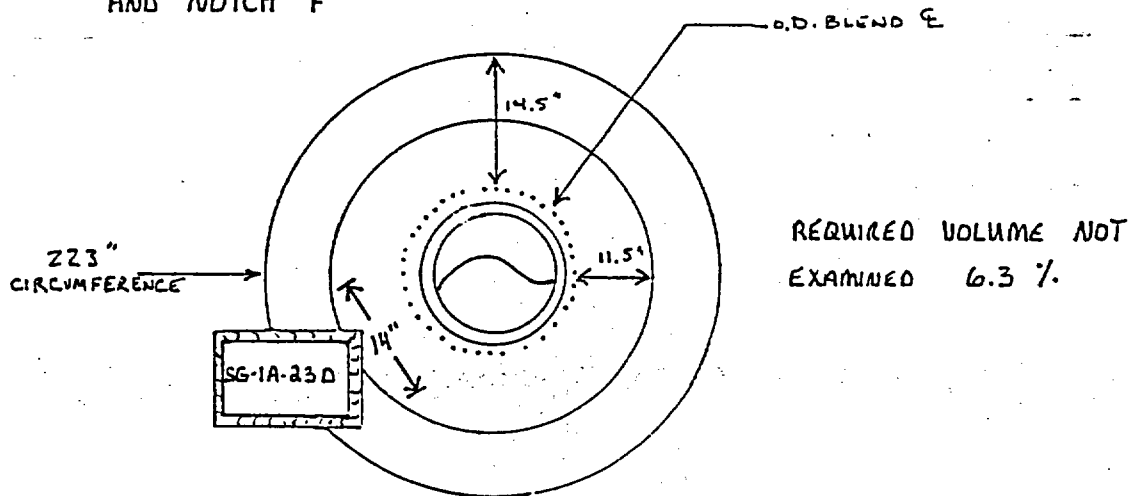
LEVEL

EXAMINER: TRAVIS THOMAS II DATE: 6-22-01

LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND
PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

14.0" OF INTEGRALLY WELDED ATTACHMENT SG-1A-23 D
LIMITED 60° SCANS WITH CALIBRATION FOR NOTCH B
AND NOTCH F

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. BukesDATE: June 25, 2001AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Ryan McGinnisDATE: 6-25-01

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: REPLACEMENT STEAM GENERATORS SG-1A AND SG-1B

DRAWING NO.: M-1201

COMPONENT IDENTIFICATION: SG-1R 26 PROCEDURE: NEP-15.44 REVISION: A

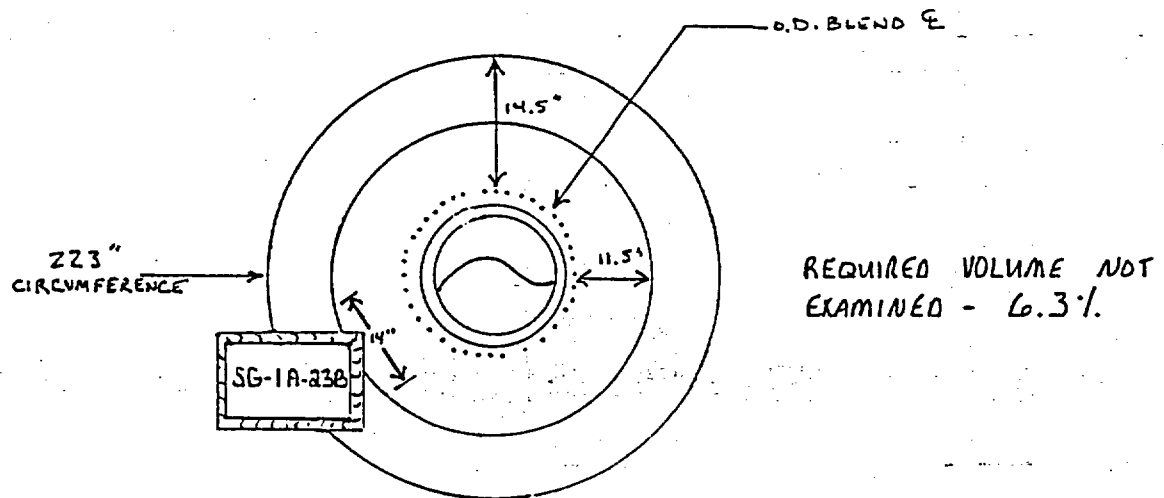
ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: JEFF JOHNSON II DATE: 6-22-01
LEVEL

EXAMINER: TRAVIS THOMAS II DATE: 6-22-01
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

14.0" OF INTEGRALLY WELDED ATTACHMENT SG-1A-23 B LIMITED 60°
SCANS WITH CALIBRATION FOR NOTCH B AND NOTCH F



KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip C. Bakes DATE: June 25, 2001
AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Ryan McGuire DATE: 6-25-01

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: REPLACEMENT STEAM GENERATORS SG-1A AND SG-1B

DRAWING NO.: M-1201

COMPONENT IDENTIFICATION: SG-1B 27 PROCEDURE: NEP-15.44 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: JEFF JOHNSON II DATE: 6-23-01

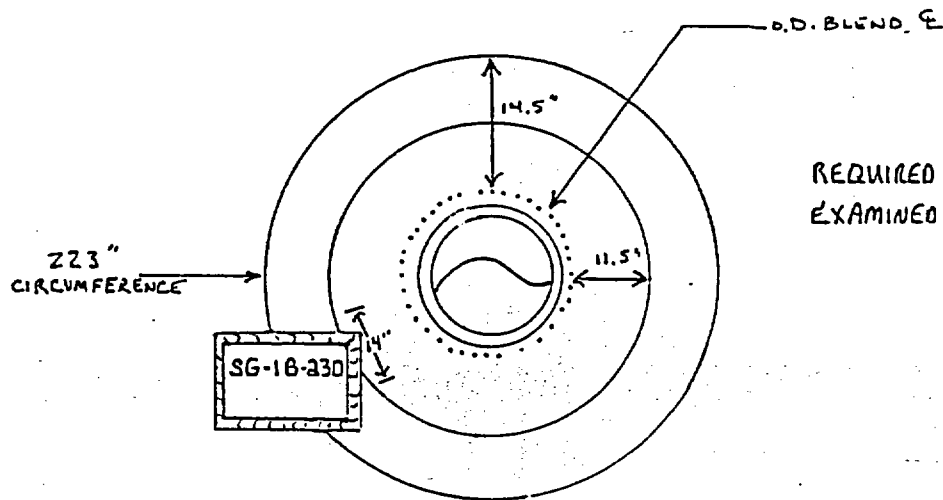
LEVEL

EXAMINER: TRAVIS THOMAS II DATE: 6-23-01

LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

14.0" OF INTEGRALLY WELDED ATTACHMENT SG-1B-23D LIMITED
60° SCANS WITH CALIBRATION FOR NOTCH B AND F.



REQUIRED VOLUME NOT
EXAMINED - 6.3 %

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Buekes DATE: June 25, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Roger M. Wynn DATE: 6-25-01

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: REPLACEMENT STEAM GENERATORS SG-1A AND SG-1B

DRAWING NO.: M-1201

COMPONENT IDENTIFICATION: SG-1B 23 PROCEDURE: NEP-15.44 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: JEFF JOHNSON II DATE: 6-23-01

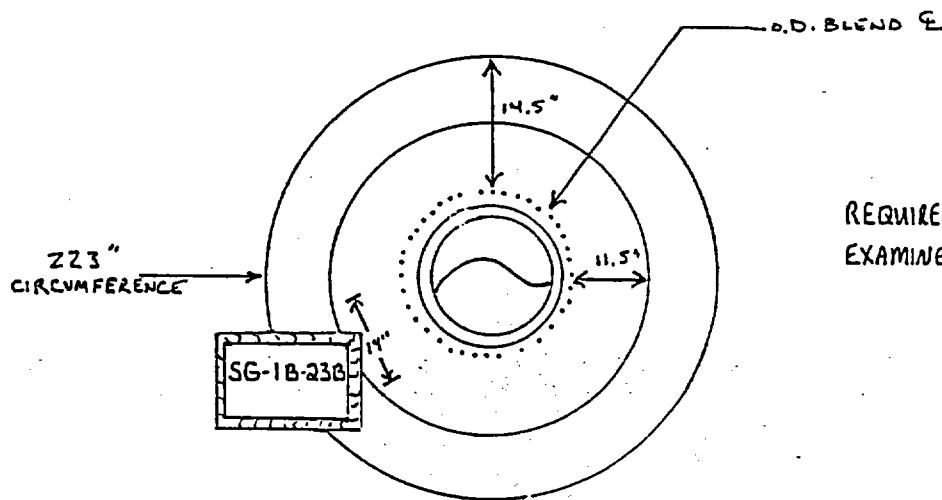
LEVEL

EXAMINER: TRAVIS THOMAS II DATE: 6-23-01

LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

14.0" OF INTEGRALLY WELDED ATTACHMENT SG-1B-23 B LIMITED
60° SCANS WITH CALIBRATION FOR NOTCH B AND NOTCH F



REQUIRED VOLUME NOT
EXAMINED 6.3%.

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bakes DATE: June 25, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Logan McQueen DATE: 6-25-01

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-13

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Letdown Heat Exchanger
Head Circumferential Weld AHNR-W2**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category
C-A; Item No. C1.20**
- 4. Impracticality of Compliance: 43.0% of the Letdown Heat Exchanger Head
Circumferential Weld AHNR-W2 was inaccessible due to configuration of
the Letdown Heat Exchanger 2 Welded Supports and the 2" Inlet Nozzle
and the 2" Outlet Nozzle thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 43.0% of the
Head Circumferential Weld AHNR-W2 would require modification from
the Original Design of the Letdown Heat Exchanger.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-13

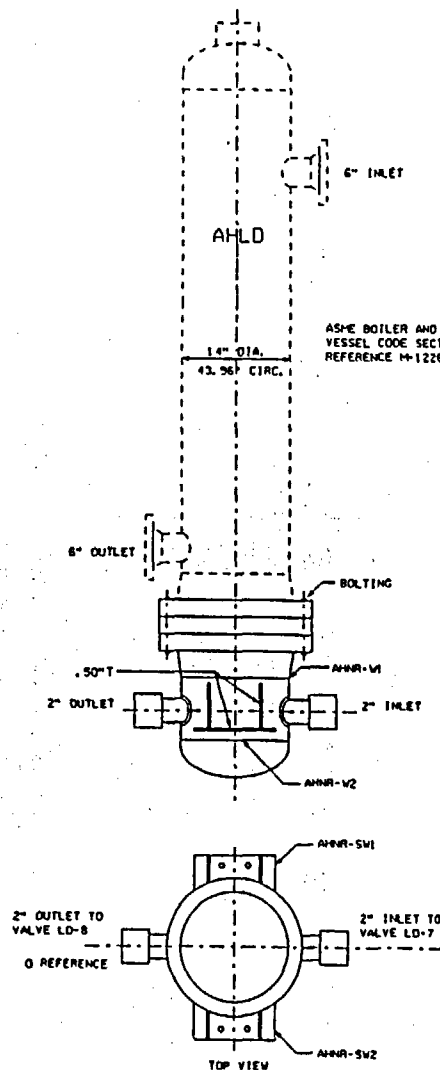
**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWC-2500-1; Examination Category C-H; Item C7.10 each 3 1/3 Year
Period for evidence of leakage.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

6021-W



ASME BOILER AND PRESSURE
VESSEL CODE SECTION XI CLASS 3
REFERENCE M-1226

TOP VIEW

BOLTING DATA		
BOLTS / DIA. / LGTH	NUTS	
20 1/2" / 8.5"	40	

COMPONENT WELD DATA		
I.D.	THICKNESS	MATERIAL
ANVR-V1	0.375"	A240 TP304SS
ANVR-V2	0.375"	A240 TP304SS

INTEGRALLY WELDED ATTACHMENT DATA		
I.D.	THICKNESS	MATERIAL
ANVR-SW1	0.50" T	
ANVR-SW2	0.50" T	

CALIBRATION BLOCK		
I.D.	DIAMETER/SCHEDULE	MATERIAL
WPS-25	1.4" SCH 40S 0.375" T	A358 CL2 1304SS

C-1
KAP 01-001639

DRAWING APPLICABLE FOR 3RD (AND 4TH) ISI
INTERVAL ASME BOILER AND PRESSURE
VESSEL CODE SECTION XI CLASS 2

REVISION

A	PDD 0011 COMPL SEE REV 0-1 APP'D: CAT 10/23/89 FILMED: (WPS) 11/7/89
A-1	REDRAFTED TO CAD PER ESR 92-177 OWN: E. SAXTON 4/1/93 CHK'D: B. TROTTER 5/12/93 APP'D: CAT 8-4-93
B	ESR 92-177 COMP. SEE REV. A-1 FILMED: WPS 8-17-93
B-1	RE PUR 0295 ADDED REF NUMBER BY BJO 7-19-99 APP'D: DAK 7-26-99
C	RE PUR 0295 COMP. SEE REV. B-1 FILMED: WPS 8-3-99
C-1	KAP 01-001639 REVISED NOTE 1. BY: ABF 06-03-02 APP'D:
D	KAP 01-001639 COMPLETE SEE REV. C-1. FILMED: (WPS)

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

LETDOWN HEAT EXCHANGER AHL

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	PHILLIP E. BUKES	6/1/93
CHECKED		
D.M.	1/17/83	

DATE	4/1/93	DWG. NO.	M-1209	REV.	0
ESS	WAT				
NONE					

CADD

LOCATION: AUXILIARY BUILDING 606 LETDOWN HEAT EXCHANGER ROOM GATE 53

135-041

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: LETDOWN HEAT EXCHANGER AHLD

DRAWING NO.: M-1209

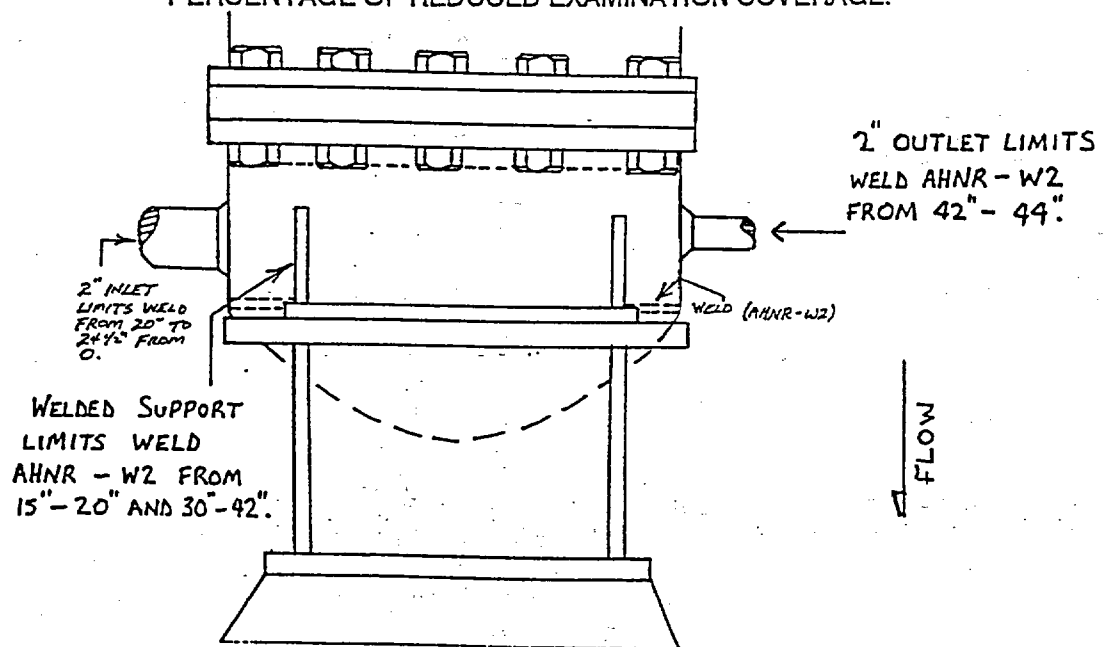
COMPONENT IDENTIFICATION: AHNR - W2 PROCEDURE: NEP-15.41 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: _____ MAGNETIC PARTICLE: _____ VISUAL: _____

EXAMINER: TIM COBURN [Signature] II DATE: 10/24/01
LEVEL

EXAMINER: NA NA DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



- 45° - RESTRICTED SCAN 2,5,7,8 DUE TO WELDED SUPPORTS.
45° - RESTRICTED SCAN 5 DUE TO INLET AND OUTLET 2" LINES.

REDUCED CODE COVERAGE BY 43%.

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Butkus DATE: October 29, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Royce M. [Signature] DATE: 10/29/01

NOTES

1. CONSTRUCTION TO COMPLY WITH ASME CODE SEC III CLASS C TUBE SIDE, AND SEC III SHELL SIDE, ALSO TEMA 'K' (ALL PER LATEST EDITION) FOR INSTALLATION IN STATE OF

2. NAME PLATE STAMPING:

ATLAS INDUSTRIAL MFG. CO. CLIFTON, N.J.	
U	DES. MATL. NO. _____
AT	SERIAL YEAR _____
SHELL	150 PSI AT 150 °F
TUBES	600 PSI AT 400 °F
JACKET	150 PSI AT 150 °F
TEST PRESS. 225 PSI TUBE TEST 1125 PSI	

TEST TEMP 70 °F SHELL SIDE TUBE SIDE
TEST PRESSURE 225 PSI 1125 PSI
CORROSION ALLOW 1/8" 0
WATER VOLUME 60 GAL 35 GAL
EMPTY 1900 LBS.
FULL OF WATER 2755 LBS.
PAINT: ALL C.S. ONE COAT OF RED PRIMER SANDBLAST: NOT REQ'D.

6. TUBE HOLES SHALL NOT BE SPACED. SEAL WELDS TUBES IN ACCORD WITH ATLAS STD. 103.
7. STRESS RELIEVE: NO

RADIOGRAPHY: TUBE SIDE, 100% ALL BUTT WELDS.

8. ALL TUBING SHALL BE ULTRASONICALLY EXAMINED IN ACCORD WITH PARA. N-324.3, SEC. III ASME CODE 1965 ED, BEFORE BENDING

9. PRIOR TO HYDRO-TEST, AIR TEST TUBE SEAL WELDS @ 25 PSIG IN ACCORD WITH ATLAS STD. 107, ON SHELL SIDE

10. HYDRO-STATICALLY TEST UNIT FOR 30 MINUTE (MINIMUM) WITH WATER CHLORIDE CONTENT LESS THAN 1 PPM

11. AFTER MACHINING AND PRIOR TO TUBE HOLES DRILLING THE TUBE SHEET FACE SHALL BE USED PENETRANT INSPECT PER ATLAS STD. 101

12. TUBE SHEET, HEADS, FLANGES AND C.F.G. SHALL BE USED. PERM INSPECTED ON ALL ACCESSIBLE SURFACES FOLLOWING FIN. TYPING OR MACHINING. PER ATLAS STD. 101

13. ALL OUTER SURFACES OF ALL RESS. MAGNETIC WELDS SHALL BE MAGNETIC PARTICLE INSPECTED PER ATLAS STD. 106

14. ALL ACCESSIBLE SURFACES OF ALL PARA-MAGNETIC OR NON-MAGNETIC WELDS SHALL BE LIQUID PENT. INSPECT PER ATLAS STD. 101

15. TUBE SHEETS SHALL BE MARKED WITH SERIAL NO. AND TAGS READ. TAGS SHALL BE EXEMPTED FROM

16. SEAL ALL NOZZLES FOR SHIPMENT

17. THE INSIDE OF HEAT EXCHANGER TUBES SHALL BE CLEANED BY SCOURING A SCOURER BRUSHED FELT PLUG THROUGH EACH TUBE. THIS SHALL BE PERFORMED AFTER WELDING AND ROLLING

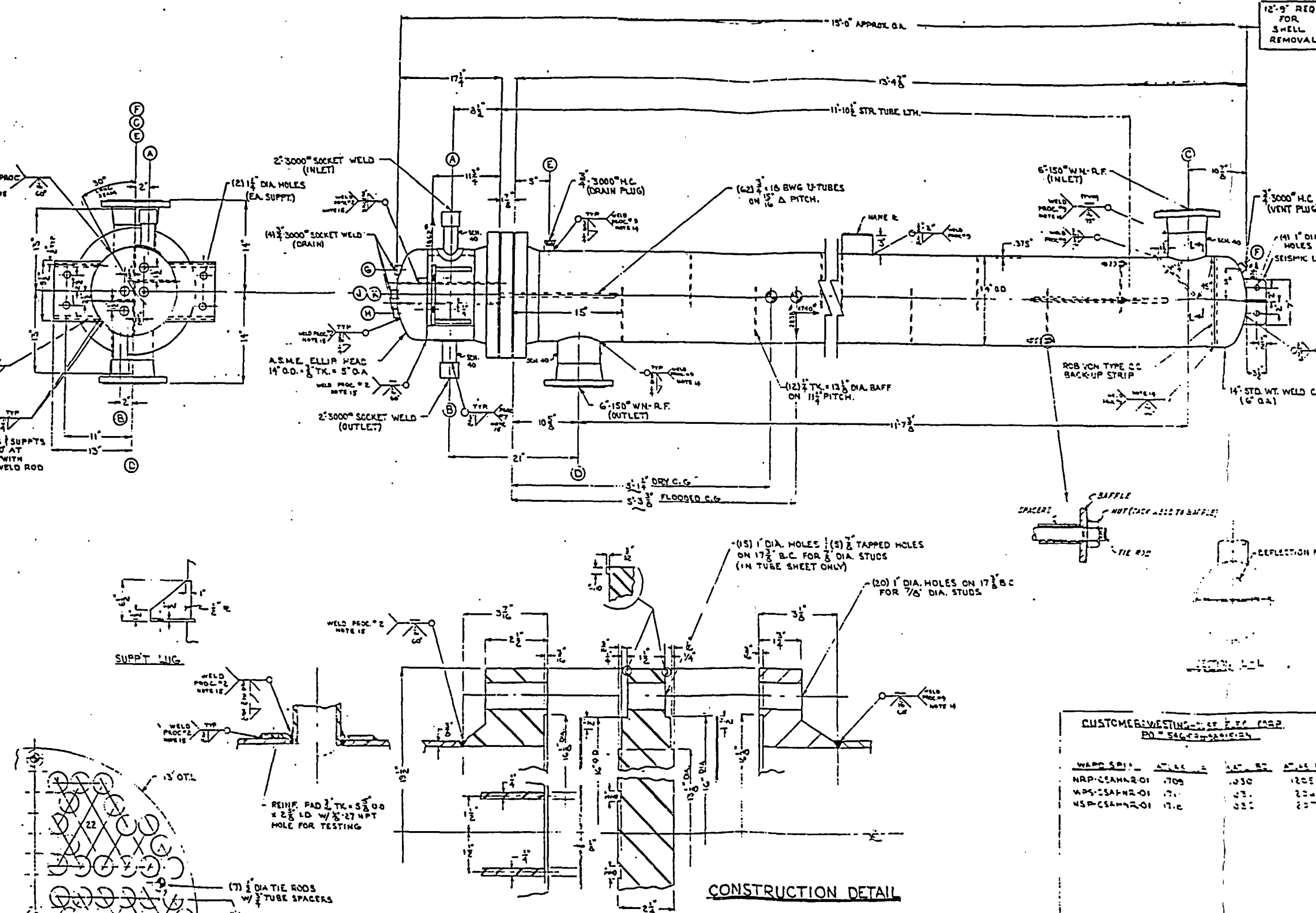
CUSTOMER TESTING DATA SHEET

WATER SIDE	ATLAS	ATLAS	ATLAS
NRP-CSAHR-01	1709	1730	1735
NRP-CSAHR-01	1711	1731	1736
NRP-CSAHR-01	1712	1732	1737

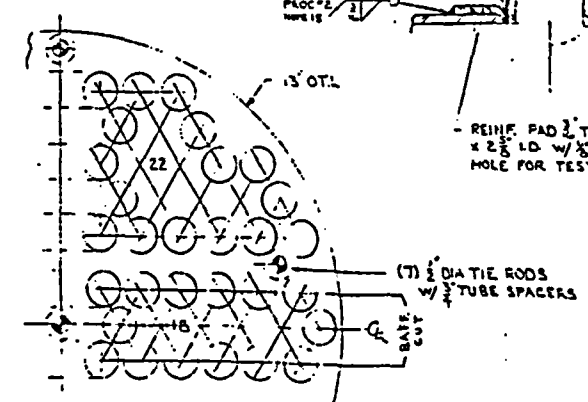
1	WATER SIDE TESTING	1709	1730	1735
2	STEAM SIDE TESTING	1711	1731	1736
3	HYDRO-TESTING	1712	1732	1737
4	AIR TEST	1713	1733	1738
5	OTHER TESTING	1714	1734	1739

ATLAS INDUSTRIAL MANUFACTURING CO.
CLIFTON, N.J.

LetDown Heat Exchanger



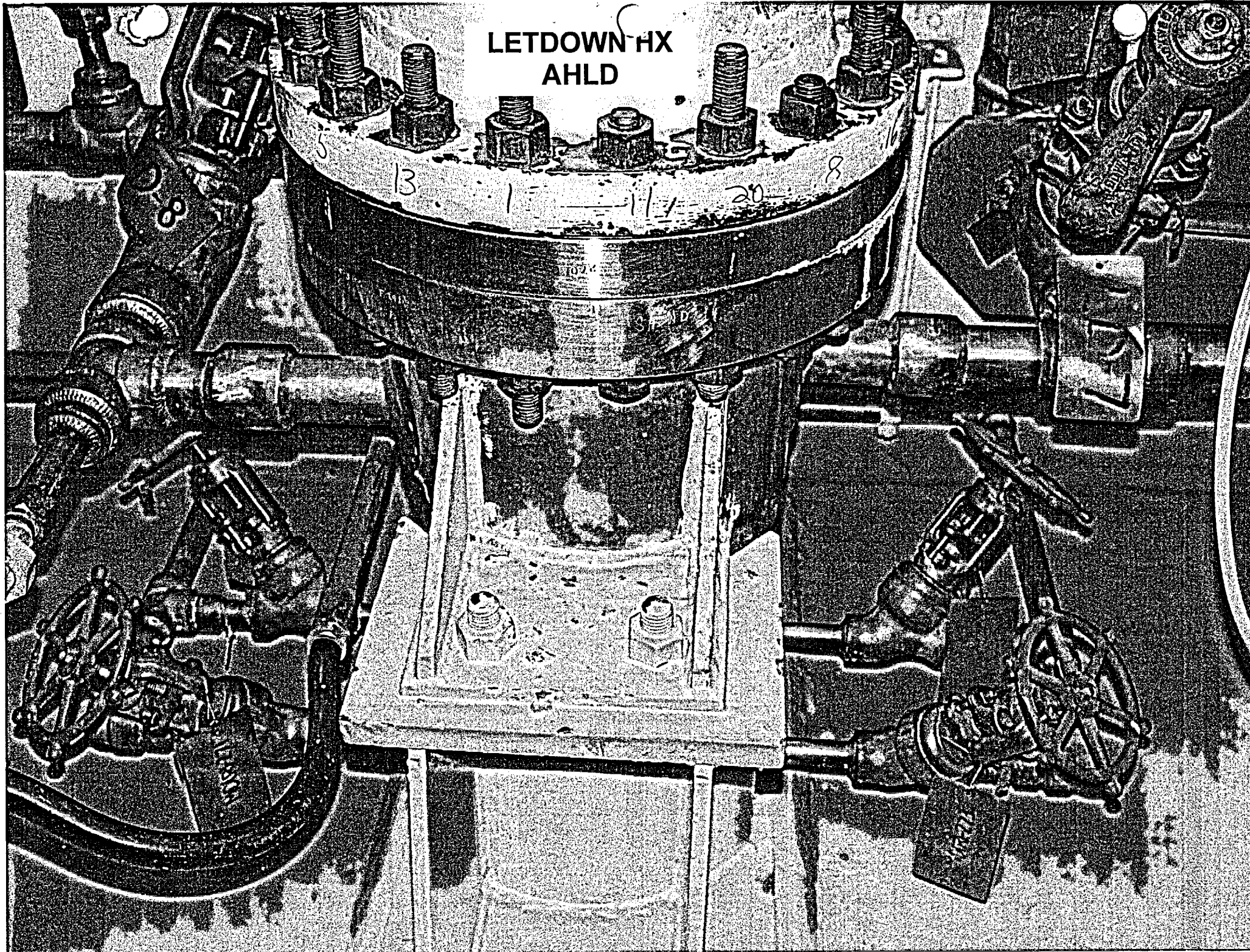
TUBE LAYOUT



CONSTRUCTION DETAIL

ASME MATERIAL SPECIFICATIONS			
SHELLS	PIPE	ROLL PLATE	BAFFLES
C.S.	C.S.	C.S.	C.S.
SA-53-B	SA-53-B	SA-26	SA-36
EXPANSION JOINT	END PLATE	WELD CAPS	FORMED HEADS
SA-53-B	SA-26	C.S.	SA-26
NOZZLE HEADS	NOZZLE NECKS	NOZZLE FITTINGS	NOZZLE FLANGES
SA-53-B	SA-53-B	SA-26	SA-26
NOZZLE FLANGES	NOZZLE PLUGS	NOZZLE PLUGS	NOZZLE PLUGS
SA-26	SA-26	SA-26	SA-26
SUPPORTS	SA-36	SA-36	SA-36

LETDOWN HX
AHLD



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-14

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Seal Water Injection Filter 1A
Shell Circumferential Weld AFS1-W1**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category
C-A; Item No. C1.10**
- 4. Impracticality of Compliance: 67.06% of the Seal Water Injection Filter 1A
Shell Circumferential Weld AFSI-W1 was inaccessible due to configuration
of the Seal Water Injection Filter 1A Flange to Shell Configuration, Flange
Cover Hinge Plate, Weld Crown and Welded Name Plate thus restricting
Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 67.06% of the
Shell Circumferential Weld AFSI-W1 would require modification from
the Original Design of the Seal Water Injection Filter 1A.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-14

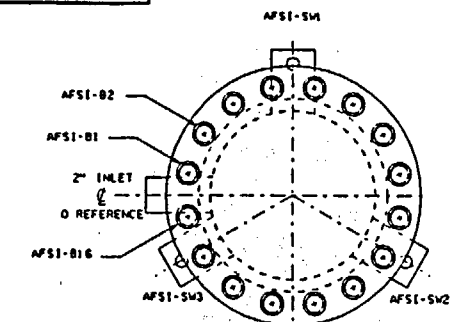
6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. However, during the Kewaunee Nuclear Power Plant 2nd Interval 1984-1994; 100% Radiography in 1988, 100% Visual From the I.D. in 1988 and 100% Liquid Penetrant From the I.D. in 1988 were performed on Seal Water Injection Filter 1A Shell Circumferential Weld AFSI-W1. VT-2 Examinations were performed during the 3rd Interval as required by ASME Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWC-2500-1; Examination Category C-H; Item C7.10 each 3 1/3 Year Period for evidence of leakage.

7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 – June 16, 2004

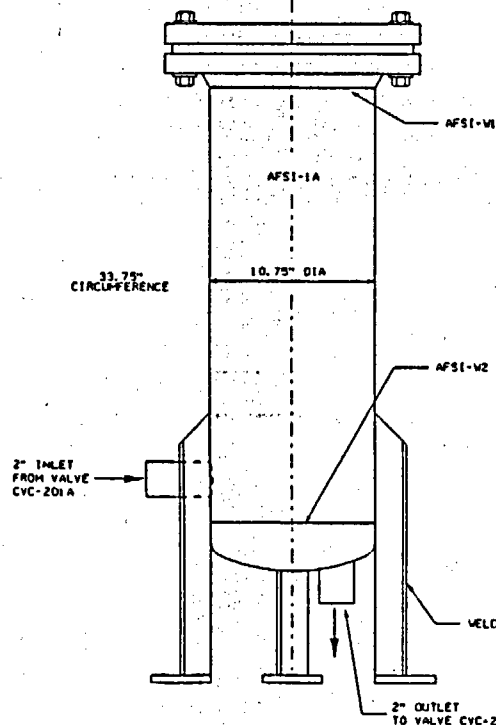
8. Precedents: Not Applicable

9. References: Not Applicable

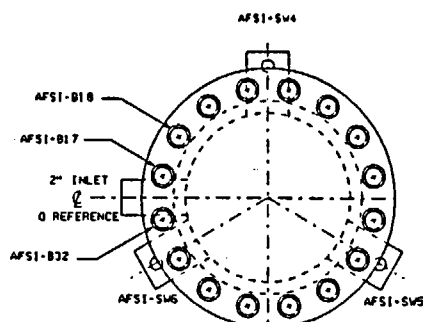
M-1212



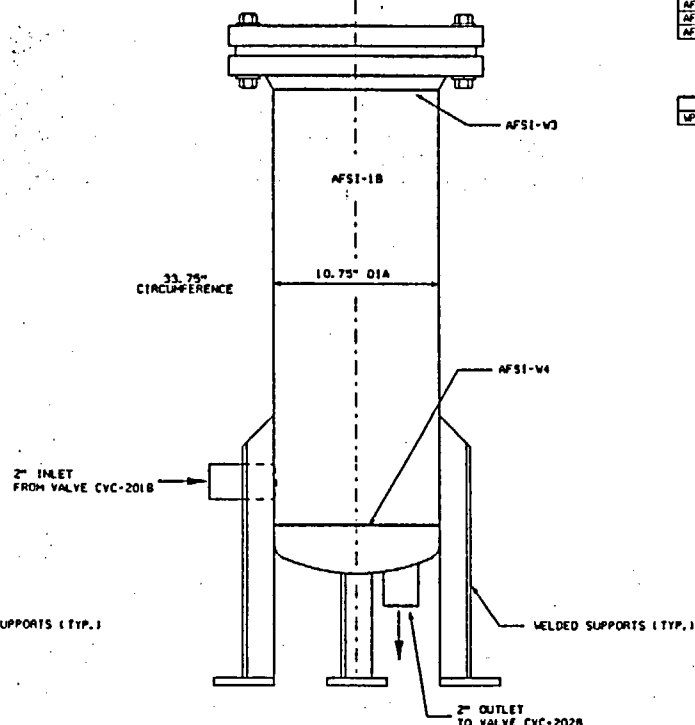
TOP VIEW
BOLTING (TYP)



LOCATION: AUXILIARY BUILDING ELEVATION 606' FILTER ROOM GATE 257



TOP VIEW
BOLTING (TYP)



BOLTING DATA		
BOLTS / DIA. / LGTH	INCHES	
16 / 1.25 / 8.5	16	

COMPONENT WELD DATA		
I.D.	THICKNESS	MATERIAL
AFSI-1A	1.00"	SA240 TP304SS
AFSI-1B	1.00"	SA240 TP304SS
AFSI-1C	1.00"	SA240 TP304SS
AFSI-1D	1.00"	SA240 TP304SS

INTEGRALLY WELDED ATTACHMENT DATA		
I.D.	THICKNESS	MATERIAL
AFSI-1A	0.40"	
AFSI-1B	0.40"	
AFSI-1C	0.40"	
AFSI-1D	0.40"	
AFSI-1E	0.40"	
AFSI-1F	0.40"	

CALIBRATION BLOCK		
I.D.	DIMETER/SCHEDULE	MATERIAL
WPS-10	10" SCH 140 1.0"	A312 TP304SS

169-011
169-012

C-1
KAP 01-001639

DRAWING APPLICABLE FOR 3RD (AND 4TH) ISI
INTERVAL ASME BOILER AND PRESSURE
VESSEL CODE SECTION XI CLASS 2

REVISION

A	PDD 0011 COMPL SEE REV 0-1 APP'D: CAT 10/23/89 FILM'D: WPS 11/7/89
A-1	REDRAFTED TO CAD PER ESR 92-177 DWG E. SEXTON 4/1/93 CHK'D: B. TROTTER 5/12/93 APP'D: CAT 8-4-93
B	ESR 92-177 COMP. SEE REV. A-1 FILM'D: WPS 8-17-93
B-1	RE PUR 0295 ADDED REF NO. 5. BY: BJD 7-19-99 APP'D: DAK 7-26-99
C	RE PUR 0295 COMP. SEE REV. B-1 FILM'D: WPS 8-3-99
C-1	KAP 01-001639 REVISED NOTE 1. BY: ABF 06-03-02 APP'D:
D	KAP 01-001639 COMPLETE SEE REV. C-1. FILM'D: (WPS)

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

SEAL WATER INJECTION FILTERS
AFSI-1A AND AFSI-1B

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	APPROVED	
CHECKED	PHILLIP E. BUKES	6/1/93
D. M.	PROJECT APPROVED	
DATE	1/17/93	
ESS	SCALE	DWG. NO.
NONE		M-1212
		REV.
		D

CADD

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: SEAL WATER INJECTION FILTERS AFSI-1A AND AFSI-1B

DRAWING NO.: M-1212

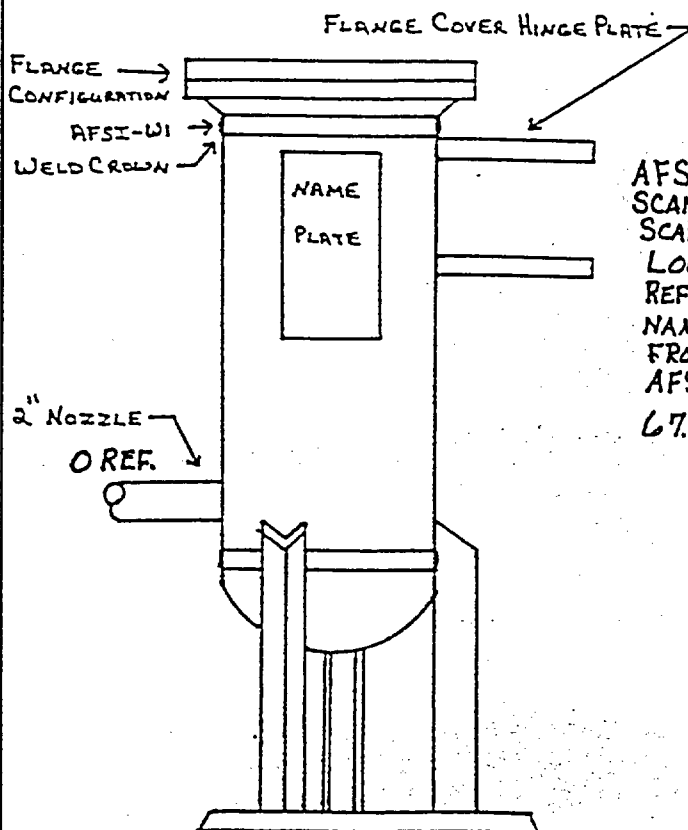
COMPONENT IDENTIFICATION: AFSI-W1 PROCEDURE: NEP-15.41 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: _____ MAGNETIC PARTICLE: _____ VISUAL: _____

EXAMINER: Brian A. Knott II DATE: 10/26/01
LEVEL

EXAMINER: NA NA DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



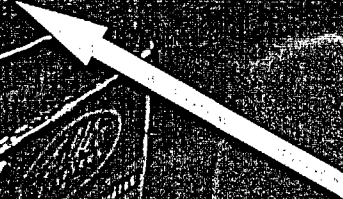
AFSI-W1 - FLANGE CONFIGURATION LIMITS 5,7+8
SCANS FOR 45° RL. WELD CROWN LIMITS 2,5,7+8
SCANS FOR 45° RL. FLANGE COVER HINGE PLATE
LOCATED FROM 16.0" CW TO 19.0" CW FROM O
REFERENCE LIMITS 2,7+8 SCANS FOR 45° RL
NAME PLATE LOCATED FROM 24.0" CW TO 28.0" CW
FROM O REFERENCE 0.9' FROM TAE OF WELD
AFSI-W1 LIMITS 2 SCAN FOR 45° RL.
67.06% PROCEDURE COVERAGE NOT OBTAINED.

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bures DATE: November 1, 2001
AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Ryan McGinnis DATE: 11-2-01

AFSI-W1

104 1 1884
158644

8 53 11



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-15

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Seal Water Injection Filter 1A
Head Circumferential Weld AFS1-W2**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category
C-A; Item No. C1.20**
- 4. Impracticality of Compliance: 35.8% of the Seal Water Injection Filter 1A
Head Circumferential Weld AFSI-W2 was inaccessible due to configuration
of the Seal Water Injection Filter 1A - 3 Welded Supports and the 2" Inlet
Nozzle thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 35.8% of the
Head Circumferential Weld AFSI-W2 would require modification from
the Original Design of the Seal Water Injection Filter 1A.**

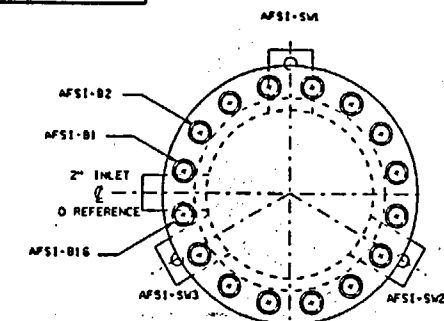
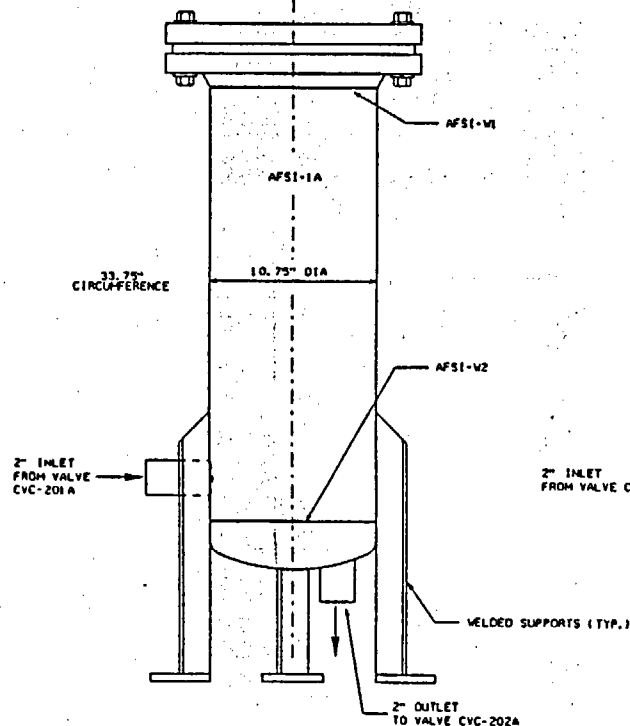
KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

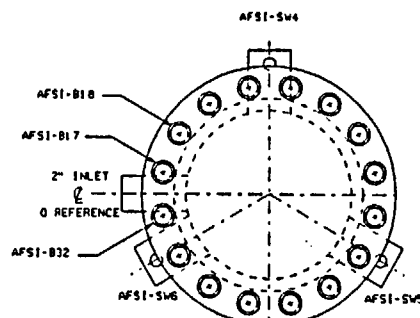
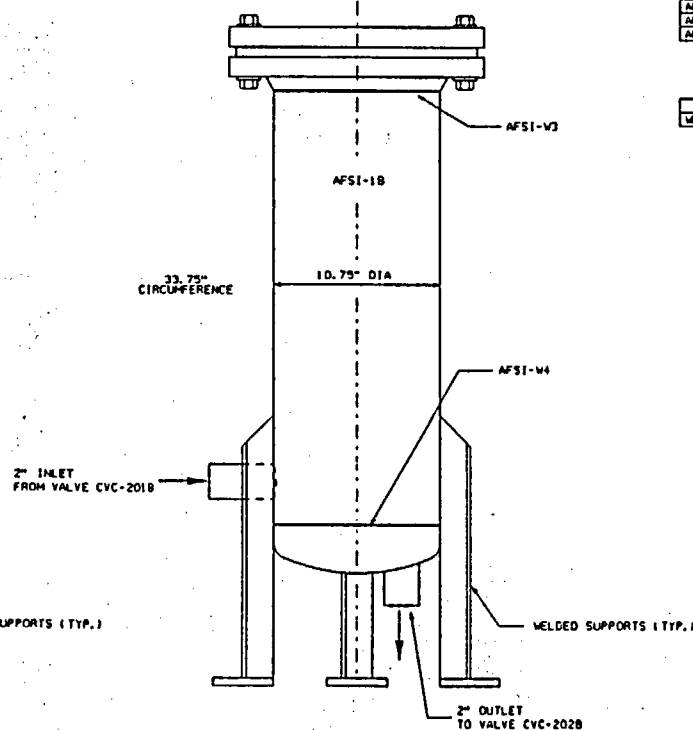
RELIEF REQUEST NO: RR-G-7-15

- 6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. However,
during the Kewaunee Nuclear Power Plant 2nd Interval 1984-1994; 100%
Radiography in 1988 and 100% Visual From the I.D. in 1988 were
performed on Seal Water Injection Filter 1A Head Circumferential Weld
AFSI-2. VT-2 Examinations were performed during the 3rd Interval as
required by ASME Boiler and Pressure Vessel Code Section XI 1989
Edition: Table IWC-2500-1; Examination Category C-H; Item C7.10 each
3 1/3 Year Period for evidence of leakage.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**

M-121-W

TOP VIEW
BOLTING (TYP)

LOCATION: AUXILIARY BUILDING ELEVATION 606' FILTER ROOM GATE 257

TOP VIEW
BOLTING (TYP)

BOLTING DATA		
BOLTS / DIA. / LGTH	INITS	
16 / 1.25" / 8.5"	116	

COMPONENT WELD DATA		
I.D.	THICKNESS	MATERIAL
AFSI-W1	1.00"	SA240 TP304SS
AFSI-W2	1.00"	SA240 TP304SS
AFSI-W3	1.00"	SA240 TP304SS
AFSI-W4	1.00"	SA240 TP304SS

INTEGRALLY WELDED ATTACHMENT DATA		
I.D.	THICKNESS	MATERIAL
AFSI-SW1	0.40"	
AFSI-SW2	0.40"	
AFSI-SW3	0.40"	
AFSI-SW4	0.40"	
AFSI-SW5	0.40"	
AFSI-SW6	0.40"	

CALIBRATION BLOCK		
I.D.	DIAMETER/SCHEDULE	MATERIAL
WPS-10	10" SCH 140 1.0" T	A312 TP304SS

169-011
169-012C-1
KAP 01-001639DRAWING APPLICABLE FOR 3RD (AND 4TH) ISI
INTERVAL ASME BOILER AND PRESSURE
VESSEL CODE SECTION XI CLASS 2

REVISION

A	
PDD 0011 COMPL	
SEE REV 0-1	
APP'D: CAT 10/23/89	
FILM'D: (WPS) 11/7/89	
A-1	
REDRAFTED TO CAD	
PER ESR 92-177	
OWN: E. SAXTON 4/1/93	
CHK'D: B. TROTTER 5/12/93	
APP'D: CAT 8-4-93	
B	
ESR 92-177 COMP.	
SEE REV. A-1	
FILM'D: WPS 8-17-93	
B-1	
RE PUR 0295	
ADDED REF NO. 5	
BY: BJD, 7-19-99	
APP'D: DAK 7-26-99	
C	
RE PUR 0295 COMP.	
SEE REV. B-1	
FILM'D: WPS 8-3-99	
C-1	
KAP 01-001639	
REVISED NOTE 1.	
BY: ABF 06-03-02	
APP'D:	
D	
KAP 01-001639	
COMPLETE	
SEE REV. C-1.	
FILM'D: (WPS)	

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSINSEAL WATER INJECTION FILTERS
AFSI-1A AND AFSI-1BDESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED		APPROVED	
		PHILLIP E. BUKES 6/1/93	
CHECKED		PROJECT APPROVED	
D. M.		1/17/83	
DRAWN		DWG. NO.	
ESS 1/1/93		M-1212	
SCALE		REV.	
NONE		D	

CADD

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: SEALWATER INJECTION FILTERS AFSI-1A AND AFSI-1B

DRAWING NO.: M-1212

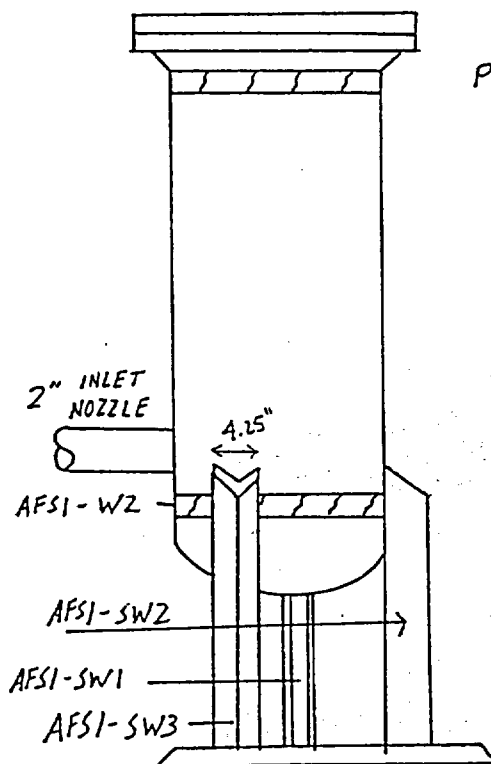
COMPONENT IDENTIFICATION: AFSI-W2 PROCEDURE: NEP No. 15, 16 REVISION: Orig.

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: [Signature] III DATE: 11-14-98
LEVEL

EXAMINER: [Signature] II DATE: 11-14-98
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



PERCENT OF LIMITED CODE COVERAGE: 35.8%
PERCENT OF LIMITED PROCEDURE COVERAGE: 35.9%

45° AND 60° SCANS LIMITED BY 2"
INLET NOZZLE 1.3" FROM TOE OF
1A-2 (AFSI-W2).

0°, 45° AND 60° SCANS LIMITED BY
4.25 INCHES FROM AFSI-SW1, AFSI-SW2
AND AFSI-SW3 FOR A TOTAL OF
12.75"

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bakes

DATE: November 16, 1998

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Roger M. [Signature]

DATE: 11-18-98

AFSI-W2



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-16

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Steam Generator 1A
Shell Circumferential Weld SG-W2**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category
C-A; Item No. C1.10**
- 4. Impracticality of Compliance: 11.1% of the Steam Generator 1A Shell
Circumferential Weld SG-W2 was inaccessible due to configuration of
the Steam Generator 1A - 4 Welded Pads and the configuration of the Weld
Crown thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 11.1% of the
Shell Circumferential Weld SG-W2 would require modification from
the Original Design of Steam Generator 1A.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-16

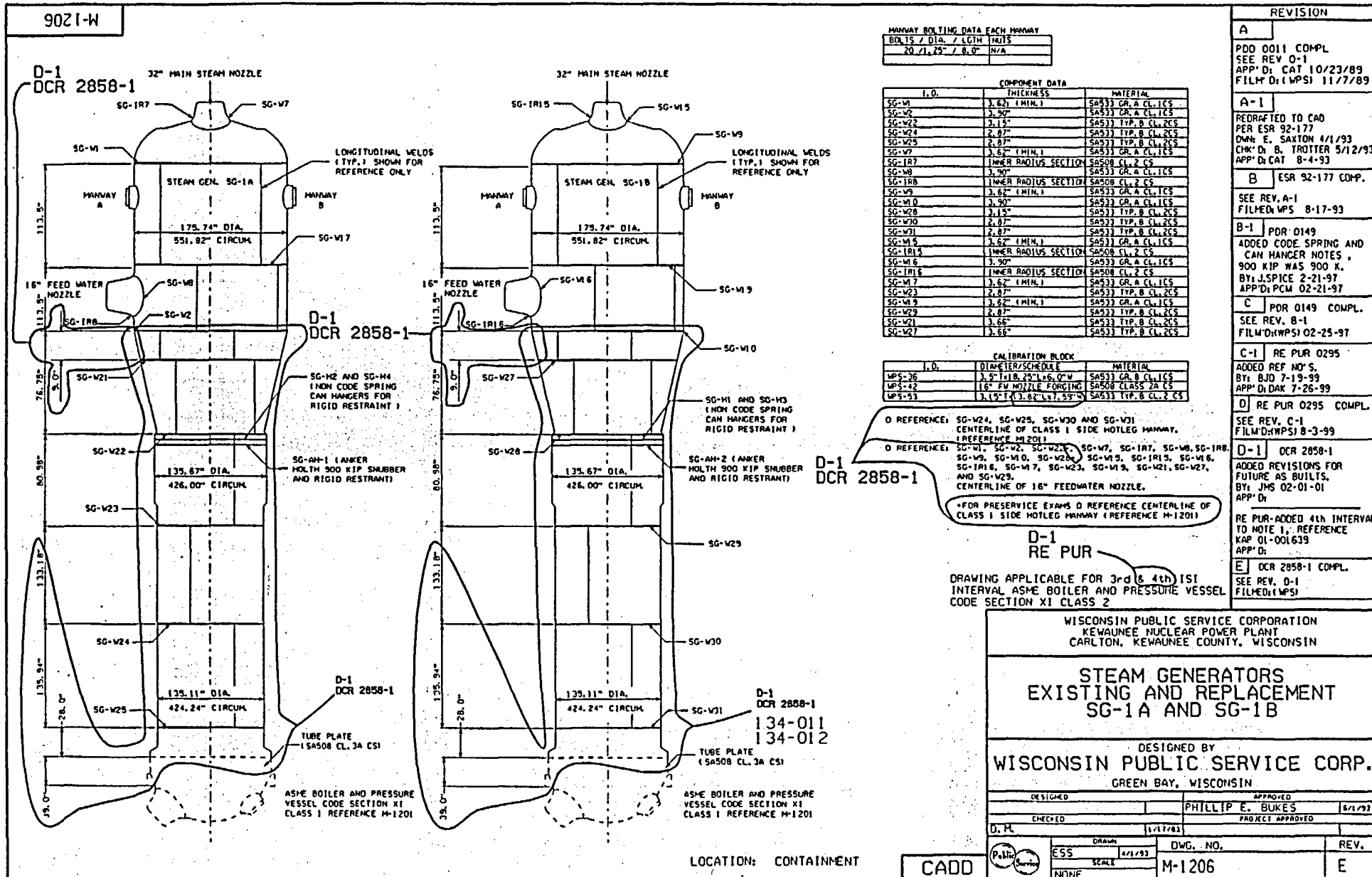
**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWC-2500-1; Examination Category C-H; Item C7.10 each 3 1/3 Year
Period for evidence of leakage. Magnetic Particle Examination of 100% of
the I.D. was performed during the 2001 Steam Generator Replacement for
evidence of I.D. Cracking.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

9021-W



REVISION

A
PDD 0011 COMPL
SEE REV 0-1
APP'D: CAT 10/23/89
FILM'D: WPSI 11/7/89

A-1
REDRAFTED TO CAD
PER ESR 92-177
DWN: E. SAXTON 4/1/93
CHK'D: B. TROTTER 5/12/93
APP'D: CAT 8-4-93

B
ESR 92-177 COMP.
SEE REV. A-1
FILM'D: WPS 8-17-93

B-1
PDR 0149
ADDED CODE SPRING AND
CAN HANGER NOTES,
900 KIP WAS 900 K.
BY: J. SPICE 2-21-97
APP'D: PCW 02-25-97

C
PDR 0149 COMPL.
SEE REV. B-1
FILM'D: WPS 02-25-97

C-1
RE PUR 0295
ADDED REF. NO'S.
BY: BJD 7-19-99
APP'D: DAK 7-26-99

D
RE PUR 0295 COMPL.
SEE REV. C-1
FILM'D: WPS 8-3-99

D-1
DCR 2858-1
ADDED REVISIONS FOR
FUTURE AS BUILTS.
BY: JMS 02-01-01
APP'D:

RE PUR-ADDED 4th INTERVAL
TO NOTE 1, REFERENCE
KAP 01-001639
APP'D:

E
DCR 2858-1 COMPL.
SEE REV. D-1
FILM'D: WPS

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: STEAM GENERATORS EXISTING AND REPLACEMENT SG-1A AND SG-1B

DRAWING NO: M-1206

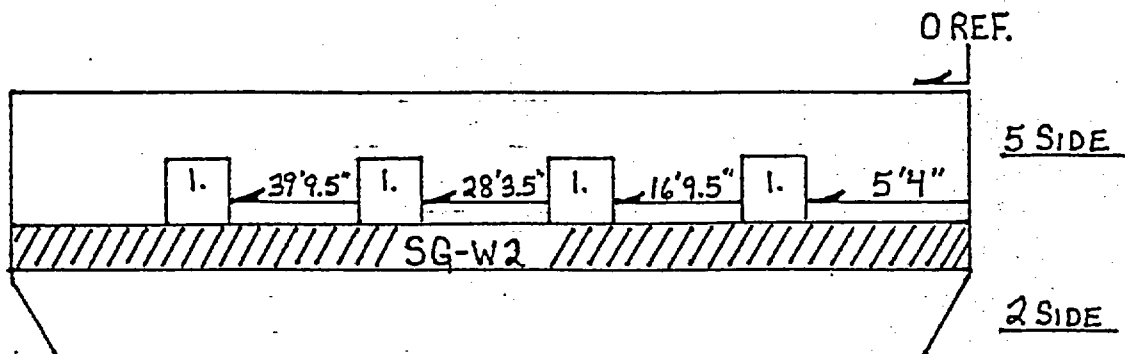
COMPONENT IDENTIFICATION: SG-W2 PROCEDURE: NEP-15.09 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: TIM COBURN [Signature] II DATE: 11/10/01
LEVEL

EXAMINER: [Signature] II DATE: 11/10/01
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



1. FOUR WELDED PADS 7.75" X 10.75" MEASURED IN THE CWD DIRECTION FROM O REF. LOCATED ON THE WELD TOE ON THE 5 SIDE OF THE WELD LIMITS 5, 7 AND 8 SCANS.
2. WELD CROWN LIMITS SCANS 2, 5, 7 AND 8 FOR THE 60°
3. REDUCED CODE / PROCEDURE COVERAGE BY 0.5% FOR SCANS 7 AND 8 DUE TO WELDED PADS.
4. REDUCED CODE / PROCEDURE COVERAGE BY 0.5% FOR SCAN 5.
5. REDUCED CODE / PROCEDURE COVERAGE BY 0.1% FOR SCAN 2.

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Baker DATE: November 17, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: [Signature] DATE: 11-20-01

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

EXISTING AND REPLACEMENT

SYSTEM OR COMPONENT: STEAM GENERATORS SG-1A AND SG-1B

DRAWING NO.: M-1206

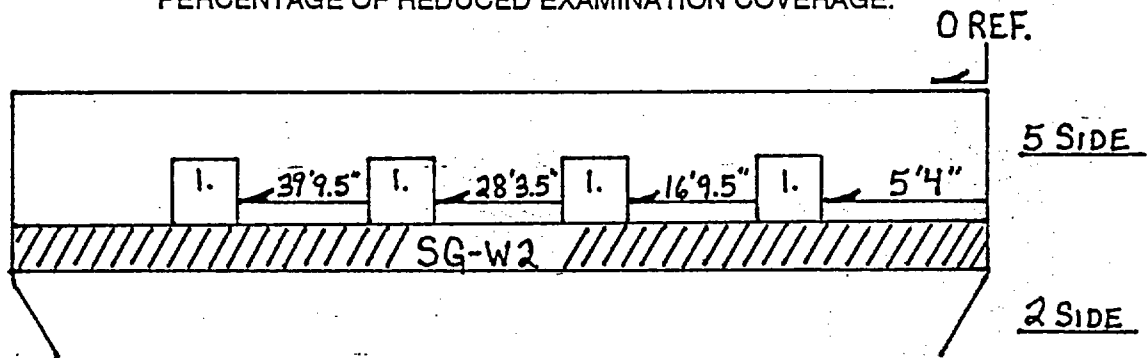
COMPONENT IDENTIFICATION: SG-W2 PROCEDURE: NEP-15.09 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: _____ MAGNETIC PARTICLE: _____ VISUAL: _____

EXAMINER: Brian A. Knott II DATE: 11/10/01
LEVEL

EXAMINER: Jeff Blum II DATE: 11/10/01
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



1. FOUR WELDED PADS 7.75" X 10.75" MEASURED IN THE CW DIRECTION FROM O REF. LOCATED ON THE WELD TOE ON THE 5 SIDE OF THE WELD LIMITS 5, 7 AND 9 SCANS.
2. WELD CROWN LIMITS SCANS 2, 5, 7 AND 8 FOR THE 45°
3. 45° - REDUCED CODE/PROCEDURE COVERAGE BY 7%

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Buckner

DATE: November 17, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Logan McQuinn

DATE: 11-20-01

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: STEAM GENERATORS EXISTING AND REPLACEMENT SG-1A AND SG-1B

DRAWING NO: M-1206

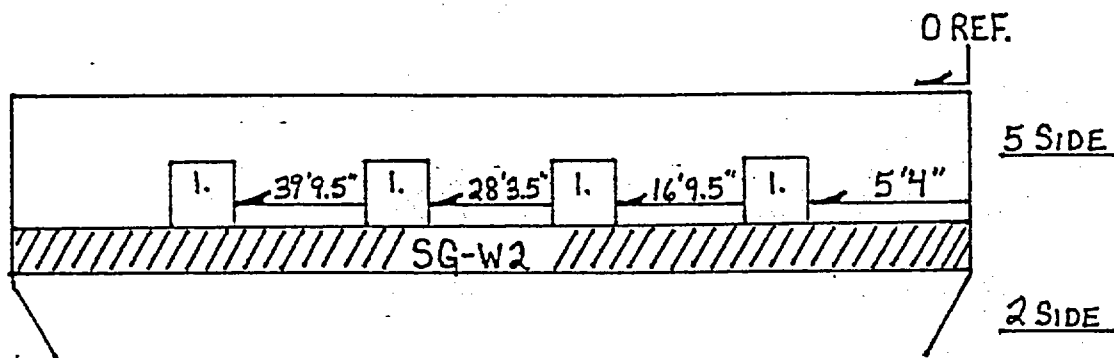
COMPONENT IDENTIFICATION: SG-W2 PROCEDURE: NEP-15.09 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: TIM COBURN [Signature] II DATE: 11/10/01
LEVEL

EXAMINER: [Signature] II DATE: 11/10/01
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



1. FOUR WELDED PADS 7.75" X 10.75" MEASURED IN THE CW DIRECTION FROM O REF. LOCATED ON THE WELD TOE ON THE 5 SIDE OF THE WELD
2. 0° - REDUCED CODE / PROCEDURE COVERAGE BY 3% ON 5 SIDE.

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillips C. Butke DATE: November 17, 2001
AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: [Signature] DATE: 11-20-01

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-17

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Steam Generator 1B Shell
Circumferential Weld SG-W10**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category
C-A; Item No. C1.10**
- 4. Impracticality of Compliance: 7.9% of the Steam Generator 1B Shell
Circumferential Weld SG-W10 was inaccessible due to configuration of
the Steam Generator 1B - 4 Welded Pads, 3 - 2" Nozzles and the
configuration of the Weld Crown thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 7.9% of the
Shell Circumferential Weld SG-W10 would require modification from
the Original Design of Steam Generator 1B.**

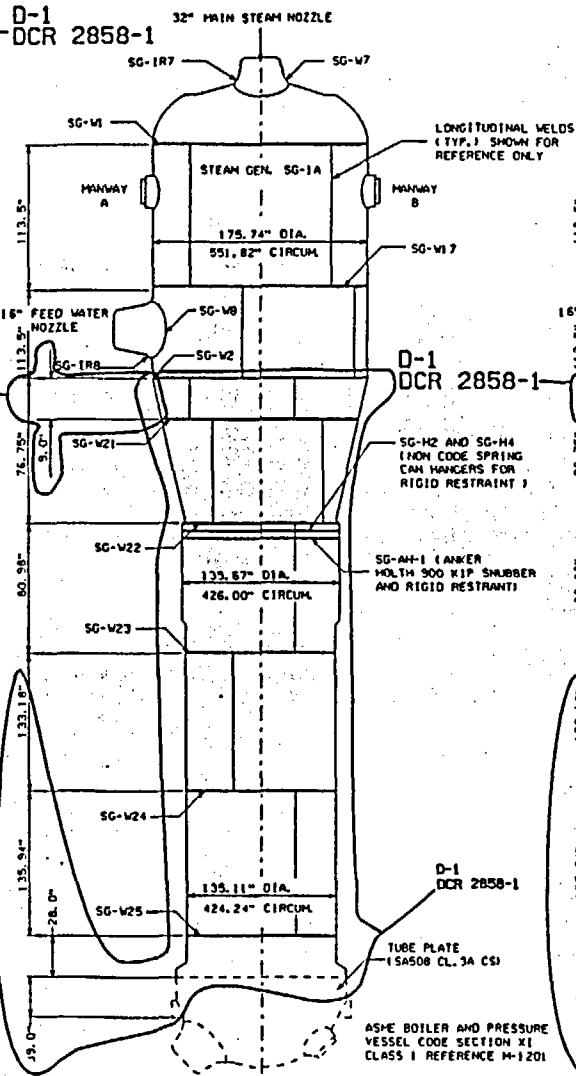
KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

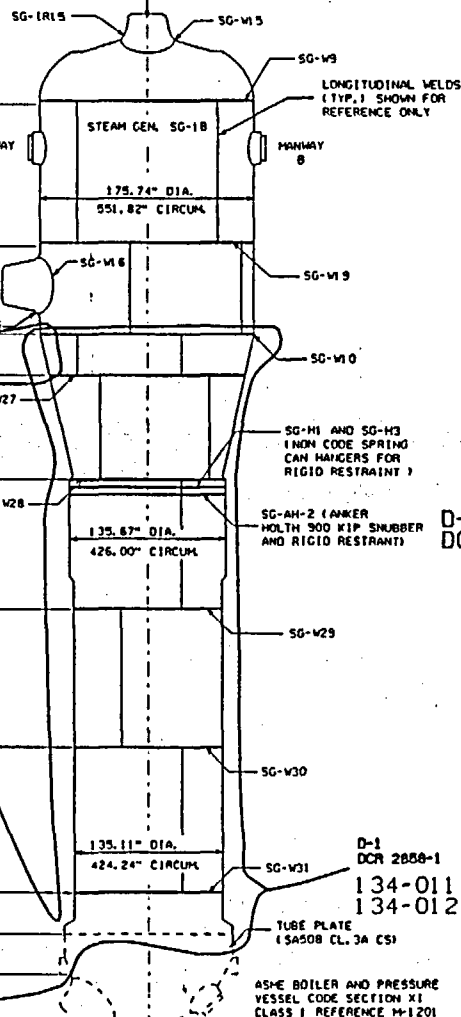
RELIEF REQUEST NO: RR-G-7-17

- 6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWC-2500-1; Examination Category C-H; Item C7.10 each 3 1/3 Year
Period for evidence of leakage. Magnetic Particle Examination of 100% of
the I.D. was performed during the 2001 Steam Generator Replacement for
evidence of I.D. Cracking.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**

9021-W

D-1
DCR 2858-1D-1
DCR 2858-1D-1
DCR 2858-1ASME BOILER AND PRESSURE
VESSEL CODE SECTION XI
CLASS I REFERENCE M-1201

32" MAIN STEAM NOZZLE

D-1
DCR 2858-1D-1
DCR 2858-1
134-011
134-012

LOCATION: CONTAINMENT

MANWAY BOLTING DATA EACH MANWAY		
BOLTS / DIA. / LGTH	UNITS	
20 / 1.25" / 8.0"	N/A	

COMPONENT DATA		
I.D.	THICKNESS	MATERIAL
SG-W1	3.62" (MIN.)	SA533 GR. A CL. 1CS
SG-W2	3.90"	SA533 GR. A CL. 1CS
SG-W3	3.15"	SA533 TYP. B CL. 2CS
SG-W4	2.87"	SA533 TYP. B CL. 2CS
SG-W5	2.87"	SA533 TYP. B CL. 2CS
SG-W6	3.62" (MIN.)	SA533 GR. A CL. 1CS
SG-W7	3.90"	SA533 GR. A CL. 1CS
SG-1R7	INNER RADIUS SECTION	SA508 CL. 2 CS
SG-W8	3.90"	SA533 GR. A CL. 1CS
SG-1R8	INNER RADIUS SECTION	SA508 CL. 2 CS
SG-W9	3.62" (MIN.)	SA533 GR. A CL. 1CS
SG-W10	3.90"	SA533 GR. A CL. 1CS
SG-W11	3.15"	SA533 TYP. B CL. 2CS
SG-W12	2.87"	SA533 TYP. B CL. 2CS
SG-W13	2.87"	SA533 TYP. B CL. 2CS
SG-W14	3.62" (MIN.)	SA533 GR. A CL. 1CS
SG-1R15	INNER RADIUS SECTION	SA508 CL. 2 CS
SG-W16	3.90"	SA533 GR. A CL. 1CS
SG-1R16	INNER RADIUS SECTION	SA508 CL. 2 CS
SG-W17	3.62" (MIN.)	SA533 GR. A CL. 1CS
SG-W18	2.87"	SA533 TYP. B CL. 2CS
SG-W19	3.62" (MIN.)	SA533 GR. A CL. 1CS
SG-W20	2.87"	SA533 TYP. B CL. 2CS
SG-W21	3.66"	SA533 TYP. B CL. 2CS
SG-W22	3.66"	SA533 TYP. B CL. 2CS

CALIBRATION BLOCK		
I.D.	DIMETER/SCHEDULE	MATERIAL
WPS-36	3.5" I.D. 25 LBS. 0 W	SA533 GR. A CL. 1CS
WPS-42	1.625" I.D. 10 LBS. 0 W	SA508 CL. 2 CS
WPS-53	1.315" I.D. 5.625" LBS. 0 W	SA533 TYP. B CL. 2 CS

O REFERENCE: SG-W24, SG-W25, SG-W30 AND SG-W31
CENTERLINE OF CLASS I SIDE HOTLEG MANWAY.
(REFERENCE M-201)

O REFERENCE: SG-W1, SG-W2, SG-W22, SG-W7, SG-1R7, SG-W8, SG-1R8,
SG-W9, SG-W10, SG-W16, SG-W15, SG-1R15, SG-W16,
SG-1R16, SG-W17, SG-W23, SG-W19, SG-W21, SG-W27,
AND SG-W28.
CENTERLINE OF 16" FEEDWATER NOZZLE.

*FOR PRESERVICE EXAMS O REFERENCE CENTERLINE OF
CLASS I SIDE HOTLEG MANWAY (REFERENCE M-1201)

D-1
RE PUR

DRAWING APPLICABLE FOR 3rd & 4th ISI
INTERVAL ASME BOILER AND PRESSURE VESSEL
CODE SECTION XI CLASS 2

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

STEAM GENERATORS
EXISTING AND REPLACEMENT
SG-1A AND SG-1B

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	APPROVED	DATE
CHECKED	PHILLIP E. BUKES	6/1/93
D.M.	PROJECT APPROVED	
DATE	1/17/83	
DRW. NO.	M-1206	REV.
ESS	DATE	
NONE		E

CADD

REVISION

A	
PDD 0011 COMPL	
SEE REV 0-1	
APP'D: CAT 10/23/89	
FILM'D: (WPS) 11/7/89	
A-1	
REDRAFTED TO CAD	
PER ESR 92-177	
OWN: E. SAXTON 4/1/93	
CHK'D: B. TROTTER 5/12/93	
APP'D: CAT 8-4-93	
B	
ESR 92-177 COMP.	
SEE REV. A-1	
FILM'D: WPS 8-17-93	
B-1	
PDR 0149	
ADDED CODE SPRING AND	
CAN HANGER NOTES	
900 KIP WAS 900 K.	
BY: JSPICE 2-21-97	
APP'D: PCM 02-21-97	
C	
PDR 0149 COMPL.	
SEE REV. B-1	
FILM'D: (WPS) 02-25-97	
C-1	
RE PUR 0295	
ADDED REF NO'S.	
BY: BJO 7-19-99	
APP'D: OAK 7-26-99	
D	
RE PUR 0295 COMPL.	
SEE REV. C-1	
FILM'D: (WPS) 8-3-99	
D-1	
DCR 2858-1	
ADDED REVISIONS FOR	
FUTURE AS BUILTS.	
BY: JHS 02-01-01	
APP'D:	
RE PUR-ADDED 4th INTERVAL	
TO NOTE 1, REFERENCE	
KAP D1-001839	
APP'D:	
E	
DCR 2858-1 COMPL.	
SEE REV. D-1	
FILM'D: (WPS)	

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: STEAM GENERATORS EXISTING AND REPLACEMENT SG-1A AND SG-B

DRAWING NO.: M-1206

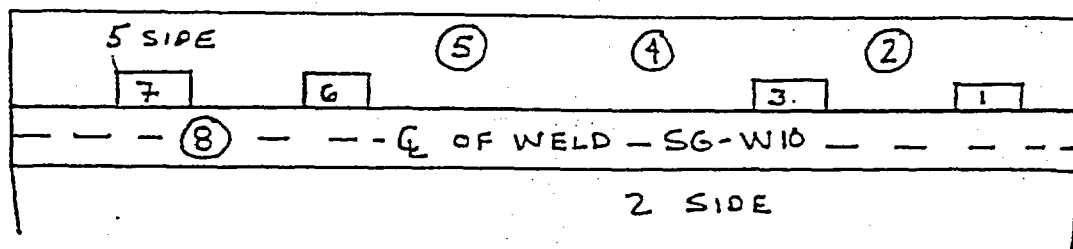
COMPONENT IDENTIFICATION: SG-W10 PROCEDURE: NEP-15.09 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: Brian D. Knott II DATE: 11/12/01
LEVEL

EXAMINER: [Signature] II DATE: 11/12/01
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE. O REFERENCE LOCATED AT CENTER OF FEEDWATER NOZZLE



1. WELDED PAD $7\frac{3}{4}'' \times 10\frac{3}{4}''$ LOCATED AT $5' 4''$ CW FROM O REFERENCE ON 5 SIDE OF WELD LIMITS $0^\circ, 45^\circ + 60^\circ$ SCANS *
 2. 2" NOZZLE LOCATED AT $13' 4\frac{1}{2}''$ CW FROM O REFERENCE $6\frac{3}{4}''$ FROM TOE OF WELD ON 5 SIDE LIMITS 60° SCAN
 3. WELDED PAD $7\frac{3}{4}'' \times 10\frac{3}{4}''$ LOCATED AT $16' 9\frac{1}{2}''$ CW FROM O REFERENCE ON 5 SIDE OF WELD LIMITS $0^\circ, 45^\circ + 60^\circ$ SCANS *
 4. 2" NOZZLE LOCATED AT $21' 1''$ CW FROM O REFERENCE $6\frac{3}{4}''$ FROM TOE OF WELD ON 5 SIDE LIMITS 60° SCAN
 5. 2" NOZZLE LOCATED AT $24' 11''$ CW FROM O REFERENCE $6\frac{3}{4}''$ FROM TOE OF WELD ON 5 SIDE LIMITS 60° SCAN
 6. WELDED PAD $7\frac{3}{4}'' \times 10\frac{3}{4}''$ LOCATED AT $28' 3\frac{1}{2}''$ CW FROM O REFERENCE ON 5 SIDE OF WELD LIMITS $0^\circ, 45^\circ + 60^\circ$ SCANS *
 7. WELDED PAD $7\frac{3}{4}'' \times 10\frac{3}{4}''$ LOCATED AT $39' 9\frac{1}{2}''$ CW FROM O REFERENCE ON 5 SIDE OF WELD LIMITS $0^\circ, 45^\circ + 60^\circ$ SCANS *
 8. WELD CROWN LIMITS $0^\circ, 45^\circ + 60^\circ$ SCANS
- * PAD STARTS AT TOE OF WELD
- 7.9% OF REQUIRED
VOLUME NOT
EXAMINED

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Baker

DATE: Nov. 20, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: [Signature]

DATE: 11-21-01

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-18

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Steam Generator 1B Head
Circumferential Weld SG-W9**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category
C-A; Item No. C1.20**
- 4. Impracticality of Compliance: 0.113% of the Steam Generator 1B Head
Circumferential Weld SG-W9 was inaccessible due to configuration of
the Steam Generator 1B - 4 Welded Pads thus restricting Ultrasonic
Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 0.113% of the
Head Circumferential Weld SG-W9 would require modification from
the Original Design of Steam Generator 1B.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

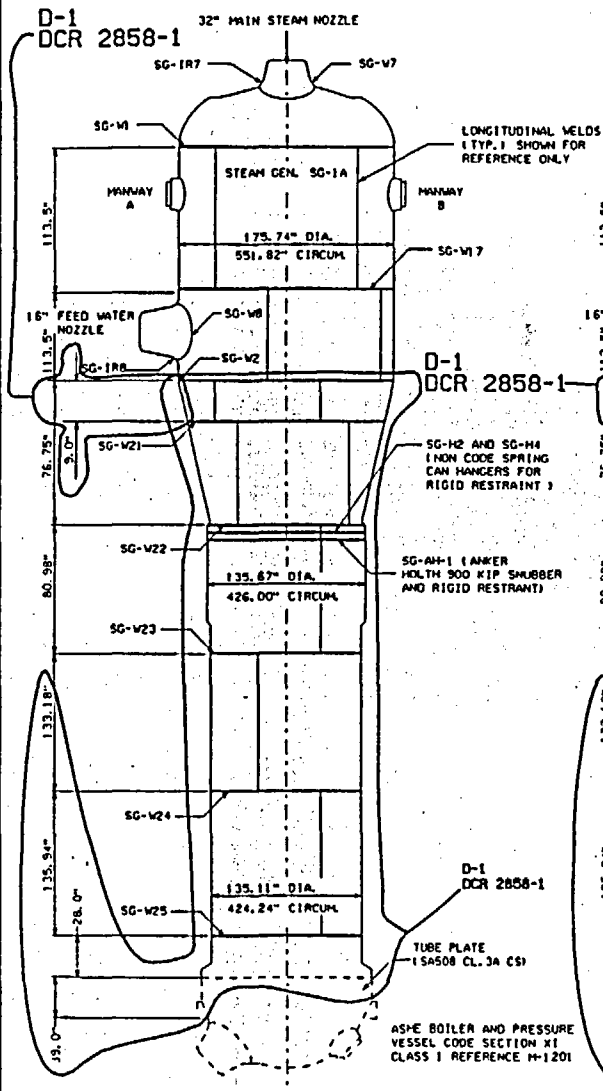
RELIEF REQUEST NO: RR-G-7-18

- 6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWC-2500-1; Examination Category C-H; Item C7.10 each 3 1/3 Year
Period for evidence of leakage.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**

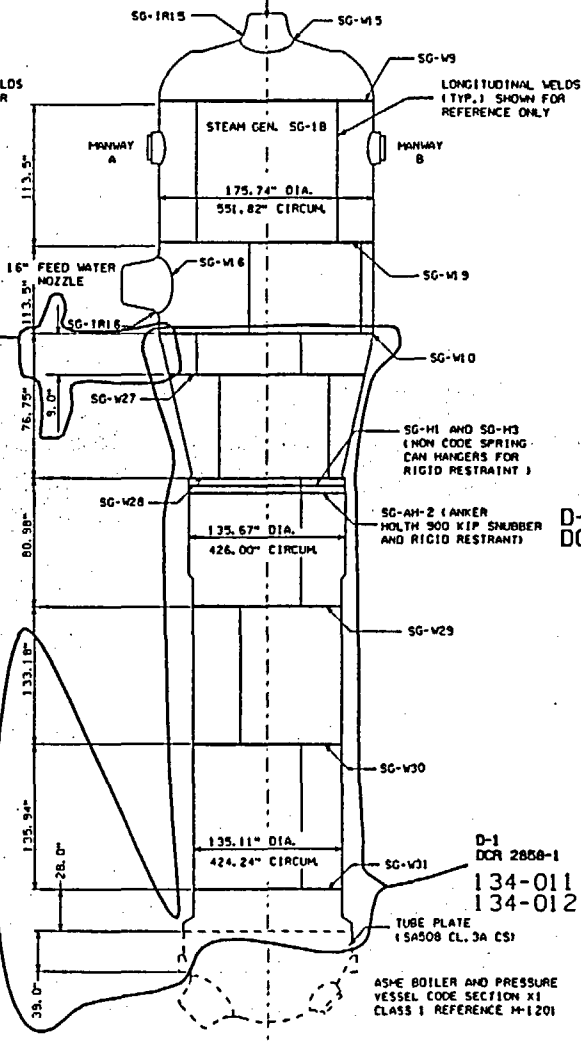
9021-W

D-1
DCR 2858-1

32" MAIN STEAM NOZZLE

ASME BOILER AND PRESSURE
VESSEL CODE SECTION XI
CLASS 1 REFERENCE M-1201

32" MAIN STEAM NOZZLE

ASME BOILER AND PRESSURE
VESSEL CODE SECTION XI
CLASS 1 REFERENCE M-1201

LOCATION: CONTAINMENT

MANWAY BOLTING DATA EACH MANWAY		
BOX IS / DIA. / LGTH	NUTS	
20 / 1.25" / 8.0"	N/A	

COMPONENT DATA		
I.D.	THICKNESS	MATERIAL
SG-W1	3.62" (MIN.)	SA533 GR. A CL. 1CS
SG-W2	3.90"	SA533 GR. A CL. 1CS
SG-W22	3.15"	SA533 TYP. B CL. 2CS
SG-W24	2.87"	SA533 TYP. B CL. 2CS
SG-W25	2.87"	SA533 TYP. B CL. 2CS
SG-W7	3.62" (MIN.)	SA533 GR. A CL. 1CS
SG-1R7	INNER RADIUS SECTION	SA508 CL. 2 CS
SG-W8	3.90"	SA533 GR. A CL. 1CS
SG-1R8	INNER RADIUS SECTION	SA508 CL. 2 CS
SG-W9	3.62" (MIN.)	SA533 GR. A CL. 1CS
SG-W10	3.90"	SA533 GR. A CL. 1CS
SG-W20	3.15"	SA533 TYP. B CL. 2CS
SG-W30	2.87"	SA533 TYP. B CL. 2CS
SG-W31	2.87"	SA533 TYP. B CL. 2CS
SG-M15	3.62" (MIN.)	SA533 GR. A CL. 1CS
SG-1R15	INNER RADIUS SECTION	SA508 CL. 2 CS
SG-M16	3.90"	SA533 GR. A CL. 1CS
SG-1R16	INNER RADIUS SECTION	SA508 CL. 2 CS
SG-M17	3.62" (MIN.)	SA533 GR. A CL. 1CS
SG-W23	2.87"	SA533 TYP. B CL. 2CS
SG-M19	3.62" (MIN.)	SA533 GR. A CL. 1CS
SG-W29	2.87"	SA533 TYP. B CL. 2CS
SG-W21	3.66"	SA533 TYP. B CL. 2CS
SG-W27	3.66"	SA533 TYP. B CL. 2CS

CALIBRATION BLOCK		
I.D.	DIMENSION / SCHEDULE	MATERIAL
WPS-25	3.5" I.D. 75" LG. 0.75" W	SA533 GR. A CL. 1CS
WPS-42	16" F.W. NOZZLE FORGING	SA508 CLASS 2A CS
WPS-53	3.19" I.D. 3.62" L 7.59" W	SA533 TYP. B CL. 2 CS

O REFERENCE: SG-W24, SG-W25, SG-W30 AND SG-W31
CENTERLINE OF CLASS 1 SIDE HOTLEG MANWAY.
(REFERENCE M-1201)

O REFERENCE: SG-W1, SG-W2, SG-W23, SG-W7, SG-1R7, SG-W8, SG-1R8,
SG-W9, SG-W10, SG-W20, SG-W15, SG-1R15, SG-W16,
SG-1R16, SG-W17, SG-W23, SG-W19, SG-W21, SG-W27,
AND SG-W29.
CENTERLINE OF 16" FEEDWATER NOZZLE.

*FOR PRESERVICE EXAMS O REFERENCE CENTERLINE OF
CLASS 1 SIDE HOTLEG MANWAY (REFERENCE M-1201)

D-1
RE PUR

DRAWING APPLICABLE FOR 3rd & 4th ISI
INTERVAL ASME BOILER AND PRESSURE VESSEL
CODE SECTION XI CLASS 2

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

STEAM GENERATORS
EXISTING AND REPLACEMENT
SG-1A AND SG-1B

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED		APPROVED	
		PHILLIP E. BUKES	
CHECKED		PROJECT APPROVED	
D. H.		1/17/83	
DRAWN		DWG. NO.	
ESS		M-1206	
SCALE		REV.	
NONE		E	

CADD

REVISION

A	
PDO 0011 COMPL	
SEE REV 0-1	
APP'D: CAT 10/23/89	
FILMED: WPS 11/7/89	
A-1	
REDRAFTED TO CAD	
PER ESR 92-177	
DWH: E. SAXTON 4/1/93	
CHK'D: B. TROTTER 5/12/93	
APP'D: CAT 8-4-93	
B	
ESR 92-177 COMP.	
SEE REV. A-1	
FILMED: WPS 8-17-93	
B-1	
PDR 0149	
ADDED CODE SPRING AND	
CAN HANGER NOTES .	
900 KIP WAS 900 K.	
BT: JSPICE 2-21-97	
APP'D: PCM 02-21-97	
C	
PDR 0149 COMPL.	
SEE REV. B-1	
FILMED: WPS 02-25-97	
C-1	
RE PUR 0295	
ADDED REF NO'S.	
BT: BJD 7-19-99	
APP'D: DAK 7-26-99	
D	
RE PUR 0295 COMPL.	
SEE REV. C-1	
FILMED: WPS 8-3-99	
D-1	
DCR 2858-1	
ADDED REVISIONS FOR	
FUTURE AS BUILTS.	
BT: JMS 02-01-01	
APP'D:	
E	
DCR 2858-1 COMPL.	
SEE REV. D-1	
FILMED: WPS	

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

EXISTING AND REPLACEMENT
SYSTEM OR COMPONENT: STEAM GENERATORS SG-1A AND SG-1B

DRAWING NO.: M-1206

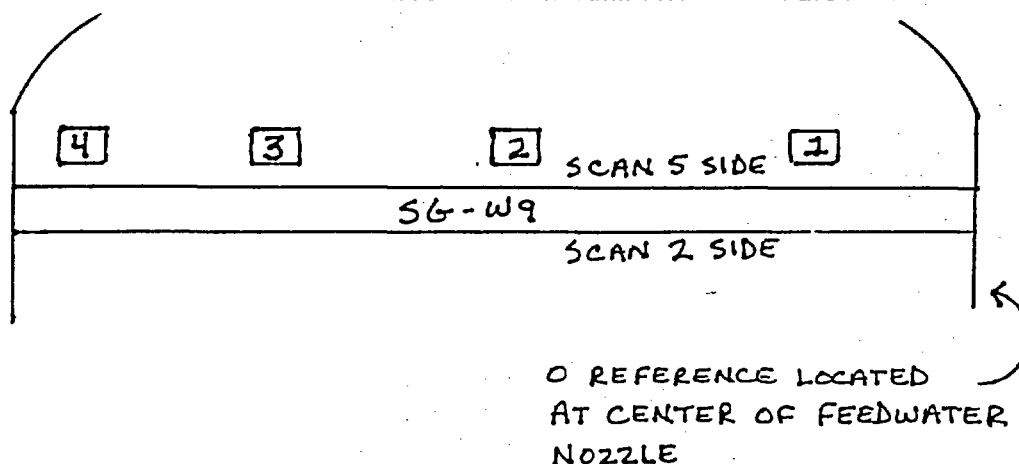
COMPONENT IDENTIFICATION: SG-W9 PROCEDURE: NEP-15.09 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: Tim Coburn II DATE: 10/6/01
LEVEL

EXAMINER: Timothy Hahan II DATE: 10-6-01
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



1. WELDED PAD 2.7" x 2.7" LOCATED 60° FROM O REFERENCE ON S SIDE.
2. WELDED PAD 2.7" x 2.7" LOCATED 150° FROM O REFERENCE ON S SIDE.
3. WELDED PAD 2.7" x 2.7" LOCATED 240° FROM O REFERENCE ON S SIDE.
4. WELDED PAD 2.7" x 2.7" LOCATED 330° FROM O REFERENCE ON S SIDE.

ALL PADS 1.6" FROM TOE OF WELD ON S SIDE.

SCAN 5 LIMITED ON THE 45° AND 60° DUE TO WELDED PADS.

REDUCED CODE COVERAGE BY 0.113%.

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bures DATE: October 16, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Roger McGuire DATE: 10-18-01

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-19

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Steam Generator 1A Tubesheet -To-Shell Circumferential Weld SG-W25 and Steam Generator 1B Tubesheet -To-Shell Circumferential Weld SG-W31**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category C-A; Item No. C1.30**
- 4. Impracticality of Compliance: 9.0% of the Steam Generator 1A Tubesheet-To-Shell Circumferential Weld SG-W25 and 9.0% of the Steam Generator 1B Tubesheet -To-Shell Circumferential Weld SG-W31 were inaccessible due to each weld possessing 3 Handholes, 2- 4" Nozzles, 1 -2 ¼ " Nozzle and 4- 2" Nozzles thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 9.0% of the Steam Generator 1A Tubesheet-To-Shell Circumferential Weld SG-W25 and 9.0% of Steam Generator 1B Tubesheet-To-Shell Circumferential Weld SG-W31 would require modification of the design of Steam Generator 1A and Steam Generator 1B.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-19

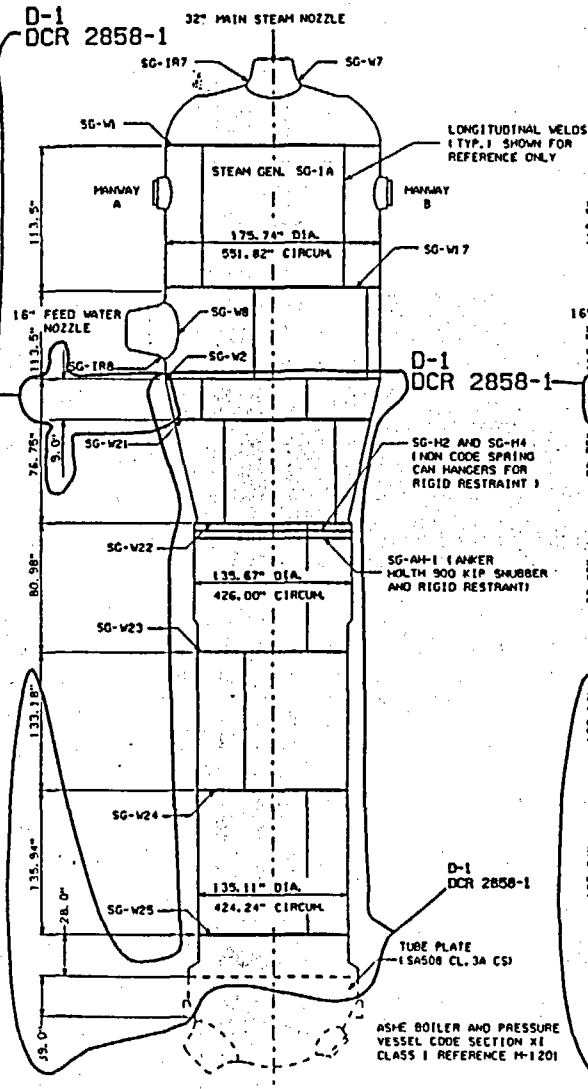
**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWC-2500-1; Examination Category C-H; Item C7.10 each 3 1/3 Year
Period for evidence of leakage. ASME Boiler and Pressure Vessel Code
Section III Radiography was performed as part of Kewaunee Nuclear
Power Plant Steam Generator Replacement during the 2001 Refueling
Outage.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

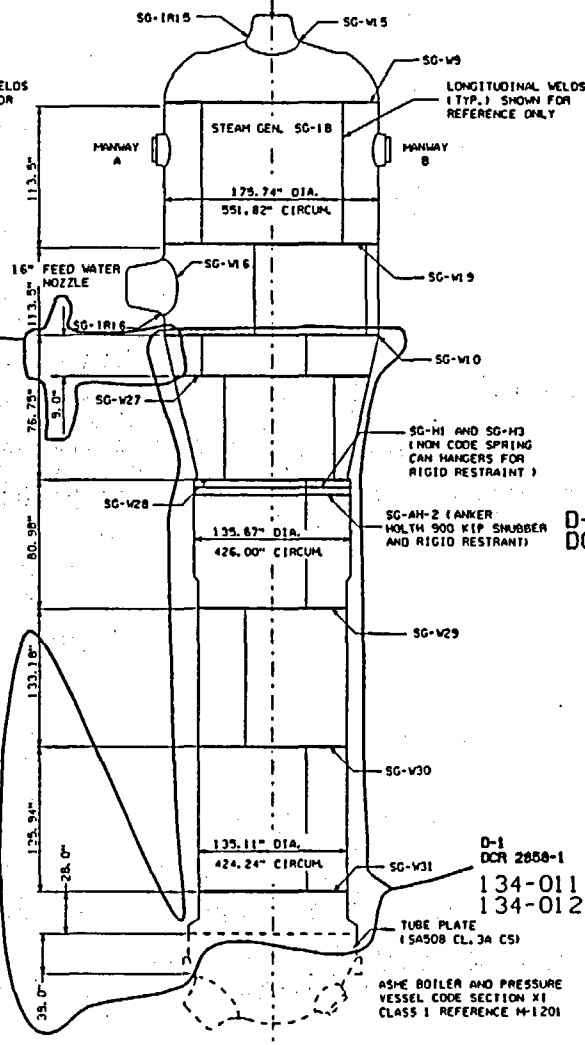
8. Precedents: Not Applicable

9. References: Not Applicable

9021-W

D-1
DCR 2858-1ASME BOILER AND PRESSURE
VESSEL CODE SECTION XI
CLASS I REFERENCE H-1201

32\"/>

ASME BOILER AND PRESSURE
VESSEL CODE SECTION XI
CLASS I REFERENCE H-1201

LOCATION: CONTAINMENT

MANWAY BOLTING DATA EACH MANWAY		
BOLTS / DIA. / LGTH	UNITS	
20 / 1.25" / 8.0"	N/A	

COMPONENT DATA		
I.D.	THICKNESS	MATERIAL
SG-V1	3.62" (M.I.N.)	SA533 GR. A CL. 1CS
SG-W2	3.90"	SA533 GR. A CL. 1CS
SG-W22	3.15"	SA533 TYP. B CL. 2CS
SG-W23	2.87"	SA533 TYP. B CL. 2CS
SG-W24	2.87"	SA533 TYP. B CL. 2CS
SG-W7	3.62" (M.I.N.)	SA533 GR. A CL. 1CS
SG-1A7	INNER RADIUS SECTION	SA508 CL. 2 CS
SG-W8	3.90"	SA533 GR. A CL. 1CS
SG-1A8	INNER RADIUS SECTION	SA508 CL. 2 CS
SG-W9	3.62" (M.I.N.)	SA533 GR. A CL. 1CS
SG-W10	3.90"	SA533 GR. A CL. 1CS
SG-W20	3.15"	SA533 TYP. B CL. 2CS
SG-W30	2.87"	SA533 TYP. B CL. 2CS
SG-W31	2.87"	SA533 TYP. B CL. 2CS
SG-V15	3.62" (M.I.N.)	SA533 GR. A CL. 1CS
SG-1A15	INNER RADIUS SECTION	SA508 CL. 2 CS
SG-W16	3.90"	SA533 GR. A CL. 1CS
SG-1A16	INNER RADIUS SECTION	SA508 CL. 2 CS
SG-W17	3.62" (M.I.N.)	SA533 GR. A CL. 1CS
SG-W23	2.87"	SA533 TYP. B CL. 2CS
SG-W19	3.62" (M.I.N.)	SA533 GR. A CL. 1CS
SG-W27	2.87"	SA533 TYP. B CL. 2CS
SG-W28	2.87"	SA533 TYP. B CL. 2CS
SG-W29	3.66"	SA533 TYP. B CL. 2CS
SG-W27	3.66"	SA533 TYP. B CL. 2CS

CALIBRATION BLOCK		
I.D.	DIAMETER/SCHEDULE	MATERIAL
WPS-36	3.5" T.B. 25" L x 6.0" W	SA533 GR. B CL. 1CS
WPS-42	16" F.W. NOZZLE FORGING	SA508 CLASS 2A CS
WPS-43	3.15" T.M. 3.82" L x 3.93" W	SA533 TYP. B CL. 2 C

O REFERENCE: SG-W24, SG-W25, SG-W30 AND SG-W31
CENTERLINE OF CLASS I SIDE HOTLEG MANWAY.
(REFERENCE H-1201)

O REFERENCE: SG-W1, SG-W2, SG-W23, SG-W7, SG-1A7, SG-W8, SG-1A8,
SG-W9, SG-W10, SG-W26, SG-W15, SG-1A15, SG-W16,
SG-1A16, SG-W17, SG-W23, SG-W15, SG-W21, SG-W27,
AND SG-W29.
CENTERLINE OF 18\"/>

*FOR PRESERVICE EXAMS O REFERENCE CENTERLINE OF
CLASS I SIDE HOTLEG MANWAY (REFERENCE H-1201)

D-1
RE PUR

DRAWING APPLICABLE FOR 3rd & 4th ISI
INTERVAL ASME BOILER AND PRESSURE VESSEL
CODE SECTION XI CLASS 2

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

STEAM GENERATORS
EXISTING AND REPLACEMENT
SG-1A AND SG-1B

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	APPROVED	
CHECKED	PHILLIP E. BUKES	6/1/93
D. H.	PROJECT APPROVED	
DATE	1/17/83	
ESS	DWG. NO.	REV.
SCALE	M-1206	E
NONE		

REVISION

A
PDD 0011 COMPL
SEE REV 0-1
APP'D: CAT 10/23/89
FILM'D: (WPS) 11/7/89

A-1
REDRAFTED TO CAD
PER ESR 92-177
OWN: E. SEXTON 4/1/93
CHK'D: B. TROTTER 5/12/93
APP'D: CAT 8-4-93

B ESR 92-177 CORR.
SEE REV. A-1
FILM'D: WPS 8-17-93

B-1 PDR 0149
ADDED CODE SPRING AND
CAN HANGER NOTES
900 KIP WAS 900 K.
BY: J. SPICE 2-21-97
APP'D: PCM 02-21-97

C PDR 0149 COMPL.
SEE REV. B-1
FILM'D: (WPS) 02-25-97

C-1 RE PUR 0295
ADDED REF. NO. 5.
BY: BJD 7-19-99
APP'D: DAX 7-26-99

D RE PUR 0295 COMPL.
SEE REV. C-1
FILM'D: (WPS) 8-3-99

D-1 DCR 2858-1
ADDED REVISIONS FOR
FUTURE AS BUILTS.
BY: JMS 02-01-01
APP'D:

RE PUR-ADDED 4th INTERVAL
TO NOTE 1, REFERENCE
KAP 01-001639
APP'D:

E DCR 2858-1 COMPL.
SEE REV. D-1
FILM'D: (WPS)

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: STEAM GENERATORS EXISTING AND REPLACEMENT SG-1A & SG-1B

DRAWING NO.: m-1206

COMPONENT IDENTIFICATION: SG-WA5 PROCEDURE: NEP-15.09 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: _____ MAGNETIC PARTICLE: _____ VISUAL: _____

EXAMINER: TRAVIS THOMAS II DATE: 6-8-01
 LEVEL

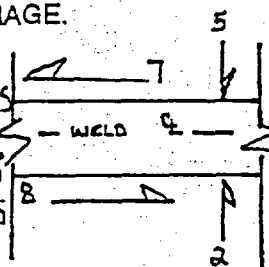
EXAMINER: JEFF JOHNSON II DATE: 6-8-01
 LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

- 1 HANDHOLE 28"-48", 2.5" FROM TOE OF WELD 5 SIDE.
- 2 4" NOZZLE 35"-42", 2.5" FROM TOE OF WELD 2 SIDE.
- 3 HANDHOLE 133"-156", 2.0" FROM TOE OF WELD 5 SIDE.
- 4 2" NOZZLE 179"-183", @ TOE OF WELD 5 SIDE.
- 5 2" NOZZLE 214"-218", @ TOE OF WELD 5 SIDE.
- 6 4" NOZZLE 249"-255", 2.5" FROM TOE OF WELD 2 SIDE.
- 7 HANDHOLE 241 1/2"-264", 2.5" FROM TOE OF WELD 5 SIDE.
- 8 2" NOZZLE 285"-289", @ TOE OF WELD 5 SIDE.
- 9 2" NOZZLE 320"-325", @ TOE OF WELD 5 SIDE.
- 10 2" NOZZLE 386"-391", 2.5" FROM TOE OF WELD 2 SIDE.

SCAN 2: 45° & 60°
 LIMITATION FROM ITEMS # 2, 6, 10.

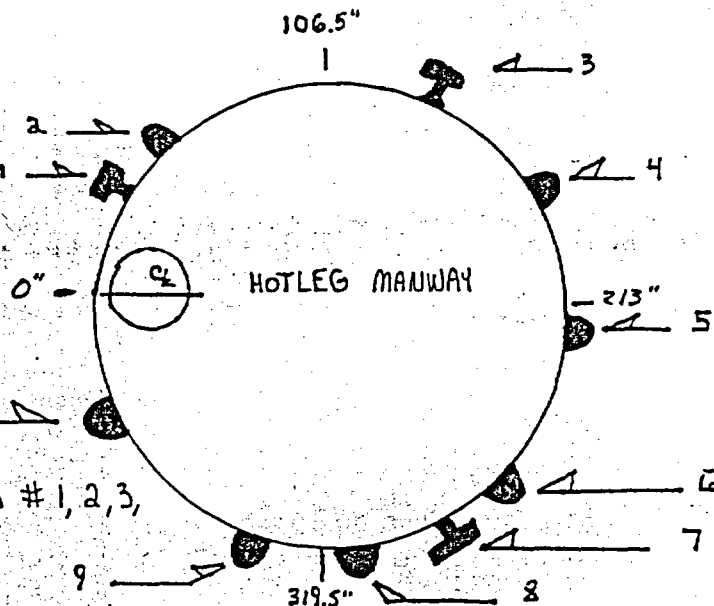
SCAN 7: & 2: 45° & 60°
 LIMITATION FROM ITEMS # 4, 5, 8, 9, 10.



0° SCAN: LIMITATION FROM ITEMS # 1, 2, 3, # 4, 5, 8, 9, 10, 6, & 7.

SCAN 5: 45° & 60° LIMITATION FROM ITEMS # 1, 3, 4, 5, 7, 8, 9.

REQUIRED VOLUME NOT EXAMINED = 9%.



KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip C. Bures

DATE: June 12, 2001

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Allen McQuinn

DATE: 6-13-01

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: STEAM GENERATORS EXISTING AND REPLACEMENT SG-1A AND SG-1B

DRAWING NO.: M-1206

COMPONENT IDENTIFICATION: SG-W31 PROCEDURE: NEP-15.09 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

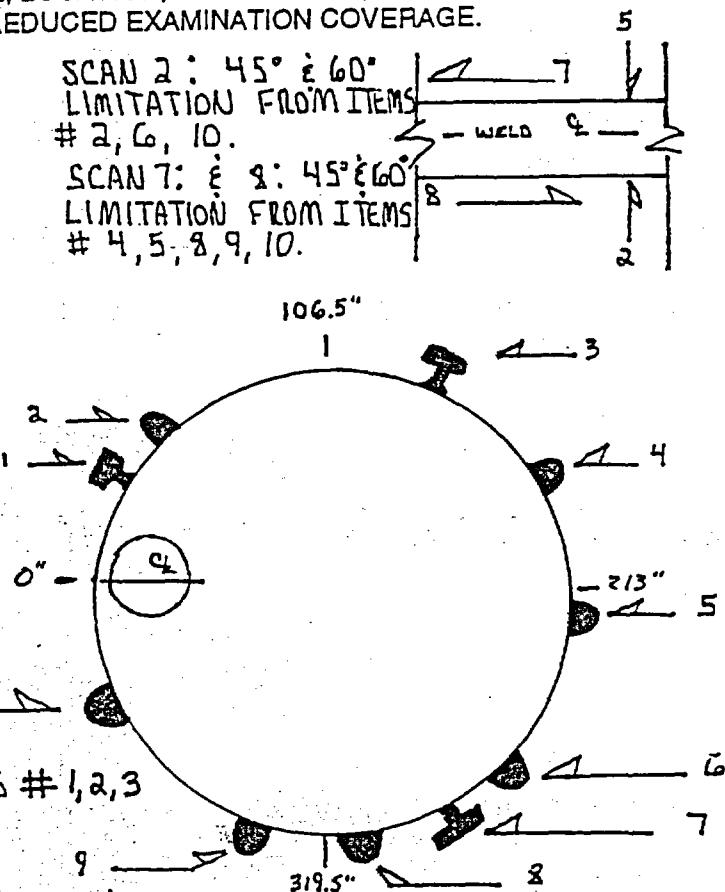
EXAMINER: JM Johnson Jm John II DATE: 6-14-01
 LEVEL

EXAMINER: TW THOMAS Tw Thomas II DATE: 6-14-01
 LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

- 1 HANDHOLE 28"-48", 2.5" FROM TOE OF WELD 5 SIDE.
- 2 4" NOZZLE 35"-42", 2.5" FROM TOE OF WELD 2 SIDE.
- 3 HANDHOLE 133"-156", 2.0" FROM TOE OF WELD 5 SIDE.
- 4 2" NOZZLE 179"-183", @ TOE OF WELD 5 SIDE.
- 5 2" NOZZLE 214"-218", @ TOE OF WELD 5 SIDE.
- 6 4" NOZZLE 249"-255", 2.5" FROM TOE OF WELD 2 SIDE.
- 7 HANDHOLE 241 1/2"-264", 2.5" FROM TOE OF WELD 5 SIDE.
8. 2" NOZZLE 285"-289", @ TOE OF WELD 5 SIDE.
9. 2" NOZZLE 320"-325", @ TOE OF WELD 5 SIDE.
10. 2 1/4" NOZZLE 386"-391", 2.5" FROM TOE OF WELD 2 SIDE.

SCAN 2: 45° & 60°
 LIMITATION FROM ITEMS # 2, 6, 10.
 SCAN 7: 45° & 60°
 LIMITATION FROM ITEMS # 4, 5, 8, 9, 10.



0° SCAN: LIMITATION FROM ITEMS # 1, 2, 3
 # 4, 5, 8, 9, 10, 6 & 7
 SCAN 5: 45° & 60° LIMITATION FROM
 ITEMS # 1, 3, 4, 5, 7, 8, 9.
 REQUIRED VOLUME NOT EXAMINED = 9%.

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip C. Bakes DATE: June 16, 2001

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Logan McIntosh DATE: 6-16-01

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-20

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Reactor Vessel Outlet Nozzle To Vessel Weld RV-W7**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-D; Item No. B3.90**
- 4. Impracticality of Compliance: 2.84% of the Remote Ultrasonic Perpendicular Scan and 56.76% of the Remote Ultrasonic Tangential Scan of the Reactor Vessel Outlet Nozzle to Vessel Weld RV-W7 were inaccessible due to the Outlet Nozzle Boss Radius and the Outlet Nozzle Boss thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 2.84% Perpendicular Scan and 56.76% of the Tangential Scan of the Reactor Vessel Outlet Nozzle to Vessel Weld RV-W7 would require modification of the original design of Reactor Vessel Outlet Nozzle.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-20

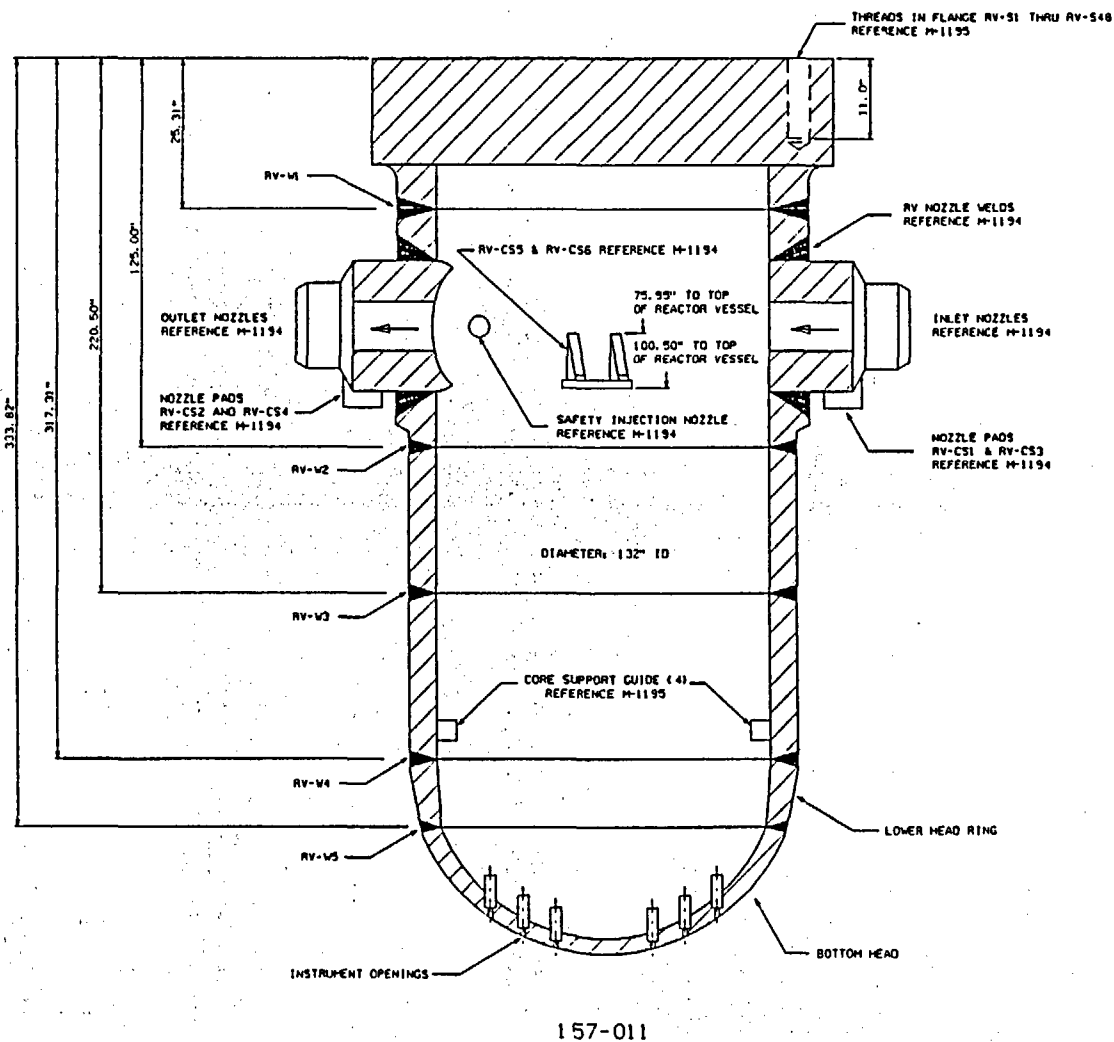
**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

E611-W



LOCATION: CONTAINMENT

COMPONENT WELD DATA		
I.D.	THICKNESS	MATERIAL
RV-W1	9.44"	A508-64 CL. 2 CS
RV-W2	7.0"	A508-64 CL. 2 CS
RV-W3	7.0"	A508-64 CL. 2 CS
RV-W4	7.0"	A508-64 CL. 2 CS
RV-W5	4.12" MIN	A533 GR. 9 CL. 1 CS

CALIBRATION BLOCK		
I.D.	DIAMETER/SCHEDULE	MATERIAL
WPS-RV-1	16" I.D. x 3" L x 8.625" W	SASOR CL. 1 CS
WPS-RV-2	9.0" I.D. x 32" L x 6.0" W	SASOR CL. 2 CS
WPS-RV-3	7.0" I.D. x 28" L x 6.0" W	SASOR CL. 2 CS
WPS-RV-4	5.0" I.D. x 18" L x 6.0" W	SASOR CL. 2 CS

NOTES:

1. DRAWING APPLICABLE FOR 3rd (AND 4th) ISI INTERVAL
2. ASME BOILER AND PRESSURE VESSEL CODE SECTION XI CLASS I
3. RV INSTRUMENT PENETRATION ID #S: RV-P1 THRU RV-P36

D-1
KAP 01-001639

REVISION

A
PDD 0011 COMPL
SEE REV 0-1
APP'D: CAT 10/23/99
FILM'D: (WPS) 11/7/89

A-1
REDRAFTED TO CAD.
PER ESR 92-177
OWN: E. SAXTON 4/1/93
CHK'D: B. TROTTER 5/12/93
APP'D: CAT 7-23-93

B ESR 92-177 COMPL
SEE REV. A-1
FILM'D: (WPS) 08-03-93

B-1
REV. NOTES
PER ESR 92-177
BY: LNL 10-1-93
CHK'D: RJS 10-4-93
APP'D: CAT 10-07-93

C ESR 92-177 COMPL
SEE REV. B-1
FILM'D: (WPS) 10-19-93

C-1 RE PUR 0295
ADDED ITEM NO.
BY: BJD 7-19-99
APP'D: DAK 7-26-99
D RE PUR 0295 COMPL
SEE REV. C-1
FILM'D: (WPS) 8-3-99

D-1 KAP 01-001639
REVISED NOTE 1.
BY: ABF 06-03-02
APP'D:

E KAP 01-001639
COMPLETE
SEE REV. D-1.
FILM'D: (WPS)

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

REACTOR VESSEL
RV

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	PHILLIP E. BUKES	6/16/93
CHECKED		
D. M.	1/17/83	
ESS	SCALE	DWG. NO.
SCALE	M-1193	REV.
CADD		E

LOCATION:	CONTAINMENT

CALIBRATION BLOCK			
I.D.	DIAMETER/SCHEDULE	WATER IN	
WPS-RV-1	16" I.D. x 31' L.B.T. 8.625" W	SA-508-64 CL.	2 C
WPS-RV-2	3.0" I.D. x 32' L.B.T. 6.0" W	SA-508-64 CL.	2 C
WPS-RV-3	7.0" I.D. x 28' L.B.T. 6.0" W	SA-508-64 CL.	2 C
WPS-SIS-01	6.0" I.D. x 15' L.B.T. 4.0" W	SA-508-64 CL.	2 C

1). DRAWING APPLICABLE FOR 3rd AND 4th ISI INTERVAL

2). ASME BOILER AND PRESSURE VESSEL CODE
SECTION XI CLASS I

REVISION

F | KAP 01-001639
COMPLETE
SEE REV. E-1.
FILMED: (WPS)

A-1

REDRAFTED TO CAD .
PER ESR 92-177
DWA, E. S. MAXTON 4/1/93
CHK'D: B. TROTTER 5/12/93
APP'D: CAT 7-23-93

B | ESR 92-177 COMPL. .
SEE REV. A-1
FILMED: (WPS) 08-03-93

B-1

REV. NOTES
PER ESR 92-177
BY: LNL 10-1-93
CHK'D: RJS 10-4-93
APP'D: CAT 10-07-93

C | ESR 92-177 COMPL.
SEE REV. B-1
FILMED: (WPS) 10-19-93

C-1 | PDR 0149
REVISED WELD ATTCH.
DATA, ADDED INLET AND
OUTLET NOZZEL WELD DATA
BY: JSCPW 2-21-97
APP'D: PCME 2-21-97

D | PDR 0149 COMPL.
SEE REV. C-1
FILMED: (WPS) 02-25-97

D-1 | RE PUR 0295
ADDED ITEM NO.
BY: BJD 7-19-99
APP'D: DAK 7-26-99

E | RE PUR 0295 COMPL
SEE REV. D-1
FILMED: (WPS) 8-3-99

E-1 | KAP 01-001639
REVISED NOTE 1.
BY: ABF 06-03-02
APP'D:

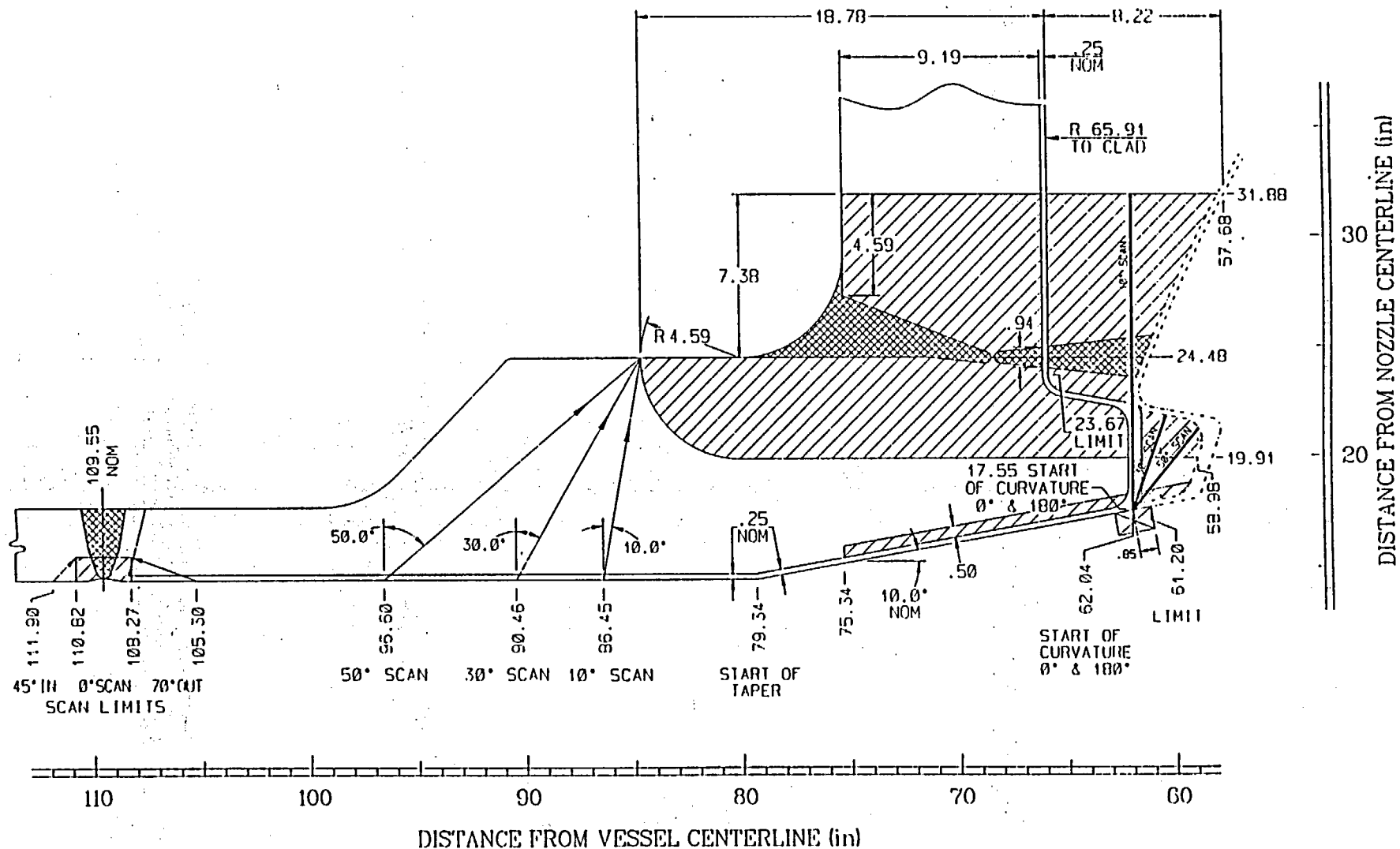
WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

REACTOR VESSEL
NOZZLES AND
INTEGRALLY WELDED ATTACHMENTS

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED		APPROVED	
CHECKED		PROJECT APPROVED	
D. M.		1/17/83	
ESS		DWG. NO.	
SCALE		REV.	
M-1194		F	

CADD



KEWAUNEE - WPS

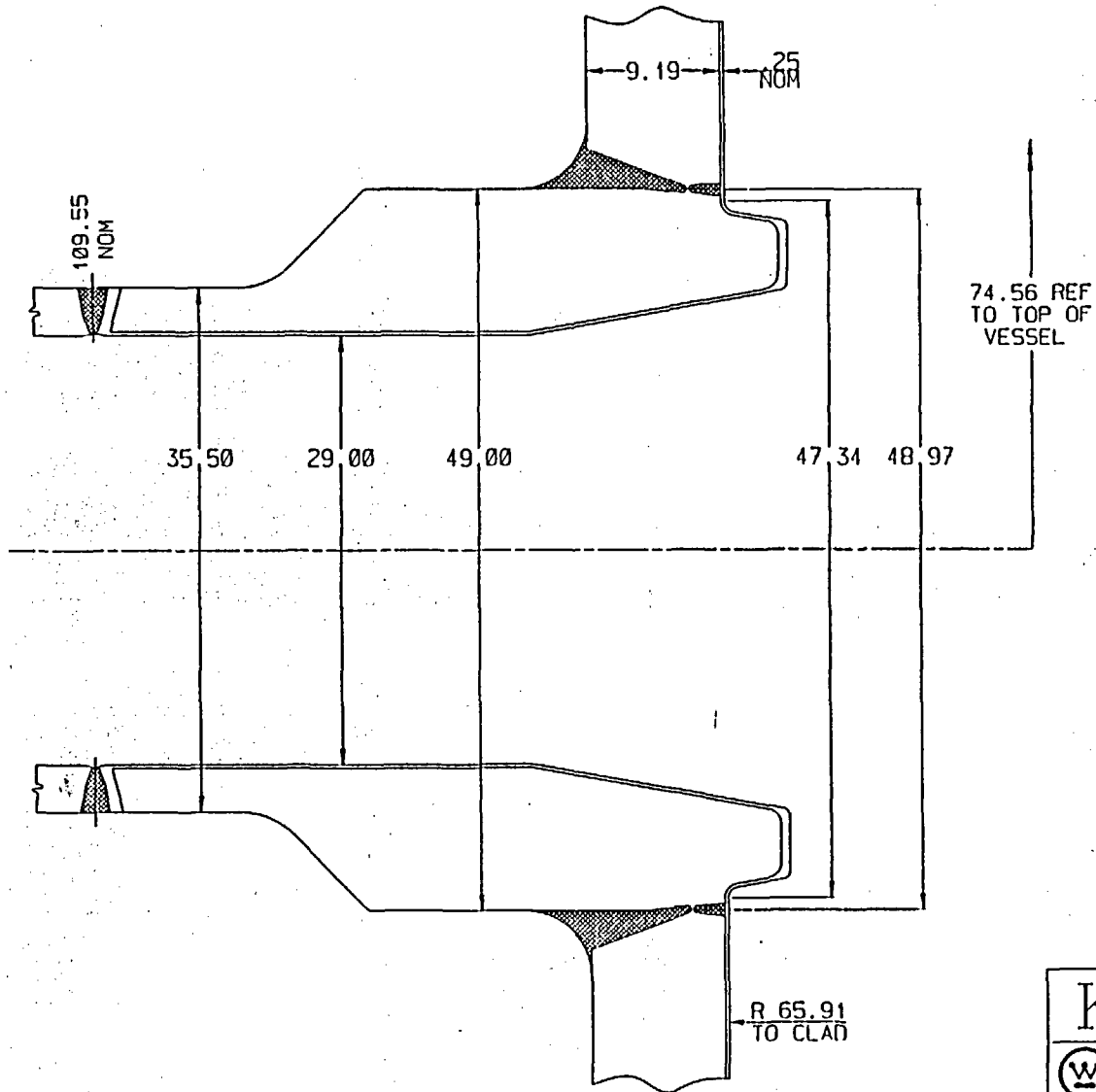
Ⓜ INSPECTION SERVICES

TITLE: OUTLET NOZZLE EXAM AREAS

ENG. SKETCH: NTD--MNA--DSD9-110 Rev. 1

ALL DIMENSIONS IN INCHES
UNLESS OTHERWISE NOTED

Westinghouse Primary Class 2C



KEWAUNEE - WPS

W INSPECTION SERVICES

TITLE OUTLET NOZZLE

ENG. SKETCH: NTD-MNA-DSD9410 Rev. 0

ALL DIMENSIONS IN INCHES
UNLESS OTHERWISE NOTED

SHEET 05 OF 39

Wisconsin Public Service Corporation
 Kewaunee Nuclear Power Plant
 1st Outage; 1st Period; 3rd Interval
 Automated Reactor Vessel Tool
 Examination Coverage

Program Item	Weld Number	Description	Direction	% Coverage	Limitations
2	RV-W7	Loop A Outlet Nozzle to Vessel Weld	Perpendicular Tangential	97.16% 43.24%	Nozzle Boss Radius Nozzle Boss
3	RV-W10	Loop B Outlet Nozzle to Vessel Weld	Perpendicular Tangential	97.16% 43.24%	Nozzle Boss Radius Nozzle Boss
4	RV-IR7	Loop A Outlet Nozzle Inside Radius Section	Circumferential	100.00%	
5	RV-IR10	Loop B Outlet Nozzle Inside Radius Section	Circumferential	100.00%	
6	RC-W1DM	Loop A Reactor Coolant Pipe Outlet Nozzle to Safe End	Parallel Perpendicular	100.00% 100.00%	
7	RC-W30DM	Loop B Reactor Coolant Pipe Outlet Nozzle to Safe End	Parallel Perpendicular	100.00% 100.00%	

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-21

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Reactor Vessel Outlet Nozzle To Vessel Weld RV-W10**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-D; Item No. B3.90**
- 4. Impracticality of Compliance: 2.84% of the Remote Ultrasonic Perpendicular Scan and 56.76% of the Remote Ultrasonic Tangential Scan of the Reactor Vessel Outlet Nozzle to Vessel Weld RV-W10 were inaccessible due to the Outlet Nozzle Boss Radius and the Outlet Nozzle Boss thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 2.84% Perpendicular Scan and 56.76% of the Tangential Scan of the Reactor Vessel Outlet Nozzle to Vessel Weld RV-W10 would require modification of the original design of Reactor Vessel Outlet Nozzle.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-21

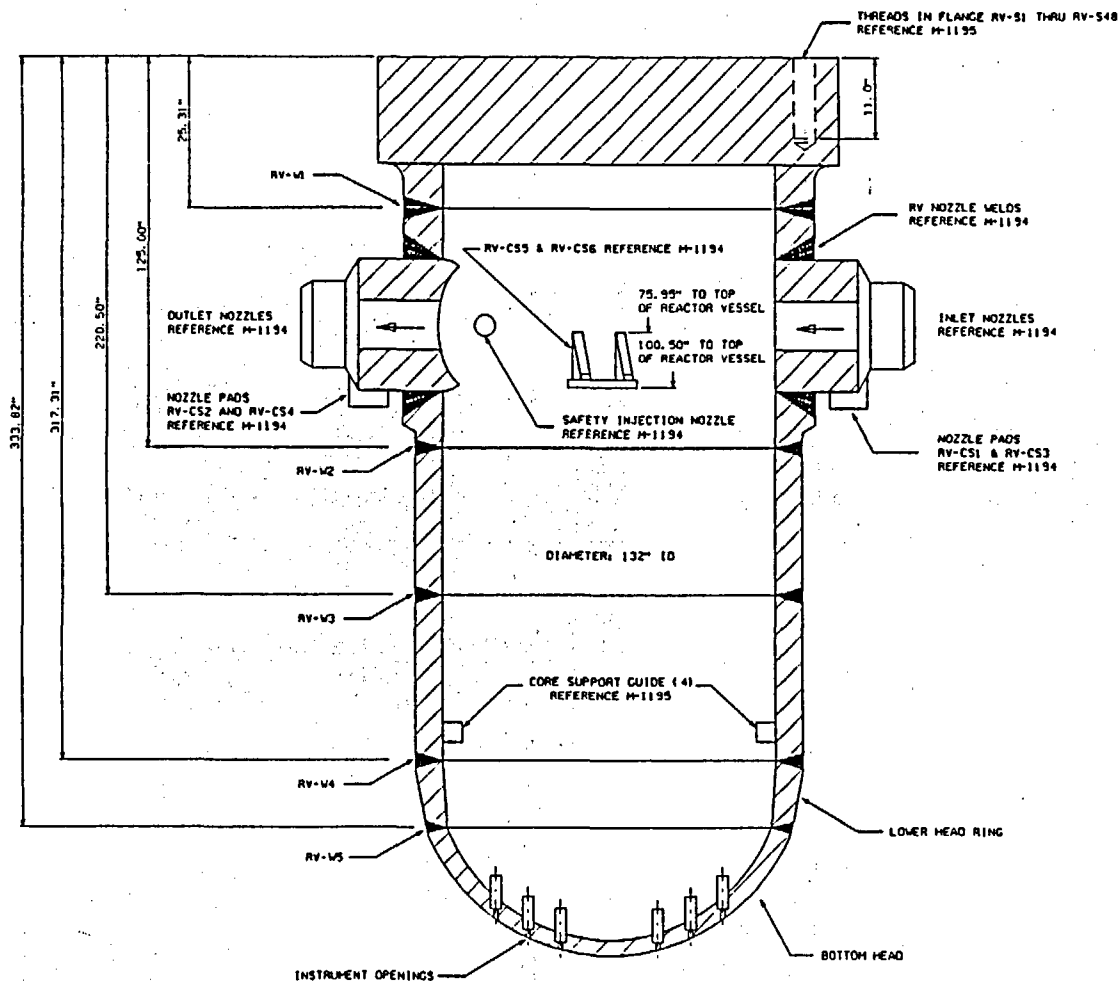
**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

E611-W



157-011

LOCATION: CONTAINMENT

COMPONENT WELD DATA		
I.D.	THICKNESS	MATERIAL
RV-V1	9.44"	A508-64 CL. 2 CS
RV-V2	7.0"	A508-64 CL. 2 CS
RV-V3	7.0"	A508-64 CL. 2 CS
RV-V4	7.0"	A508-64 CL. 2 CS
RV-V5	4.12" MIN.	A533 GR. B CL. 1 CS

CALIBRATION BLOCK		
I.D.	DIAMETER/SCHEDULE	MATERIAL
WPS-RV-1	16" IN. x 2.181" x 8.625" W	SAS08 CL. 3 CS
WPS-RV-2	9.0" x 32" x 8.0" W	SAS08 CL. 2 CS
WPS-RV-3	7.0" x 28" x 8.0" W	SAS08 CL. 2 CS
WPS-RV-4	6.0" x 18" x 8.0" W	SAS08 CL. 2 CS

NOTES:

- DRAWING APPLICABLE FOR 3rd AND 4th ISI INTERVAL
- ASME BOILER AND PRESSURE VESSEL CODE SECTION XI CLASS I
- RV INSTRUMENT PENETRATION ID #S: RV-P1 THRU RV-P36

D-1
KAP 01-001639

REVISION

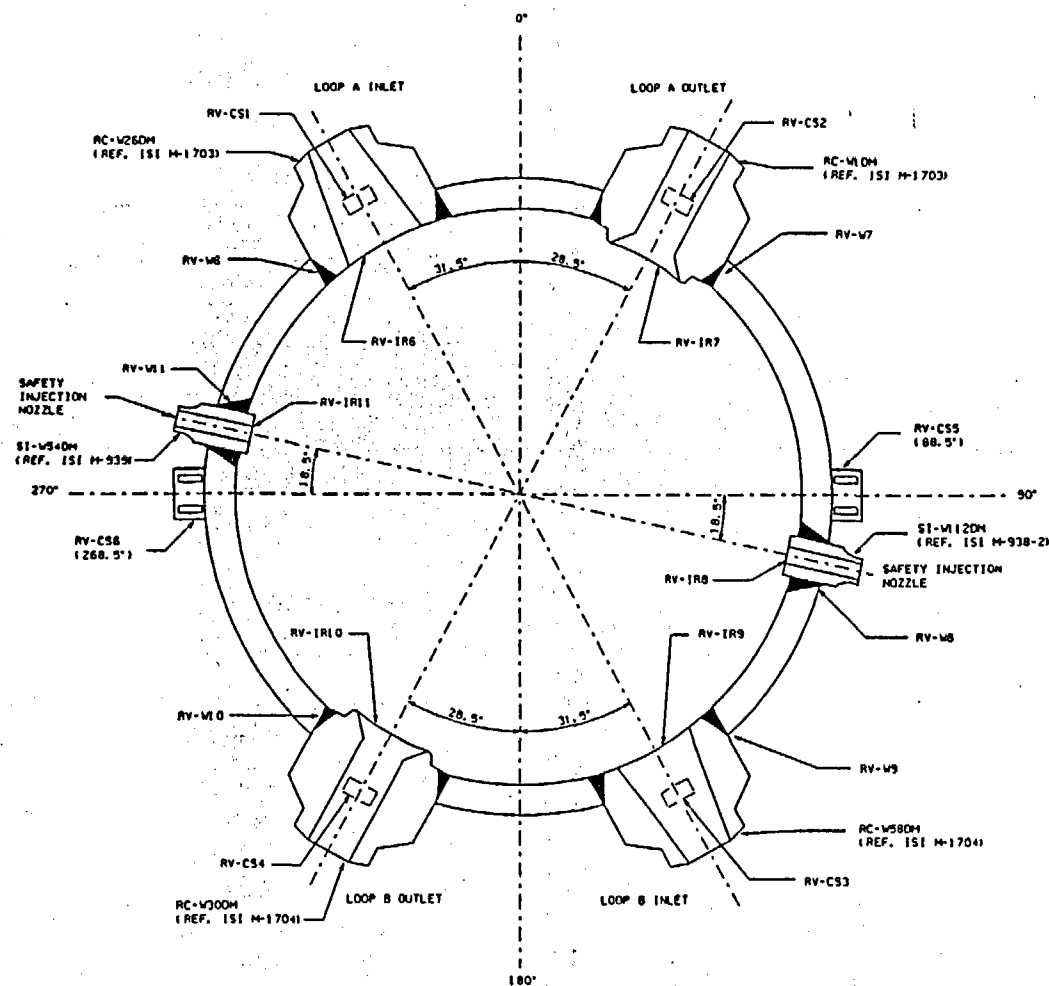
A	
PDD 0011 COMPL	
SEE REV. 0-1	
APP'D: CAT 10/23/89	
FILM'D: (WPS) 11/7/89	
A-1	
REDRAFTED TO CAD.	
PER ESR 92-177	
DAK'D: SAXTON 4/1/93	
CHK'D: B. TROTTER 5/12/93	
APP'D: CAT 7-23-93	
B	
ESR 92-177 COMPL.	
SEE REV. A-1	
FILM'D: (WPS) 08-03-93	
B-1	
REV. NOTES	
PER ESR 92-177	
BY: LNL 10-1-93	
CHK'D: RJS 10-4-93	
APP'D: CAT 10-07-93	
C	
ESR 92-177 COMPL.	
SEE REV. B-1	
FILM'D: (WPS) 10-19-93	
C-1	
RE PUR 0295	
ADDED ITEM NO.	
BY: BJD 7-19-99	
APP'D: DAK 7-26-99	
D	
RE PUR 0295 COMPL.	
SEE REV. C-1	
FILM'D: (WPS) 8-3-99	
D-1	
KAP 01-001639	
REVISED NOTE 1.	
BY: ABF 06-03-02	
APP'D:	
E	
KAP 01-001639	
COMPLETE	
SEE REV. D-1.	
FILM'D: (WPS)	

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSINREACTOR VESSEL
RVDESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED		APPROVED	
		PHILLIP E. BUKES	
CHECKED		PROJECT APPROVED	
D.M.		1/17/83	
DRAWN		DWG. NO.	
ESS		4/1/93	
SCALE		M-1193	
NONE		REV.	
		E	

CADD

611-W



157-011

LOCATION: CONTAINMENT

COMPONENT DATA		
I.D.	THICKNESS	MATERIAL
RV-W6	9.44"	A508-64 CL 2 CS
RV-IR6	INNER RADIUS SECTION	A508-64 CL 2 CS
RV-W7	9.44"	A508-64 CL 2 CS
RV-IR7	INNER RADIUS SECTION	A508-64 CL 2 CS
RV-W8	9.37"	A508-64 CL 2 CS
RV-IR8	INNER RADIUS SECTION	A508-64 CL 2 CS
RV-W9	9.44"	A508-64 CL 2 CS
RV-IR9	INNER RADIUS SECTION	A508-64 CL 2 CS
RV-W10	9.44"	A508-64 CL 2 CS
RV-IR10	INNER RADIUS SECTION	A508-64 CL 2 CS
RV-W11	9.37"	A508-64 CL 2 CS
RV-IR11	INNER RADIUS SECTION	A508-64 CL 2 CS

INTEGRALLY WELDED ATTACHMENT DATA		
I.D.	THICKNESS	MATERIAL
RV-CS5	4.25"	SA 516 GR. 70 CS
RV-CS6	4.25"	SA 516 GR. 70 CS

INLET AND OUTLET NOZZLE SUPPORT PADS (WELD BUILDUP)		
I.D.	THICKNESS	MATERIAL
RV-CS1	3.0"	SA 516 GR. 70 CS
RV-CS2	3.0"	SA 516 GR. 70 CS
RV-CS3	3.0"	SA 516 GR. 70 CS
RV-CS4	3.0"	SA 516 GR. 70 CS

CALIBRATION BLOCK		
I.D.	DIMETER/SCHEDULE	MATERIAL
WPS-RV-1	16" TM x 31" L x 11.8.625" W	SA-508-64 CL 1 CS
WPS-RV-2	9.0" T x 32" L x 6.0" W	SA-508-64 CL 2 CS
WPS-RV-3	7.0" T x 28" L x 6.0" W	SA-508-64 CL 3 CS
WPS-SIS-01	6.0" T x 15" L x 4.0" W	SA-508-64 CL 2 CS

NOTES:

1. DRAWING APPLICABLE FOR 3rd AND 4TH ISI INTERVAL
2. ASME BOILER AND PRESSURE VESSEL CODE SECTION XI CLASS I

E-1
KAP 01-001639

REVISION

F KAP 01-001639
COMPLETE
SEE REV. E-1.
FILMED: (WPS)

A-1

REDRAFTED TO CAD
PER ESR 92-177
OWN: E. SAXTON 4/1/93
CHK'D: B. TROTTER 5/12/93
APP'D: CAT 7-23-93

B ESR 92-177 COMPL.
SEE REV. A-1
FILMED: (WPS) 08-03-93

B-1

REV. NOTES
PER ESR 92-177
BY: LHM 10-1-93
CHK'D: RUS 10-4-93
APP'D: CAT 10-07-93

C ESR 92-177 COMPL.
SEE REV. B-1
FILMED: (WPS) 10-19-93

C-1

PDR 0149
REVISED WELD ATTACH.
DATA, ADDED INLET AND
OUTLET NOZZEL WELD DATA.
BY: JSPICE 2-21-91
APP'D: PCW 02-21-91

D

PDR 0149 COMPL.
SEE REV. C-1
FILMED: (WPS) 02-25-97

D-1

RE PUR 0295
ADDED ITEM NO.
BY: BJO 7-19-99
APP'D: DAK 7-26-99

E

RE PUR 0295 COMPL.
SEE REV. D-1
FILMED: (WPS) 8-3-99

E-1

KAP 01-001639
REVISED NOTE 1.
BY: ABF 06-03-02
APP'D:

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

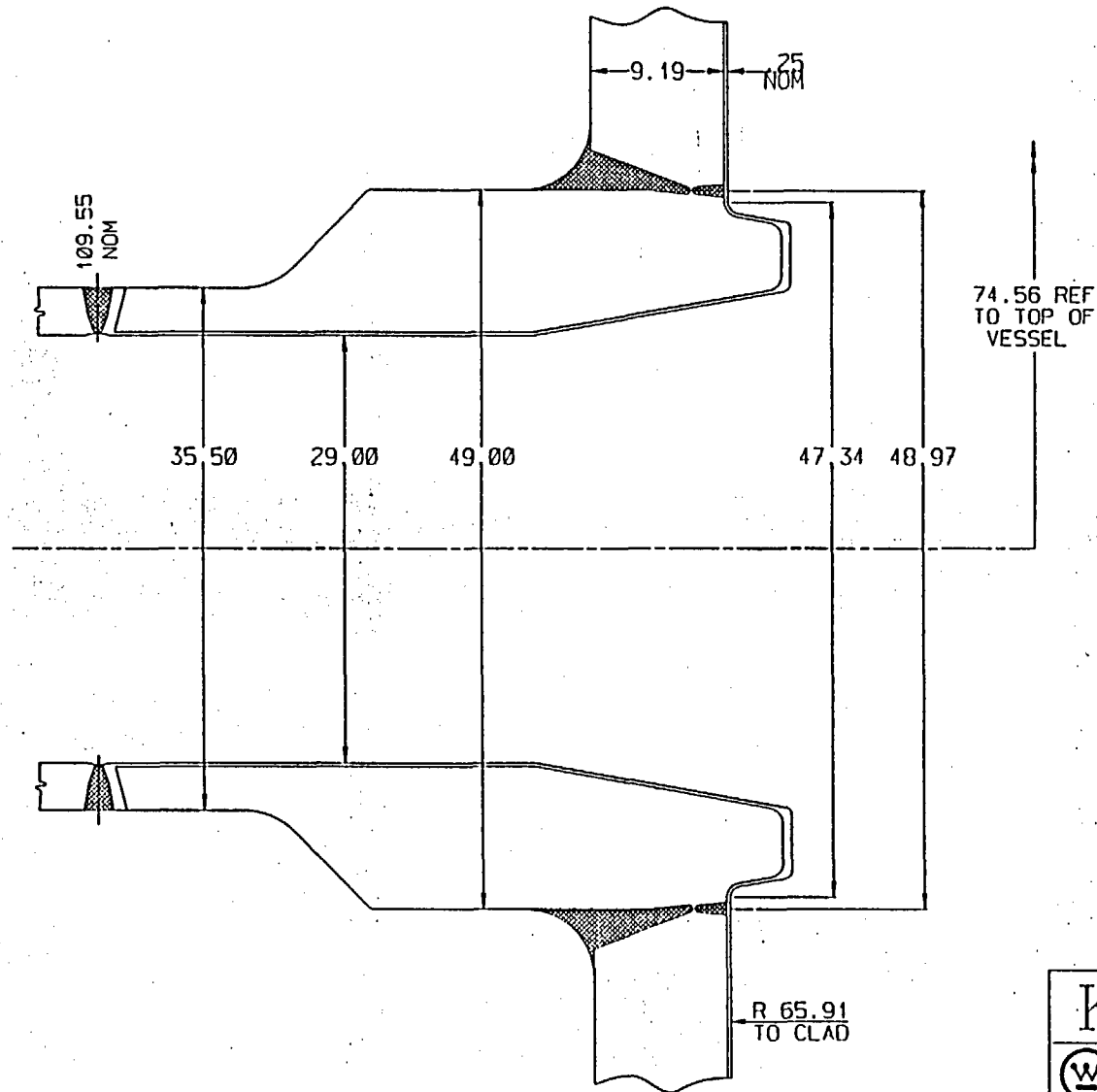
REACTOR VESSEL
NOZZLES AND
INTEGRALLY WELDED ATTACHMENTS

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	APPROVED	
CHECKED	PHILLIP E. BUKES	6/16/93
D. M.	PROJECT APPROVED	
DATE	1/17/83	
DRWING	OWG. NO.	REV.
ESS	4/1/93	
SCALE	M-1194	F
NONE		

CADD

Westinghouse Primary Class 2C



KEWAUNEE - WPS

Ⓜ INSPECTION SERVICES

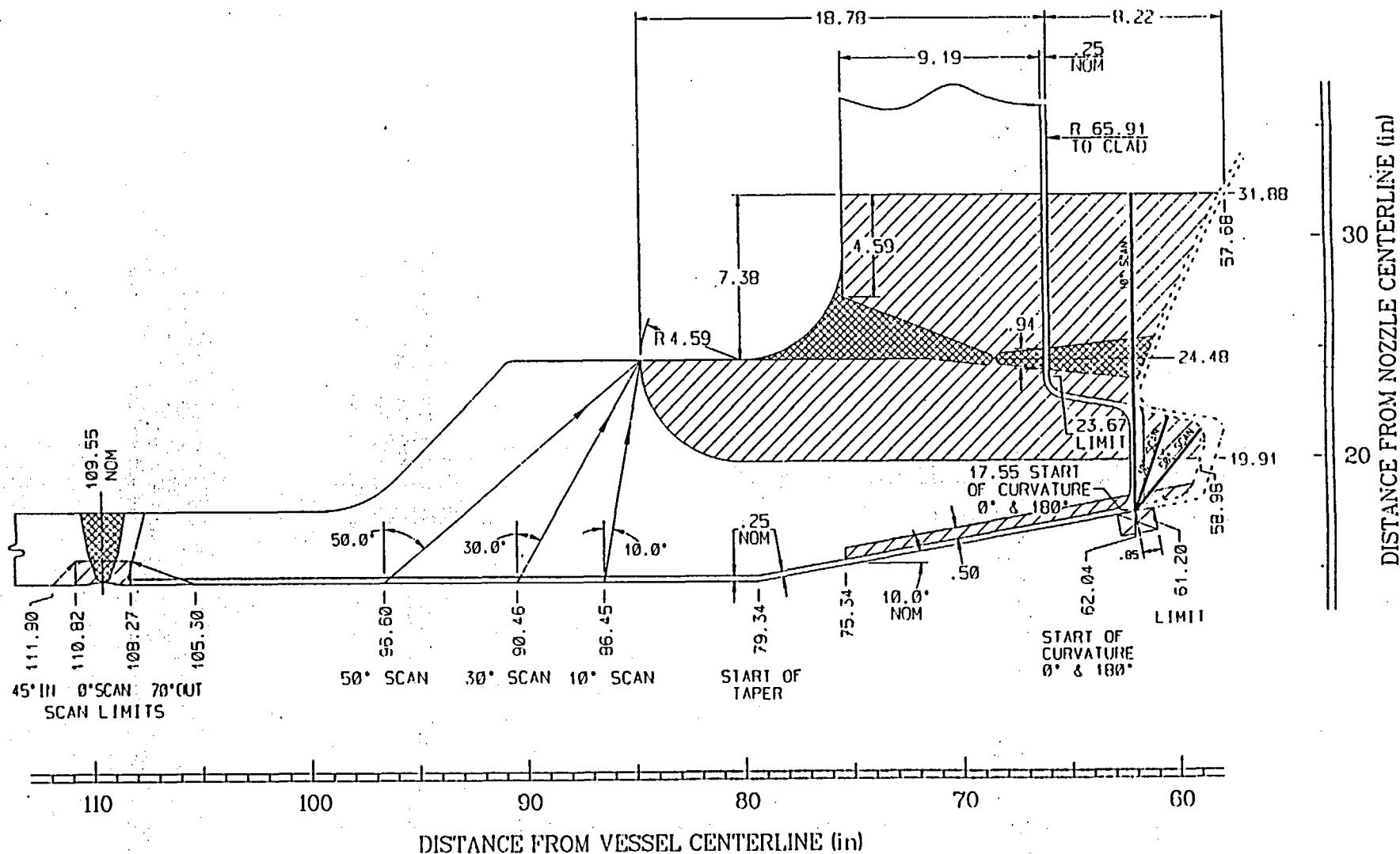
TITLE OUTLET NOZZLE

ENG. SKETCH: NTD-MNA-DSD9410 Rev. 0

ALL DIMENSIONS IN INCHES
UNLESS OTHERWISE NOTED

SHEET 05 OF 39

Westinghouse Proprietary Class 2C



KEWAUNEE - WPS

INSPECTION SERVICES

TITLE: OUTLET NOZZLE EXAM AREAS

ENG. SKETCH: NTD-MNA-DS10-110 Rev. 1

ALL DIMENSIONS IN INCHES
UNLESS OTHERWISE NOTED

SHEET 01 OF 01

Wisconsin Public Service Corporation
 Kewaunee Nuclear Power Plant
 1st Outage; 1st Period; 3rd Interval
 Automated Reactor Vessel Tool
 Examination Coverage

Program Item	Weld Number	Description	Direction	% Coverage	Limitations
2	RV-W7	Loop A Outlet Nozzle to Vessel Weld	Perpendicular Tangential	97.16% 43.24%	Nozzle Boss Radius Nozzle Boss
3	RV-W10	Loop B Outlet Nozzle to Vessel Weld	Perpendicular Tangential	97.16% 43.24%	Nozzle Boss Radius Nozzle Boss
4	RV-IR7	Loop A Outlet Nozzle Inside Radius Section	Circumferential	100.00%	
5	RV-IR10	Loop B Outlet Nozzle Inside Radius Section	Circumferential	100.00%	
6	RC-W1DM	Loop A Reactor Coolant Pipe Outlet Nozzle to Safe End	Parallel Perpendicular	100.00% 100.00%	
7	RC-W30DM	Loop B Reactor Coolant Pipe Outlet Nozzle to Safe End	Parallel Perpendicular	100.00% 100.00%	

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-22

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Steam Generator 1A Nozzle To Safe End Butt Welds RC-W76DM and RC-77DM**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-F; Item No. B5.70**
- 4. Impracticality of Compliance: 38.1% of the Steam Generator 1A Nozzle To Safe End Butt Welds RC-W76DM and RC-W77DM were inaccessible due to the Nozzle Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 38.1% of the Steam Generator 1A Nozzle To Safe End Butt Welds RC-W76DM and RC-W77DM would require modification of the design of Steam Generator 1A Nozzles and Reactor Coolant Pipe.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-22

6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWB-2500-1; Examination Category B-P; Item B15.30 each Refueling
Outage for evidence of leakage. Surface Liquid Penetrant Examination was
performed on Steam Generator 1A Nozzle to Safe End Butt Welds RC-
W76DM and RC-W77DM during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-
1; Examination Category B-F and Item No. B5.70. ASME Boiler and
Pressure Vessel Code Section III Radiography was performed as part of
Kewaunee Nuclear Power Plant Steam Generator Replacement during the
2001 Refueling Outage.

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

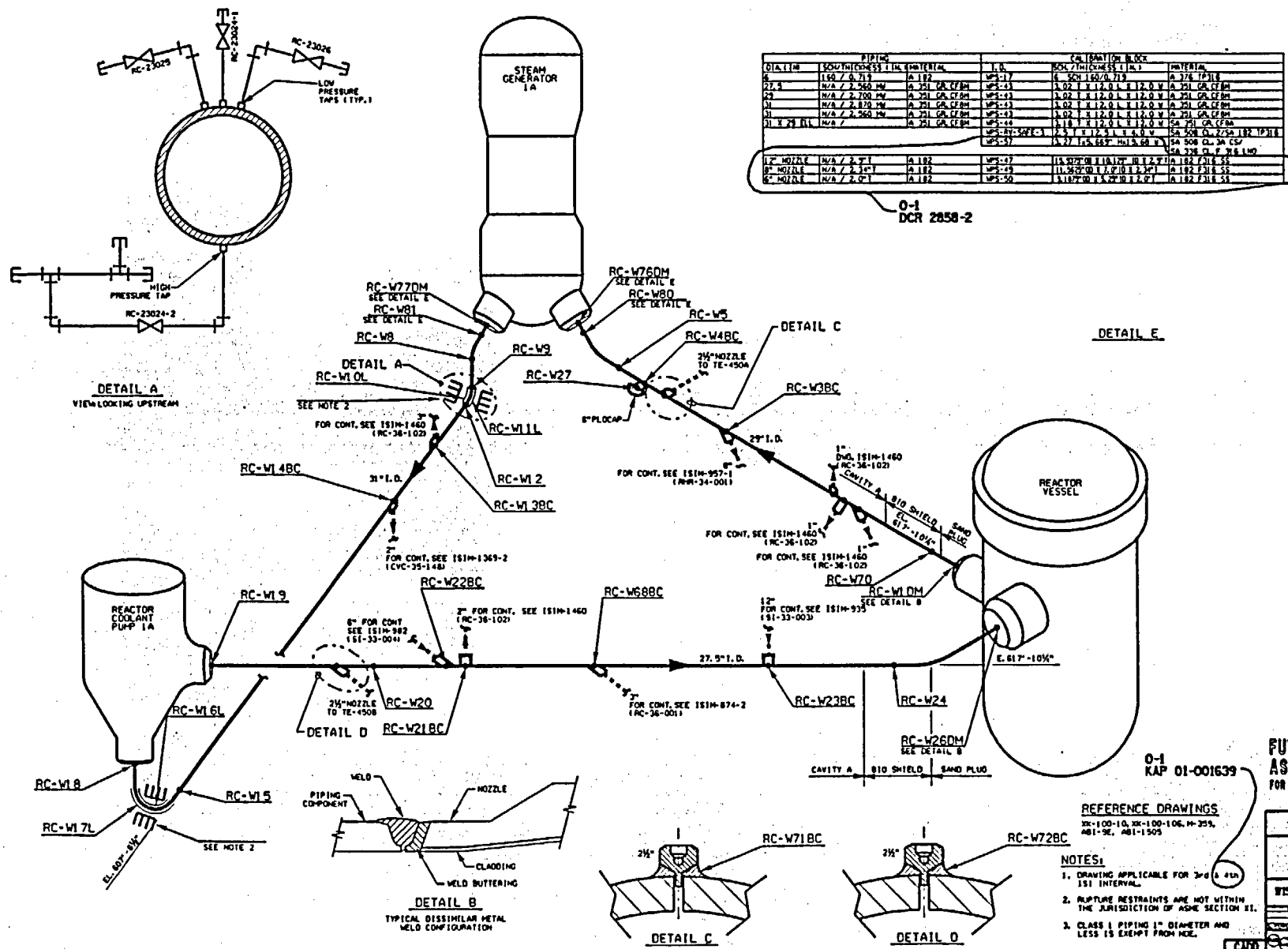
8. Precedents: Not Applicable

9. References: Not Applicable

CDL-1-00151

CODE CLASS 1

LOCATION: CONTAINMENT ELEV. 606'-0"
SAND PLUG, BIO SHIELD, CAVITY A



WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: REACTOR COOLANT PIPING LOOP A

DRAWING NO.: ISIM-1703

COMPONENT IDENTIFICATION: RC-W76DM PROCEDURE: NEP-15.45 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: _____ MAGNETIC PARTICLE: _____ VISUAL: _____

EXAMINER: J. M. R. Bly

III
LEVEL

DATE: 6-19-01

EXAMINER: Jeff R

III
LEVEL

DATE: 06/19/01

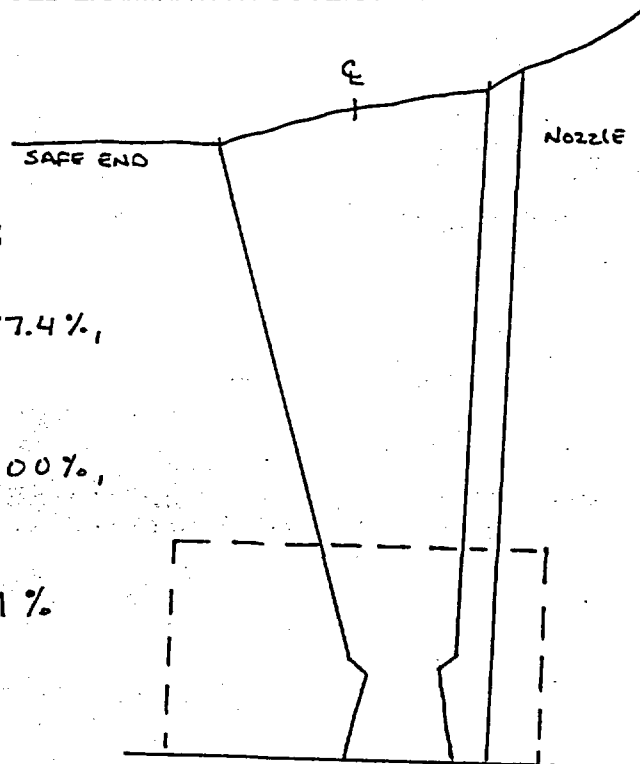
SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

NOZZLE CONFIGURATION LIMITS COVERAGE WITH
0°, 45° SCAN 2, 5, 7, AND 8; 60° SCAN 2, 5, 7, AND 8

SAFE END SIDE COVERAGE NOT OBTAINED: 17.4%,
DUE TO NOZZLE CONFIGURATION.

NOZZLE SIDE COVERAGE NOT OBTAINED: 100%,
DUE TO NOZZLE CONFIGURATION.

TOTAL COVERAGE NOT OBTAINED: 38.1%



KEWAUNEE NUCLEAR
POWER PLANT REVIEW:

Phillip C. Butkus

DATE: June 19, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW:

Boyd M. Myners

DATE: 6-20-01

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: REACTOR COOLANT PIPING LOOP A

DRAWING NO.: ISIM-1703

COMPONENT IDENTIFICATION: RC-W77DM PROCEDURE: NEP-15.45 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: J. M. P. Bly III DATE: 6-19-01
LEVEL

EXAMINER: Jeff R III DATE: 06/19/01
LEVEL

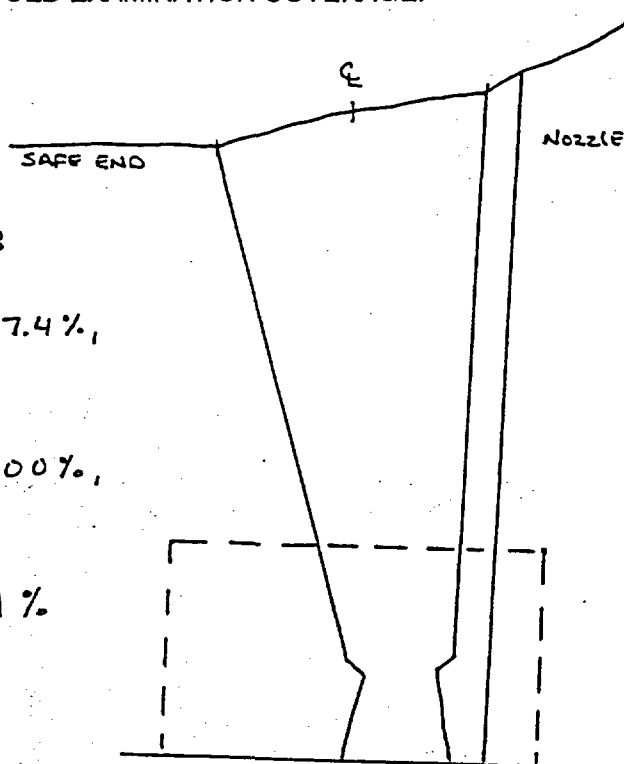
SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

NOZZLE CONFIGURATION LIMITS COVERAGE WITH
0°/45° SCAN 2, 5, 7, AND 8; 60° SCAN 2, 5, 7, AND 8

SAFE END SIDE COVERAGE NOT OBTAINED: 17.4%,
DUE TO NOZZLE CONFIGURATION.

NOZZLE SIDE COVERAGE NOT OBTAINED: 100%,
DUE TO NOZZLE CONFIGURATION.

TOTAL COVERAGE NOT OBTAINED: 38.1%



KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bakes

DATE: June 19, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Roger Morgan

DATE: 6-20-01

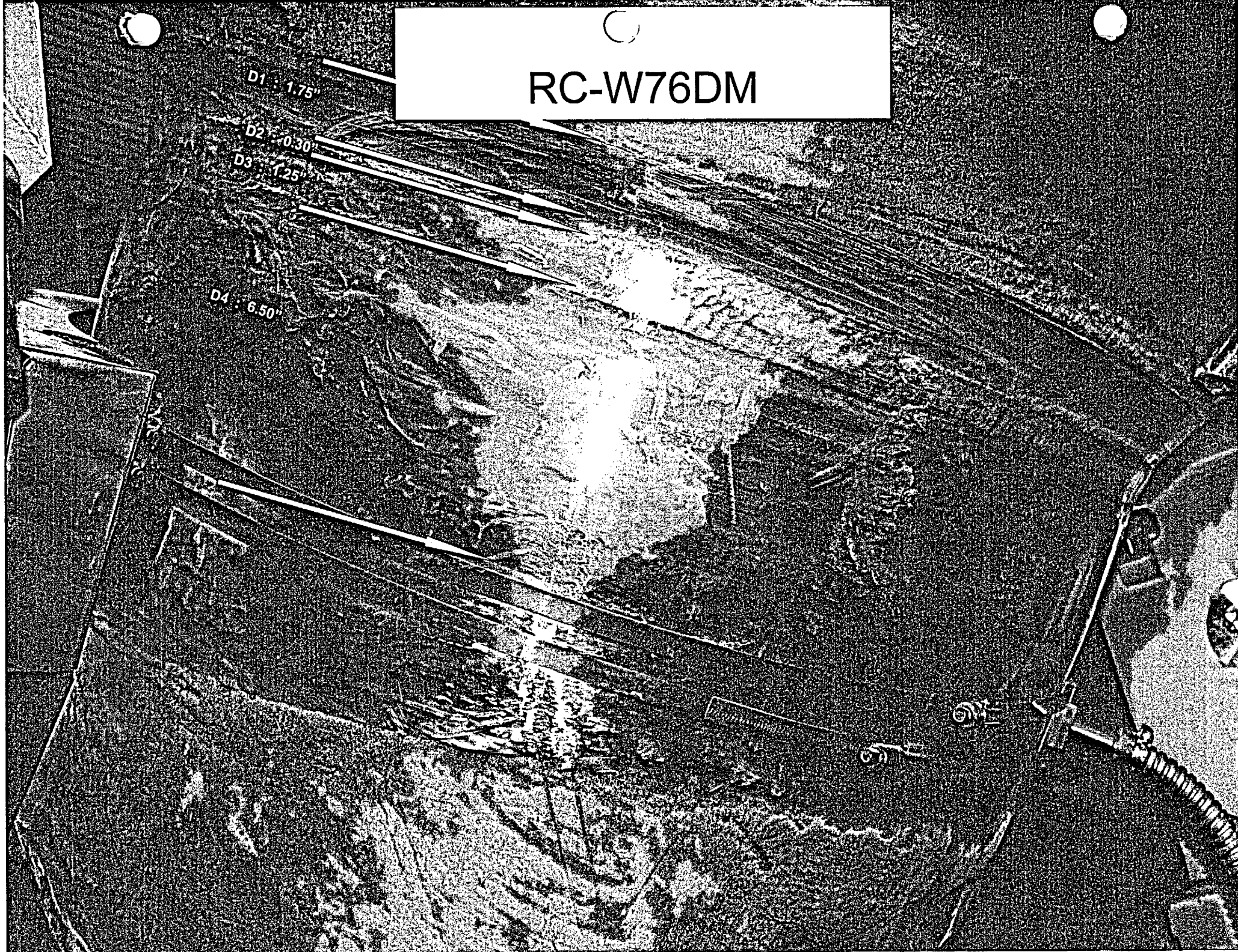
RC-W76DM

D1 : 1.75"

D2 : 0.30"

D3 : 1.25"

D4 : 6.50"



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-23

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Steam Generator 1B Nozzle To Safe End Butt Welds RC-W78DM and RC-79DM**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-F; Item No. B5.70**
- 4. Impracticality of Compliance: 40.25% of the Steam Generator 1B Nozzle To Safe End Butt Welds RC-W78DM and RC-W79DM were inaccessible due to the Nozzle Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 40.25% of the Steam Generator 1B Nozzle To Safe End Butt Welds RC-W78DM and RC-W79DM would require modification of the design of Steam Generator 1B Nozzles and Reactor Coolant Pipe.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-23

**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWB-2500-1; Examination Category B-P; Item B15.30 each Refueling
Outage for evidence of leakage. Surface Liquid Penetrant Examination was
performed on Steam Generator 1B Nozzle to Safe End Butt Welds RC-
W78DM and RC-W79DM during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-
1; Examination Category B-F and Item No. B5.70. ASME Boiler and
Pressure Vessel Code Section III Radiography was performed as part of
Kewaunee Nuclear Power Plant Steam Generator Replacement during the
2001 Refueling Outage.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

CODE CLASS 1

LOCATION: CONTAINMENT ELEV. 606'-0"
SAND PLUG, BIO SHIELD, CAVITY B

REVISIONS
1. REVISED FOR 100%
2. REVISED FOR 100%
3. REVISED FOR 100%
4. REVISED FOR 100%
5. REVISED FOR 100%
6. REVISED FOR 100%
7. REVISED FOR 100%
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10. REVISED FOR 100%

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40. REVISED FOR 100%

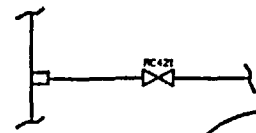
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60. REVISED FOR 100%

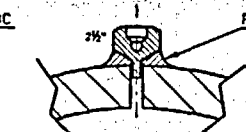
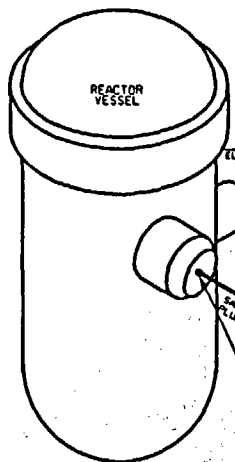
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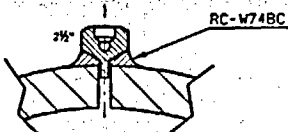
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DETAIL E



DETAIL C

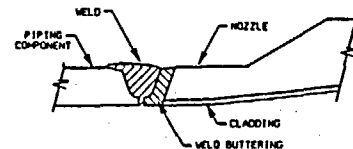


DETAIL D

DIAM	THICKNESS	IN	MATERIAL	WELD	WELD BUTTERING	WELD BUTTERING	WELD BUTTERING	WELD BUTTERING	WELD BUTTERING
1/2"	1/8"	0.125	A-182	WPS-17	1/8" SCH 160	0.125	A-182	WPS-17	1/8" SCH 160
1/2"	1/8"	0.125	A-182	WPS-17	1/8" SCH 160	0.125	A-182	WPS-17	1/8" SCH 160
1/2"	1/8"	0.125	A-182	WPS-17	1/8" SCH 160	0.125	A-182	WPS-17	1/8" SCH 160
1/2"	1/8"	0.125	A-182	WPS-17	1/8" SCH 160	0.125	A-182	WPS-17	1/8" SCH 160
1/2"	1/8"	0.125	A-182	WPS-17	1/8" SCH 160	0.125	A-182	WPS-17	1/8" SCH 160
1/2"	1/8"	0.125	A-182	WPS-17	1/8" SCH 160	0.125	A-182	WPS-17	1/8" SCH 160
1/2"	1/8"	0.125	A-182	WPS-17	1/8" SCH 160	0.125	A-182	WPS-17	1/8" SCH 160
1/2"	1/8"	0.125	A-182	WPS-17	1/8" SCH 160	0.125	A-182	WPS-17	1/8" SCH 160
1/2"	1/8"	0.125	A-182	WPS-17	1/8" SCH 160	0.125	A-182	WPS-17	1/8" SCH 160

O-1
DCR 2858-2

DETAIL G



DETAIL B

TYPICAL DISSIMILAR METAL
WELD CONFIGURATION

REFERENCE DRAWINGS

AK-100-10, AK-100-106, AK-359, AK-363,
AK-156, AK-1505

NOTES:

1. DRAWING APPLICABLE FOR 3-0 & 4-0
151 INTERVAL.
2. RUPTURE RESTRAINTS ARE NOT WITHIN
THE JURISDICTION OF ASME SECTION XI.
3. CLASS 1 PIPING 1" DIAMETER AND
LESS IS EXEMPT FROM NDE.

O-1
KAP 01-001639

FUTURE
AS BUILT
FOR DCR 2858-2

WISCONSIN PUBLIC SERVICE CORPORATION	
151 ISOMETRIC REACTOR COOLANT PIPING LOOP B	
WISCONSIN PUBLIC SERVICE CORPORATION	
151-1704	

CAUTION

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: REACTOR COOLANT PIPING LOOP B

DRAWING NO.: 151M-1704

COMPONENT IDENTIFICATION: RC-W78DM PROCEDURE: NEP-15.45 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: J. P. Belf III DATE: 6-19-01
LEVEL

EXAMINER: J. P. Belf III DATE: 06/19/01
LEVEL

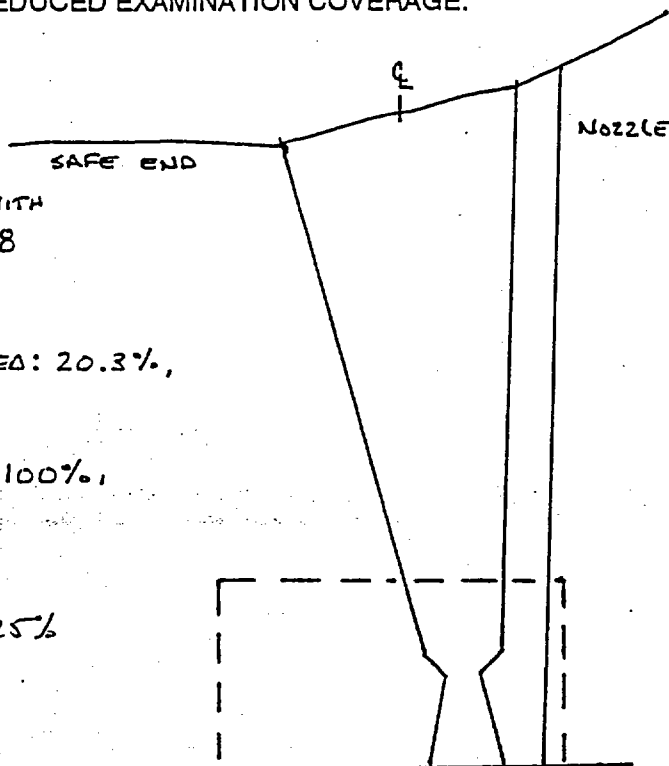
SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

NOZZLE CONFIGURATION LIMITS COVERAGE WITH
0°, 45° SCAN 2, 5, 7, AND 8; 60° SCAN 2, 5, 7, AND 8

SAFE END SIDE COVERAGE NOT OBTAINED: 20.3%,
DUE TO NOZZLE CONFIGURATION.

NOZZLE SIDE COVERAGE NOT OBTAINED: 100%,
DUE TO NOZZLE CONFIGURATION.

TOTAL COVERAGE NOT OBTAINED: 40.25%



KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bures

DATE: June 19, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Logan McIntyre

DATE: 6-20-01

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: REACTOR COOLANT PIPING LOOP B

DRAWING NO.: 15IM-1704

COMPONENT IDENTIFICATION: RC-W79DM PROCEDURE: NEP-15.45 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: J. P. Blf III DATE: 6-19-01
LEVEL

EXAMINER: Jeff R III DATE: 06/19/01
LEVEL

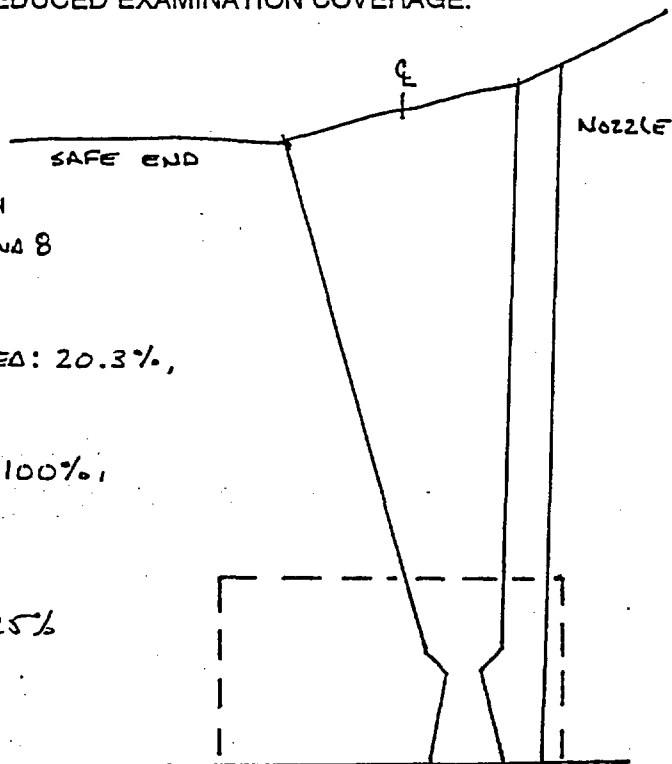
SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

NOZZLE CONFIGURATION LIMITS COVERAGE WITH
0°, 45° SCAN 2, 5, 7, AND 8, 60° SCAN 2, 5, 7, AND 8

SAFE END SIDE COVERAGE NOT OBTAINED: 20.3%,
DUE TO NOZZLE CONFIGURATION.

NOZZLE SIDE COVERAGE NOT OBTAINED: 100%,
DUE TO NOZZLE CONFIGURATION.

TOTAL COVERAGE NOT OBTAINED: 40.25%



KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bakes

DATE: June 19, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Angie McGuire

DATE: 6-20-01

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-24

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Reactor Coolant Pump 1A Flywheel
RCP-1A-FLY**
- 2. Applicable Code Edition and Addenda: Not Applicable Nuclear Regulatory
Commission Regulatory Guide 1.14 Reactor Coolant Pump Flywheel
Integrity**
- 3. Applicable Code Requirement: Not Applicable**
- 4. Impracticality of Compliance: 9.0% of the Reactor Coolant Pump 1A
Flywheel RCP-1A-FLY was inaccessible due to the 5 Anti Rotation Paws
and the Flywheel In Place Configuration thus restricting Ultrasonic
Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 9.0% of the
Reactor Coolant Pump 1A Flywheel would require removal of the 5 Anti
Rotation Paws which would affect the balance of the Reactor Coolant Pump
Motor and would also require modification of the original design of Reactor
Coolant Pump Flywheel Motor.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-24

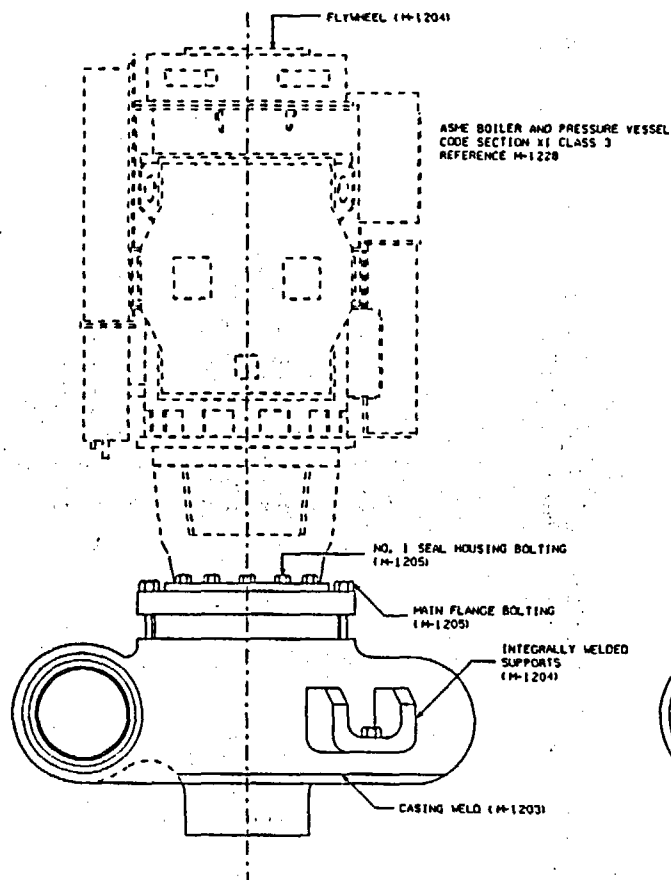
6. Proposed Alternative and Basis for Use: No alternative Regulatory Guide required Ultrasonic examination is available due to the limited access.

7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 – June 16, 2004

8. Precedents: Not Applicable

9. References: Not Applicable

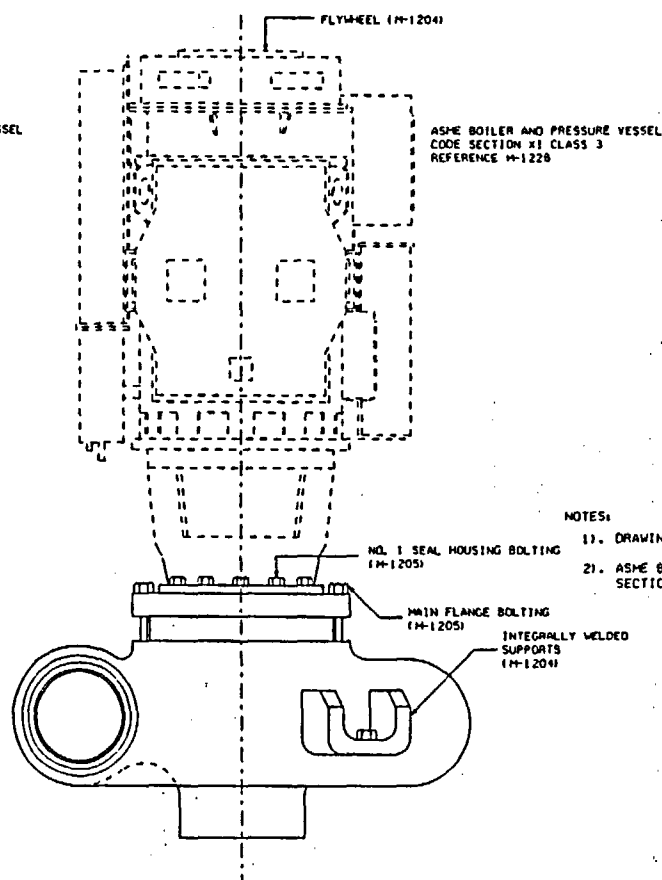
2021-W



RCP-1A

145-021

LOCATION: CONTAINMENT



RCP-1B

145-022

NOTES:

- 1). DRAWING APPLICABLE FOR 3rd AND 4th ISI INTERVAL
- 2). ASME BOILER AND PRESSURE VESSEL CODE SECTION XI CLASS 1

D-1
KAP 01-001639

REVISION

A	PDO 0011 COMPL SEE REV. D-1 APP'D: CAT 10/23/89 FILM'D: (WPS) 11/7/89
A-1	REDRAFTED TO CAD PER ESR 92-177 DWG. E. SAXTON 4/1/93 CHK'D: B. TROTTER 5/12/93 APP'D: CAT 7-23-93
B	ESR 92-177 COMPL. SEE REV. A-1 FILM'D: (WPS) 08-03-93
B-1	REV. NOTES PER ESR 92-177. BY: LNL 10-1-93 CHK'D: RJS 10-4-93 APP'D: CAT 10-07-93
C	ESR 92-177 COMPL. SEE REV. B-1 FILM'D: (WPS) 10-19-93
C-1	RE PUR 0295 ADDED ITEM NO'S. BY: BJO 7-19-99 APP'D: DAK 7-26-99
D	RE PUR 0295 COMPL. SEE REV. C-1 FILM'D: (WPS) 8-3-99
D-1	KAP 01-001639 REVISED NOTE 1. BY: ADF 06-03-02 APP'D:
E	KAP 01-001639 COMPLETE SEE REV. D-1. FILM'D: (WPS)

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

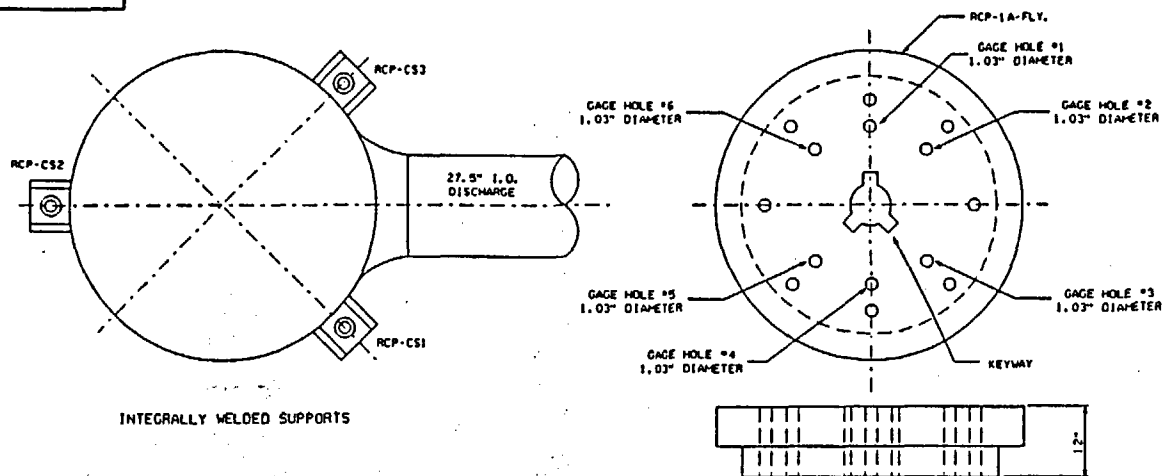
REACTOR COOLANT PUMPS RCP-1A AND RCP-1B

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	PHILLIP E. BLUKES	8/16/93
ENGINEERED	PROJECT APPROVED	
D. H.	1/17/93	
GRAPH	ESS	8/17/93
SCALE	DWG. NO.	REV.
NONE	M-1202	E

CADD

M-1204



REACTOR COOLANT PUMP RCP-1A
145-021

FLY WHEEL

COMPONENT DATA		
I.D.	THICKNESS	MATERIAL
RCP-1A-FLY.	12"	ASTM A533 TP. B CL. 1
RCP-1B-FLY.	12"	ASTM A533 TP. B CL. 1

INTEGRALLY WELDED ATTACHMENT DATA		
I.D.	THICKNESS	MATERIAL
RCP-CS1	4.0"	304SS(1A351)-65 CF 8
RCP-CS2	4.0"	304SS(1A351)-65 CF 8
RCP-CS3	4.0"	304SS(1A351)-65 CF 8
RCP-CS4	4.0"	304SS(1A351)-65 CF 8
RCP-CS5	4.0"	304SS(1A351)-65 CF 8
RCP-CS6	4.0"	304SS(1A351)-65 CF 8

NOTES:

- 1). DRAWING APPLICABLE FOR 3rd AND 4th ISI INTERVAL
- 2). ASME BOILER AND PRESSURE VESSEL CODE SECTION XI CLASS I

D-1
KAP 01-001639

REVISION

A
POD 0011 COMPL
SEE REV. 0-1
APP'D: CAT 10/23/89
FILM'D: (MPS) 11/7/89

A-1
REDRAFTED TO CAD
PER ESR 92-177
DWN: E. SAXTON 4/1/93
CHK'D: B. TROTTER 5/12/93
APP'D: CAT 7-23-93

B ESR 92-177 COMPL.
SEE REV. A-1
FILM'D: (MPS) 08-03-93

B-1
REV. NOTES
PER ESR 92-177
BY: LNL 10-1-93
CHK'D: RJS 10-4-93
APP'D: CAT 10-07-93

C ESR 92-177 COMPL.
SEE REV. B-1
FILM'D: (MPS) 10-19-93

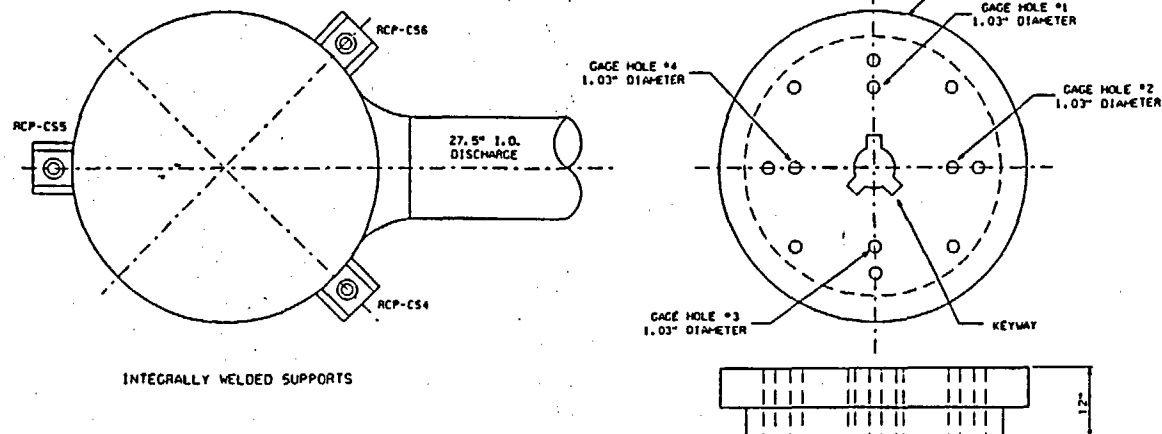
C-1 RE PUR 0295

ADDED REF. NO. 5.
BY: BJD 7-19-99
APP'D: DAK 7-26-99

D RE PUR 0295 COMPL.
SEE REV. C-1
FILM'D: (MPS) 8-3-99

D-1 KAP 01-001639
REVISED NOTE 1.
BY: ABF 06-03-02
APP'D:

E KAP 01-001639
COMPLETE
SEE REV. D-1.
FILM'D: (MPS)



REACTOR COOLANT PUMP RCP-1B
145-022

FLY WHEEL

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

REACTOR COOLANT PUMPS
RCP-1A AND RCP-1B
FLYWHEEL & SUPPORTS

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	APPROVED	
CHECKED	PHILLIP E. BUKES	6/16/93
D.M.	PROJECT APPROVED	

DRW. NO.	REV.
ESS	4/1/93
SCALE	
NONE	

CADD

M-1204

E

LOCATION: CONTAINMENT

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: REACTOR COOLANT PUMP 1A

DRAWING NO.: M-1204

COMPONENT IDENTIFICATION: RCP-1A-FLY PROCEDURE: NEP-15.12 REVISION: ORIG

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

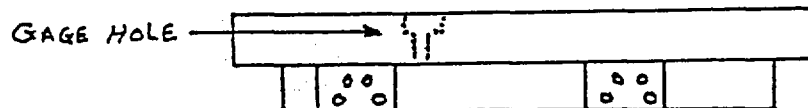
EXAMINER: N.A. Bg II DATE: 10/5/96

LEVEL

EXAMINER: Jeffrey M. Johnson II DATE: 10/5/96

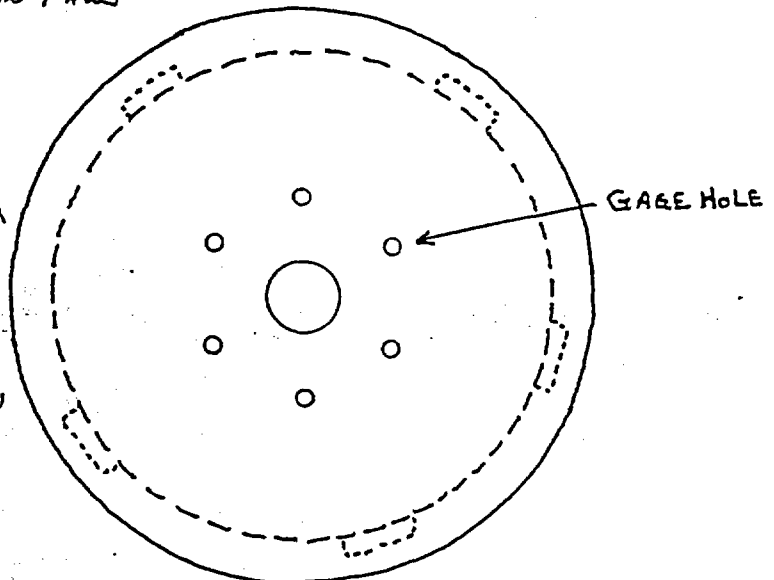
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



ANTI-ROTATION PAWS

FLYWHEEL IN PLACE RESTRICTS
BOTTOM 1" OF LOWER PLATE OF
KEYWAY AND RADIAL GAGE HOLE
EXAMS. DIAMETER CHANGE FROM
1.5" TO 1.03" IN TOP 1.5" OF
UPPER PLATE RESTRICTS KEYWAY
AND RADIAL GAGE HOLE EXAMS.
5 - 3" x 7" ANTI-ROTATION PAWS
RESTRICT PERIPHERY EXAM ON
LOWER PLATE



9% OF Required Volume. Not Examined

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bures DATE: October 5, 1996

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Arjen M. Wiggins DATE: 10/5/96

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-25

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 16" Feedwater Integrally Welded Attachment FDW-H170**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category C-C; Item No. C3.20 and Table IWF-2500-1 Examination Category F-A; Item No. F1.20B**
- 4. Impracticality of Compliance: 100% of the Integrally Welded Attachment Saddle Weld Portion of 16" Feedwater Support FDW-H170 is inaccessible for Surface Examination as required by IWC-2500-1, Category C-C, Item No. 3.20 and Visual examination as required by IWF-2500-1 Examination Category F-A, Item No. F1.20B due to Encapsulation surrounding the 16" Feedwater Piping. Visual Examination of the remaining portion of FDW-H170 support is available for examination.**
- 5. Burden Caused by Compliance: To provide for access to perform Surface Examination and Visual examination on the Integrally Welded Attachment Saddle Weld for FDW-H170 would require removal of the 16" Feedwater Piping Encapsulation.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

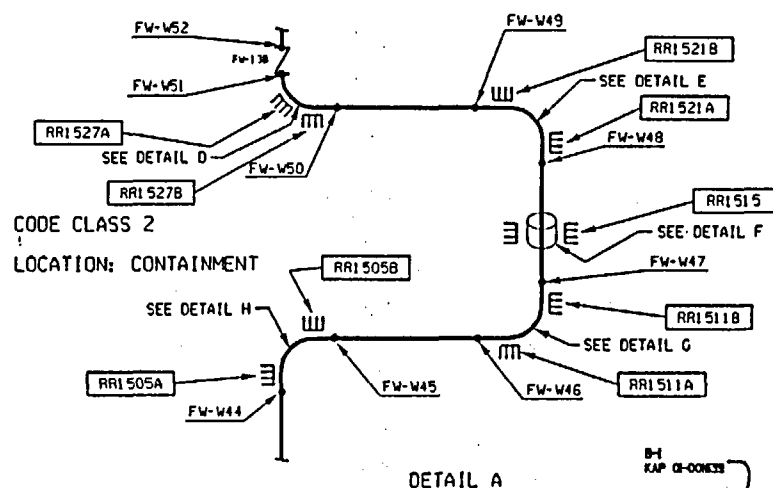
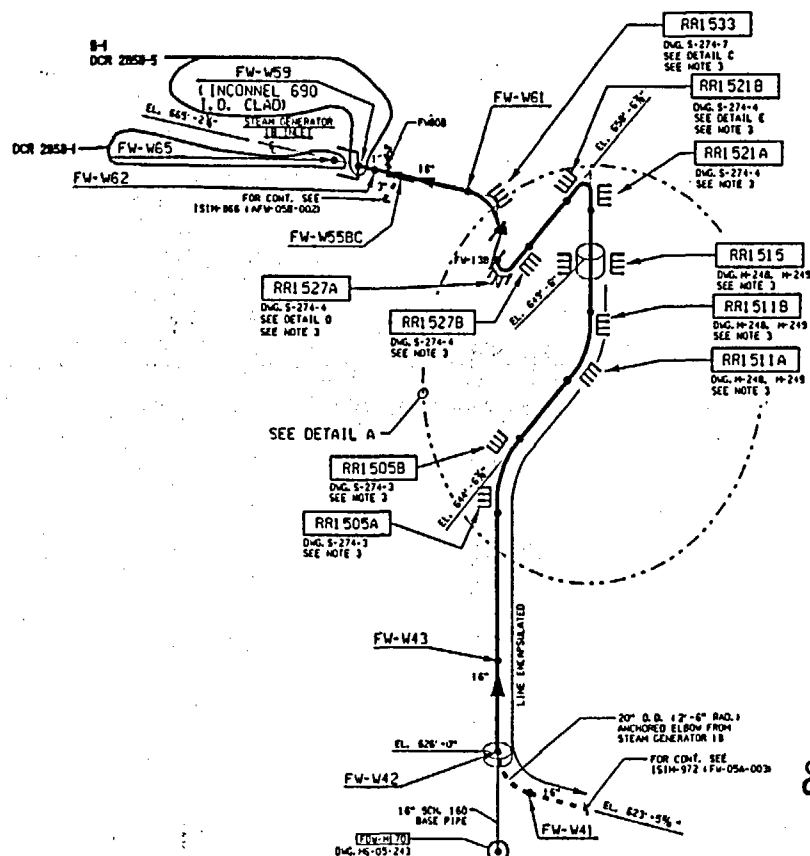
RELIEF REQUEST NO: RR-G-7-25

- 6. Proposed Alternative and Basis for Use: No alternative Code required
Surface examination is available of the FDW-H170 Saddle Weld due to the
restricted access caused by the encapsulation. VT-3 Examination of the
accessible portion of the Support was performed during the 3rd Interval.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**

PIPING			CALCULATION DATA		
DATE	NO	SCHEMATIC	THICKNESS	IN	MATERIAL
16	1	100/1.038	A	108	CA
16	2	100/1.031	A	108	CA
16	NOZ	50/0.508	A	108	CA
16	NOZ	80/0.844	LINE DOWEL	50	SA
16	NOZ	7/1.375	SA	508	1.2 CS

한글 2024-5

VALVE BOMBY BOLTING DATA			
VALVE ID	SHOPS/O	A.I	M.I
FW 78	A/I 28		



DETAIL A

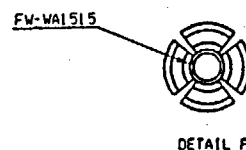
NOTES:

1. DRAMING APPLICABLE FOR 3rd & 4th INTERVAL.
2. CLASS 2 PIPING & DIAMETER AND LESS IS EXEMPT FROM NOC.
3. RUPTURE RESTRAINTS ARE NOT WITHIN THE JURISDICTION OF ASME SECTION 8.
4. FU NOZZLE TRANSITION PIPE SPOOL BUZZER WITH INCHWELD (350).
5. MIN. THICKNESS OF CARBON STEEL & METAL BASE SEE DESIGNWORK DRAWINGS 6450202 SHEETS 9 FOR FRESHWATER NOZZLE TRANSITION PIPE CLASS 2.

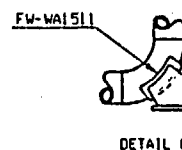
REFERENCE DWGS.

15247, 15248, 15249, 15250, 15251, 15252, 15253, 15254, 15255, 15256, 15257, 15258, 15259, 15260, 15261, 15262, 15263, 15264, 15265, 15266, 15267, 15268, 15269, 15270, 15271, 15272, 15273, 15274, 15275, 15276, 15277, 15278, 15279, 15280, 15281, 15282, 15283, 15284, 15285, 15286, 15287, 15288, 15289, 15290, 15291, 15292, 15293, 15294, 15295, 15296, 15297, 15298, 15299, 15300, 15301, 15302, 15303, 15304, 15305, 15306, 15307, 15308, 15309, 15310, 15311, 15312, 15313, 15314, 15315, 15316, 15317, 15318, 15319, 15320, 15321, 15322, 15323, 15324, 15325, 15326, 15327, 15328, 15329, 15330, 15331, 15332, 15333, 15334, 15335, 15336, 15337, 15338, 15339, 15340, 15341, 15342, 15343, 15344, 15345, 15346, 15347, 15348, 15349, 15350, 15351, 15352, 15353, 15354, 15355, 15356, 15357, 15358, 15359, 15360, 15361, 15362, 15363, 15364, 15365, 15366, 15367, 15368, 15369, 15370, 15371, 15372, 15373, 15374, 15375, 15376, 15377, 15378, 15379, 15380, 15381, 15382, 15383, 15384, 15385, 15386, 15387, 15388, 15389, 15390, 15391, 15392, 15393, 15394, 15395, 15396, 15397, 15398, 15399, 15400, 15401, 15402, 15403, 15404, 15405, 15406, 15407, 15408, 15409, 15410, 15411, 15412, 15413, 15414, 15415, 15416, 15417, 15418, 15419, 15420, 15421, 15422, 15423, 15424, 15425, 15426, 15427, 15428, 15429, 15430, 15431, 15432, 15433, 15434, 15435, 15436, 15437, 15438, 15439, 15440, 15441, 15442, 15443, 15444, 15445, 15446, 15447, 15448, 15449, 15450, 15451, 15452, 15453, 15454, 15455, 15456, 15457, 15458, 15459, 15460, 15461, 15462, 15463, 15464, 15465, 15466, 15467, 15468, 15469, 15470, 15471, 15472, 15473, 15474, 15475, 15476, 15477, 15478, 15479, 15480, 15481, 15482, 15483, 15484, 15485, 15486, 15487, 15488, 15489, 15490, 15491, 15492, 15493, 15494, 15495, 15496, 15497, 15498, 15499, 15500, 15501, 15502, 15503, 15504, 15505, 15506, 15507, 15508, 15509, 15510, 15511, 15512, 15513, 15514, 15515, 15516, 15517, 15518, 15519, 15520, 15521, 15522, 15523, 15524, 15525, 15526, 15527, 15528, 15529, 15530, 15531, 15532, 15533, 15534, 15535, 15536, 15537, 15538, 15539, 15540, 15541, 15542, 15543, 15544, 15545, 15546, 15547, 15548, 15549, 15550, 15551, 15552, 15553, 15554, 15555, 15556, 15557, 15558, 15559, 15560, 15561, 15562, 15563, 15564, 15565, 15566, 15567, 15568, 15569, 15570, 15571, 15572, 15573, 15574, 15575, 15576, 15577, 15578, 15579, 15580, 15581, 15582, 15583, 15584, 15585, 15586, 15587, 15588, 15589, 15590, 15591, 15592, 15593, 15594, 15595, 15596, 15597, 15598, 15599, 15600, 15601, 15602, 15603, 15604, 15605, 15606, 15607, 15608, 15609, 15610, 15611, 15612, 15613, 15614, 15615, 15616, 15617, 15618, 15619, 15620, 15621, 15622, 15623, 15624, 15625, 15626, 15627, 15628, 15629, 15630, 15631, 15632, 15633, 15634, 15635, 15636, 15637, 15638, 15639, 15640, 15641, 15642, 15643, 15644, 15645, 15646, 15647, 15648, 15649, 15650, 15651, 15652, 15653, 15654, 15655, 15656, 15657, 15658, 15659, 15660, 15661, 15662, 15663, 15664, 15665, 15666, 15667, 15668, 15669, 15670, 15671, 15672, 15673, 15674, 15675, 15676, 15677, 15678, 15679, 15680, 15681, 15682, 15683, 15684, 15685, 15686, 15687, 15688, 15689, 15690, 15691, 15692, 15693, 15694, 15695, 15696, 15697, 15698, 15699, 15700, 15701, 15702, 15703, 15704, 15705, 15706, 15707, 15708, 15709, 15710, 15711, 15712, 15713, 15714, 15715, 15716, 15717, 15718, 15719, 15720, 15721, 15722, 15723, 15724, 15725, 15726, 15727, 15728, 15729, 15730, 15731, 15732, 15733, 15734, 15735, 15736, 15737, 15738, 15739, 15740, 15741, 15742, 15743, 15744, 15745, 15746, 15747, 15748, 15749, 15750, 15751, 15752, 15753, 15754, 15755, 15756, 15757, 15758, 15759, 15760, 15761, 15762, 15763, 15764, 15765, 15766, 15767, 15768, 15769, 15770, 15771, 15772, 15773, 15774, 15775, 15776, 15777, 15778, 15779, 15780, 15781, 15782, 15783, 15784, 15785, 15786, 15787, 15788, 15789, 15790, 15791, 15792, 15793, 15794, 15795, 15796, 15797, 15798, 15799, 15800, 15801, 15802, 15803, 15804, 15805, 15806, 15807, 15808, 15809, 15810, 15811, 15812, 15813, 15814, 15815, 15816, 15817, 15818, 15819, 15820, 15821, 15822, 15823, 15824, 15825, 15826, 15827, 15828, 15829, 15830, 15831,

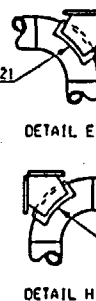
**FUTURE
AS BUILT
FOR DC2 2011**



DETAIL F



DETAIL 1



DETAIL H

RECEIVED IN FULL BY STATE OF CALIFORNIA
 OF FINANCE AND BUDGET OFFICE
 CALIFORNIA, DEPARTMENT OF REVENUE, SACRAMENTO

**ISI ISOMETRIC
 FEEDWATER**
 FROM ANCHORED ELL TO STM GEN.

DELIVERED BY
WISCONSIN PUBLIC SERVICE CORP.
 GREEN BAY, WISCONSIN

151M-971

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: FEEDWATER FROM ANCHORED ELL TO STEAM GEN. 1B

DRAWING NO.: ISIM-971

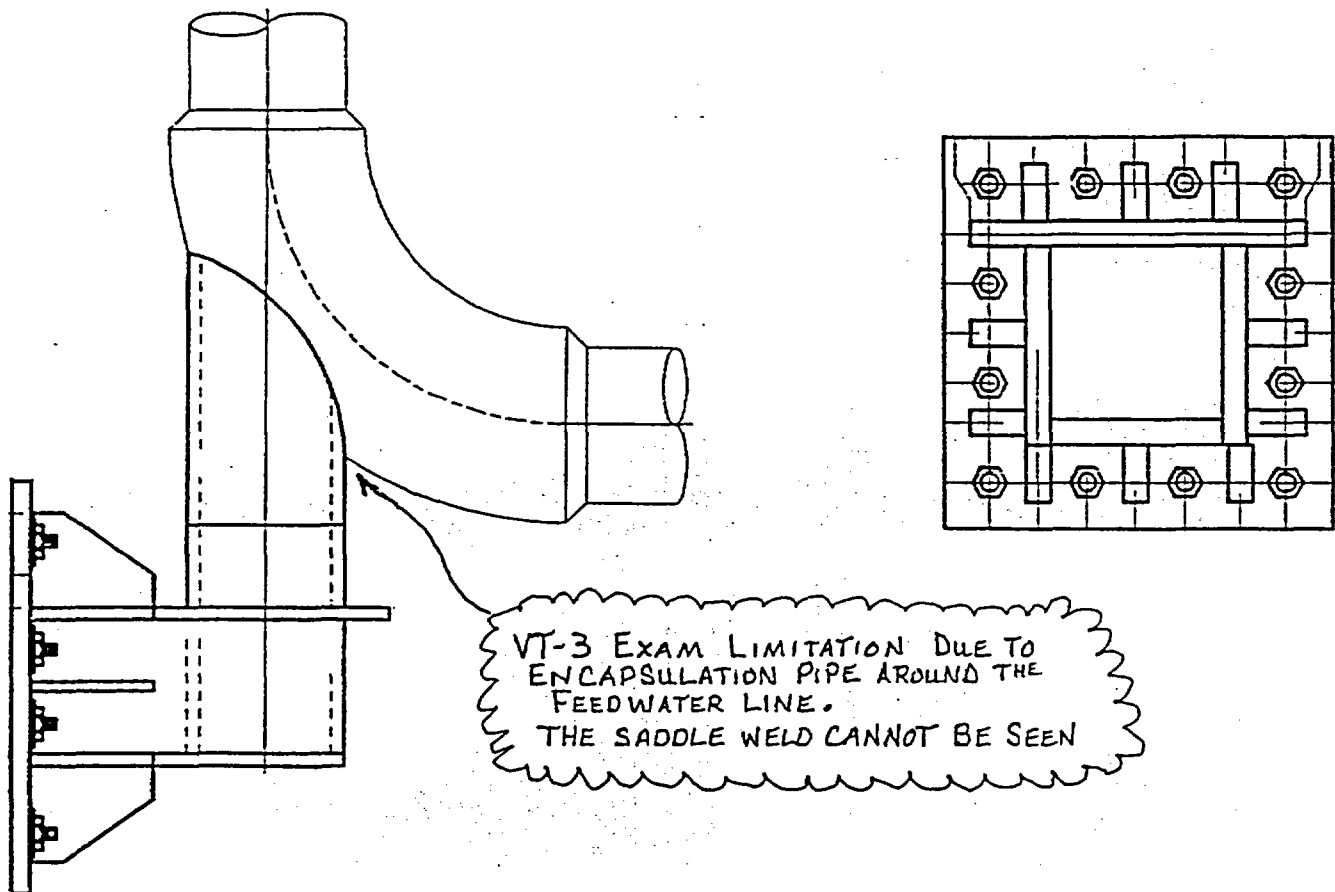
COMPONENT IDENTIFICATION: FDW-H170 PROCEDURE: NEP No. 15.5 REVISION: ORIG

ULTRASONIC: LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL: X

EXAMINER: Brian A. Knott II DATE: 10/17/01
LEVEL

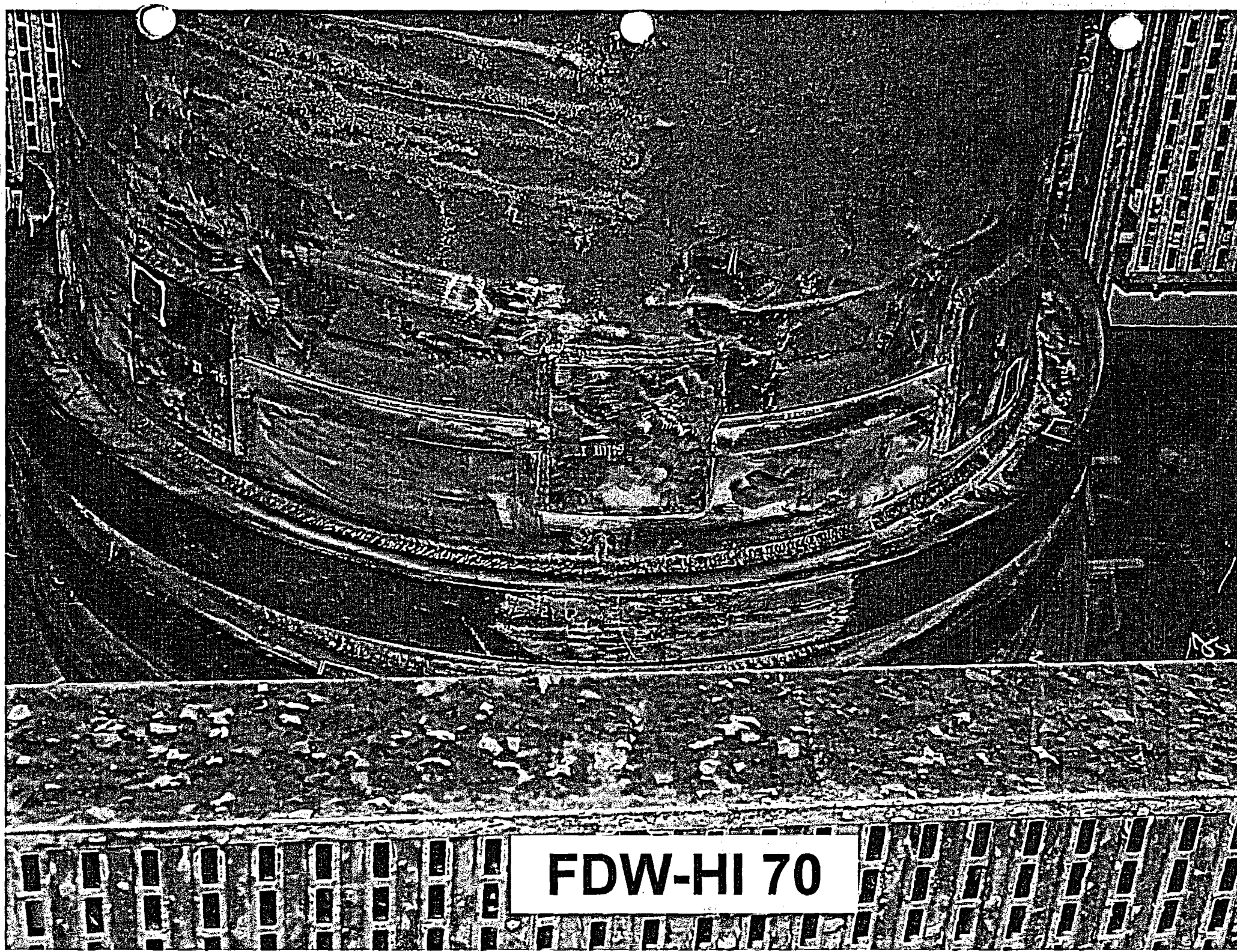
EXAMINER: NA NA DATE: N/A
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



KEWAUNEE NUCLEAR
POWER PLANT REVIEW: October 18, 2001 Phillip C. Bueke DATE: October 18, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Logan McFadden DATE: 10-18-01



FDW-HI 70

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-26

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 3" Safety Injection Integrally Welded Attachment SI-H17A**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category C-C; Item No. C3.20**
- 4. Impracticality of Compliance: 1% of Integrally Welded Attachment SI-H17A was inaccessible for Surface Liquid Penetrant Examination due to Welded Name Plate located next to 2 of the 4 Welded Lugs thus restricting Surface Examination.**
- 5. Burden Caused by Compliance: To provide for access to perform Surface Examination for SI-H17A would require removal and then rewelding of the Name Plate located on the 3" Safety Injection Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-26

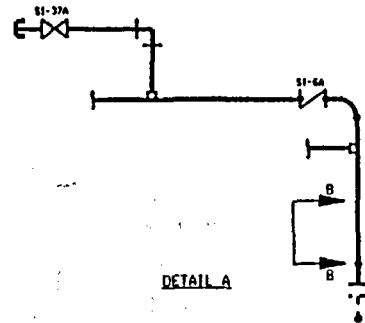
6. Proposed Alternative and Basis for Use: No alternative Code required
Surface examination is available for the SI-H17A Welded Lug Area due to restricted access caused by the Welded Name Plate. VT-3 Examination of the accessible portion of SI-H17A Support and Welded Lugs were performed.

7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 – June 16, 2004

8. Precedents: Not Applicable

9. References: Not Applicable

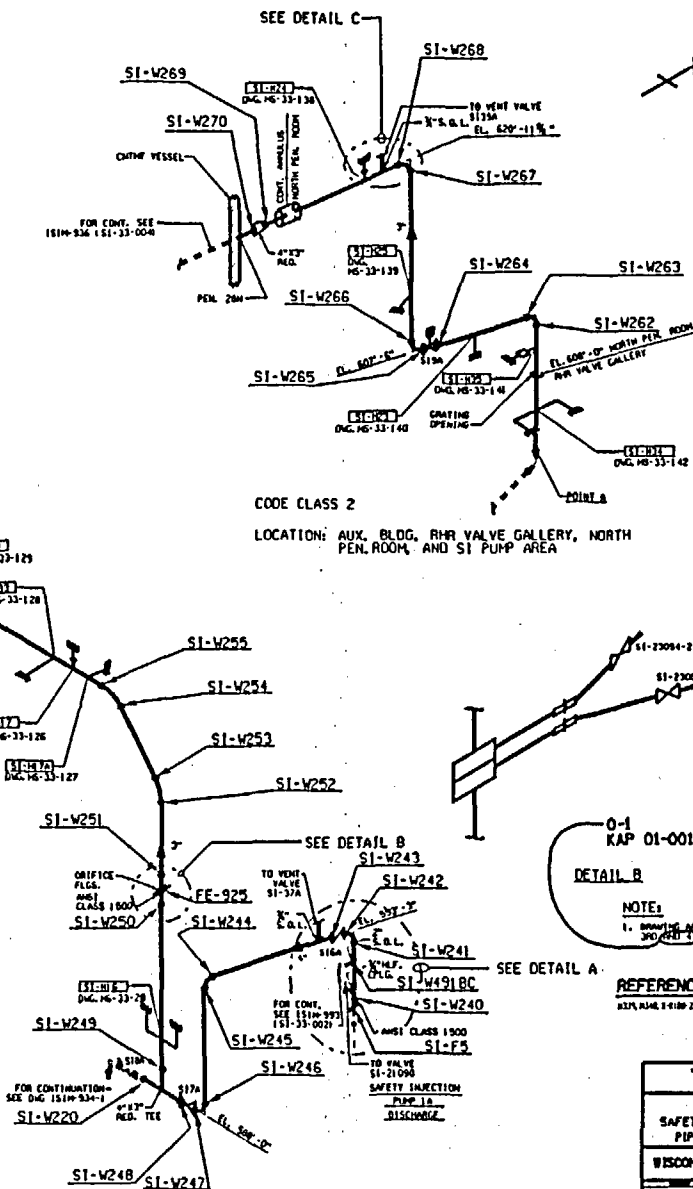
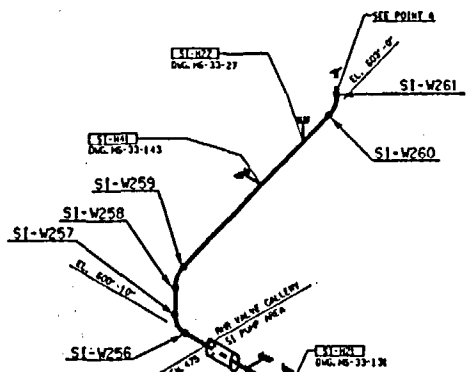
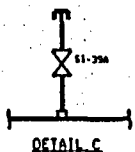
2-016-1151



SECTION B-B

VALVE BOXES AND LINE DATA		
LINE	VALVE BOX	LINE
SI-37A	SI-64	SI-2190
SI-64	SI-2190	SI-37A
SI-2190	SI-37A	SI-64
PUMP BOX LINE DATA		
LINE	PUMP BOX	LINE
SI-37A	SI-64	SI-2190
SI-64	SI-2190	SI-37A
SI-2190	SI-37A	SI-64
HYDRAULIC WELVE ATTACHMENT DATA		
LINE	WELVE	LINE
SI-37A	SI-64	SI-2190
SI-64	SI-2190	SI-37A
SI-2190	SI-37A	SI-64

PIPING		
DIAMETER	WELVE	WELVE
1.500-0.518	1.500-0.518	1.500-0.518
1.500-0.518	1.500-0.518	1.500-0.518



0-1
KAP 01-001639
DETAIL B
NOTE:
1. DRAWING NOT SCALE FOR
300' (100' MIN) INTERVAL.

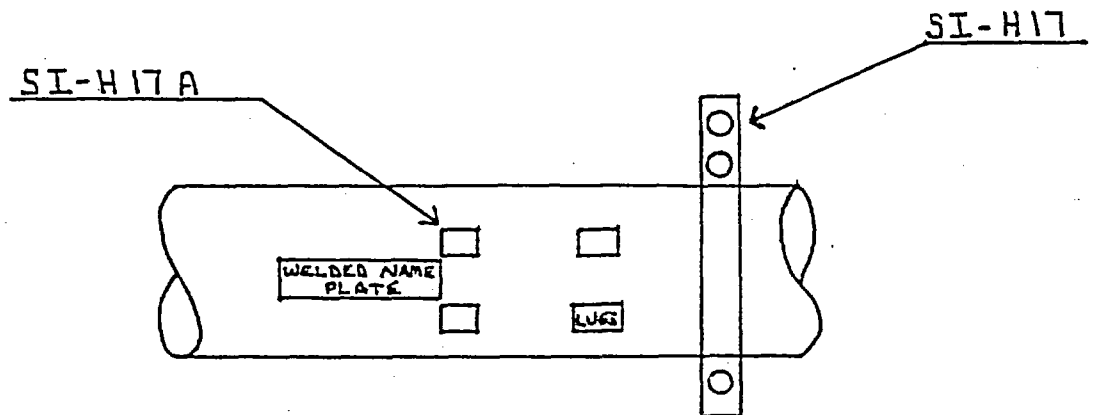
REFERENCE DWGS.

WISCONSIN PUBLIC SERVICE CORP.	
151 ISOMETRIC SAFETY INJECTION PUMPS DISCH. PIPING TO PEN 20M & RWST	
DATE: 11/1/83	BY: J. J. JONES
SCALE: 1" = 100'	PROJECT: 151-934-2
151-934-2	

WISCONSIN PUBLIC SERVICE CORPORATION

REV.: ORIG.

KEWAUNEE NUCLEAR POWER PLANT

ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORDSYSTEM OR COMPONENT: SAFETY INJECTION PUMPS DISCH.
PIPING TO PEN 2&N & RWSTDRAWING NO.: ISIM-934-2COMPONENT IDENTIFICATION: SI-H17A PROCEDURE: NEPND. 15.6 REVISION: DRIG.ULTRASONIC: LIQUID PENETRANT: X MAGNETIC PARTICLE: VISUAL: EXAMINER: David Thomas II DATE: 10-26-98
LEVELEXAMINER: NA DATE: NA
LEVELSKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND
PERCENTAGE OF REDUCED EXAMINATION COVERAGE.NAME PLATE .20" FRDM TOE OF
WELD ON 2 LUGSPERCENTAGE OF REDUCED EXAMINATION
COVERAGE = 1%KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bukes DATE: October 27, 1998AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Ryan McGinnis DATE: 10-28-98

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-27

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 8" Reactor Coolant Pipe Branch Connection Weld RC-W3BC**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-J; Item No. B9.31**
- 4. Impracticality of Compliance: 42.4% of Reactor Coolant Pipe 8" Branch Connection Weld RC-W3BC was inaccessible for Ultrasonic Examination due to the Branch Nozzle Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to perform Ultrasonic Examination for Reactor Coolant Pipe 8" Branch Connection Weld RC-W3BC would require modification of the original design of the Reactor Coolant Pipe.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-27

6. Proposed Alternative and Basis for Use: No alternative Code required Ultrasonic Examination is available for Reactor Coolant Pipe Branch Connection RC-W3BC due to the Nozzle Configuration. VT-2 Examinations were performed during the 3rd Interval as required by ASME Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-1; Examination Category B-P; Item No. B15.50 each Refueling Outage for evidence of leakage. Surface Liquid Penetrant Examination was performed on Reactor Coolant Pipe 8" Branch Connection Weld RC-W3BC during the 3rd Interval as required by ASME Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-1; Examination Category B-J and Item No. B9.31.

7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 – June 16, 2004

8. Precedents: Not Applicable

9. References: Not Applicable

CD-1-101

CODE CLASS 1

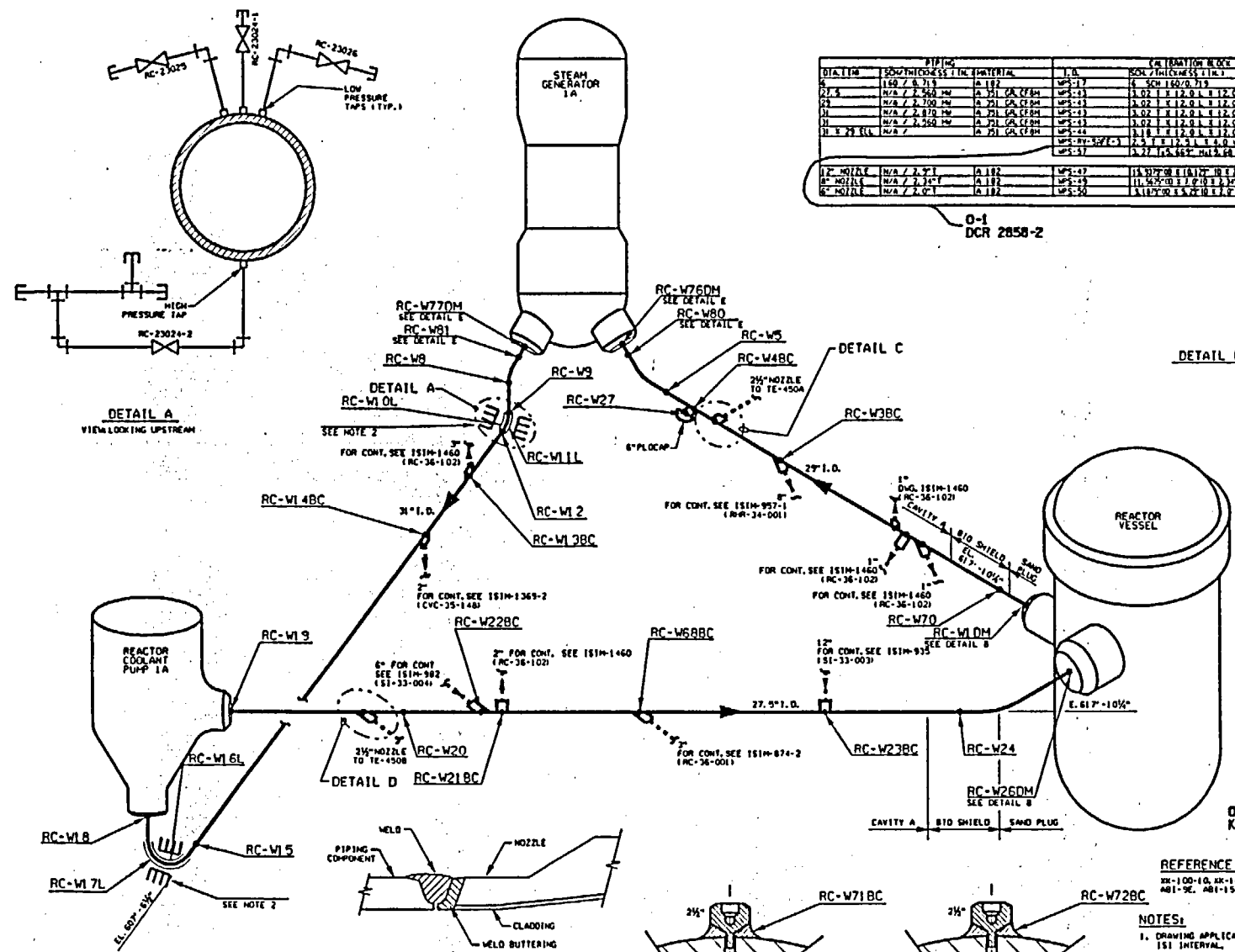
LOCATION: CONTAINMENT ELEV. 606'-0"
SAND PLUG, BIO SHIELD, CAVITY A



REVISION
1. REVISED FOR 100%
2. REVISED FOR 100%
3. REVISED FOR 100%
4. REVISED FOR 100%
5. REVISED FOR 100%
6. REVISED FOR 100%
7. REVISED FOR 100%
8. REVISED FOR 100%
9. REVISED FOR 100%
10. REVISED FOR 100%

ITEM	SIZE/THICKNESS	MATERIAL	ITEM	SIZE/THICKNESS	MATERIAL
1	1/2" / 0.1875"	A 182	11	1/2" / 0.1875"	A 182
2	1/2" / 0.1875"	A 182	12	1/2" / 0.1875"	A 182
3	1/2" / 0.1875"	A 182	13	1/2" / 0.1875"	A 182
4	1/2" / 0.1875"	A 182	14	1/2" / 0.1875"	A 182
5	1/2" / 0.1875"	A 182	15	1/2" / 0.1875"	A 182
6	1/2" / 0.1875"	A 182	16	1/2" / 0.1875"	A 182
7	1/2" / 0.1875"	A 182	17	1/2" / 0.1875"	A 182
8	1/2" / 0.1875"	A 182	18	1/2" / 0.1875"	A 182
9	1/2" / 0.1875"	A 182	19	1/2" / 0.1875"	A 182
10	1/2" / 0.1875"	A 182	20	1/2" / 0.1875"	A 182

O-1
DCR 2858-2



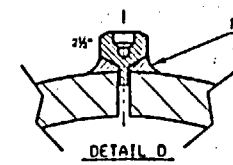
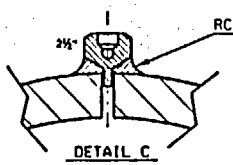
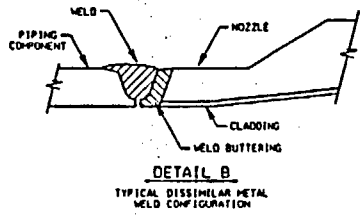
DETAIL E

REFERENCE DRAWINGS

- NOTES:
1. DRAWING APPLICABLE FOR 3'-0" DIA. 4IN. 151 INTERVAL.
 2. RUPTURE RESTRAINTS ARE NOT WITHIN THE JURISDICTION OF ASME SECTION II.
 3. CLASS 1 PIPING 1" DIAMETER AND LESS IS EXEMPT FROM RCE.

FUTURE
AS BUILT
FOR DCR 2111

DESIGNED BY: [Signature]		CHECKED BY: [Signature]	
DRAWN BY: [Signature]		SCALE: [Blank]	
151 ISO-METRIC REACTOR COOLANT PIPING LOOP A			
WISCONSIN PUBLIC SERVICE CORP.			
DATE: [Blank]		SHEET: [Blank]	
PROJECT: [Blank]		JOB: [Blank]	
DRAWING NO: [Blank]		REV: [Blank]	



WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: REACTOR COOLANT PIPING LOOP A

DRAWING NO.: ISIM-1703

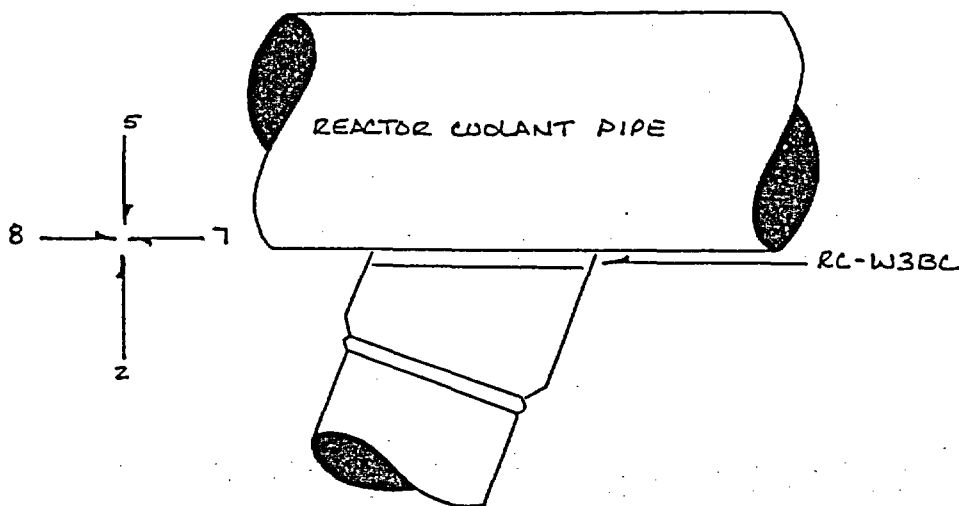
COMPONENT IDENTIFICATION: RC-W3BC PROCEDURE: NEP No 15.39 REVISION: ORIG

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: Jeff Dues II DATE: 11/03/98
LEVEL

EXAMINER: Greg Williams II DATE: 11-03-98
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND
PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

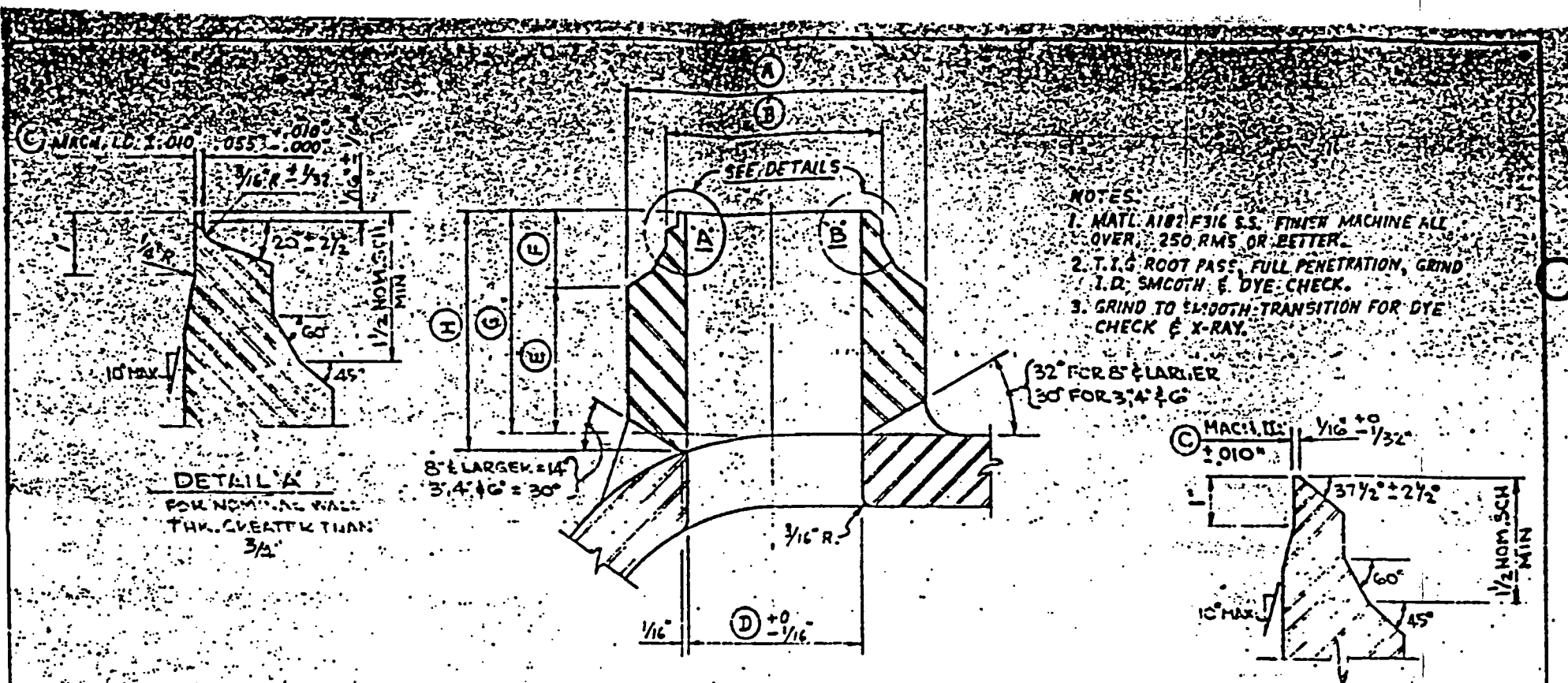


NOTE: NO SCAN 5, SCAN 7 & 8 LIMITED TO WELD & DOWNSTREAM
BASE METAL ONLY DUE TO CONFIGURATION OF BRANCH CONNECTION.

PROCEDURE LIMITATION: 42.4%

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip E. Bakes DATE: November 5, 1998

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Ryan McGinnis DATE: 11-6-98



DETAILS			MACHINING DATA									NOMINAL SCH.	NOMINAL WALL TH.
SIZE			END OF NOZZ.	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)		
1402	3" ON 27 1/2"	21 1/16"	5.625	3.500	2.692	2.624	3 1/16	1 1/2	5 3/16	5 1/4	160	.438	
1395	3" ON 25"	22 9/16"											
1397	3" ON 31"	23 11/16"											
1398	6" ON 27 1/2"	23 7/16"	6.012	4.500	3.692	2.624	3 15/16	1 5/8	5 9/16	5 1/2	120	.498	
1396	6" ON 29"	23 7/16"	9.187	6.625	5.32	5.189	4 15/16	2"	6 13/16	7 3/16	160	.718	
1397	8" ON 29"	2'-0 5/16"	11.687	8.625	7.163	7.001	5 7/8	2 3/8	8 1/4	8 5/8	140	.512	
1397	10" ON 27 1/2"	2'-1 1/16"	14.125	9"	8.750	8.750	6 1/16	2 5/8	9 5/16	9 13/16		1.000	
1398	10" ON 29"	2'-2 11/16"											
1399	12" ON 27 1/2"	2'-2 9/16"	15.937	12.750	10.413	10.126	7 1/4	2 13/16	10 1/16	10 7/8	160	1.312	
	12" ON 29"	2'-3 1/16"											
1400	14" ON 29"	2'-4 1/16"	17.575	14.000	11.475	11.188	7 1/16	3"	10 1/16	11 5/16	180	1.100	

THIS SHEET IS FOR PLANTS
AEP, AMP, TVA, TEN, DLW,
VRA, VGB, WPS, & NRP,
ONLY.

Pipe supplied for K is
A 351 Gr. CF8M

FOR CAST PIPE HDR.
A451 GR. CPE8M

THESE NOZZLES ARE FOR
A451 GR. CPE8M CAST PIPE ONLY.
CERTIFIED DOCUMENT.
IS FILED AT PS&E CO.
CHICAGO, ILL.
REF. W 503392 2-8, 3.
REF. W 503392 2-8, 3.

DRAWING STATUS	BY	DATE
FOR PLANT EQUIPMENT		
PRELIMINARY		
APPROVED FOR CONSTRUCTION		
WITH COMMENTS		
APPROVED FOR CONSTRUCTION		

REV.	DESCRIPTION	DATE
1	REV. DEVEL END DETAIL	3-25-70
0	ISSUED FOR APPROVAL	2-26-70

SOUTHWEST FABRICATING & WELDING CO.
CUSTOMER WESTINGHOUSE ELECTRIC CORP.
P.O. NO. 546 - CRW 116871 BN

P.O. BOX 9449 HOUSTON, TEXAS 77011 713-228-3051
RC PIPING NOZZLE DETAILS
140 9392

2-24-72 XK100-1392 (1)

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-28

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 6" Reactor Coolant Pipe Branch
Connection Weld RC-W4BC**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category
B-J; Item No. B9.31**
- 4. Impracticality of Compliance: 65.0% of Reactor Coolant Pipe 6" Branch
Connection Weld RC-W4BC was inaccessible for Ultrasonic Examination
due to the Branch Nozzle Configuration thus restricting Ultrasonic
Examination.**
- 5. Burden Caused by Compliance: To provide for access to perform
Ultrasonic Examination for Reactor Coolant Pipe 6" Branch Connection
Weld RC-W4BC would require modification of the original design of the
Reactor Coolant Pipe.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-28

6. Proposed Alternative and Basis for Use: No alternative Code required Ultrasonic Examination is available for Reactor Coolant Pipe 6" Branch Connection RC-W4BC due to the Nozzle Configuration. VT-2 Examinations were performed during the 3rd Interval as required by ASME Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-1; Examination Category B-P; Item No. B15.50 each Refueling Outage for evidence of leakage. Surface Liquid Penetrant Examination was performed on Reactor Coolant Pipe 6" Branch Connection Weld RC-W4BC during the 3rd Interval as required by ASME Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-1; Examination Category B-J and Item No. B9.31.

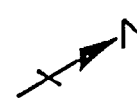
7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 – June 16, 2004

8. Precedents: Not Applicable

9. References: Not Applicable

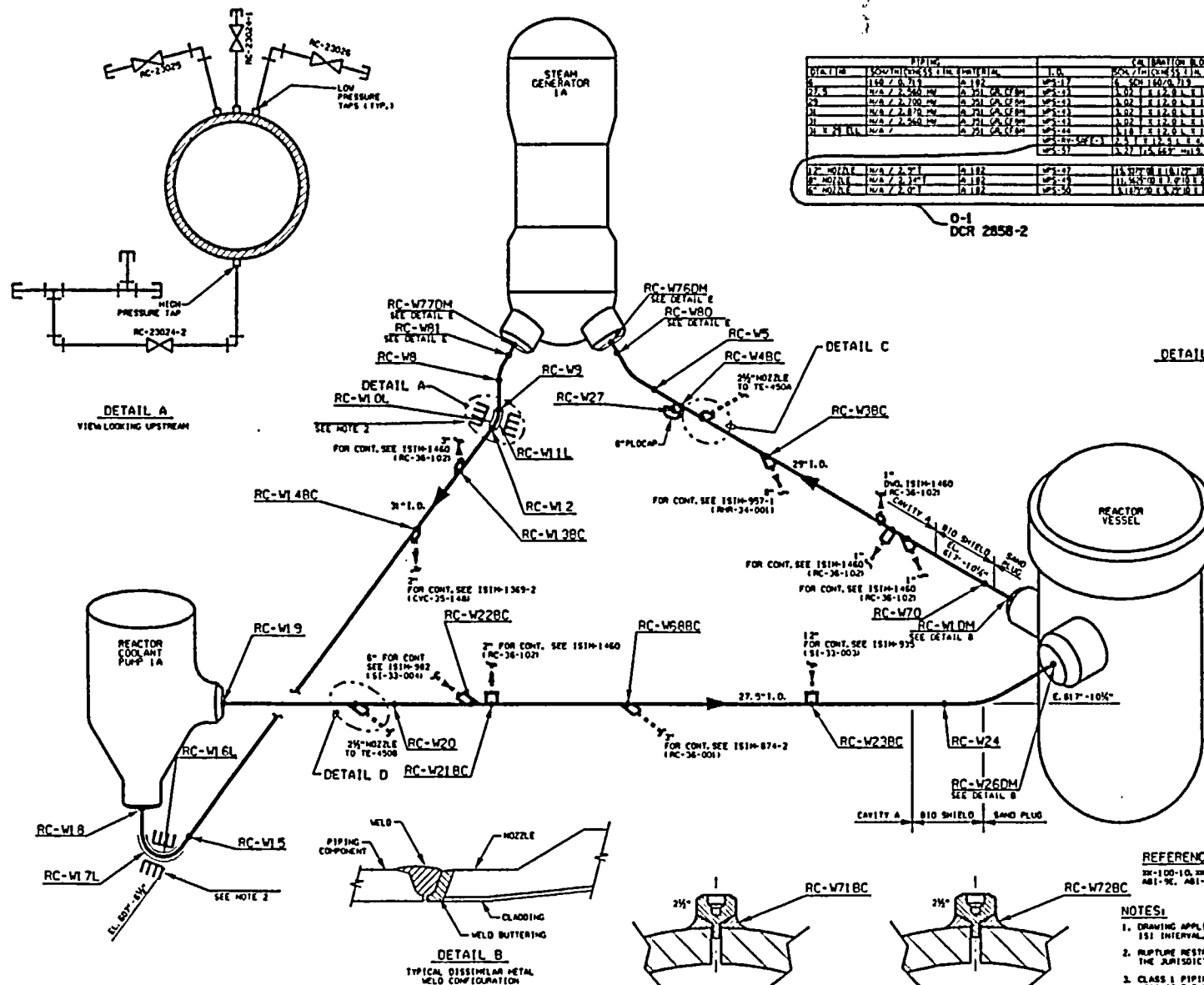
CODE CLASS 1

LOCATION: CONTAINMENT ELEV. 606'-0"
SAND PLUG, BIO SHIELD, CAVITY A



DIPLOME			CERAMIFICATION		
DATE	DESIGNATION	DATE	DESIGNATION	DATE	DESIGNATION
1900	1900	1900	1900	1900	1900
1901	1901	1901	1901	1901	1901
1902	1902	1902	1902	1902	1902
1903	1903	1903	1903	1903	1903
1904	1904	1904	1904	1904	1904
1905	1905	1905	1905	1905	1905
1906	1906	1906	1906	1906	1906
1907	1907	1907	1907	1907	1907
1908	1908	1908	1908	1908	1908
1909	1909	1909	1909	1909	1909
1910	1910	1910	1910	1910	1910
1911	1911	1911	1911	1911	1911
1912	1912	1912	1912	1912	1912
1913	1913	1913	1913	1913	1913
1914	1914	1914	1914	1914	1914
1915	1915	1915	1915	1915	1915
1916	1916	1916	1916	1916	1916
1917	1917	1917	1917	1917	1917
1918	1918	1918	1918	1918	1918
1919	1919	1919	1919	1919	1919
1920	1920	1920	1920	1920	1920
1921	1921	1921	1921	1921	1921
1922	1922	1922	1922	1922	1922
1923	1923	1923	1923	1923	1923
1924	1924	1924	1924	1924	1924
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1927	1927	1927	1927	1927	1927
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1931	1931	1931	1931	1931	1931
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1948	1948	1948	1948	1948	1948
1949	1949	1949	1949	1949	1949
1950	1950	1950	1950	1950	1950
1951	1951	1951	1951	1951	1951
1952	1952	1952	1952	1952	1952
1953	1953	1953	1953	1953	1953
1954	1954	1954	1954	1954	1954
1955	1955	1955	1955	1955	1955
1956	1956	1956	1956	1956	1956
1957	1957	1957	1957	1957	1957
1958	1958	1958	1958	1958	1958
1959	1959	1959	1959		

0-1
DCR 2858-2



REFERENCE DRAWINGS

EK-100-10, EK-100-106, M-359,
 AB1-9E, AB1-1509

NOTES:

1. DRAWING APPLICABLE FOR 200 & 400 PSI INTERVAL.
2. RUPTURE RESTRAINTS ARE NOT WITHIN THE JURISDICTION OF ASME SECTION XI.
3. CLASS 1 PIPING 1" DIAMETER AND LESS IS EXEMPT FROM NCE.

**FUTURE
AS BUILT
FOR ALL**

DECLASSIFIED PURSUANT TO NATIONAL ARCHIVES
RECORDS MANAGEMENT ACT, 44 U.S.C. 2201
EAP, 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

ISI ISOMETRIC
REACTOR COOLANT PIPING
LOOP A

REGISTERED
WISCONSIN PUBLIC SERVICE CORP.
OFFICE 600 WESTERN AVE.

RECEIVED

1510-1703

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: REACTOR COOLANT PIPING LOOP A

DRAWING NO.: ISTM-1703

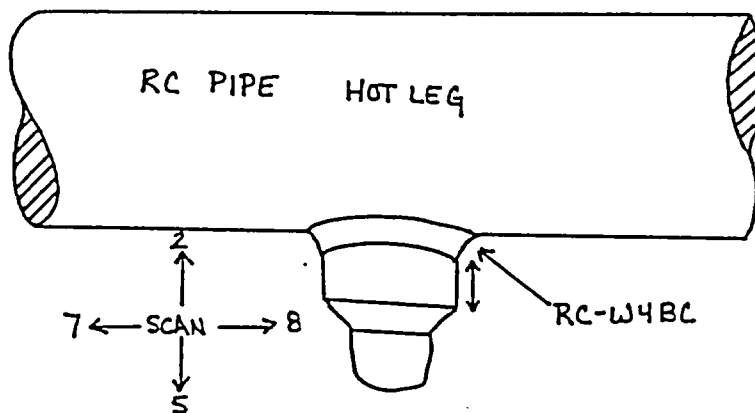
COMPONENT IDENTIFICATION: RC-W4 BC PROCEDURE: NEP No. 15.39 REVISION: ORIG.

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: W. Carlson III DATE: 11-7-98
LEVEL

EXAMINER: Ray Wham II DATE: 11-7-98
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



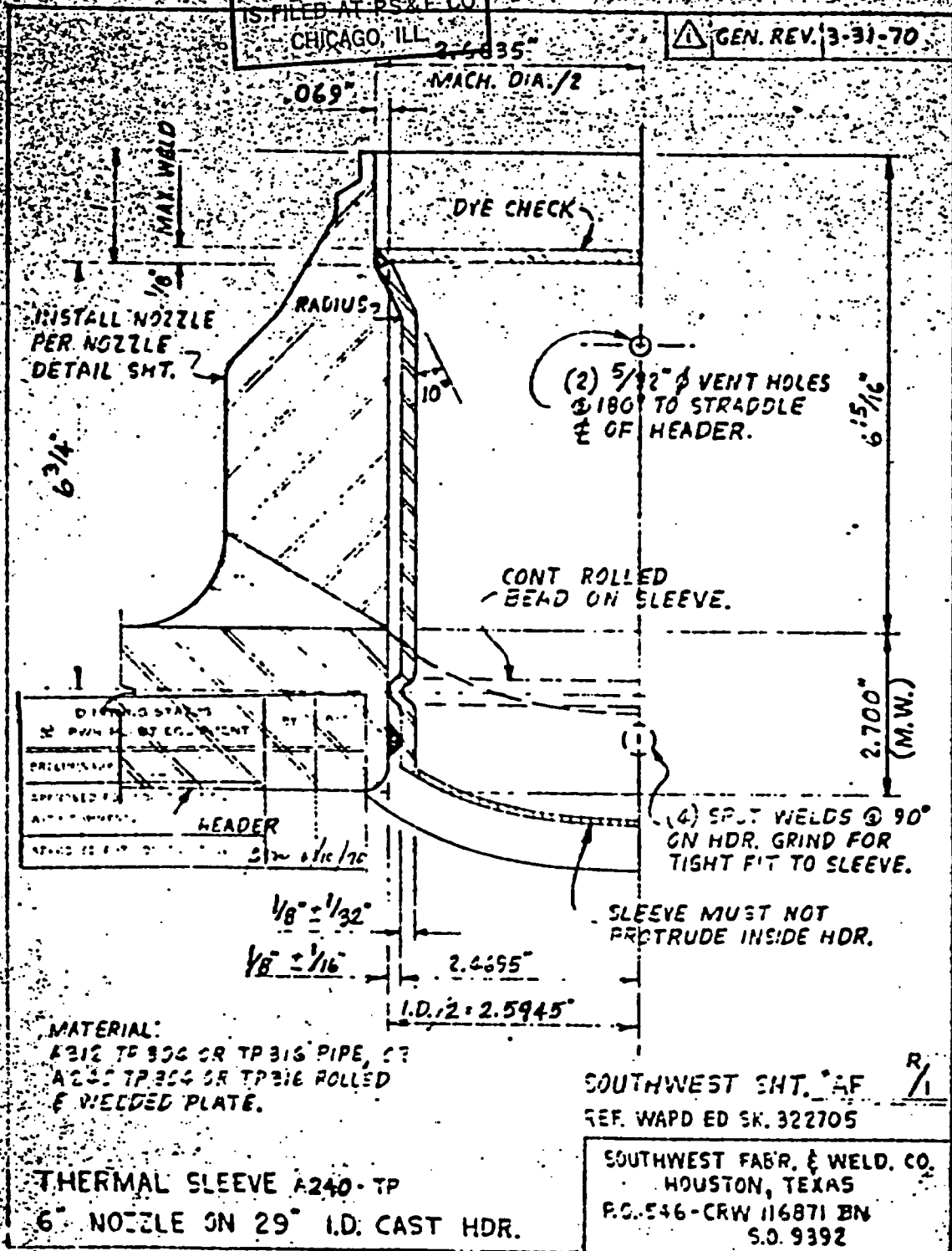
* NO SCAN 5 DUE TO BRANCH CONFIGURATION.
* SCANS 7 & 8 LIMITED DUE TO BRANCH CONFIGURATION.
PROCEDURE COVERAGE REDUCED BY 65%.

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bueker DATE: November 9, 1998

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Ray Wham DATE: 11-9-98

CERTIFIED DOCUMENT
IS FILED AT PS&F CO.
CHICAGO, ILL. 2-4-35

GEN. REV. 3-31-70



2-24-72 XK100-1396 (1)

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-29

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 29" I.D. Reactor Coolant Pipe
Circumferential Weld RC-W5**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category
B-J; Item No. B9.11**
- 4. Impracticality of Compliance: 4.6% of Reactor Coolant Pipe 29" I.D.
Circumferential Weld RC-W5 was inaccessible for Ultrasonic Examination
due to the O.D. Taper on the Elbow thus restricting Ultrasonic
Examination.**
- 5. Burden Caused by Compliance: To provide for access to perform
Ultrasonic Examination for Reactor Coolant Pipe 29" I.D. Circumferential
Weld RC-W5 would require modification of the original design of the
Reactor Coolant Pipe.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-29

6. Proposed Alternative and Basis for Use: No alternative Code required Ultrasonic Examination is available for Reactor Coolant Pipe 29" I.D. Circumferential Weld RC-W5 due to the O.D. Taper on Elbow. VT-2 Examinations were performed during the 3rd Interval as required by ASME Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-1; Examination Category B-P; Item No. B15.50 each Refueling Outage for evidence of leakage. Surface Liquid Penetrant Examination was performed on Reactor Coolant Pipe 29" I.D. Circumferential Weld RC-W5 during the 3rd Interval as required by ASME Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-1; Examination Category B-J and Item No. B9.11.

7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 – June 16, 2004

8. Precedents: Not Applicable

9. References: Not Applicable

**FUTURE
AS BUILT
FOR DEC 2010**

REFERENCE DRAWINGS

NK-100-10, NK-100-106, H-359,
 AB-9E, AB-1503

NOTES:

1. DRAWING APPLICABLE FOR 3rd & 4th 151 INTERVAL.
2. RUPTURE RESTRAINTS ARE NOT WITHIN THE JURISDICTION OF ASME SECTION II.
3. CLASS 1 PIPING 1" DIAMETER AND LESS IS EXEMPT FROM NDE.

DISCLOSED IN PUBLIC SERVICE COMPANY'S 2001
ANNUAL REPORT, PAGES 14 AND
15, UNDER "MANAGEMENT'S DISCUSSION AND ANALYSIS"

151 ISOMETRIC
REACTOR COOLANT PIPING
LOOP A

ISSUED BY
WISCONSIN PUBLIC SERVICE CORP.

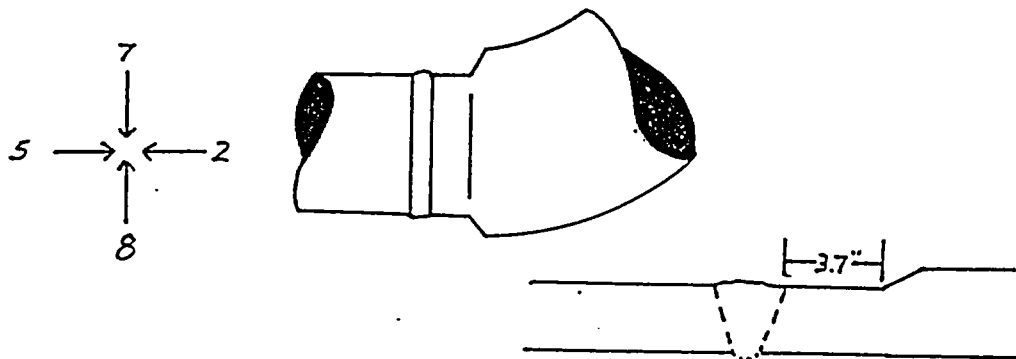
STOCK BUY PROGRAM

151-103

WISCONSIN PUBLIC SERVICE CORPORATION

REV.: ORIG.

KEWAUNEE NUCLEAR POWER PLANT

ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORDSYSTEM OR COMPONENT: REACTOR COOLANT PIPING LOOP ADRAWING NO.: 151M-1703COMPONENT IDENTIFICATION: RC-W5 PROCEDURE: NEP No. 15.13 REVISION: AULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL: EXAMINER: Jeff Oewer II DATE: 10-30-98
LEVELEXAMINER: Paul I DATE: 10-30-98
LEVELSKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND
PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

NOTE: SCAN 2 LIMITED ON UPSTREAM SIDE OF WELD DUE
TO O.D. TAPER ON ELBOW - SEE DIMENSIONS ABOVE.

PERCENTAGE OF PROCEDURAL LIMITATION 4.6%KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bakes DATE: November 7, 1998AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Roger Morgan DATE: 11-7-98

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-30

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

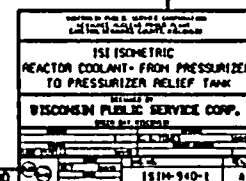
- 1. ASME Code Component Affected: 3" Pressurizer Relief Circumferential Weld PR-W12**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-J; Item No. B9.21**
- 4. Impracticality of Compliance: 74.0% of the 3" Pressurizer Relief Circumferential Weld PR-W12 was inaccessible due to a Whip Restraint RRRC39 thus restricting Surface Liquid Penetrant Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 74.0% of the 3" Pressurizer Relief Circumferential Weld PR-W12 would require removal of the Whip Restraint RRRC39.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-30

- 6. Proposed Alternative and Basis for Use: No alternative Code required
Liquid Penetrant examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-
1; Examination Category B-P; Item B15.50 each Refueling Outage for
evidence of leakage.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**



**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

REACTOR COOLANT-FRAME PRESSURIZER
SYSTEM OR COMPONENT: TO PRESSURIZER RELIEF TANK DRAWING NO.: IS/M-940-1

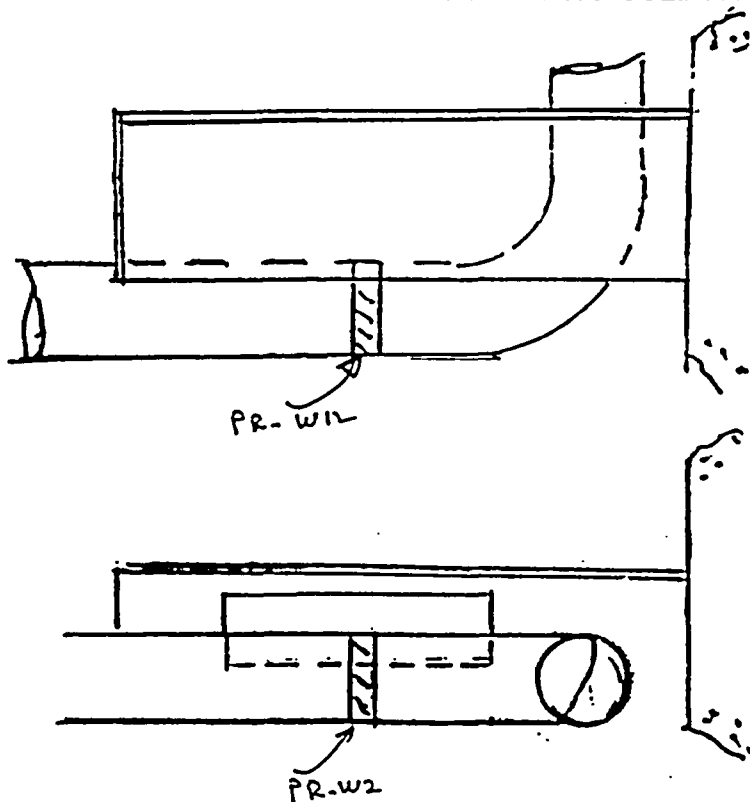
COMPONENT IDENTIFICATION: PR-W12 PROCEDURE: QCP-901 REVISION: ORIG.

ULTRASONIC: LIQUID PENETRANT: X MAGNETIC PARTICLE: VISUAL:

EXAMINER: NLA. Bey. II DATE: 4-15-95
LEVEL

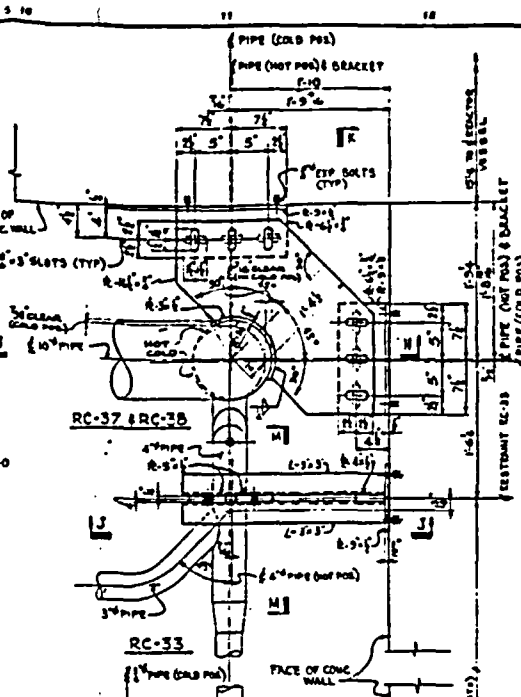
EXAMINER: NA NA DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



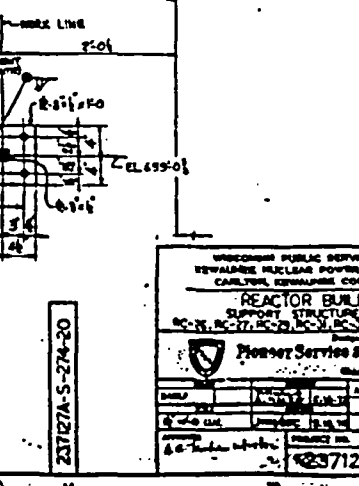
Whip Restraint Limited
P.T. Exam. of Weld
PR-W12
Percentage of Reduced
Examination Coverage = 74%

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Eino A. Salstad DATE: 4/17/95
AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Ryan Meyer DATE: 4/19/95




ALL PIPE REQUIRED RETAINERS FOR PIPES MADE OF SEAMLESS STEEL SHALL BE LINED OF CORROSION RESISTANT 18% STAINLESS STEEL. AFTER 4-2-2, PIPE END OF TUBES SHOWN ON DATA, THE HEAT TREAT, QUALITY OF STEEL MEMBERS SHOWN OF THE STRUCTURAL RETAINERS AND EACH WELDED AS A CORROSION RESISTANT OF STRUCTURE PLATE. 40% PROVISIONS FOR EXCESSIVE WELD REPAIRS.

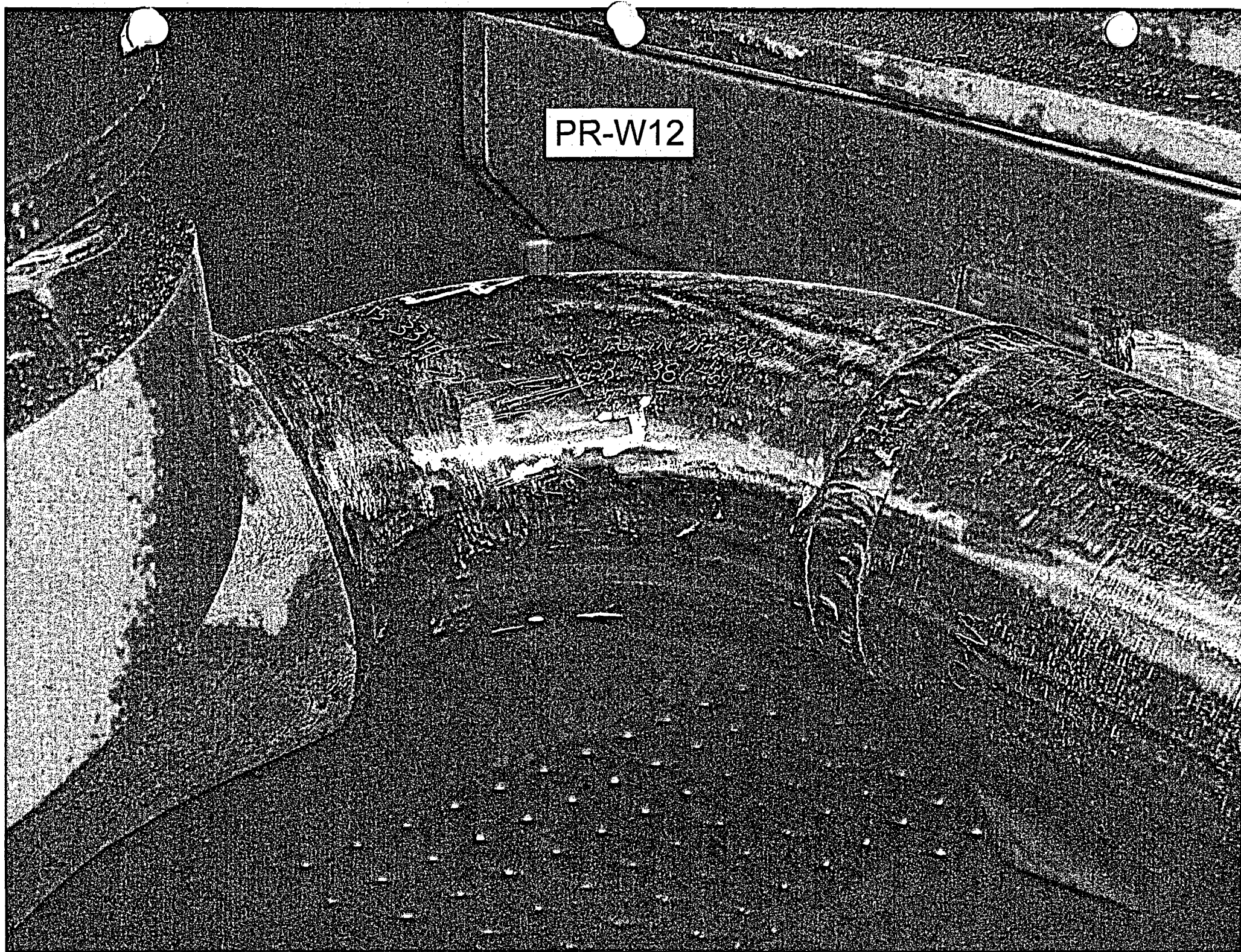
WHERE SHOWN PLATES ARE PROVIDED WITH BELT, THE SEAMLESS STEEL SHALL BE PLACED AS THE LAST SHOWN PLATE CLOSEST TO THE PIPE.



BIRMINGHAM SECTION MEMBERSHIP		
OFFICER	NAME	DATE
PRESIDENT	ALAN	10-1-74
V.P. PRESIDENT	ALAN	10-1-74
SECRETARY	ALAN	10-1-74
TREASURER	ALAN	10-1-74
CLERK	ALAN	10-1-74
CHIEF OF POL.	ALAN	10-1-74
CHIEF OF SEC.	ALAN	10-1-74
CHIEF OF AD.	ALAN	10-1-74
CHIEF OF EXT.	ALAN	10-1-74
CHIEF OF INT.	ALAN	10-1-74
CHIEF OF LEG.	ALAN	10-1-74
CHIEF OF MGMT.	ALAN	10-1-74
CHIEF OF PLAN.	ALAN	10-1-74
CHIEF OF RESEARCH	ALAN	10-1-74
CHIEF OF TECH.	ALAN	10-1-74
CHIEF OF TRNG.	ALAN	10-1-74
CHIEF OF WELFARE	ALAN	10-1-74

WISCONSIN PUBLIC SERVICE CORPORATION TETRAPOLE NUCLEAR POWER PLANT - UNIT NO. 1 CAMBRIA, KENOSHA COUNTY, WISCONSIN	
REACTOR BUILDING SUPPORT STRUCTURE	
RC-N, SC-17, SC-18, SC-19, RC-17, SC-20	8-23 8-23
Prepared by Monnet Service & Engineering Co.	
Checked 	
DATE 8-23-68	TIME 10:15 AM
PROJECT NO. 68-17-18-19	SHEET NO. 1
PREPARED BY R. J. G. Jones	CHECKED BY R. J. G. Jones
68-17-18-19-20	

PR-W12



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-31

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Pressurizer 6" Nozzle To Safe End Butt Weld PR-W1DM**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-F; Item No. B5.40**
- 4. Impracticality of Compliance: 50.0% of the Pressurizer 6" Nozzle To Safe End Butt Weld PR-W1DM was inaccessible due to the Carbon Steel Nozzle Configuration and Nozzle O.D. Taper Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 50.0% of the Pressurizer 6" Nozzle To Safe End Butt Weld PR-W1DM would require modification of the original design of Pressurizer Nozzle to Safe Ends.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-31

6. Proposed Alternative and Basis for Use: No alternative Code required. Ultrasonic examination is available due to the limited access. VT-2 Examinations were performed during the 3rd Interval as required by ASME Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-1; Examination Category B-P; Item B15.20 each Refueling Outage for evidence of leakage. Surface Liquid Penetrant Examination was performed on Pressurizer 6" Nozzle To Safe End Butt Weld PR-W1DM during the 3rd Interval as required by ASME Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-1; Examination Category B-F and Item No. B5.40.

7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 – June 16, 2004

8. Precedents: Not Applicable

9. References: Not Applicable

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: REACTOR COOLANT FROM PRESSURIZER TO PRESSURIZER RELIEF TANK

DRAWING NO.: 151M-940-1

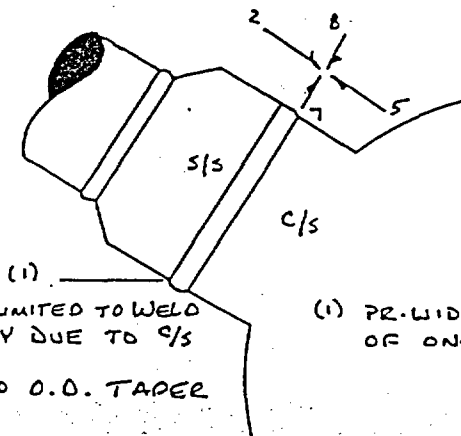
COMPONENT IDENTIFICATION: PR-WIDM PROCEDURE: NEP No. 15.14 REVISION: ORIG

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: Jeff Dues II DATE: 11/03/98
LEVEL

EXAMINER: Greg Wilson II DATE: 11-03-98
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



NOTE: NO SCAN 5, SCAN 7 & 8 LIMITED TO WELD AND U/S BASE METAL ONLY DUE TO C/S MATERIAL.
SCAN 2 LIMITED DUE TO O.D. TAPER

(i) PR-WIDM & PR-WZLDM ARE TYPICAL OF ONE ANOTHER.

PERCENTAGE OF CODE/PROCEDURE LIMITATION: 50%

ACTUAL PART THICKNESS: 1.2"

CAL. BLOCK (WPS-17) THICKNESS: 0.719"

ADEQUATE SCREEN RANGE ACHIEVED UTILIZING WPS-17

45° I.D. ROLL AT 6.2 DIVISIONS.

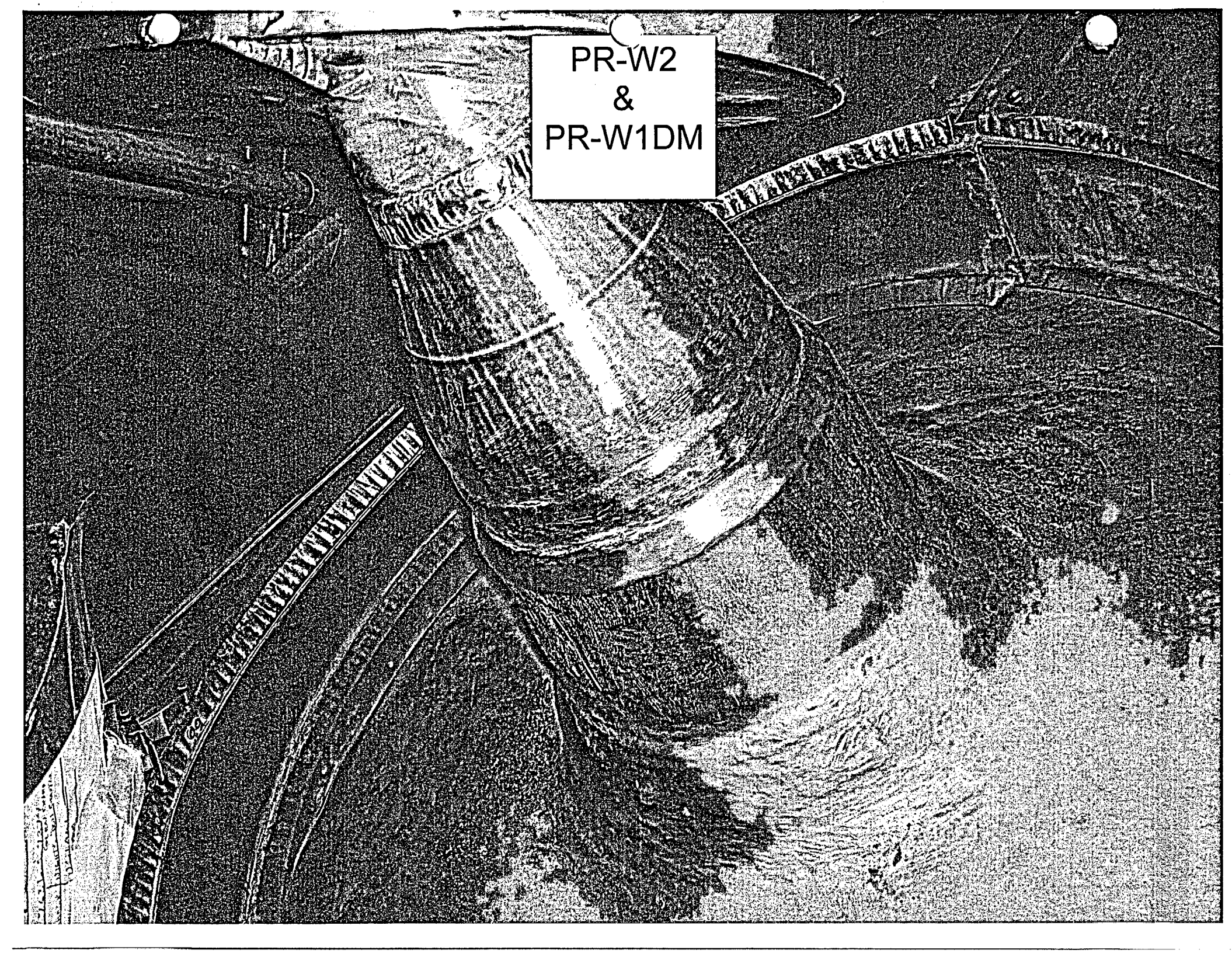
60° I.D. ROLL AT 8.1 DIVISIONS.

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bukes

DATE: November 5, 1998

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Bryan Matymin

DATE: 11-6-98



PR-W2
&
PR-W1DM

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-32

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Pressurizer 6" Nozzle To Safe End Butt Weld PR-W16DM**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-F; Item No. B5.40**
- 4. Impracticality of Compliance: 50.0% of the Pressurizer 6" Nozzle To Safe End Butt Weld PR-W16DM was inaccessible due to the Carbon Steel Nozzle Configuration and Nozzle O.D. Taper Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 50.0% of the Pressurizer 6" Nozzle To Safe End Butt Weld PR-W16DM would require modification of the original design of Pressurizer Nozzle to Safe Ends.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

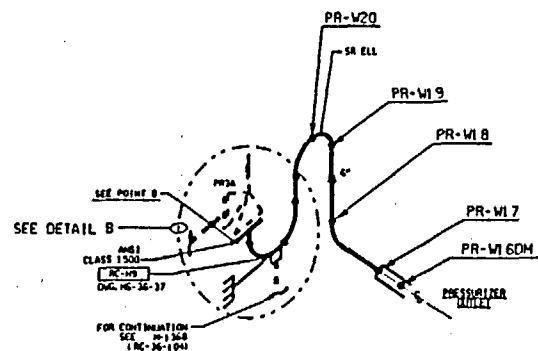
RELIEF REQUEST NO: RR-G-7-32

6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-
1; Examination Category B-P; Item B15.20 each Refueling Outage for
evidence of leakage. Surface Liquid Penetrant Examination was
performed on Pressurizer 6" Nozzle To Safe End Butt Weld PR-W16DM
during the 3rd Interval as required by ASME Boiler and Pressure Vessel
Code Section XI 1989 Edition: Table IWB-2500-1; Examination Category
B-F and Item No. B5.40.

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

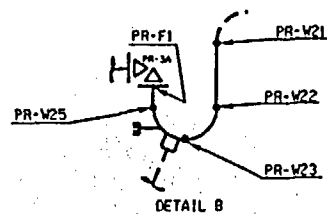
9. References: Not Applicable



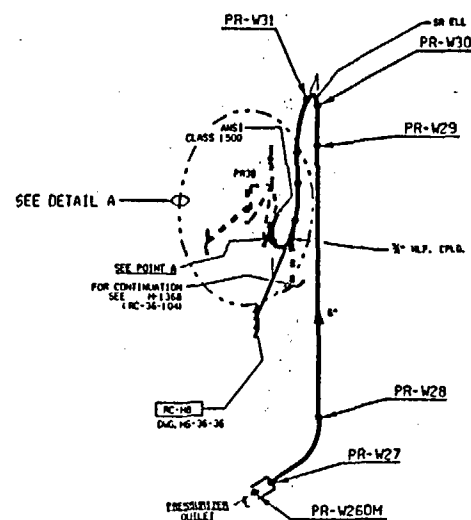
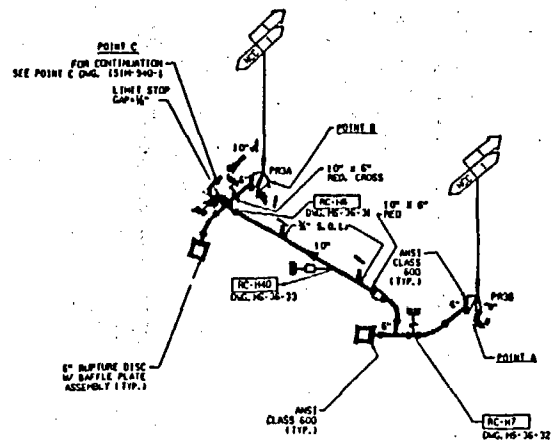
PIPING				CALIBRATION BLOCK			
SIA. NO.	SCM/THICKNESS	IN	MATERIAL	I.D.	SCM/THICKNESS	IN	MATERIAL
5	160/0.719		A 376 TP316	NPS-12	160/0.719		A 376 TP316

INTEGRITY WELDED ATTACHMENT DATA	
Q.	THICKNESS (IN.)
RC-M8	0.375
RC-M9	0.375

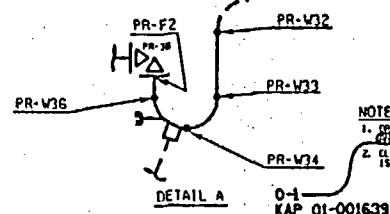
NAME DATA		VALUE DATA	
PR-3A	8 / 8	8	8
PR-3B	8 / 8	8	8
NAME DATA		VALUE DATA	
PR-F1	12 / 1, 3, 5	24	24
PR-F2	12 / 1, 3, 5	24	24



LOCATION: CONTAINMENT, PRZ VAULT



REFERENCE DWGS.
K163, K164, K165, K166, K168, 2 K169-18



NOTES:

1. SPRAYING APPLICABLE FOR 2nd AND 3rd 151 INTERVAL.
2. CLASS 1 PIPING 1" DIA. & LESS IS EXEMPT FROM NOE.

0-1
KAP 01-001639

DIVISION OF PUBLIC WORKS CORPORATION
 151 ISOMETRIC
 REACTOR COOLANT FROM PRESSURIZED
 TO PRESSURIZED RELIEF TANK
 DIVISION OF
 WISCONSIN PUBLIC SERVICE CORP.
 ORDER BY: 151M-940-2

REV.: ORIG.

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

SYSTEM OR COMPONENT: REACTOR COOLANT - FROM PRESSURIZER TO PRESSURIZER RELIEF TANK

DRAWING NO.: ISIM-940-2

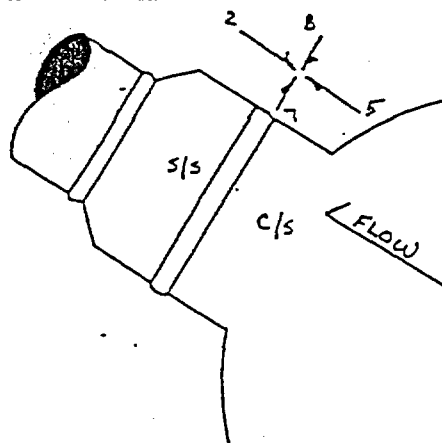
COMPONENT IDENTIFICATION: PR-W16 DM PROCEDURE: NEP-15.14 REVISION: ORIG.

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: TIM COBURN [Signature] II DATE: 10/25/01
LEVEL

EXAMINER: [Signature] II DATE: 10-25-01
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



PERCENTAGE OF CODE/PROCEDURE LIMITATION: 50%

ACTUAL PART THICKNESS: 1.2"
CAL. BLOCK (WPS-17) THICKNESS: 0.719"

ADEQUATE SCREEN RANGE ACHIEVED UTILIZING WPS-17

45° I.D. ROLL AT 6.2 DIVISIONS.

60° I.D. ROLL AT 8.1 DIVISIONS.

0°, 45°, 60° - NO SCAN 5 DUE TO MATERIAL CONFIGURATION.

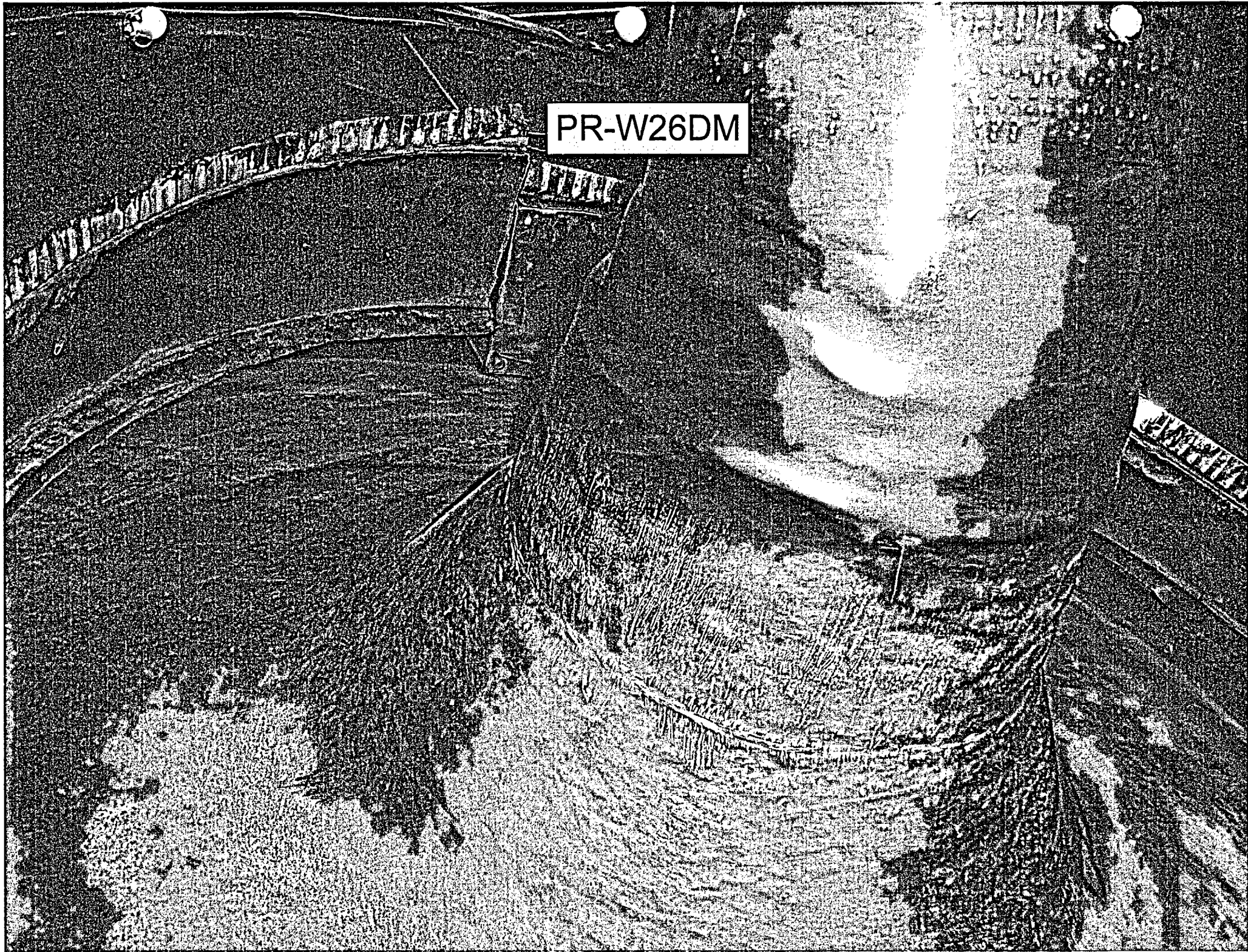
SCAN 2 LIMITED DUE TO DD TAPER.

SCAN 7, 8 LIMITED ON S SIDE DUE TO MATERIAL CONFIGURATION.

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bakes DATE: October 29, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: [Signature] DATE: 10/29/01

PR-W26DM



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-33

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Pressurizer 6" Nozzle To Safe End
Butt Weld PR-W26DM**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category
B-F; Item No. B5.40**
- 4. Impracticality of Compliance: 50.0% of the Pressurizer 6" Nozzle To Safe
End Butt Weld PR-W26DM was inaccessible due to the Carbon Steel
Nozzle Configuration and Nozzle O.D. Taper Configuration thus restricting
Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 50.0% of the
Pressurizer 6" Nozzle To Safe End Butt Weld PR-W26DM would require
modification of the original design of Pressurizer Nozzle to Safe Ends.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-33

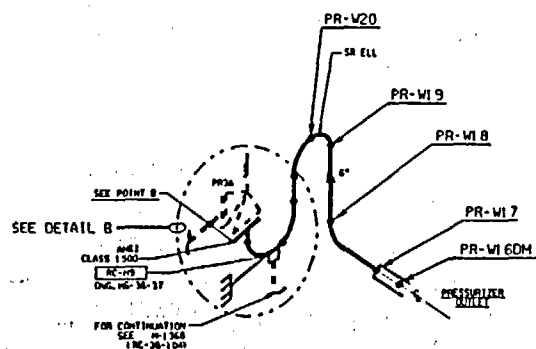
6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWB-2500-1; Examination Category B-P; Item B15.20 each Refueling
Outage for evidence of leakage. Surface Liquid Penetrant Examination was
performed on Pressurizer 6" Nozzle To Safe End Butt Weld PR-W26DM
during the 3rd Interval as required by ASME Boiler and Pressure Vessel
Code Section XI 1989 Edition: Table IWB-2500-1; Examination Category
B-F and Item No. B5.40.

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

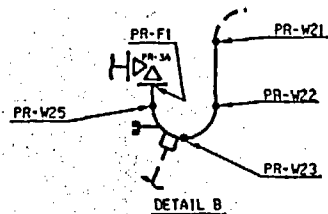
Z-006-4051



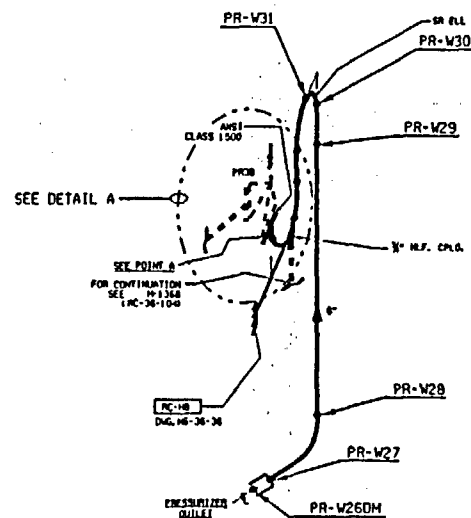
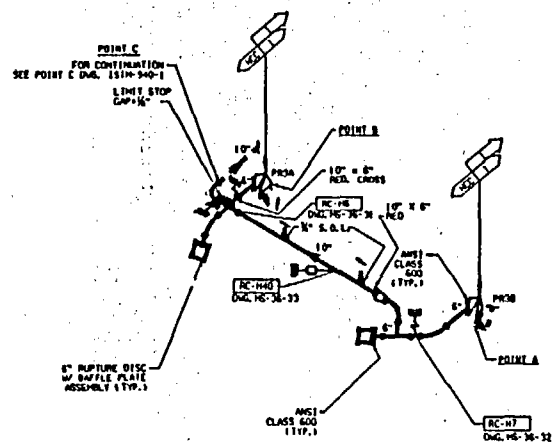
PIPING	CALCULATION BLANK
STATUS: SCHEMATIC / IN. MATERIAL	STATUS: SCHEMATIC / IN. MATERIAL
1160-7-19	1160-7-19

INTEGRALLY WELDED ATTACHMENT DATA
1.0
RC-W8
RC-W9

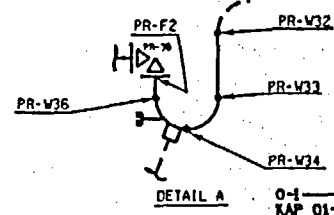
FLANGE WELDING DATA
1.0
RC-W8
RC-W9



LOCATION: CONTAINMENT, PRZ VAULT



REFERENCE DWGS.



NOTES:
1. DRAWING APPLICABLE FOR 3rd
2. CLASS 1 PIPING 1" DIA. & LESS
IS EXEMPT FROM NDE.

WISCONSIN PUBLIC SERVICE CORP.	
PROJECT NO.	151M-940-2
DATE	11/1/83
BY	151M-940-2
CHECKED	A

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: REACTOR COOLANT FROM PRESSURIZER TO PRESSURIZER RELIEF TANK

DRAWING NO.: ISIM-940-2

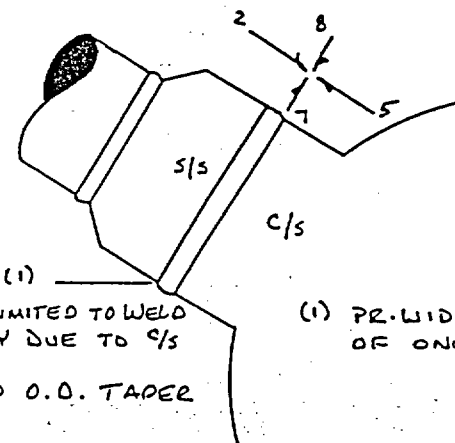
COMPONENT IDENTIFICATION: PR-W26DM PROCEDURE: NEP No. 15.14 REVISION: 009

ULTRASONIC: X LIQUID PENETRANT: _____ MAGNETIC PARTICLE: _____ VISUAL: _____

EXAMINER: Jeff Jones II DATE: 11/03/98
LEVEL

EXAMINER: Aug Williams II DATE: 11-03-98
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



NOTE: NO SCAN 5, SCAN 7 & 8 LIMITED TO WELD AND U/S BASE METAL ONLY DUE TO C/S MATERIAL.

SCAN 2 LIMITED DUE TO O.D. TAPER

U/S = UPSTREAM

(1) PR-WIDM & PR-W26DM ARE TYPICAL OF ONE ANOTHER.

PERCENTAGE OF CODE/PROCEDURE LIMITATION: 50%

ACTUAL PART THICKNESS: 1.2"

CAL. BLOCK (WPS-17) THICKNESS: 0.719"

ADEQUATE SCREEN RANGE ACHIEVED UTILIZING WPS-17

45° I.D. ROLL AT 6.2 DIVISIONS.

60° I.D. ROLL AT 8.1 DIVISIONS.

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip C. Bakes DATE: November 5, 1998

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Rayn McGinnis DATE: 11-6-98

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-34

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Pressurizer 10" Nozzle To Safe End
Butt Weld PR-W67DM**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category
B-F; Item No. B5.40**
- 4. Impracticality of Compliance: 30.0% of the Pressurizer 10" Nozzle To Safe
End Butt Weld PR-W67DM was inaccessible due to the Nozzle
Configuration and the Weld Crown Configuration thus restricting
Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 30.0% of the
Pressurizer 10" Nozzle To Safe End Butt Weld PR-W67DM would require
modification of the original design of Pressurizer Nozzle to Safe Ends.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

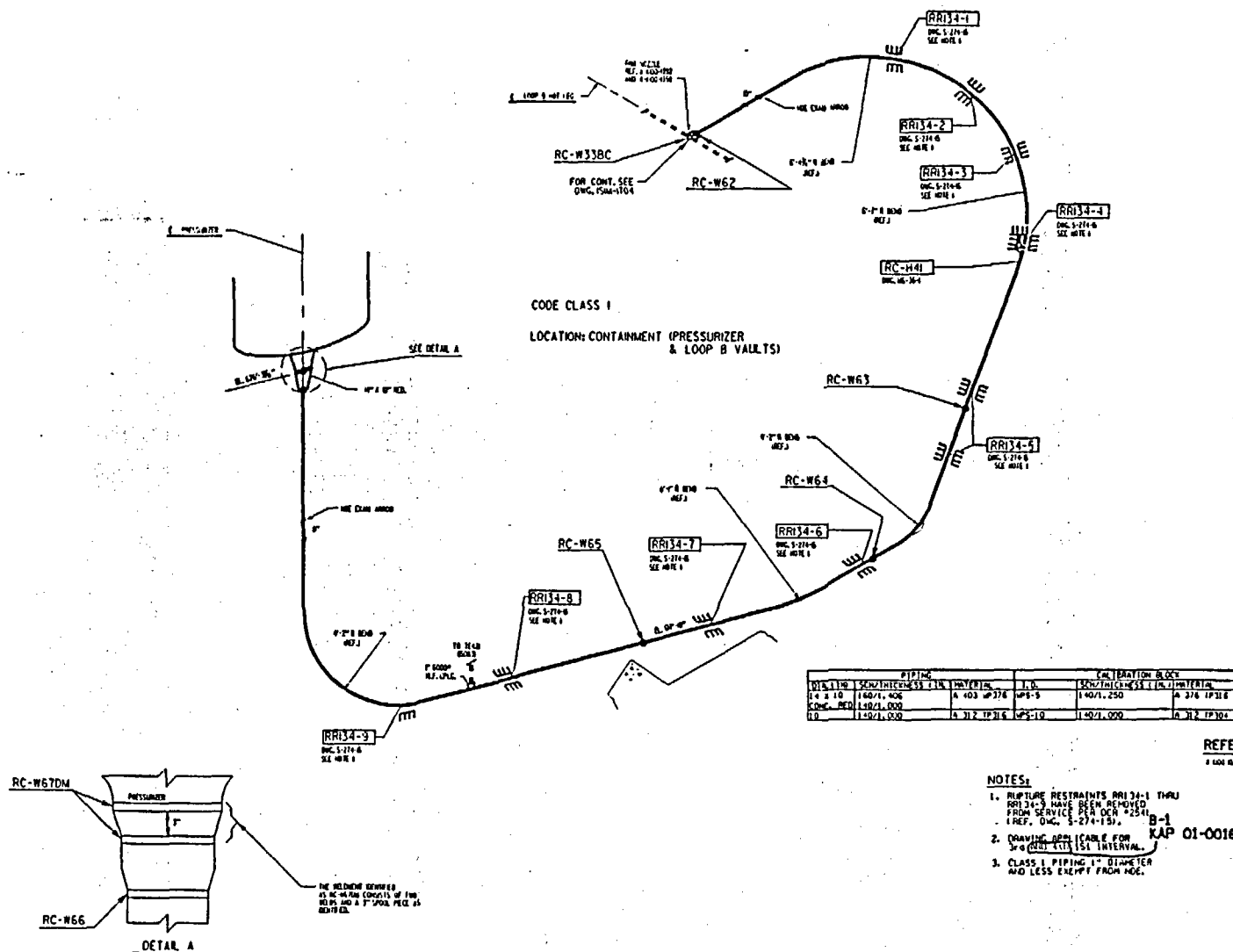
RELIEF REQUEST NO: RR-G-7-34

6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWB-2500-1; Examination Category B-P; Item B15.20 each Refueling
Outage for evidence of leakage. Surface Liquid Penetrant Examination was
performed on Pressurizer 10" Nozzle To Safe End Butt Weld PR-W67DM
during the 3rd Interval as required by ASME Boiler and Pressure Vessel
Code Section XI 1989 Edition: Table IWB-2500-1; Examination Category
B-F and Item No. B5.40.

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable



NOTES:

1. RESTRAINTS RRI34-1 THRU RRI34-9 HAVE BEEN REMOVED FROM SERVICE PER DCA #2541. REF. DCA 5-274-151.
2. DRAWING IS FOR USE FOR 30 DAY INTERVAL.
3. CLASS I PIPING 1" DIAMETER AND LESS EXCEPT FROM NOE.

B-1
KAP 01-001639

WISCONSIN PUBLIC SERVICE CORP.	
ISOMETRIC PRESSURIZER SURGE LINE	
DRAWING NO. 01-001639	
DATE: 10/1/68	
BY: J. A. TAYLOR	
CHECKED: J. A. TAYLOR	
APPROVED: J. A. TAYLOR	
SCALE: AS SHOWN	
SHEET NO. 1 OF 1	

CADD

10-192

8

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: PRESSURIZER SURGE LINE

DRAWING NO.: ISIM - 892

COMPONENT IDENTIFICATION: RC-WG7DM PROCEDURE: NER NO. 15.14 REVISION: ORIG.

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

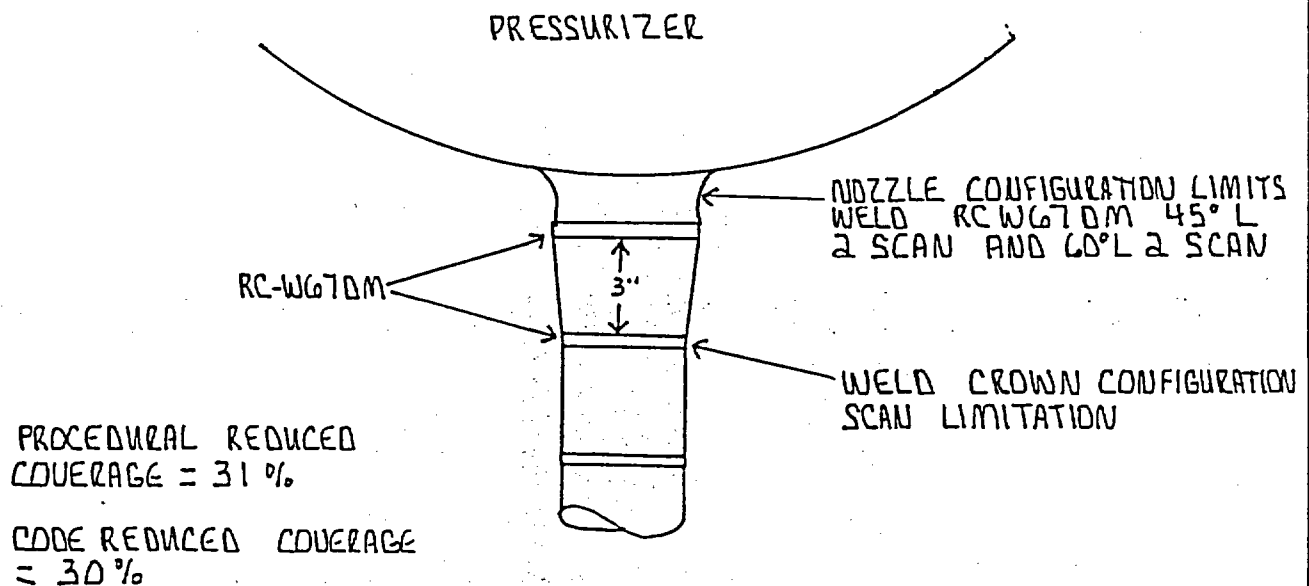
EXAMINER: *David Thomas* II DATE: 11-17-98

LEVEL

EXAMINER: *W. J. Conley* III DATE: 11-17-98

LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



KEWAUNEE NUCLEAR
POWER PLANT REVIEW: *Phillip C. Bures* DATE: November 18, 1998

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: *Royce McGinnis* DATE: 11-19-98

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-35

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 12" Safety Injection Circumferential Weld SI-W120**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-J; Item No. B9.11**
- 4. Impracticality of Compliance: 50.0% of the 12" Safety Injection Circumferential Weld SI-W120 was inaccessible due to the Valve To Pipe Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 50.0% of the 12" Safety Injection Circumferential Weld SI-W120 would require modification of the original design of Safety Injection Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-35

**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWB-2500-1; Examination Category B-P; Item B15.50 each Refueling
Outage for evidence of leakage. Surface Liquid Penetrant Examination was
performed on 12" Safety Injection Circumferential Weld SI-W120
during the 3rd Interval as required by ASME Boiler and Pressure Vessel
Code Section XI 1989 Edition: Table IWB-2500-1; Examination Category
B-J and Item No. B9.11.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

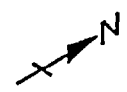
9. References: Not Applicable

SEE 4051

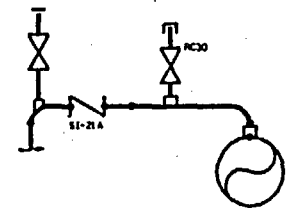
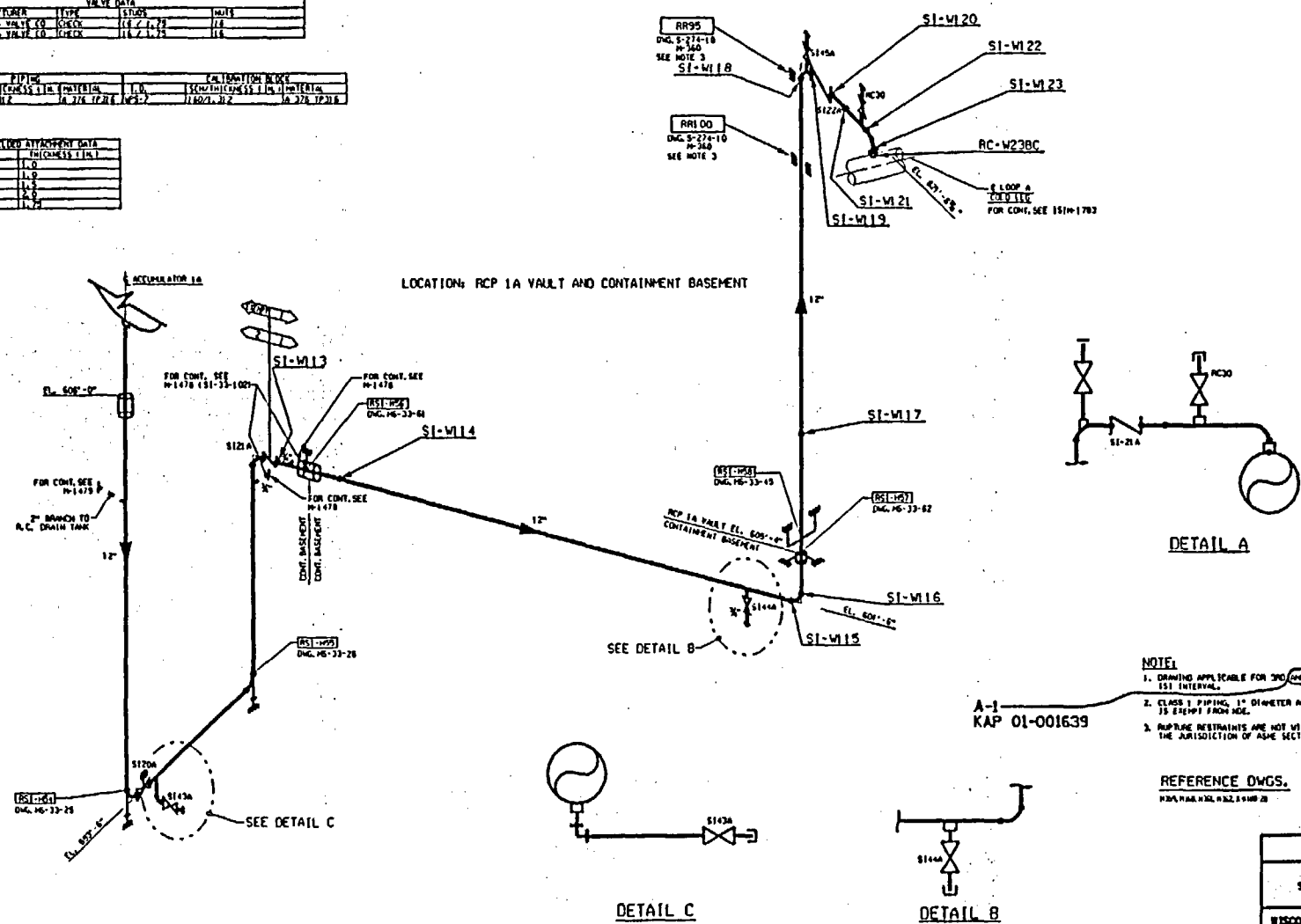
VALVE ID	MANUFACTURER	TYPE	SIZE	DATE
SI-22A	DAWING VALVE CO	CHECK	1 1/2"	11/8
SI-21A	DAWING VALVE CO	CHECK	1 1/2"	11/8

PIPE	SIZE	TYPE	DATE
1160/11.312	1160/11.312	1160/11.312	11/8
1160/11.312	1160/11.312	1160/11.312	11/8

INTERMEDIATE ATTACHMENT DATA	DATE
APPS 15	11/8
APPS 16	11/8
APPS 17	11/8
APPS 18	11/8
APPS 19	11/8
APPS 20	11/8



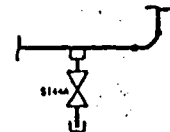
LOCATION: RCP 1A VAULT AND CONTAINMENT BASEMENT



DETAIL A



DETAIL C



DETAIL B

- NOTE**
1. DRAWING APPLICABLE FOR 30\"/>

A-1
KAP 01-001639

REFERENCE DWGS.
KAP 01-001639

WISCONSIN PUBLIC SERVICE CORPORATION	
IS1 ISOMETRIC	
SI-FROM ACCUMULATOR 1A	
TO LOOP A COLD LEG	
REVISED BY	
WISCONSIN PUBLIC SERVICE CORP.	
DATE 01-001639	
DATE	11/8
BY	11/8
151P-935	8

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

SYSTEM OR COMPONENT: SI FROM Accumulator 1A To Loop Header DRAWING NO.: ISIM-935

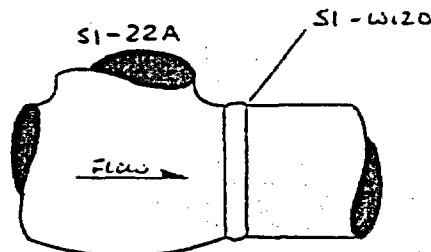
COMPONENT IDENTIFICATION: SI-W120 PROCEDURE: QCP-911 REVISION: 0216

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: Jeff Devers II DATE: 4-22-95
LEVEL

EXAMINER: Jim Thor I DATE: 4-22-95
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



COVERAGE NOT OBTAINED - 50%

NO SCAN '5' DUE TO VALVE TO PIPE CONFIGURATION.

SCAN '7' & '8' LIMITED TO WELD AND DOWNSTREAM BASE METAL
ONLY DUE TO VALVE TO PIPE CONFIGURATION.

OP SCAN ALSO LIMITED TO WELD AND DOWNSTREAM BASE METAL
ONLY DUE TO VALVE TO PIPE CONFIGURATION.

4 OF 5

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bukes DATE: April 25, 1995
AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Roger Trufan DATE: 4/25/95

SI-W120

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-36

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 12" Safety Injection Circumferential Weld SI-W123**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-J; Item No. B9.11**
- 4. Impracticality of Compliance: 50.0% of the 12" Safety Injection Circumferential Weld SI-W123 was inaccessible due to the Elbow to Branch Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 50.0% of the 12" Safety Injection Circumferential Weld SI-W123 would require modification of the original design of Safety Injection Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-36

6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWB-2500-1; Examination Category B-P; Item B15.50 each Refueling
Outage for evidence of leakage. Surface Liquid Penetrant Examination was
performed on 12" Safety Injection Circumferential Weld SI-W123
during the 3rd Interval as required by ASME Boiler and Pressure Vessel
Code Section XI 1989 Edition: Table IWB-2500-1; Examination Category
B-J and Item No. B9.11.

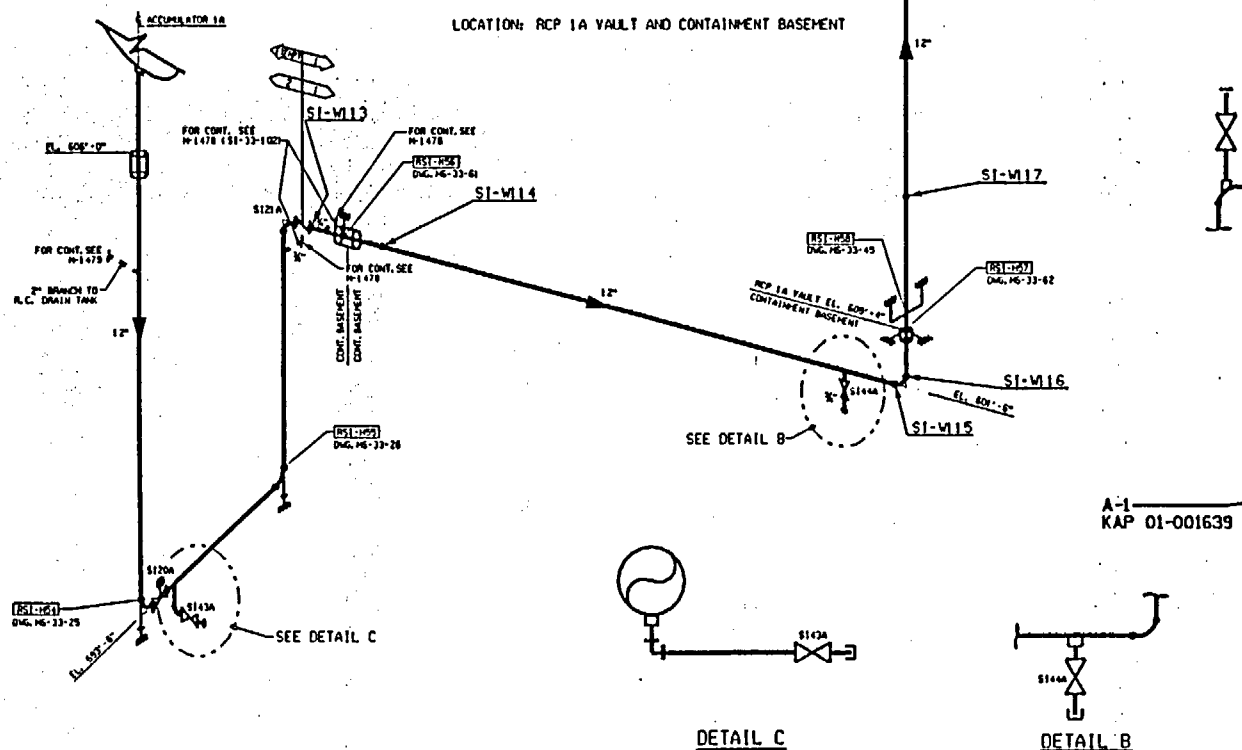
**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

PIPING			CALIBRATION BLOCK		
DIA. (IN)	SCH./THICKNESS (IN)	MATERIAL	I.D.	SCH./THICKNESS (IN)	MATERIAL
12	160/1.312	A 376 TP 316	IPS-2	160/1.312	A 376 TP 316

INTEGRALLY WEIGHTED ATTACHMENT DATA	
I.D.	THICKNESS (IN.)
RM95-151-WA959	1.0
RM100-51-WA100	1.0
RS-1-M96	1.5
RS-1-M97	2.0
RS-1-M98	1.5



NOTE:

1. DRAWING APPLICABLE FOR 3RD AND 4TH 151 INTERVAL.
2. CLASS 1 PIPING, 1" DIAMETER AND LESS IS EXEMPT FROM NOE.
3. MULTIPLE RESTRAINTS ARE NOT WITHIN THE JURISDICTION OF ASME SECTION XI.

REFERENCE DWGS.
N 25-9, N 26-8, N 26-1, N 26-2, & 4100-28

PRINTED BY THE K. M. M. COMPANY
AT THE K. M. M. COMPANY
AND THE K. M. M. COMPANY, NEW YORK

ISI ISOMETRIC
SI-FROM ACCUMULATOR 1A
TO LOOP A COLD LEG

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
MILWAUKEE, WISCONSIN

NAME	
ADDRESS	
CITY	
STATE	
ZIP	
PHONE	
FAX	
E-MAIL	
SIGNATURE	
DATE	

10/14-930	
-----------	--

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

SYSTEM OR COMPONENT: SI Scan Accumulator 1A to Log Accumulator DRAWING NO.: 151M-935

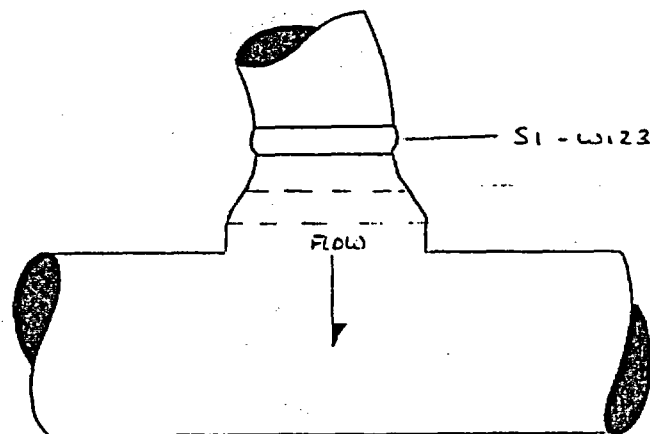
COMPONENT IDENTIFICATION: SI-W123 PROCEDURE: QCP-911 REVISION: 0216

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: Jeff Devers II DATE: 4-22-95
LEVEL

EXAMINER: Jim Cho I DATE: 4-22-95
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



COVERAGE NOT OBTAINED - 50%
NO SCAN '2' DUE TO ELBOW TO BRANCH CONNECTION CONFIGURATION.
SCAN '7' : '8' LIMITED TO WELD AND DOWNSTREAM BASE METAL
ONLY DUE TO ELBOW TO BRANCH CONNECTION CONFIGURATION.
D° SCAN ALSO LIMITED TO WELD AND DOWNSTREAM BASE METAL
DUE TO ELBOW TO BRANCH CONNECTION CONFIGURATION.

5 of 5

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Burke DATE: April 24, 1995

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Roger Mufson DATE: 4/25/95

SI-W123

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-37

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 6" Safety Injection Circumferential Weld SI-W13**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-J; Item No. B9.11**
- 4. Impracticality of Compliance: 62.5% of the 6" Safety Injection Circumferential Weld SI-W13 was inaccessible due to the Valve to Pipe Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 62.5% of the 6" Safety Injection Circumferential Weld SI-W13 would require modification of the original design of Safety Injection Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-37

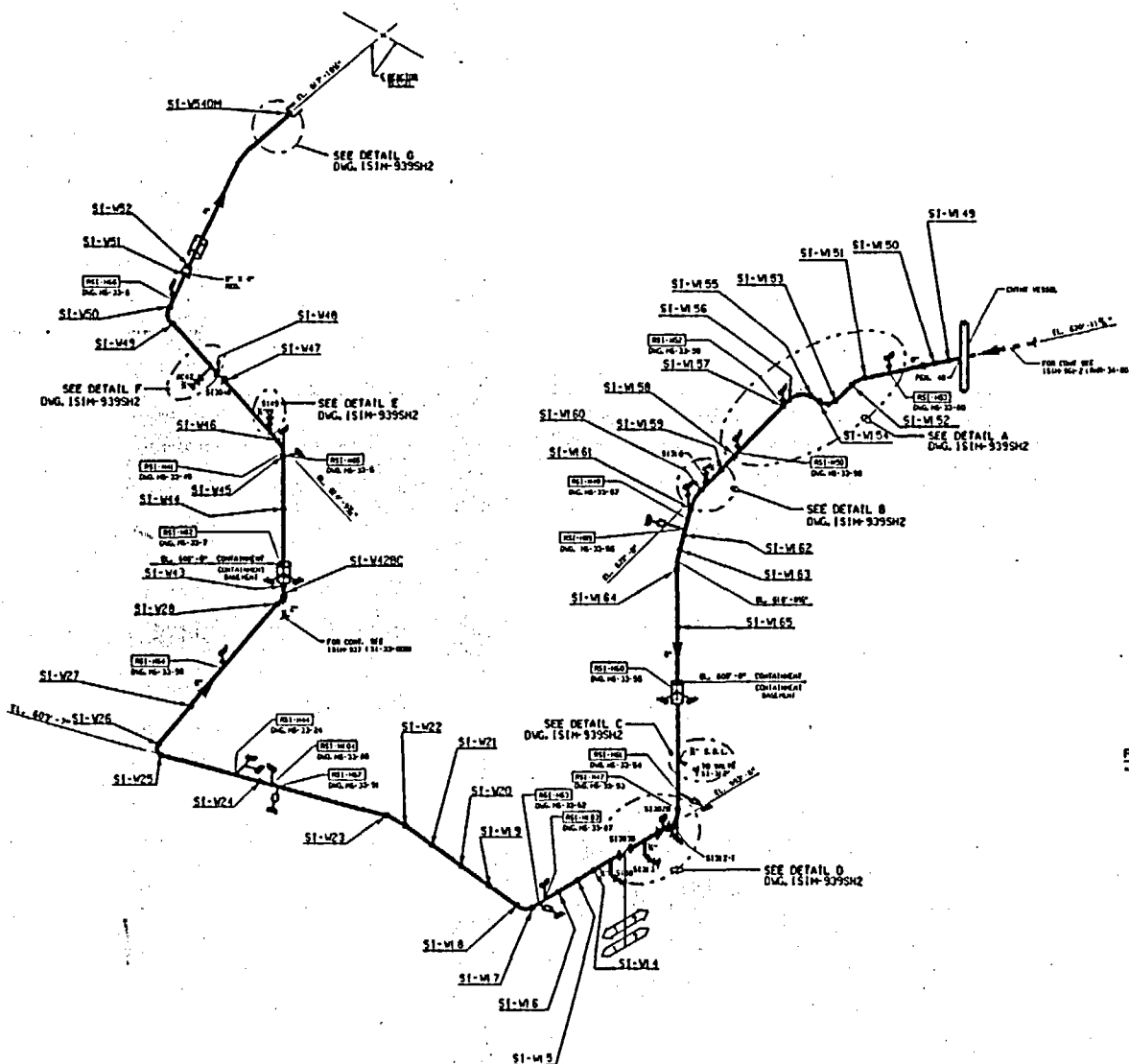
6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWB-2500-1; Examination Category B-P; Item B15.50 each Refueling
Outage for evidence of leakage. Surface Liquid Penetrant Examination was
performed on 6" Safety Injection Circumferential Weld SI-W13 during the
3rd Interval as required by ASME Boiler and Pressure Vessel Code Section
XI 1989 Edition: Table IWB-2500-1; Examination Category B-J and Item
No. B9.11.

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

WDGGS-0051



LOCATION: CONTAINMENT AND CONTAINMENT BSHT

ITEM	DESCRIPTION	TYPE	DATE	BY
151M-9395H2	CONT. VESSEL COMP.	151M-9395H2	11/2/73	151
151M-9395H2	CONT. VESSEL COMP.	151M-9395H2	11/2/73	151

ITEM	DESCRIPTION	TYPE	DATE	BY
151M-9395H2	CONT. VESSEL COMP.	151M-9395H2	11/2/73	151
151M-9395H2	CONT. VESSEL COMP.	151M-9395H2	11/2/73	151
151M-9395H2	CONT. VESSEL COMP.	151M-9395H2	11/2/73	151
151M-9395H2	CONT. VESSEL COMP.	151M-9395H2	11/2/73	151
151M-9395H2	CONT. VESSEL COMP.	151M-9395H2	11/2/73	151

ITEM	DESCRIPTION	TYPE	DATE	BY
151M-9395H2	CONT. VESSEL COMP.	151M-9395H2	11/2/73	151
151M-9395H2	CONT. VESSEL COMP.	151M-9395H2	11/2/73	151
151M-9395H2	CONT. VESSEL COMP.	151M-9395H2	11/2/73	151
151M-9395H2	CONT. VESSEL COMP.	151M-9395H2	11/2/73	151
151M-9395H2	CONT. VESSEL COMP.	151M-9395H2	11/2/73	151

ITEM	DESCRIPTION	TYPE	DATE	BY
151M-9395H2	CONT. VESSEL COMP.	151M-9395H2	11/2/73	151
151M-9395H2	CONT. VESSEL COMP.	151M-9395H2	11/2/73	151

REFERENCE DWGS.

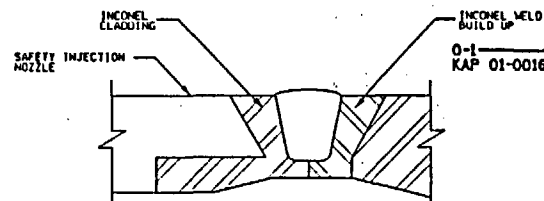
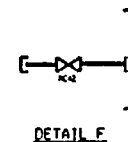
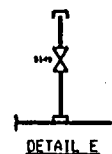
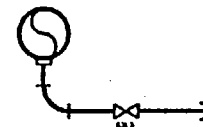
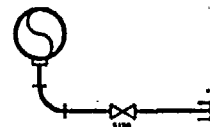
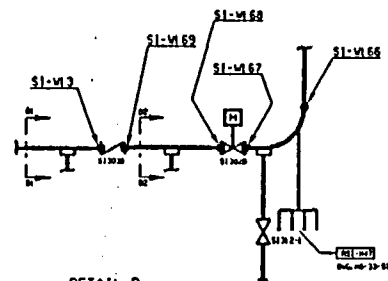
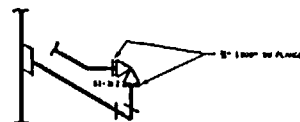
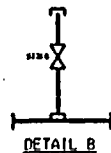
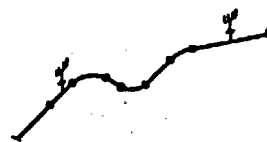
A-1
KAP 01-001639

NOTES:
1. DRAWING WITH KAP 01-001639
2. KAP 01-001639
3. KAP 01-001639

(SHEET OF 2)

DESIGNED BY: WISCONSIN PUBLIC SERVICE CORP.
CHECKED BY: WISCONSIN PUBLIC SERVICE CORP.
DATE: 11/2/73
BY: 151

WISCONSIN PUBLIC SERVICE CORP.
151M-9395H2



NOTES:

1. DRIVING APPLICABLE FOR 300 AND 400 152 INTERVAL.
2. CLASS 1 AND 2 PIPING 1" DIA. AND LESS IS EXCEPT FROM NO.

0-1
KAP 01-001639

(SH. 2 OF 2)

WILSON'S PUBLIC SERVICE CORPORATION
ATTORNEYS IN LAW
CAPITOL BUILDING, WASHINGTON

121 DETAILS

SAFETY DIRECTION
FROM CRINT PEN 40 TO REACTOR

WISCONSIN PUBLIC SERVICE COMP.

[illegible]

[illegible]

18 (14-00000)

6

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

SAFETY INJECTION FROM
SYSTEM OR COMPONENT: CNTMT PEN 48 TO REACTOR DRAWING NO.: ISIM-939 SH1f2

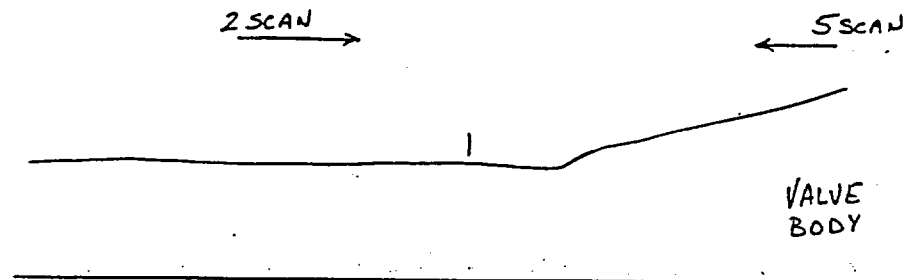
COMPONENT IDENTIFICATION: SI-W13 PROCEDURE: QCP911 REVISION: ORIG

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: N.A. Bey II DATE: 4-8-95
LEVEL

EXAMINER: James P. Wm II DATE: 4-8-95
LEVEL

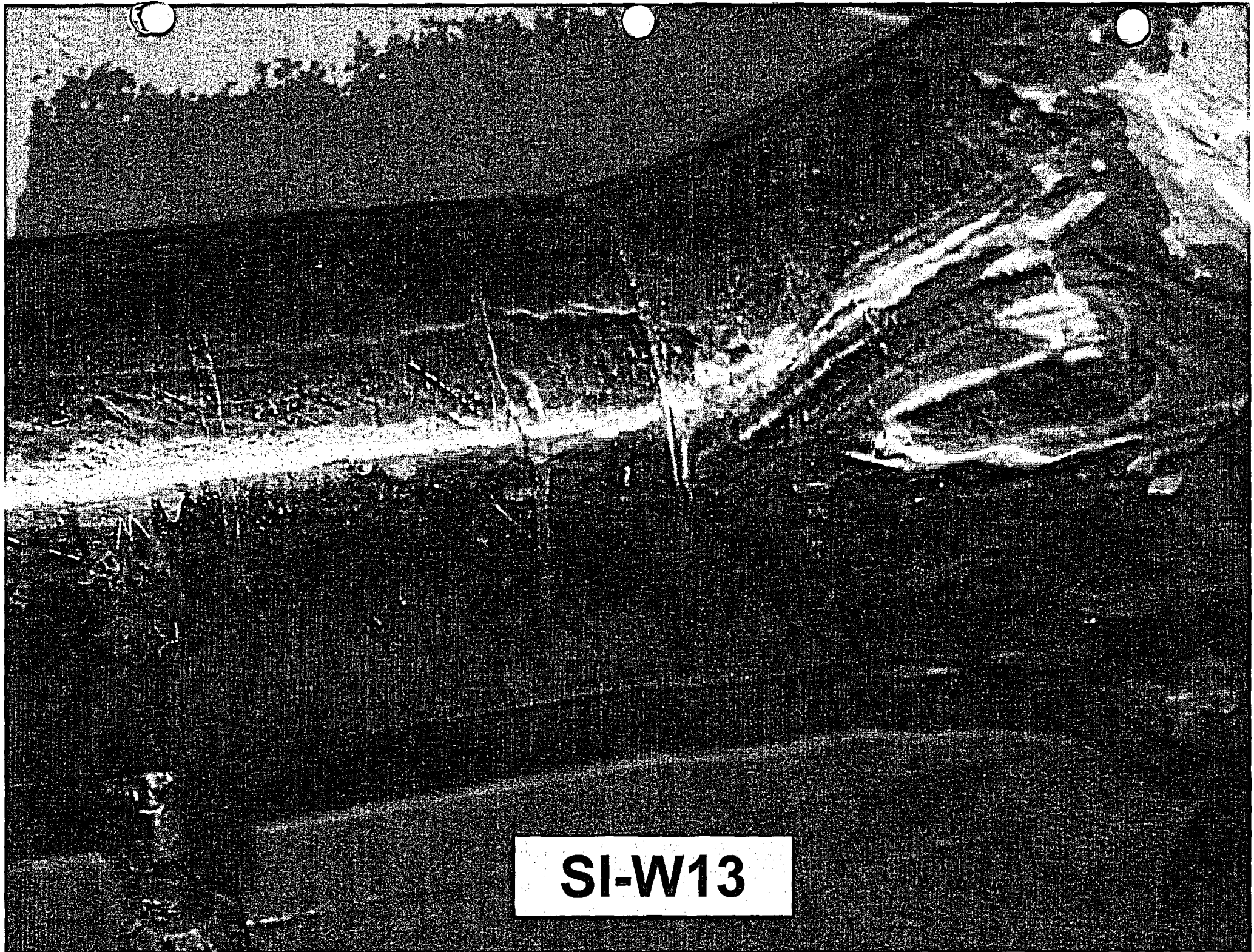
SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



VALVE BODY LIMITED 5, 7 & 8 SCANS FOR 45°, 45°RL
60°s & 0° PERCENTAGE OF REDUCED EXAMINATION
COVERAGE = 62.5%

Pg 3 of 4

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Eric A. Balstad DATE: 4/12/95
AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Roger M. Miller DATE: 4/12/95



SI-W13

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-38

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 6" Safety Injection Circumferential Weld SI-W14**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-J; Item No. B9.11**
- 4. Impracticality of Compliance: 6.5% of the 6" Safety Injection Circumferential Weld SI-W14 was inaccessible due to a 2" Socket Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 6.5% of the 6" Safety Injection Circumferential Weld SI-W14 would require modification of the original design of Safety Injection Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-38

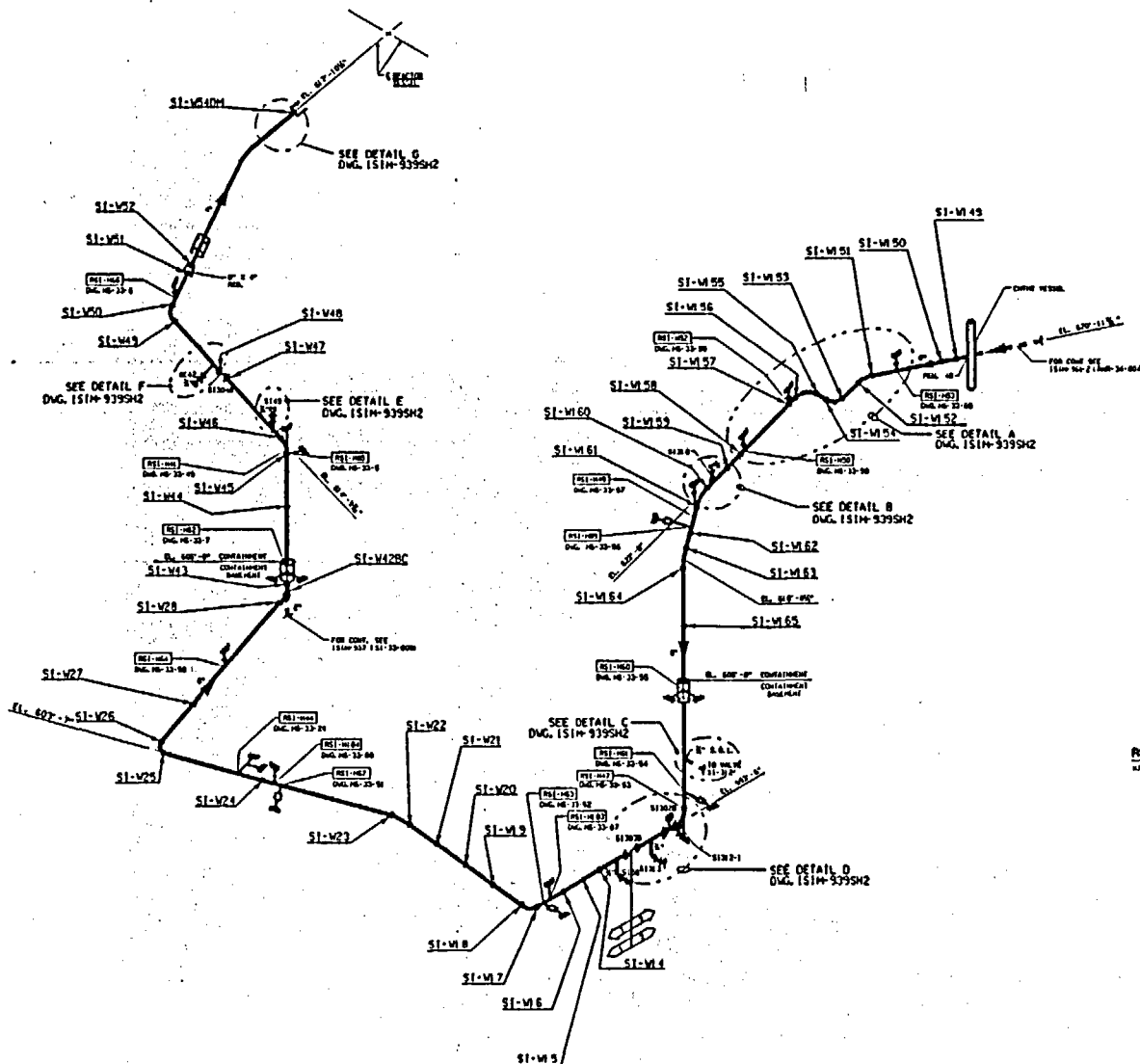
**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWB-2500-1; Examination Category B-P; Item B15.50 each Refueling
Outage for evidence of leakage. Surface Liquid Penetrant Examination was
performed on 6" Safety Injection Circumferential Weld SI-W14 during the
3rd Interval as required by ASME Boiler and Pressure Vessel Code Section
XI 1989 Edition: Table IWB-2500-1; Examination Category B-J and Item
No. B9.11.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

000000-0001



LOCATION: CONTAINMENT AND CONTAINMENT BSHT

ITEM	DESCRIPTION	UNIT	QTY	DATE
1.1	CONTAINMENT	1.1	1.1	1.1
1.2	CONTAINMENT	1.2	1.2	1.2

ITEM	DESCRIPTION	UNIT	QTY	DATE
1.1	CONTAINMENT	1.1	1.1	1.1
1.2	CONTAINMENT	1.2	1.2	1.2

ITEM	DESCRIPTION	UNIT	QTY	DATE
1.1	CONTAINMENT	1.1	1.1	1.1
1.2	CONTAINMENT	1.2	1.2	1.2

ITEM	DESCRIPTION	UNIT	QTY	DATE
1.1	CONTAINMENT	1.1	1.1	1.1
1.2	CONTAINMENT	1.2	1.2	1.2

REFERENCE DWGS.

A-1
KAP 01-001639

NOTES:
1. REVISIONS ARE SHOWN IN PINK
2. REVISIONS ARE SHOWN IN PINK
3. REVISIONS ARE SHOWN IN PINK

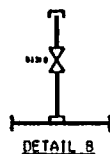
(SHEET 1 OF 2)

DESIGNED BY WISCONSIN PUBLIC SERVICE CORP.	
CHECKED BY WISCONSIN PUBLIC SERVICE CORP.	
DATE 1964-03-10	
PROJECT 100-000000	
SHEET 100-000000	

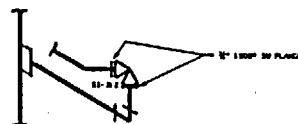
01-01-01



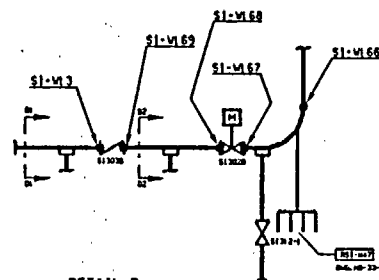
DETAIL A



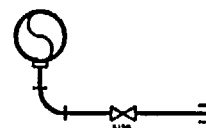
DETAIL B



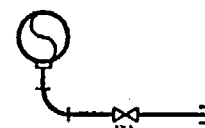
DETAIL C



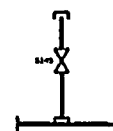
DETAIL D



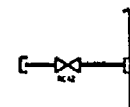
SECT. 01-01



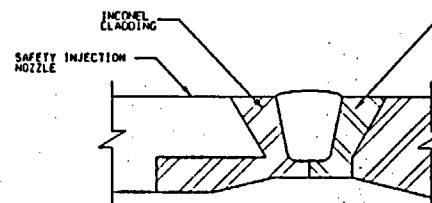
SECT. 02-02



DETAIL E



DETAIL F



DETAIL G

NOTES:
1. SHOWN FOR REFERENCE ONLY
2. SEE THE DRAWING
3. PLATE 1 AND 2 SHOWN IN DIA. AND L22
TO TYPICAL FROM A/C

0-1
KAP 01-001639

(SHEET 2 OF 2)

WISCONSIN PUBLIC SERVICE CORPORATION ATTENTION: SAFETY INJECTION CONTROL ROOM, MILWAUKEE, WISCONSIN	
SHEET NO. 01-001639	
PROJECT NO. 01-001639	
DATE: 01-01-69	
BY: J. L. H. / J. L. H.	
CHECKED BY: J. L. H. / J. L. H.	
APPROVED BY: J. L. H. / J. L. H.	
101-001639-2	

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

SYSTEM OR COMPONENT: SAFETY INJECTION FROM
CNTMT PEN 48 TO REACTOR DRAWING NO.: ISIM-939 SH 1 & 2

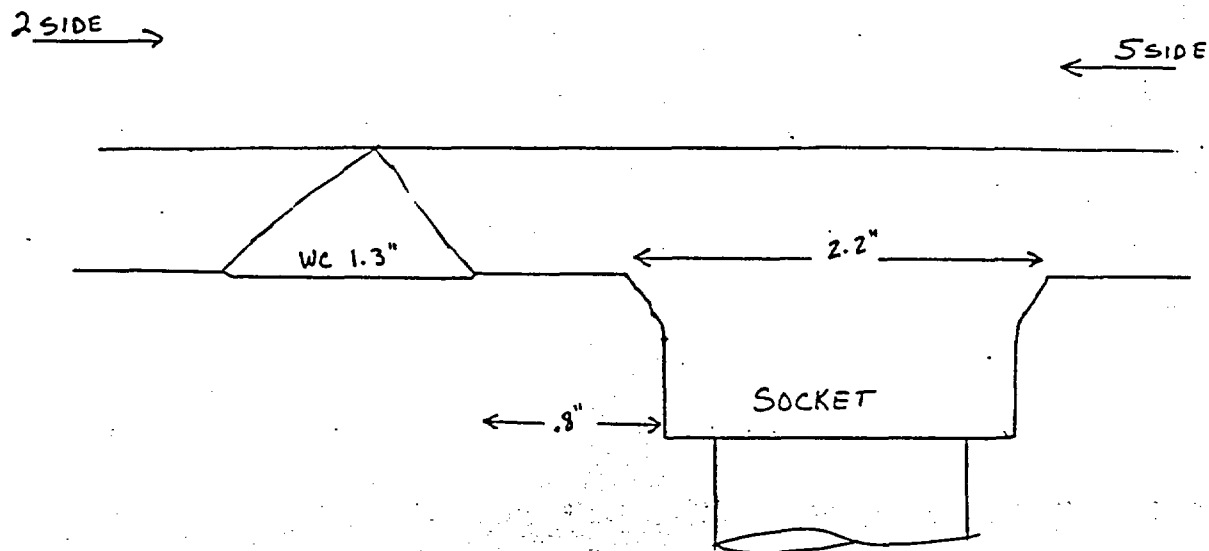
COMPONENT IDENTIFICATION: SI-W14 PROCEDURE: QCP-911 REVISION: ORIG

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: N. A. Balstad II DATE: 4-8-95
LEVEL

EXAMINER: Greg P. Wm II DATE: 4-8-95
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



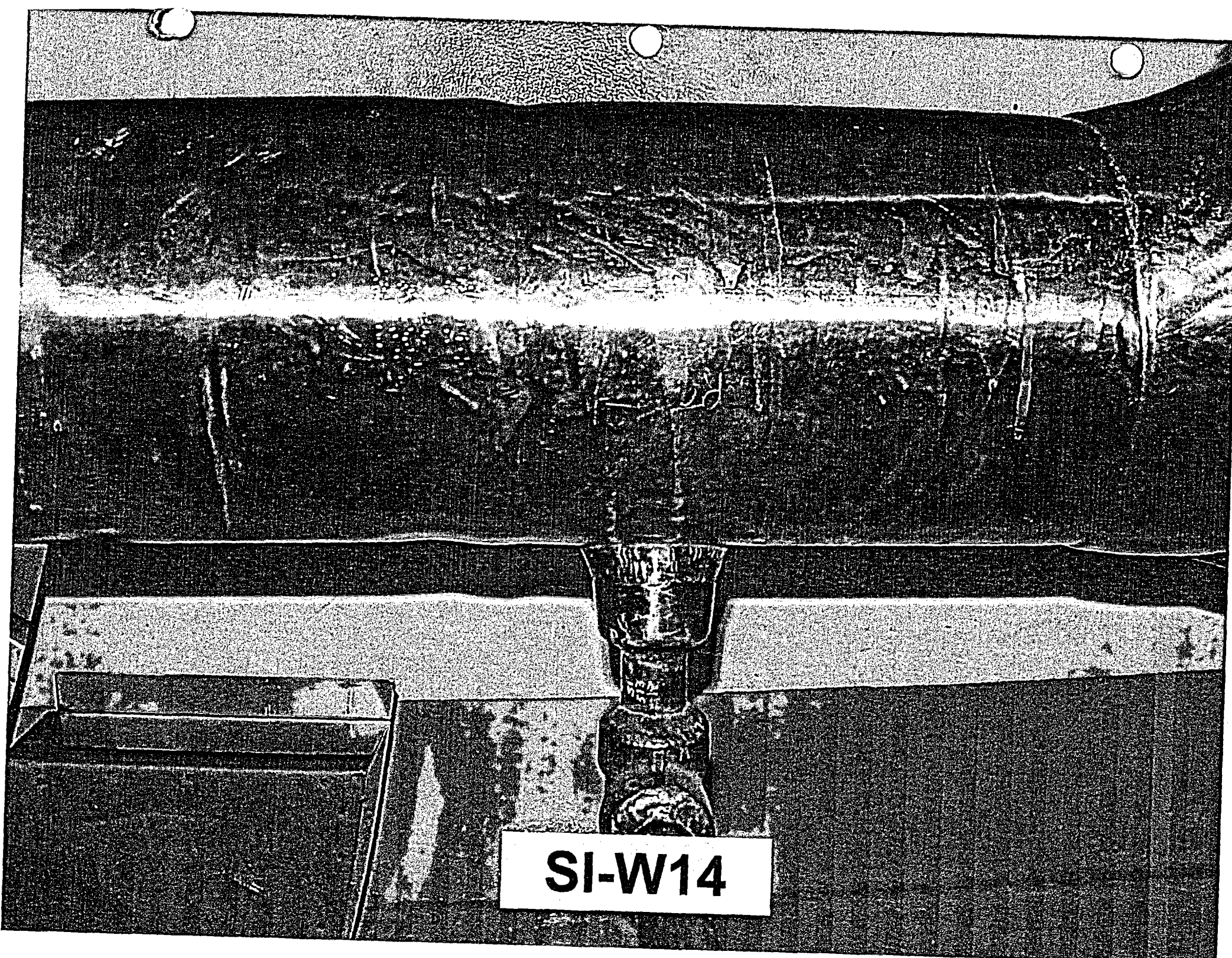
SOCKET @ 8.3" TO 10.5" .8" FROM TOE OF WELD

LIMITED SCANS 5 FOR THE 45°s, 45°RL & 60°s

PERCENTAGE OF REDUCED EXAMINATION COVERAGE = 93.5%

Pg 4 of 4

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Eino A. Balstad DATE: 4/12/95
AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Shawn M. Jensen DATE: 4/12/95



SI-W14

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-39

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 6" Pressurizer Relief Circumferential Weld PR-W2**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-J; Item No. B9.11**
- 4. Impracticality of Compliance: 61.3% of the 6" Pressurizer Relief Circumferential Weld PR-W2 was inaccessible due to the 6" Pressurizer Nozzle Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 61.3% of the 6" Pressurizer Relief Circumferential Weld PR-W2 would require modification of the original design of Pressurizer and Pressurizer Relief Nozzle.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-39

**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWB-2500-1; Examination Category B-P; Item B15.50 each Refueling
Outage for evidence of leakage. Surface Liquid Penetrant Examination was
performed on 6" Pressurizer Relief Circumferential Weld PR-W2 during
the 3rd Interval as required by ASME Boiler and Pressure Vessel Code
Section XI 1989 Edition: Table IWB-2500-1; Examination Category B-J
and Item No. B9.11.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

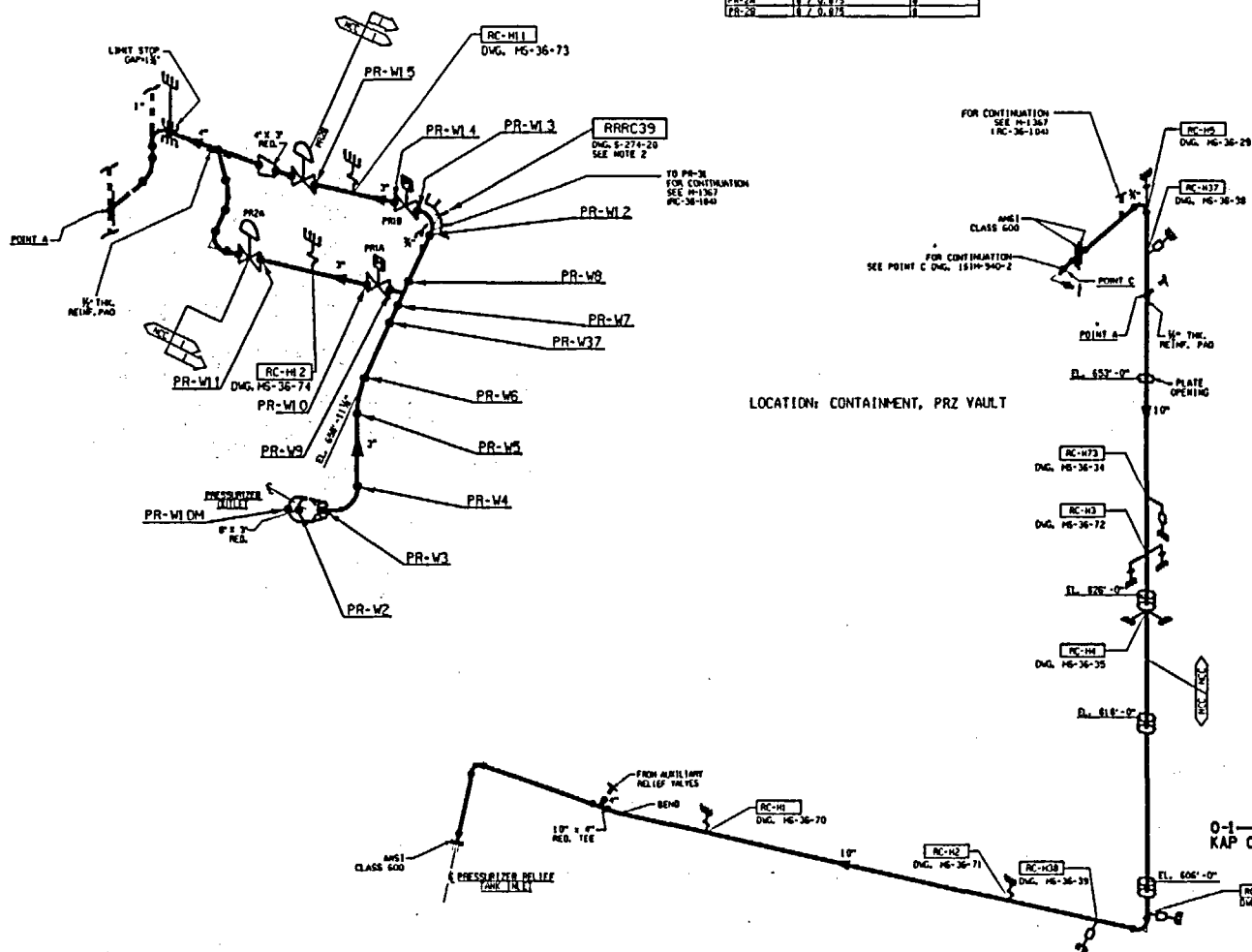
8. Precedents: Not Applicable

9. References: Not Applicable

0-06-1151

PIPING			CALCULATION BLOCK		
DIA. (IN)	SCH./THICKNESS (IN.)	MATERIAL	I.D.	SCH./THICKNESS (IN.)	MATERIAL
6 x 1/2	160/0.315	A 304 TP316	5/8	160/0.315	A 316 TP316
1	160/0.438	A 316 TP316	1/2	160/0.438	A 316 TP316

VALVE BOLT ROLLING DATA		
I.D.	SIZE (IN.)	NOTES
PR-1A	1/2 / 0.750	1/2
PR-1B	1/2 / 0.750	1/2
PR-2A	1 / 0.875	1
PR-2B	1 / 0.875	1



LOCATION: CONTAINMENT, PRZ VAULT

REFERENCE DWGS.

151M-940-1

NOTES:

1. DRAWING APPLICABLE FOR 3" AND 4" ISI INTERNAL.
2. RUPTURE RESTRAINTS ARE NOT WITHIN THE JURISDICTION OF ASME SECTION XI.
3. CLASS I PIPING 1" DIA. & LESS IS EXEMPT FROM NOE.

DESIGNED BY: J. C. MURPHY & COMPANY INC. CHECKED BY: J. C. MURPHY & COMPANY INC. DRAWN BY: J. C. MURPHY & COMPANY INC.			
ISI ISOMETRIC REACTOR COOLANT FROM PRESSURIZER TO PRESSURIZER RELIEF TANK			
ISSUED BY: WISCONSIN PUBLIC SERVICE CORP.			
DATE:	BY:	FOR:	NO.
10/1/78	J. C. MURPHY	WISCONSIN PUBLIC SERVICE CORP.	151M-940-1

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

SYSTEM OR COMPONENT: Reactor Coolant From Pressurizer to Pressurizer Relief Tank DRAWING NO.: ISIM-940-1

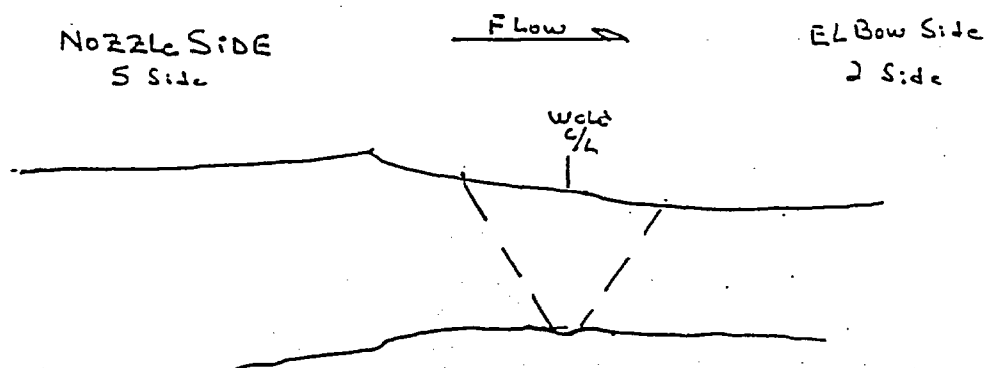
COMPONENT IDENTIFICATION: PR-W2 PROCEDURE: QCP-911 REVISION: ORIG.

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: N.A. Bly II DATE: 4-15-95
LEVEL

EXAMINER: NA NA DATE: NA
LEVEL

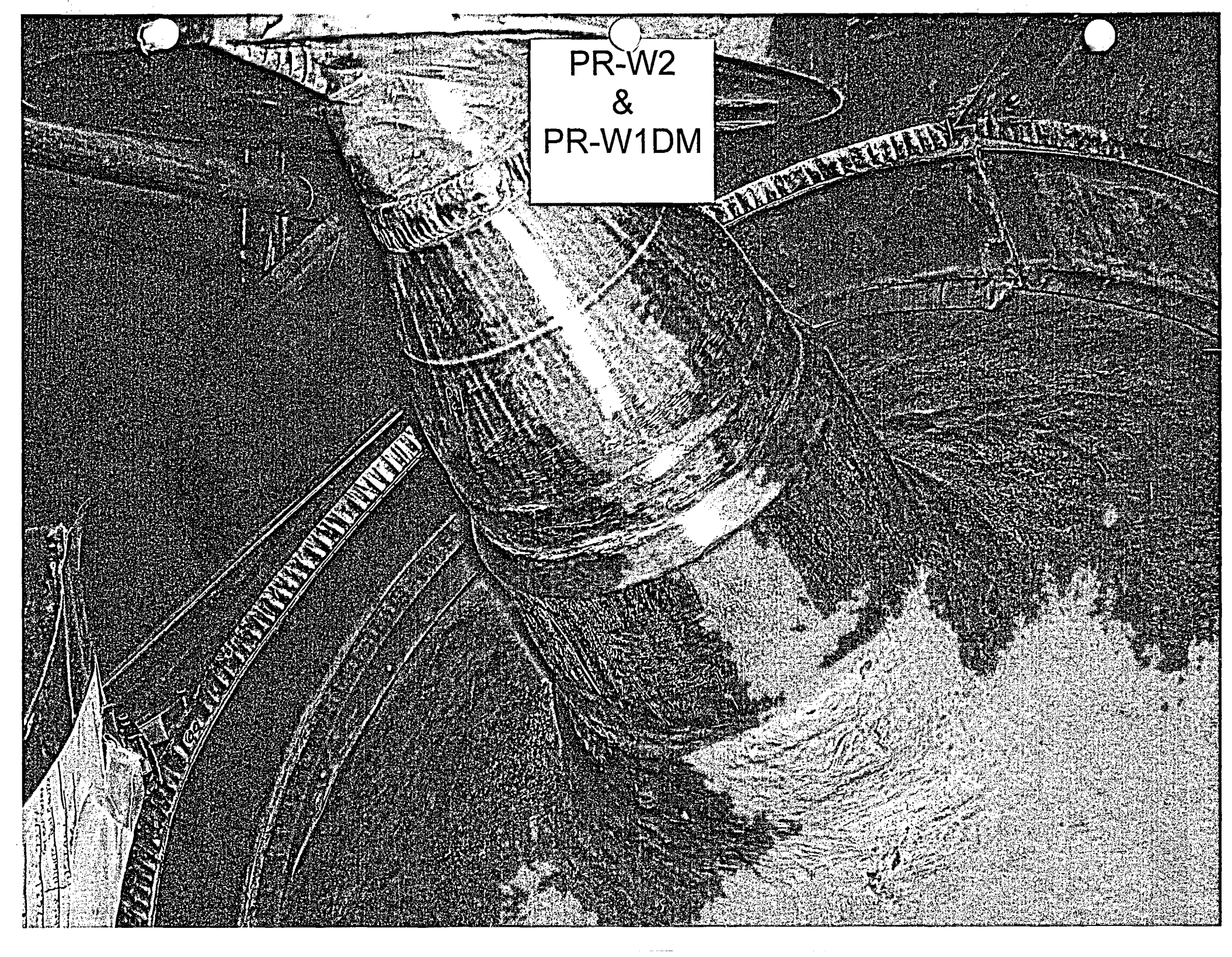
SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



NOZZLE CONFIGURATION RESTRICTED 0° SCAN AND 5° SCAN + 7 & 8 SCAN.
FOR 45° AND 60° SHEAR AND 45° RL.
PERCENTAGE OF REDUCED EXAMINATION COVERAGE = 61.3%

Page 3 of 3

KEWAUNEE NUCLEAR POWER PLANT REVIEW: E. A. Balstad DATE: 4/18/95
AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: R. M. Mays DATE: 4/18/95



PR-W2
&
PR-W1DM

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-40

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 8" Residual Heat Removal
Circumferential Weld RHR-W33**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category
B-J; Item No. B9.11**
- 4. Impracticality of Compliance: 62.5% of the 8" Residual Heat Removal
Circumferential Weld RHR-W33 was inaccessible due to the Valve Body to
Pipe Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 62.5% of the
8" Residual Heat Removal Circumferential Weld RHR-W33 would require
modification of the original design of Residual Heat Removal Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-40

**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWB-2500-1; Examination Category B-P; Item B15.50 each Refueling
Outage for evidence of leakage. Surface Liquid Penetrant Examination was
performed on 8" Residual Heat Removal Circumferential Weld RHR-W33
during the 3rd Interval as required by ASME Boiler and Pressure Vessel
Code Section XI 1989 Edition: Table IWB-2500-1; Examination Category
B-J and Item No. B9.11.**

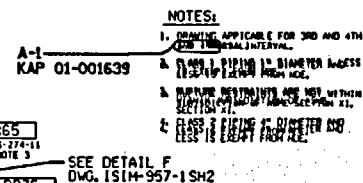
**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

P.P.1%			POLYBUTYLENE ADHESIVE		
Wt. %	SCH/THICKNESS (in.)	WATER/IN	I.D.	SCH/THICKNESS (in.)	WATER/IN
0	140/0.812	A 326 TP316	WPS-11	140/0.812	A 326 TP316
10 FE	405/1	A 403 WP 316	WPS-9	405/0.364	A 312 TP304

CODE CLASS 1 & 2
LOCATION: CONTAINMENT ELEV. 593'-0"
CAVITY B. CONT. BSMT.



PC374, PL25, PC369, N348, PL361, PC362, PC364, E-4700-10, E-4700-10

SH. 1 OF 2

SECTION OF PUBLIC SERVICE CORPORATION
NEWARK, N. J. 07102
LAW OFFICE OF ROBERT J. COOPER, JR., P.C.
1000 NEWARK FREEWAY, SUITE 200, NEWARK, N. J. 07102

ISI ISOMETRIC
RHR-FROM RC LOOPS A & B HOT LEGS
TO CNTMT PEN. 9 & TO CNTMT SUPP 8

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.

DATE: 10/10/73

[illegible]

ISI M-957-ISM B

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

RHR FROM RC. Loops A & B HOT LEG. TO

SYSTEM OR COMPONENT: CNTMT Pen. 9410 To CNTMT Sump B DRAWING NO.: ISIM-957-1SH.1

COMPONENT IDENTIFICATION: RHR-W33 PROCEDURE: QCP 911 REVISION: ORIG.

ULTRASONIC: X LIQUID PENETRANT: _____ MAGNETIC PARTICLE: _____ VISUAL: _____

EXAMINER: W. A. Boy II DATE: 4-8-95
LEVEL

EXAMINER: James P. Wan II DATE: 4-8-95
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

Value
5 Side

Pipe
2 Side



5, 7, 8 SCANS FOR
Value body Limited 45° S, 60° S, 45° RL AND 0°

Percentage of Reduced Examination Coverage = 62.5 %

PAGE 3 OF 3

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Eino J. A. Balstad DATE: 4/11/95

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Loyns Intjui DATE: 4/12/95



RHR-W33

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-41

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 6" Safety Injection Circumferential Weld SI-W108**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-J; Item No. B9.11**
- 4. Impracticality of Compliance: 50.0% of the 6" Safety Injection Circumferential Weld SI-W108 was inaccessible due to the Valve Body to Pipe Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 50.0% of the 6" Safety Injection Circumferential Weld SI-W108 would require modification of the original design of Safety Injection Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

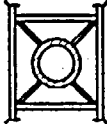
RELIEF REQUEST NO: RR-G-7-41

6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWB-2500-1; Examination Category B-P; Item B15.50 each Refueling
Outage for evidence of leakage. Surface Liquid Penetrant Examination was
performed on 6" Safety Injection Circumferential Weld SI-W108 during
the 3rd Interval as required by ASME Boiler and Pressure Vessel Code
Section XI 1989 Edition: Table IWB-2500-1; Examination Category B-J
and Item No. B9.11.

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable



MONTHLY WEATHER ATTEMPT DATA	
P.	THICKNESS (mm)
0000-0100	0.500
0100-0200	0.500
0200-0300	1.000
0300-0400	1.000
0400-0500	0.500
0500-0600	0.500
0600-0700	0.500
0700-0800	0.500
0800-0900	0.500
0900-1000	0.500
1000-1100	0.500
1100-1200	0.500
1200-1300	0.500
1300-1400	0.500
1400-1500	0.500
1500-1600	0.500
1600-1700	0.500
1700-1800	0.500
1800-1900	0.500
1900-2000	0.500
2000-2100	0.500
2100-2200	0.500
2200-2300	0.500
2300-2400	0.500
2400-2500	0.500
2500-2600	0.500
2600-2700	0.500
2700-2800	0.500
2800-2900	0.500
2900-3000	0.500
3000-3100	0.500
3100-3200	0.500
3200-3300	0.500
3300-3400	0.500
3400-3500	0.500
3500-3600	0.500
3600-3700	0.500
3700-3800	0.500
3800-3900	0.500
3900-4000	0.500
4000-4100	0.500
4100-4200	0.500
4200-4300	0.500
4300-4400	0.500
4400-4500	0.500
4500-4600	0.500
4600-4700	0.500
4700-4800	0.500
4800-4900	0.500
4900-5000	0.500
5000-5100	0.500
5100-5200	0.500
5200-5300	0.500
5300-5400	0.500
5400-5500	0.500
5500-5600	0.500
5600-5700	0.500
5700-5800	0.500
5800-5900	0.500
5900-6000	0.500
6000-6100	0.500
6100-6200	0.500
6200-6300	0.500
6300-6400	0.500
6400-6500	0.500
6500-6600	0.500
6600-6700	0.500
6700-6800	0.500
6800-6900	0.500
6900-7000	0.500
7000-7100	0.500
7100-7200	0.500
7200-7300	0.500
7300-7400	0.500
7400-7500	0.500
7500-7600	0.500
7600-7700	0.500
7700-7800	0.500
7800-7900	0.500
7900-8000	0.500
8000-8100	0.500
8100-8200	0.500
8200-8300	0.500
8300-8400	0.500
8400-8500	0.500
8500-8600	0.500
8600-8700	0.500
8700-8800	0.500
8800-8900	0.500
8900-9000	0.500
9000-9100	0.500
9100-9200	0.500
9200-9300	0.500
9300-9400	0.500
9400-9500	0.500
9500-9600	0.500
9600-9700	0.500
9700-9800	0.500
9800-9900	0.500
9900-10000	0.500

ISOTHERMIC

SF-FROM ENTMT PENLO TO REACTOR
FROM ACTMR B8 TO LOOP B COLD LEE

DIVISION OF PUBLIC SERVICE COMPANY
WISCONSIN PUBLIC SERVICE CORP.

PLANT NO. W-0697-P-1

DATE _____ TIME _____

CYCLE NO. _____ RUN NO. _____

BY _____ FOR _____

ISM-93B-ZSM A

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: SI - FROM CNTMT PEN. 10 TO REACTOR FROM ACMTR 1B TO LOOP B COLD LEG

DRAWING NO.: 151M-938-25H1

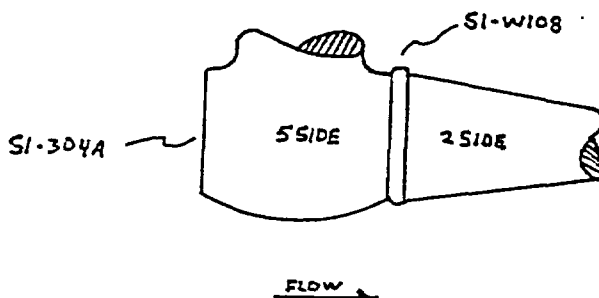
COMPONENT IDENTIFICATION: SI-W108 PROCEDURE: NEP-15.41 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: MSH Phelps II DATE: 10-30-01
LEVEL

EXAMINER: Donnelly Johnson II DATE: 10-30-01
LEVEL

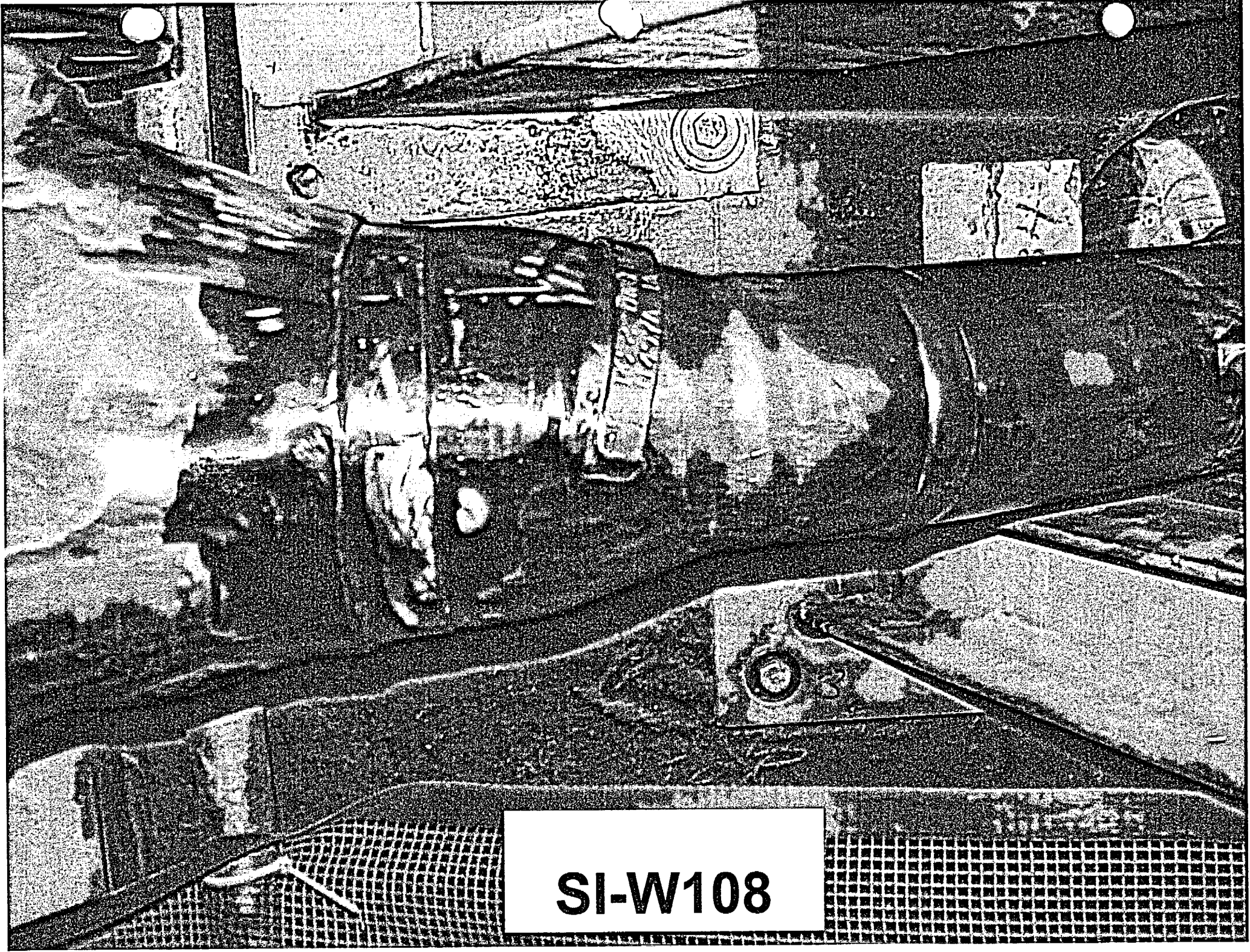
SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



NO SCANS 5, 7, & 8 ON 5 SIDE DUE TO VALVE SI-304A CONFIGURATION
CODE COVERAGE REDUCED BY 50%.

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bures DATE: November 2, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Lynn M. Johnson DATE: 11-2-01



SI-W108

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-42

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 12" Safety Injection Circumferential Weld SI-W67**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-J; Item No. B9.11**
- 4. Impracticality of Compliance: 30.0% of the 12" Safety Injection Circumferential Weld SI-W67 was inaccessible due to the O.D. Taper of 12" x 12" x 10" Tee Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 30.0% of the 12" Safety Injection Circumferential Weld SI-W67 would require modification of the original design of Safety Injection Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-42

**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWB-2500-1; Examination Category B-P; Item B15.50 each Refueling
Outage for evidence of leakage. Surface Liquid Penetrant Examination was
performed on 12" Safety Injection Circumferential Weld SI-W67 during
the 3rd Interval as required by ASME Boiler and Pressure Vessel Code
Section XI 1989 Edition: Table IWB-2500-1; Examination Category B-J
and Item No. B9.11.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

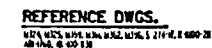
8. Precedents: Not Applicable

9. References: Not Applicable

LOCATION: CONTAINMENT, EL. 606' - 0"
"B" PMP VAULT

VALVE RUN-IN/ BOLLING DATA				
I.D.	MANUFACTURER	TYPE	STROKE / DIA (IN)	NOTES
40-1	OM-1 VALVE CO.	GATE	16 / 1.875	32
51-20	OM-1 VALVE CO.	CHUCK	16 / 1.875	16
51-22	OM-1 VALVE CO.	CHUCK	16 / 1.875	16

INTEGRALLY WELDED ATTACHMENT DATA	
I. O.	THICKNESS (IN.)
AP-91-107	0.625
AP-91-108	0.250



1. DRAWING APPLICABLE FOR 300 AND 48 IN. ISI INTERVAL.
2. RUPTURE RESTRAINTS ARE NOT WITHIN THE JURISDICTION OF ASME SECTION XI.
3. CLASS I PIPING 1" DIAMETER AND LESS IS EXEMPT FROM NOE.

A-1
KAP 01-001639

SECOND OF PUBLIC SERVICE COMMISSION
HEARING MAY 14, 1968 AT 10:00 AM
IN THE COURT OF COMMON PLEAS, ALCOA, PA.

ISOTHERMIC
SI-FROM CNTMT PENLO TO REACTOR
FROM ACMTB 18 TO LOOP 8 COLD LEG

ALL RIGHTS BY
WISCONSIN PUBLIC SERVICE CORP.

[illegible]

1000

[illegible]

SM-938-1

WISCONSIN PUBLIC SERVICE CORPORATION

REV.: ORIG.

KEWAUNEE NUCLEAR POWER PLANT

ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

SI-FROM CNTMT DEN.10 TO REACTOR
SYSTEM OR COMPONENT: FROM ACMTB 18 TO LOOP B COLD LEG

DRAWING NO.: 151M-938-1

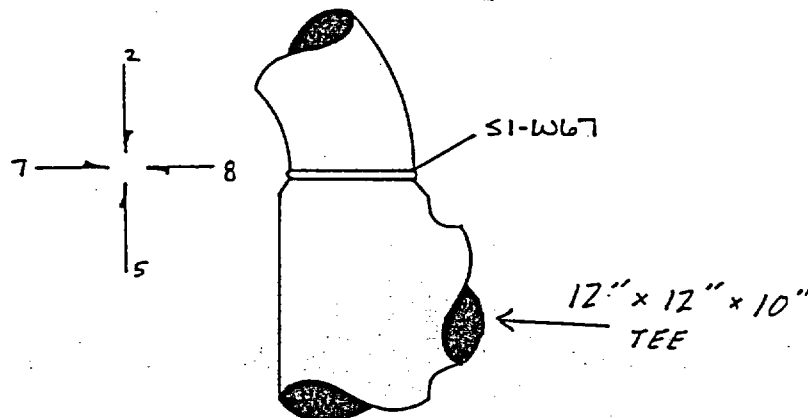
COMPONENT IDENTIFICATION: SI-W67 PROCEDURE: NEP No. 15.16 REVISION: ORIG

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: Jeff Dues II DATE: 11/06/98
LEVEL

EXAMINER: Greg Williams II DATE: 11-06-98
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



NOTE: NO SCAN 5, SCAN 7 & 8 LIMITED TO WELD ! DOWNSTREAM BASE METAL ONLY DUE TO O.D. TAPER OF TEE.

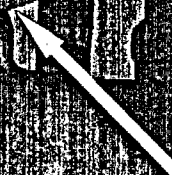
PERCENT OF CODE LIMITATION: 30%

PERCENT OF PROCEDURE LIMITATION: 45%

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bakes DATE: November 7, 1998

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Ryan McIntire DATE: 11-7-98

SI-W67



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-43

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 6" Pressurizer Relief Circumferential Weld PR-W17**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-J; Item No. B9.11**
- 4. Impracticality of Compliance: 51.8% of the 6" Pressurizer Relief Circumferential Weld PR-W17 was inaccessible due to the Safe End to Elbow Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 51.8% of the 6" Pressurizer Relief Circumferential Weld PR-W17 would require modification of the original design of the Pressurizer and Pressurizer Relief Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-43

6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWB-2500-1; Examination Category B-P; Item B15.50 each Refueling
Outage for evidence of leakage. Surface Liquid Penetrant Examination was
performed on 6" Pressurizer Relief Circumferential Weld PR-W17 during
the 3rd Interval as required by ASME Boiler and Pressure Vessel Code
Section XI 1989 Edition: Table IWB-2500-1; Examination Category B-J
and Item No. B9.11.

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: REACTOR COOLANT - FROM PRESSURIZER TO PRESSURIZER RELIEF TANK.

DRAWING NO.: ISIM-940.2

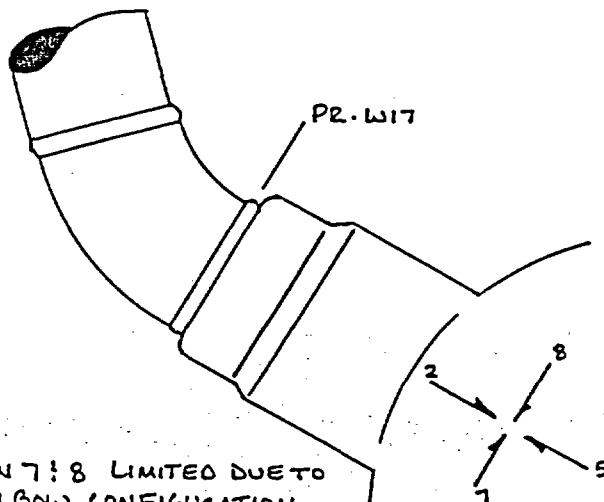
COMPONENT IDENTIFICATION: PR-W17 PROCEDURE: NEP No. 15.16 REVISION: 009

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: Jeff Dewes II DATE: 10/28/98
LEVEL

EXAMINER: W. Collier III DATE: 10/28/98
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



NOTE: NO SCAN 5, SCAN 7 & 8 LIMITED DUE TO
SAFE END TO ELBOW CONFIGURATION.

PERCENTAGE OF LIMITATION PER PROCEDURE 49.8%

PERCENTAGE OF LIMITATION PER LOOE 51.8%

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bures DATE: October 29, 1998

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Ryan McGuire DATE: 10-30-98

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-44

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 10" Pressurizer Surge Circumferential Weld RC-W64**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-J; Item No. B9.11**
- 4. Impracticality of Compliance: 21.6% of the 10" Pressurizer Surge Circumferential Weld RC-W64 was inaccessible due to Rigid Restraint RR134-6 Configuration thus restricting Ultrasonic Examination. 12.7% of the 10" Pressurizer Surge Circumferential Weld RC-W64 was inaccessible due to Rigid Restraint RR134-6 Configuration thus restricting Surface Liquid Penetrant Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 21.6% and 12.7% of the 10" Pressurizer Surge Circumferential Weld RC-W64 would require modification or removal of Rigid Restraint RR134-6.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

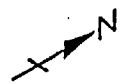
RELIEF REQUEST NO: RR-G-7-44

**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic or Liquid Penetrant examination is available due to the limited
access. VT-2 Examinations were performed during the 3rd Interval as
required by ASME Boiler and Pressure Vessel Code Section XI 1989
Edition: Table IWB-2500-1; Examination Category B-P; Item B15.50 each
Refueling Outage for evidence of leakage.**

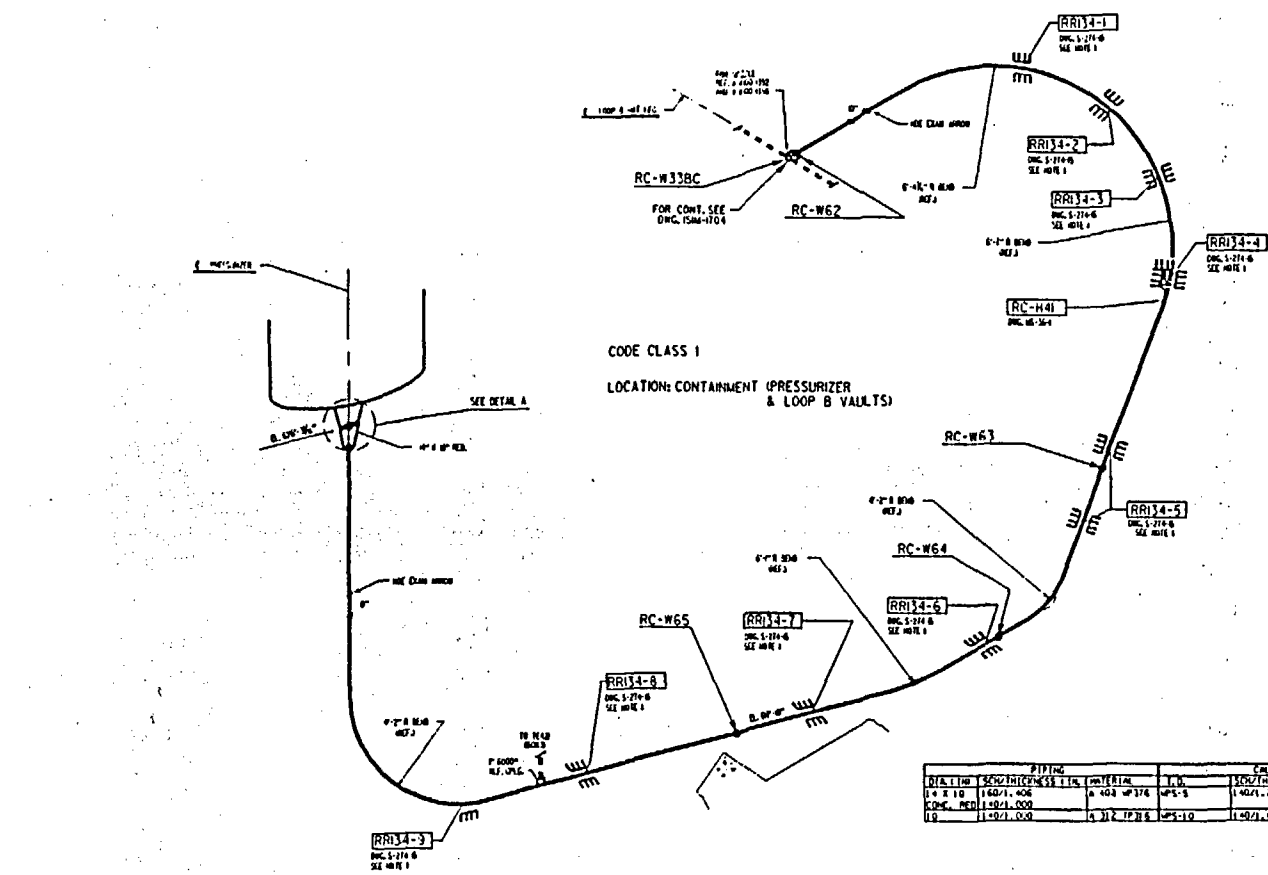
**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable



REVISIONS
 1. REVISED FOR 11/10/84
 2. REVISED FOR 11/10/84
 3. REVISED FOR 11/10/84
 4. REVISED FOR 11/10/84
 5. REVISED FOR 11/10/84
 6. REVISED FOR 11/10/84
 7. REVISED FOR 11/10/84
 8. REVISED FOR 11/10/84
 9. REVISED FOR 11/10/84
 10. REVISED FOR 11/10/84
 11. REVISED FOR 11/10/84
 12. REVISED FOR 11/10/84
 13. REVISED FOR 11/10/84
 14. REVISED FOR 11/10/84
 15. REVISED FOR 11/10/84
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 93. REVISED FOR 11/10/84
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 95. REVISED FOR 11/10/84
 96. REVISED FOR 11/10/84
 97. REVISED FOR 11/10/84
 98. REVISED FOR 11/10/84
 99. REVISED FOR 11/10/84
 100. REVISED FOR 11/10/84



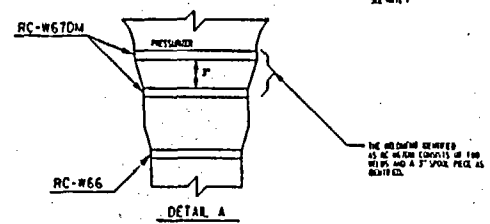
CODE CLASS 1
 LOCATION: CONTAINMENT (PRESSURIZER & LOOP B VAULTS)

PIPING		CONTAINMENT BLOCK	
DIAMETER	SCHEDULE	DIAMETER	SCHEDULE
10 X 10	160/1,406	10 X 10	160/1,406
8 X 8	160/1,406	8 X 8	160/1,406
6 X 6	160/1,406	6 X 6	160/1,406
4 X 4	160/1,406	4 X 4	160/1,406
3 X 3	160/1,406	3 X 3	160/1,406
2 X 2	160/1,406	2 X 2	160/1,406
1 X 1	160/1,406	1 X 1	160/1,406

REFERENCE DWGS.
 1. KAP 01-001639
 2. KAP 01-001639
 3. KAP 01-001639

- NOTES:
1. RUPTURE RESTRAINTS RR134-1 THRU RR134-9 HAVE BEEN REMOVED FROM SERVICE PER DEC 1984 (REF. DWG. S-274-151).
 2. DRAWING OPEN (CABLE FOR 3/4\"/>

B-1
 KAP 01-001639



WISCONSIN PUBLIC SERVICE CORP.
 151 ISOMETRIC
 PRESSURIZER SURGE LINE
 DESIGNED BY
 WISCONSIN PUBLIC SERVICE CORP.
 DATE 11/10/84
 DRAWN BY
 DATE 11/10/84
 CHECKED BY
 DATE 11/10/84
 APPROVED BY
 DATE 11/10/84
 CADD
 11/10/84

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: PRESSURIZED SURGE LINE

DRAWING NO.: ISIM-892

COMPONENT IDENTIFICATION: RC-W64 PROCEDURE: NEP NO.1516 REVISION: DRIG.

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

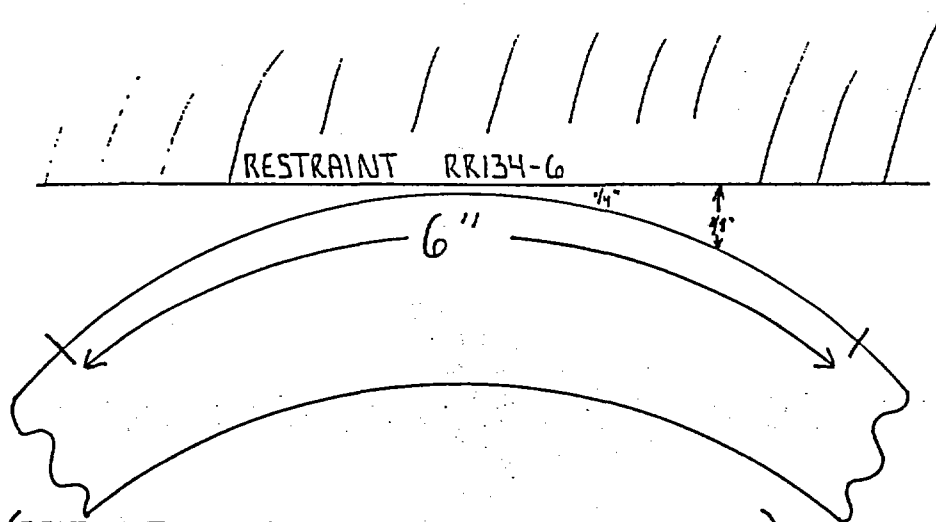
EXAMINER: *John Thomas* II DATE: 11-18-98

LEVEL

EXAMINER: *W. C. Lee* III DATE: 11-18-98

LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



(RESTRAINT LIMITS ALL ANGLES 0°, 45°, 60°)
DUE TO LIMITED ACCESS. NON REMOVABLE
LIMITATION.

PROCEDURAL REDUCED COVERAGE 20 %
CODE REDUCED COVERAGE 21.6 %

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: *Phillip C. Burke*

DATE: November 19, 1998

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: *Royce McLean*

DATE: 11-20-98

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: PRESSURIZER SURGE LINE

DRAWING NO.: ISIM - 892

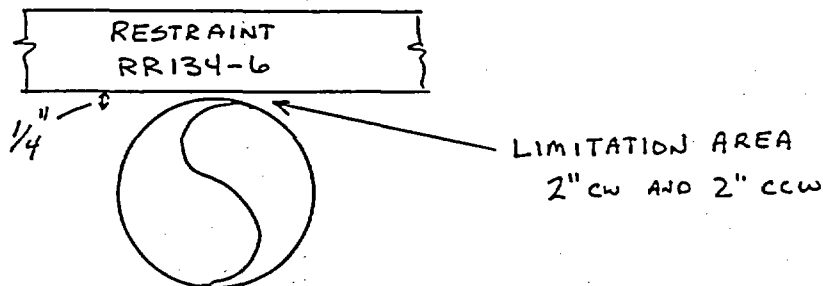
COMPONENT IDENTIFICATION: RC-W64 PROCEDURE: NEP NO. 15.6 REVISION: ORIG.

ULTRASONIC: LIQUID PENETRANT: X MAGNETIC PARTICLE: VISUAL:

EXAMINER: John P. White III DATE: 11-18-98
LEVEL

EXAMINER: NA DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



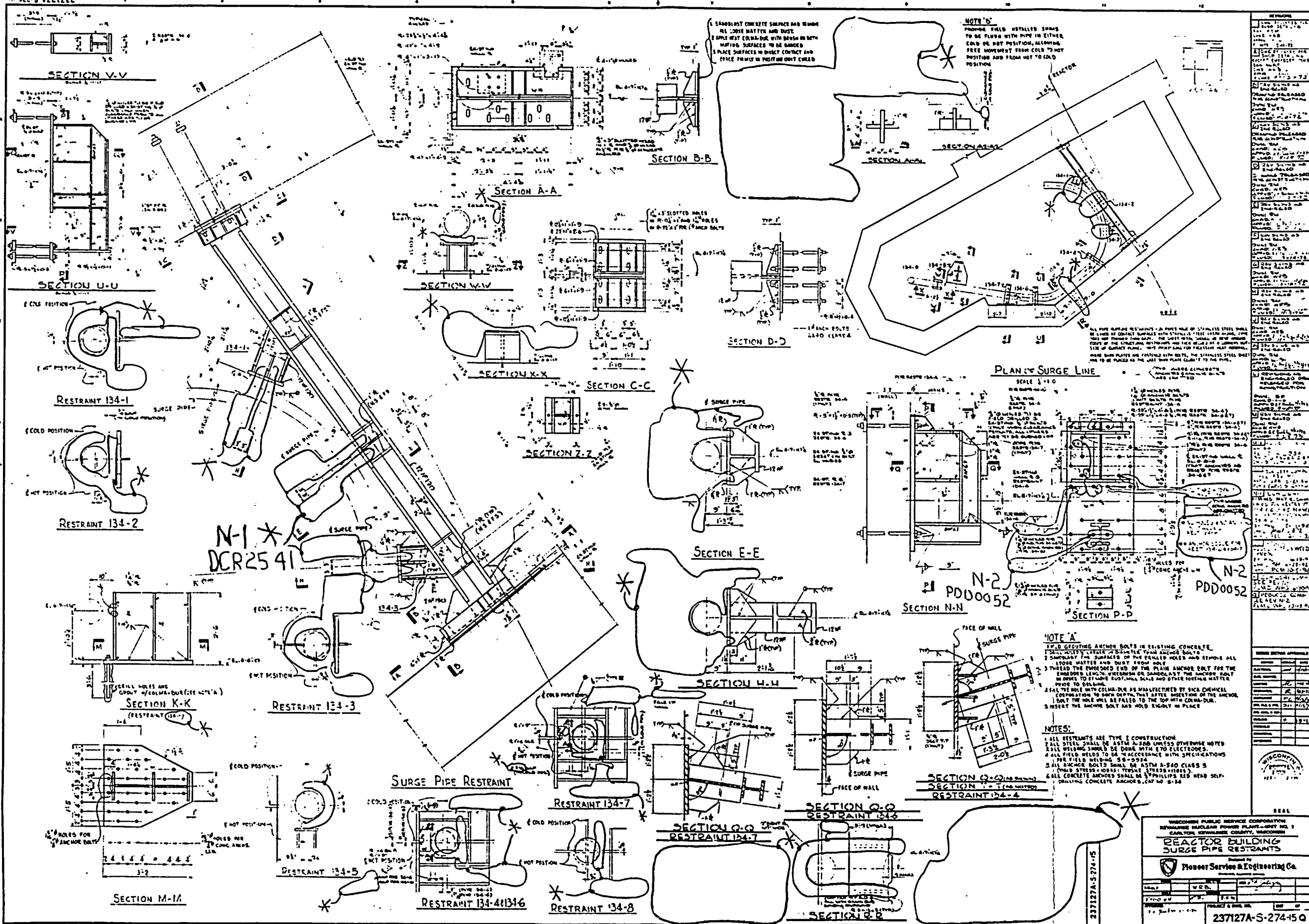
4" CIRC AREA LIMITED DUE TO NON REMOVABLE
RESTRAINT.

REDUCED EXAMINATION COVERAGE

12.7 %

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bakes DATE: November 19, 1998

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Roger McGuire DATE: 11-19-98



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-45

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 8" Residual Heat Removal
Circumferential Weld RHR-W10**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category
B-J; Item No. B9.11**
- 4. Impracticality of Compliance: 63.0% of the 8" Residual Heat Removal
Circumferential Weld RHR-W10 was inaccessible due to the Valve
Configuration and 3/4" Drain Line thus restricting Ultrasonic Examination.
1.0% of the 8" Residual Heat Removal Circumferential Weld RHR-W10
was inaccessible due to 3/4" Drain Line thus restricting Surface
Liquid Penetrant Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 63.0% and 1%
of the 8" Residual Heat Removal Circumferential Weld RHR-W10 would
require modification of the original design of the Residual Heat Removal
Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-45

**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic or Liquid Penetrant examination is available due to the limited
access. VT-2 Examinations were performed during the 3rd Interval as
required by ASME Boiler and Pressure Vessel Code Section XI 1989
Edition: Table IWB-2500-1; Examination Category B-P; Item B15.50 each
Refueling Outage for evidence of leakage.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

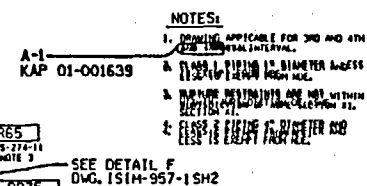
8. Precedents: Not Applicable

9. References: Not Applicable

PIPING			CALCINATION BLOCK		
SIZE IN	SCW/IN/INCHES	MATERIAL	SIZE IN	SCW/IN/INCHES	MATERIAL
8	140S/0.812	A 376 TP304	8	140S/0.812	A 376 TP304
10 TFF	405/0.365	A 403 WP 316	WPS-9	405/0.365	A 312 TP304

INTERFACIAL MIXED ATTACHMENT DATA	
IS	THICKNESS (IN)
PPH-A-M1	
PPH-A-M2	1.0
PPH-A-M3	2.125
PPH-A-M4	1.0
PPH-A-M5	

LOCATION: CONTAINMENT ELEV. 593' - 0"
CAVITY B. CONT. BSMT.



KR4 KR5 KR6 KR7 KR8 KR9 KR10 KR11 KR12 KR13 KR14 KR15 KR16 KR17 KR18 KR19 KR20 KR21 KR22 KR23 KR24 KR25 KR26 KR27 KR28 KR29 KR30 KR31 KR32 KR33 KR34 KR35 KR36 KR37 KR38 KR39 KR40 KR41 KR42 KR43 KR44 KR45 KR46 KR47 KR48 KR49 KR50 KR51 KR52 KR53 KR54 KR55 KR56 KR57 KR58 KR59 KR60 KR61 KR62 KR63 KR64 KR65 KR66 KR67 KR68 KR69 KR70 KR71 KR72 KR73 KR74 KR75 KR76 KR77 KR78 KR79 KR80 KR81 KR82 KR83 KR84 KR85 KR86 KR87 KR88 KR89 KR90 KR91 KR92 KR93 KR94 KR95 KR96 KR97 KR98 KR99 KR100 KR101 KR102 KR103 KR104 KR105 KR106 KR107 KR108 KR109 KR110 KR111 KR112 KR113 KR114 KR115 KR116 KR117 KR118 KR119 KR120 KR121 KR122 KR123 KR124 KR125 KR126 KR127 KR128 KR129 KR130 KR131 KR132 KR133 KR134 KR135 KR136 KR137 KR138 KR139 KR140 KR141 KR142 KR143 KR144 KR145 KR146 KR147 KR148 KR149 KR150 KR151 KR152 KR153 KR154 KR155 KR156 KR157 KR158 KR159 KR160 KR161 KR162 KR163 KR164 KR165 KR166 KR167 KR168 KR169 KR170 KR171 KR172 KR173 KR174 KR175 KR176 KR177 KR178 KR179 KR180 KR181 KR182 KR183 KR184 KR185 KR186 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KR1015 KR1016 KR1017 KR1018 KR1019 KR1020 KR1021 KR1022 KR1023 KR1024 KR1025 KR1026 KR1027 KR1028 KR1029 KR1030 KR1031 KR1032 KR1033 KR1034 KR1035 KR1036 KR1037 KR1038 KR1039 KR1040 KR1041 KR1

SECTION 87(2)(b) OF THE PRIVACY ACT
APPLIES TO THIS INFORMATION
AND THE INFORMATION CONTAINED HEREIN IS
NOT TO BE RELEASED TO THE PUBLIC

WISCONSIN PUBLIC SERVICE CORP.

[illegible]

ISI M-957-ISMI B

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: RHR From RC Loops A+B Hot Legs to CNTMT Pen. 9+ to CNTMT Sump B

DRAWING NO.: ISIM-957-1 SH1

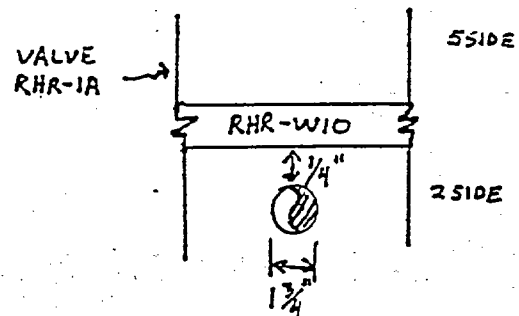
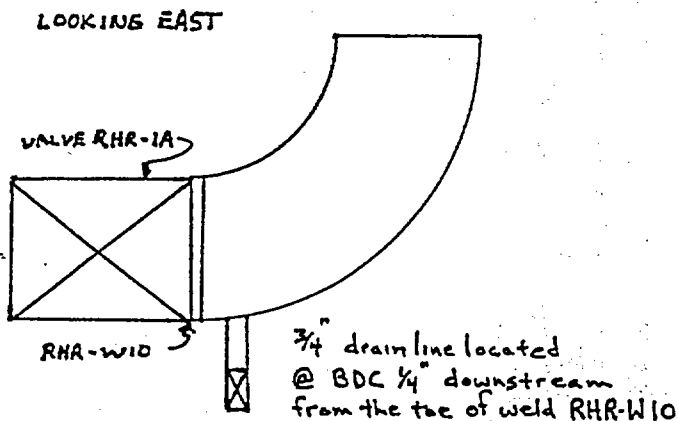
COMPONENT IDENTIFICATION: RHR-W10 PROCEDURE: NEP-15.41 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: _____ MAGNETIC PARTICLE: _____ VISUAL: _____

EXAMINER: Timothy Hahan II DATE: 10-11-01
 LEVEL

EXAMINER: M. Hilgub II DATE: 10-11-01
 LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



- LOOKING UP
- 45° - No scans 5, 7+8 on valve side due to configuration
 - Scan 2 limited due to drain line
 - 60° - No scan 5 on valve side due to configuration
 - Scan 2 limited due to drain line

Reduced Code Coverage 63%.

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip C. Baker DATE: October 18, 2001

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Logan McGinnis DATE: 10-18-01

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: RHR - FROM RC LOOPS A & B HOT LEGS TO CNTMT PEN. 9 & TO CNTMT SUMP B

DRAWING NO.: ISIM-957-ISH1

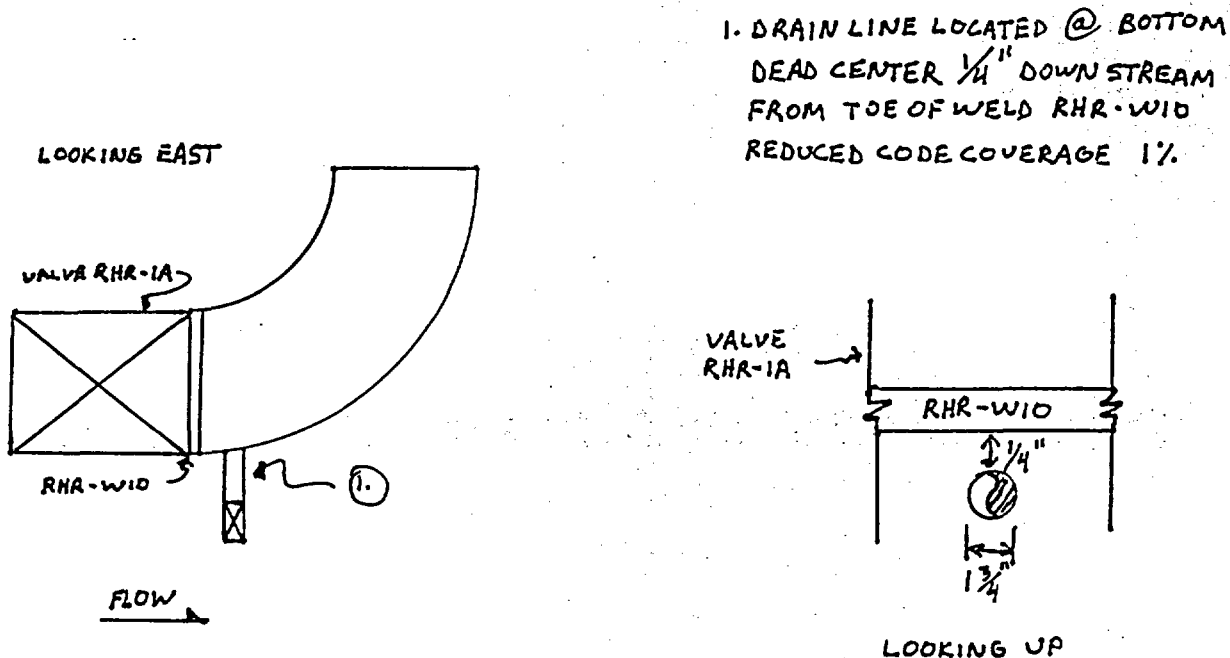
COMPONENT IDENTIFICATION: RHR-W10 PROCEDURE: NEP NO. 15.6 REVISION: ORIG

ULTRASONIC: _____ LIQUID PENETRANT: X MAGNETIC PARTICLE: _____ VISUAL: _____

EXAMINER: M. J. Hilgich II DATE: 10-10-01
LEVEL

EXAMINER: NA _____ DATE: _____
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip C. Bures DATE: October 13, 2001

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger W. Wynn DATE: 10-13-01

W10-1A

1500000
1000000
1000000
1000000

RHR-W10

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-46

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 3" Pressurizer Spray Circumferential Weld PS-W4**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-J; Item No. B9.21**
- 4. Impracticality of Compliance: 8.8% of the 3" Pressurizer Spray Circumferential Weld PS-W4 was inaccessible due to a 3/4" Line thus restricting Surface Liquid Penetrant Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 8.8% of the 3" Pressurizer Spray Circumferential Weld PS-W4 would require modification of the original design of the Pressurizer Spray Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-46

**6. Proposed Alternative and Basis for Use: No alternative Code required
Liquid Penetrant examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-
1; Examination Category B-P; Item B15.50 each Refueling Outage for
evidence of leakage.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

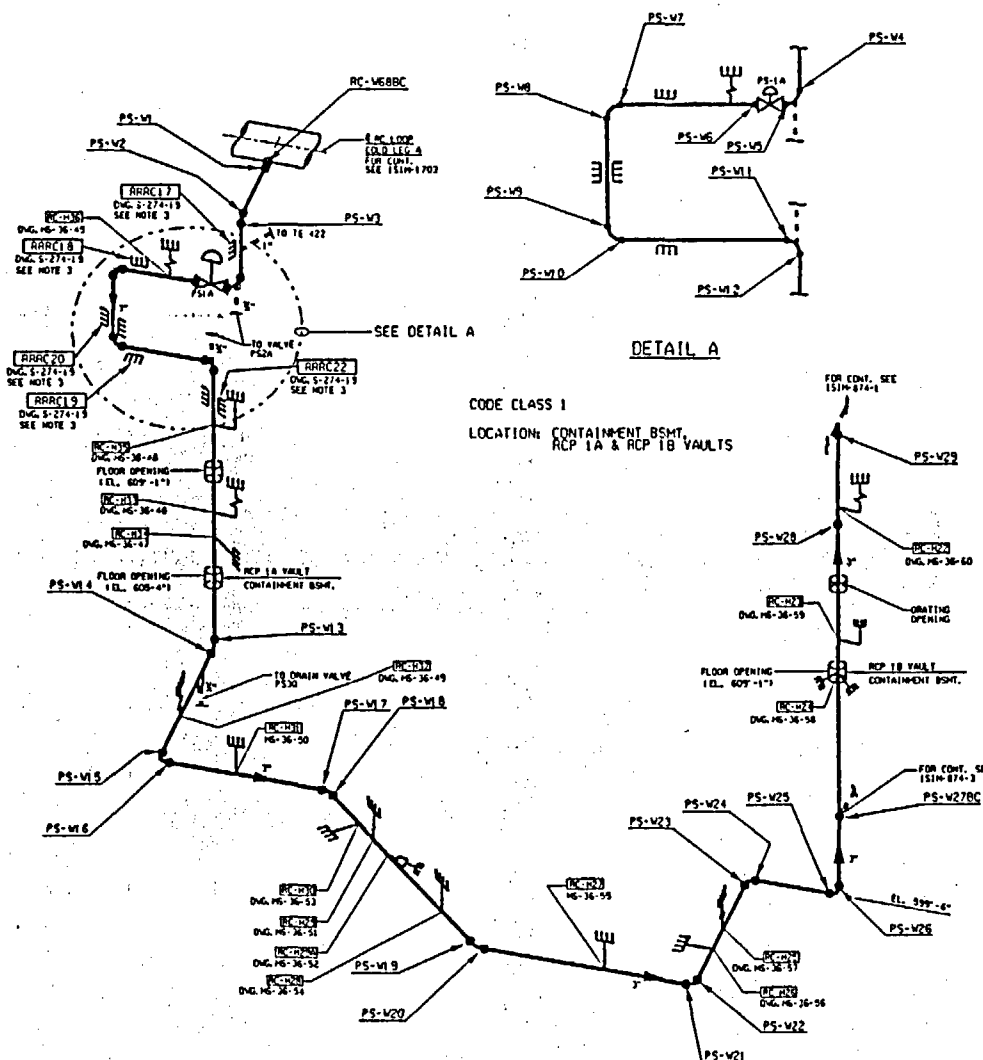
8. Precedents: Not Applicable

9. References: Not Applicable

2-10-1151



REVISION	
FILED FIRST ISSUE	
BY: JPS	
CHKD BY: CBI 09-28-93	
FILED: 10/12/93	
0-1 KAP 01-001639	
REVIEW NOTE 1	
DTAM 06-12-02	
UPD	
0-1 KAP 01-001639 COMPLETE	
SEE REF. 0-1	
FROM: 01/01/93	



DETAIL A

CODE CLASS 1
LOCATION: CONTAINMENT BSMT.
RCP 1A & RCP 1B VAULTS

INTERMEDIATE ATTACHMENT DATA	
I.D.	THICKNESS (IN.)
RC-V1	1.0
RC-V2	1.0
RC-V3	1.0
RC-V4	1.0
RC-V5	1.0
RC-V6	1.0
RC-V7	1.0
RC-V8	1.0

VALVE DATA			
VALVE ID NUMBER	TYPE	STOPS 2 DIA. IN. 1/2	BOREY NOTE
PS-1A	DISCONNECT INT.	1/2" CLOSE	1/2" / 1.125

PIPING		CALIBRATION BLOCK	
DIA. IN.	SCOTTHICKNESS (IN.) MATERIAL	I.D.	SCOTTHICKNESS (IN.) MATERIAL
1.0	1.0000 304	1.0	1.0000 304

- NOTES:
1. DRAWING APPLICABLE FOR 3" DIA. AND LESS EXCEPT FROM HERE.
 2. CLASS 1 PIPING 3" DIA. AND LESS IS EXCEPT FROM HERE.
 3. RUPTURE RESTRAINTS ARE NOT WITHIN THE JURISDICTION OF THIS SECTION.

REFERENCE DWGS.

WEL 100A-100B-100C-100D-100E-100F-100G-100H-100I-100J-100K-100L-100M-100N-100O-100P-100Q-100R-100S-100T-100U-100V-100W-100X-100Y-100Z

WISCONSIN PUBLIC SERVICE CORPORATION
PERMANENT NUCLEAR POWER PLANT
CARLTON, VERMONT COUNTY, WISCONSIN

ISI ISOMETRIC
3" R.C. TO PRESSURIZER

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

ISSUED BY
K. J. JOHNSON
PROJECT ENGINEER

DATE
10/12/93

CADD
RCY
WEL
ISI-874-2
A

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: 3" R.C. TO PRESSURIZER

DRAWING NO.: ISIM-874-2

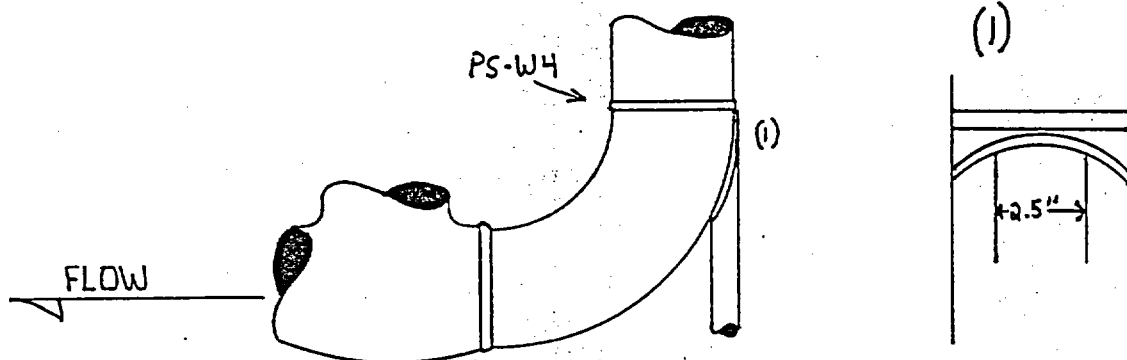
COMPONENT IDENTIFICATION: PS-W4 PROCEDURE: NEP NO. 15.6 REVISION: ORIG.

ULTRASONIC: LIQUID PENETRANT: X MAGNETIC PARTICLE: VISUAL:

EXAMINER: *Davis Thomas* II DATE: 10-29-98
LEVEL

EXAMINER: N A DATE: N A
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



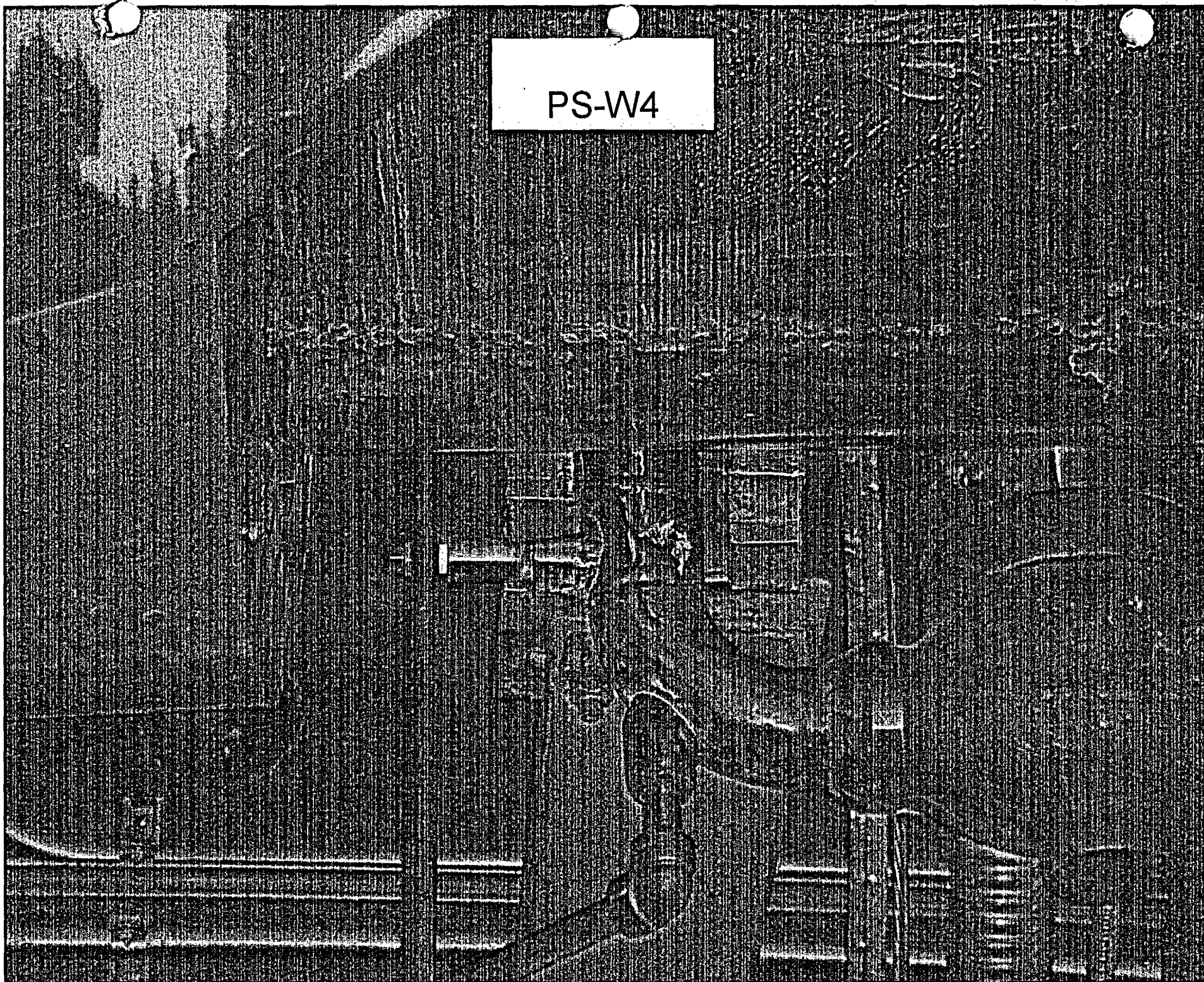
NOTE : NO EXAMINATION PERFORMED FOR 2.5" OF
DOWNSTREAM BASE METAL DUE TO 3/4" LINE.

PERCENTAGE OF EXAM LIMITATION 8.8%

KEWAUNEE NUCLEAR POWER PLANT REVIEW: *Phillip C. Burke* DATE: October 30, 1998

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: *Progn M. Gurni* DATE: 10-21-98

PS-W4



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-47

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 10" Residual Heat Removal
Circumferential Weld RHR-W188**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category
C-F-1; Item No. C5.11**
- 4. Impracticality of Compliance: 49.8% of the 10" Residual Heat Removal
Circumferential Weld RHR-W188 was inaccessible due 10" x 10" x 6" Tee
Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 49.8% of the
10" Residual Heat Removal Relief Circumferential Weld RHR-W188 would
require modification of the original design of the Residual Heat Removal
Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-47

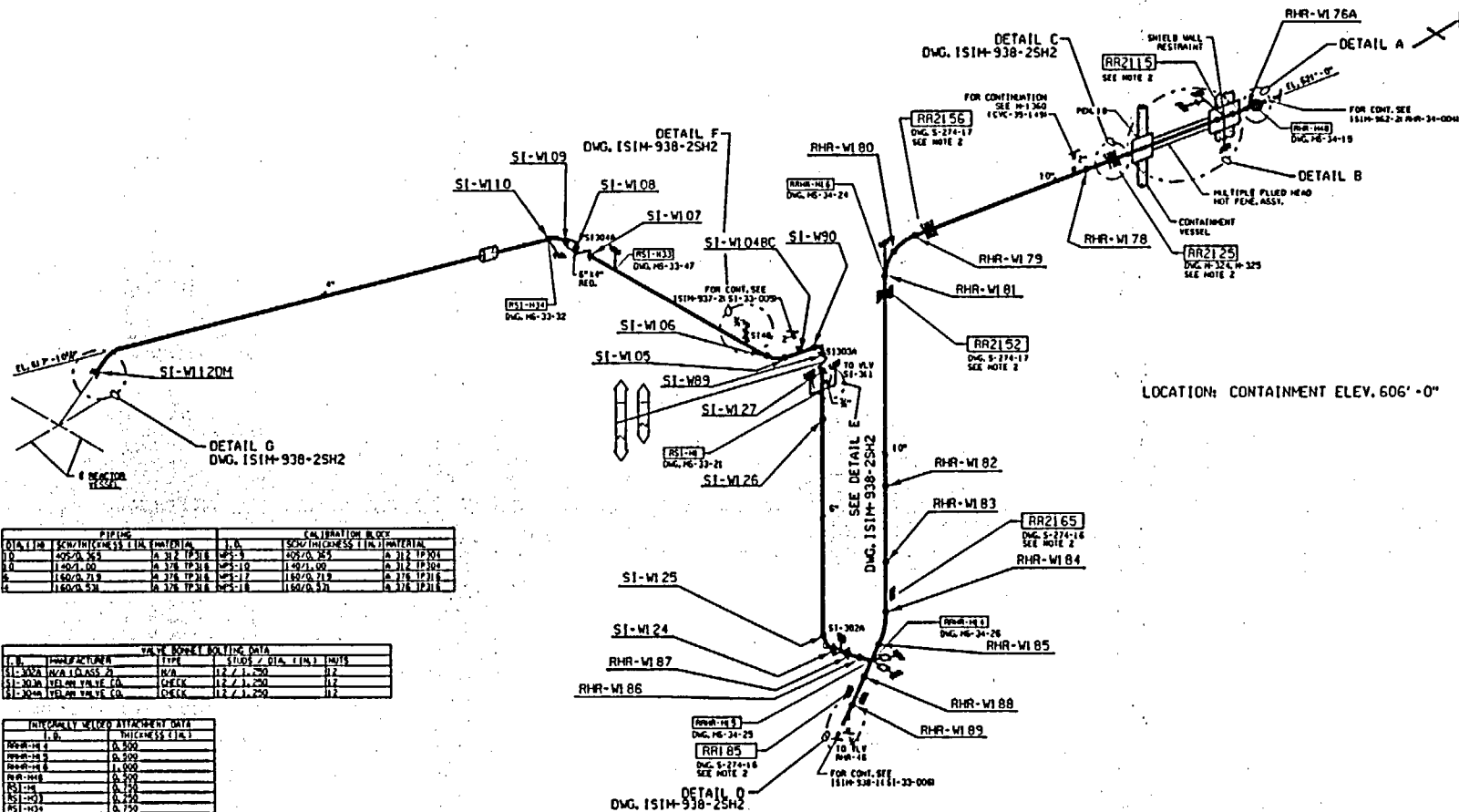
**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWC-2500-1; Examination Category C-H; Item C7.30 each 3 1/3 Year
Period for evidence of leakage. Surface Liquid Penetrant Examination was
performed on 10" Residual Heat Removal Circumferential Weld RHR-
W188 during the 3rd Interval as required by ASME Boiler and Pressure
Vessel Code Section XI 1989 Edition: Table IWC-2500-1; Examination
Category C-F-1 and Item No. C5.11.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

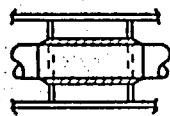
THIS DRAWING IS THE PROPERTY OF THE U.S. GOVERNMENT AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT PERMISSION IN WRITING FROM THE U.S. GOVERNMENT.



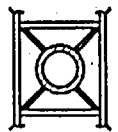
PIPE	SIZE	THICKNESS (IN.)	MATERIAL	SIZE	THICKNESS (IN.)	MATERIAL
1	400/0.25	0.25	316 TP 304	400/0.25	0.25	316 TP 304
2	150/0.25	0.25	316 TP 304	150/0.25	0.25	316 TP 304
3	150/0.25	0.25	316 TP 304	150/0.25	0.25	316 TP 304
4	150/0.25	0.25	316 TP 304	150/0.25	0.25	316 TP 304

PIPE	THICKNESS (IN.)	SIZE	THICKNESS (IN.)	NOTE
SI-W04	0.25	12 / 1.250	0.25	
SI-W05	0.25	12 / 1.250	0.25	
SI-W06	0.25	12 / 1.250	0.25	

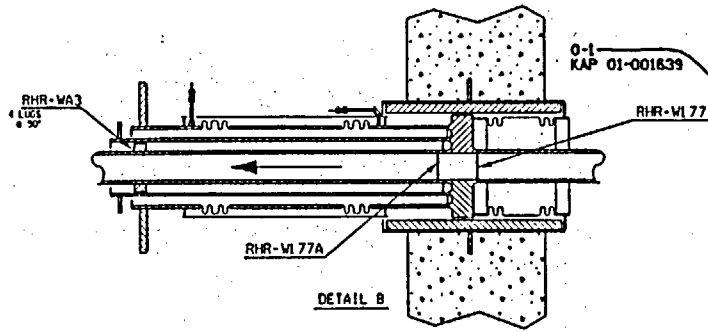
PIPE	THICKNESS (IN.)
RHR-W1	0.25
RHR-W2	0.25
RHR-W3	0.25
RHR-W4	0.25
RHR-W5	0.25
RHR-W6	0.25
RHR-W7	0.25
RHR-W8	0.25
RHR-W9	0.25
RHR-W10	0.25
RHR-W11	0.25
RHR-W12	0.25
RHR-W13	0.25
RHR-W14	0.25
RHR-W15	0.25
RHR-W16	0.25
RHR-W17	0.25
RHR-W18	0.25
RHR-W19	0.25
RHR-W20	0.25
RHR-W21	0.25
RHR-W22	0.25
RHR-W23	0.25
RHR-W24	0.25
RHR-W25	0.25
RHR-W26	0.25
RHR-W27	0.25
RHR-W28	0.25
RHR-W29	0.25
RHR-W30	0.25
RHR-W31	0.25
RHR-W32	0.25
RHR-W33	0.25
RHR-W34	0.25
RHR-W35	0.25
RHR-W36	0.25
RHR-W37	0.25
RHR-W38	0.25
RHR-W39	0.25
RHR-W40	0.25
RHR-W41	0.25
RHR-W42	0.25
RHR-W43	0.25
RHR-W44	0.25
RHR-W45	0.25
RHR-W46	0.25
RHR-W47	0.25
RHR-W48	0.25
RHR-W49	0.25
RHR-W50	0.25
RHR-W51	0.25
RHR-W52	0.25
RHR-W53	0.25
RHR-W54	0.25
RHR-W55	0.25
RHR-W56	0.25
RHR-W57	0.25
RHR-W58	0.25
RHR-W59	0.25
RHR-W60	0.25
RHR-W61	0.25
RHR-W62	0.25
RHR-W63	0.25
RHR-W64	0.25
RHR-W65	0.25
RHR-W66	0.25
RHR-W67	0.25
RHR-W68	0.25
RHR-W69	0.25
RHR-W70	0.25
RHR-W71	0.25
RHR-W72	0.25
RHR-W73	0.25
RHR-W74	0.25
RHR-W75	0.25
RHR-W76	0.25
RHR-W77	0.25
RHR-W78	0.25
RHR-W79	0.25
RHR-W80	0.25
RHR-W81	0.25
RHR-W82	0.25
RHR-W83	0.25
RHR-W84	0.25
RHR-W85	0.25
RHR-W86	0.25
RHR-W87	0.25
RHR-W88	0.25
RHR-W89	0.25
RHR-W90	0.25
RHR-W91	0.25
RHR-W92	0.25
RHR-W93	0.25
RHR-W94	0.25
RHR-W95	0.25
RHR-W96	0.25
RHR-W97	0.25
RHR-W98	0.25
RHR-W99	0.25
RHR-W100	0.25



DETAIL A



DETAIL B



REFERENCE DWGS.

1. DRAWING APPLICABLE FOR 300 AND 400 IN. INTERVAL.

2. RUPURE RESTRAINTS ARE NOT WITHIN THE JURISDICTION OF ASME SECTION XI.

3. CLASS 2 PIPING 4" DIAMETER AND LESS IS EXEMPT FROM NDE.

(SHEET 1 OF 2)

ISOMETRIC SI-FROM ENTHY PENLO TO REACTOR FROM ACTHR 10 TO LOOP 8 COLD LEG	
WISCONSIN PUBLIC SERVICE CORP.	
DATE	15M-938-25H
BY	
CHECKED	
APPROVED	

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

SI - FROM CNT MT Pen-10 TO Reactor

SYSTEM OR COMPONENT: From ACMT 1B To Loop B Cold Leg DRAWING NO.: ISIM-938-2SH1

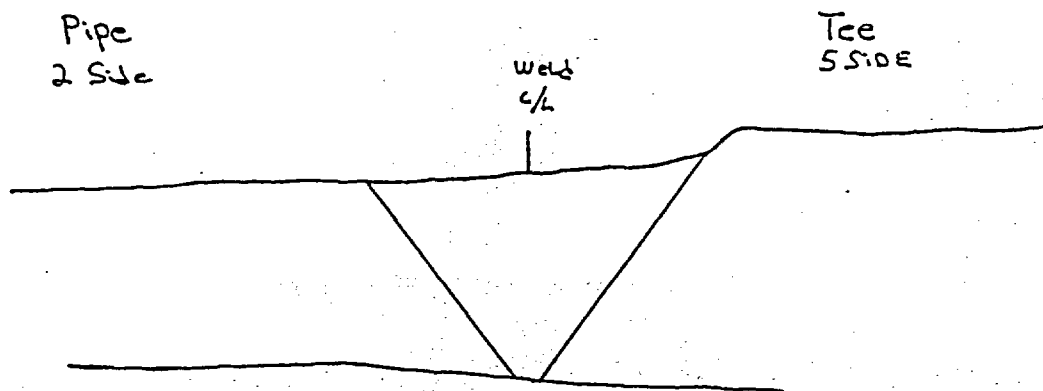
COMPONENT IDENTIFICATION: RHR-W188 PROCEDURE: QCP 911 REVISION: ORIG.

ULTRASONIC: X LIQUID PENETRANT: _____ MAGNETIC PARTICLE: _____ VISUAL: _____

EXAMINER: N.A. Bog II DATE: 4-10-95
LEVEL

EXAMINER: NA NA DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



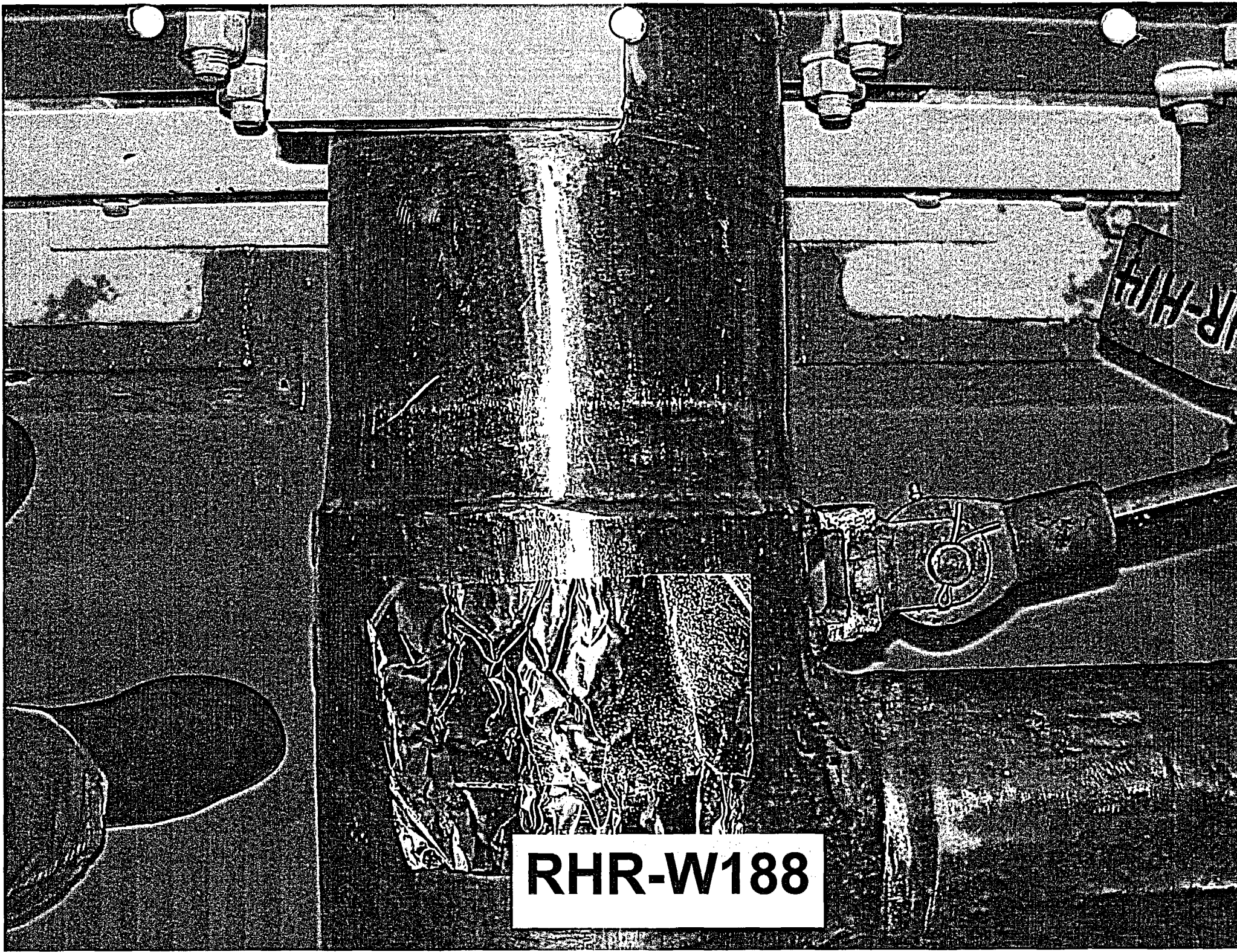
Tee Configuration Limited 0° SCAN AND S SCAN FOR
45° S, 60° S AND 45° RL.

Percentage of Reduced Examination Coverage = 49.8%

Page 2 of 3

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: E. A. Balstad DATE: 4/12/95

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Roger Myer DATE: 4/12/95



RHR-W188

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-48

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 10" Residual Heat Removal
Circumferential Weld RHR-W414**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category
C-F-1; Item No. C5.11**
- 4. Impracticality of Compliance: 59.0% of the 10" Residual Heat Removal
Circumferential Weld RHR-W414 was inaccessible due to Valve
Configuration and 2- 3/4" Line Weldolets thus restricting Ultrasonic
Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 59.0% of the
10" Residual Heat Removal Relief Circumferential Weld RHR-W414 would
require modification of the original design of the Residual Heat Removal
Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-48

**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWC-2500-1; Examination Category C-H; Item C7.30 each 3 1/3 Year
Period for evidence of leakage. Surface Liquid Penetrant Examination was
performed on 10" Residual Heat Removal Circumferential Weld RHR-
W414 during the 3rd Interval as required by ASME Boiler and Pressure
Vessel Code Section XI 1989 Edition: Table IWC-2500-1; Examination
Category C-F-1 and Item No. C5.11.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable



WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

RHR- FROM CNTMT SUMP B AND ANCHORS THRU RHR PUMP 1A
SYSTEM OR COMPONENT: TO ANCHOR ON DISCH. LINE.

DRAWING NO.: ISIM-958-ISH1

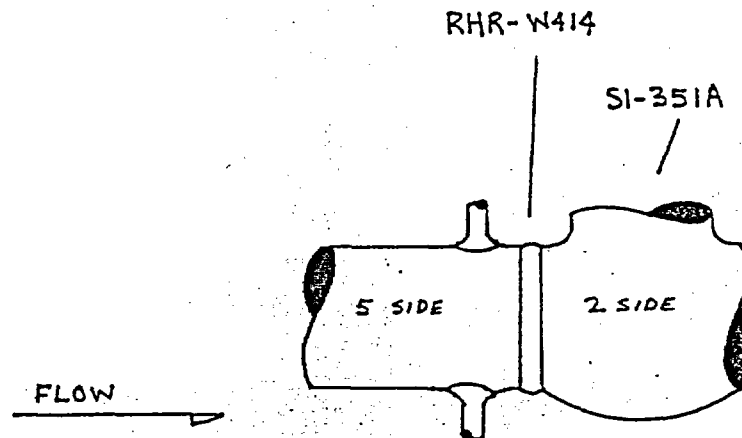
COMPONENT IDENTIFICATION: RHR-W414 PROCEDURE: NEP-15.41 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: *MBH/Spb* *II* DATE: 10-24-01
LEVEL

EXAMINER: NA NA DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



NO SCANS 2,7, AND 8 ON 2 SIDE DUE TO VALVE CONFIGURATION.

45° AND 70° SCAN 5 LIMITED FOR 2" AT TDC AND FOR 2" AT BDC DUE TO WELD O'LETS.

WELD O'LETS LOCATED $\frac{3}{4}$ " FROM TOE OF WELD AT T.D.C. AND $\frac{3}{4}$ " FROM TOE OF WELD AT B.D.C.

CODE COVERAGE REDUCED BY 59%.

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: *Phillips C. Bukes* DATE: October 25, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: *Rye M. M...* DATE: 10-26-01

A black and white photograph of a mechanical assembly, likely a ship's hull. The central feature is a large cylindrical component with a circular flange and a central pipe. A label 'RHR-W414' is visible at the top. The assembly is secured with various bolts and structural elements. The background shows the curved surface of the hull with several bolts and a small circular hatch. The overall image has a high-contrast, grainy appearance.

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-49

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 3" Safety Injection Circumferential Weld SI-W234**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category C-F-1; Item No. C5.21**
- 4. Impracticality of Compliance: 20.0% of the 3" Safety Injection Circumferential Weld SI-W234 was inaccessible due to the Elbow Intradose Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 20.0% of the 3" Safety Injection Circumferential Weld SI-W234 would require modification of the original design of the Safety Injection Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

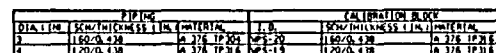
RELIEF REQUEST NO: RR-G-7-49

**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWC-2500-1; Examination Category C-H; Item C7.30 each 3 1/3 Year
Period for evidence of leakage. Surface Liquid Penetrant Examination was
performed on 3" Safety Injection Circumferential Weld SI-W234 during
the 3rd Interval as required by ASME Boiler and Pressure Vessel Code
Section XI 1989 Edition: Table IWC-2500-1; Examination Category C-F-1
and Item No. C5.21.**

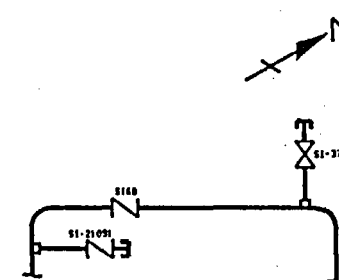
**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

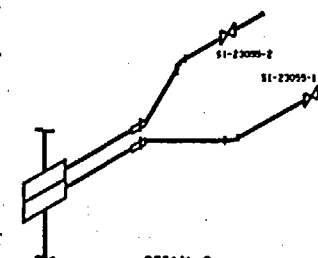
9. References: Not Applicable



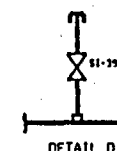
LOCATION: AUX. BLDG. SI PUMP AREA, RWST ANNULUS, EAST PENETRATION ROOM, CONT. ANNULUS



DETAIL 8



DETAIL C



DETAIL D

0-1
KAP 01-001639

REFERENCE DWGS.

四九四九 | 四九四九 | 四九四九 | 四九四九

NOTES

1. GRAVING APPLICABLE FOR 200
151 INTERVAL.

ESTIMATED PUBLIC SURVEY CORPORATION
ATTORNEY AT LAW (IN FORMER NAME)
CANTON, MASSACHUSETTS 01905

... ISI ISOMETRIC

**SAFETY INJECTION PUMPS DISCH.
PIPING TO PEN 20E & RWST**

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.

DATE: 11/11/2011

[illegible]

ISIM-934-1

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

SYSTEM OR COMPONENT: SAFETY Injection Pumps Discharge
DISCHARGE Piping From Pen. 26E & 26SD DRAWING NO.: ISIM - 934-1

COMPONENT IDENTIFICATION: SI-W234 PROCEDURE: QCP-911 REVISION: ORIG

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: *David P. Bluff* II DATE: 4-22-95
LEVEL

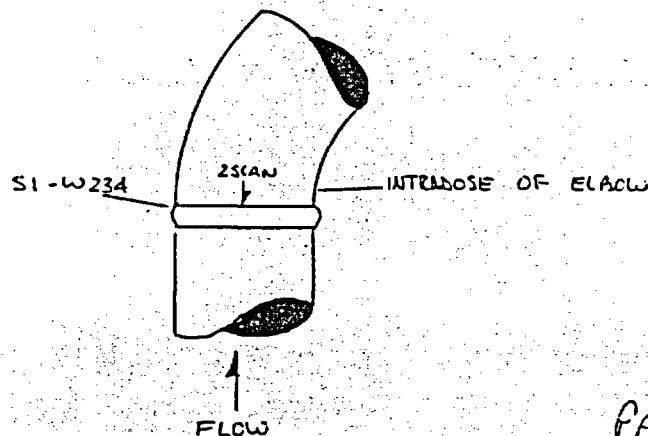
EXAMINER: NA DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

45° SHEAR AND 60° SHEAR, SCAN 2, LIMITED CONTACT FROM 6" TO 10" ON INTRADOSE OF ELBOW DUE TO CURVATURE OF ELBOW.

45° SHEAR - 20% REDUCED EXAM. COVERAGE

60° SHEAR - 20% REDUCED EXAM. COVERAGE.



PAGE 1 OF 2

KEWAUNEE NUCLEAR POWER PLANT REVIEW: *Phillips C. Burke* DATE: April 24, 1995

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: *Roger M. Wynn* DATE: 4/25/95

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-50

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 3" Safety Injection Circumferential Weld SI-W262**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category C-F-1; Item No. C5.21**
- 4. Impracticality of Compliance: 20.0% of the 3" Safety Injection Circumferential Weld SI-W262 was inaccessible due to the Elbow Intradose Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 20.0% of the 3" Safety Injection Circumferential Weld SI-W262 would require modification of the original design of the Safety Injection Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-50

**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWC-2500-1; Examination Category C-H; Item C7.30 each 3 1/3 Year
Period for evidence of leakage. Surface Liquid Penetrant Examination was
performed on 3" Safety Injection Circumferential Weld SI-W262 during
the 3rd Interval as required by ASME Boiler and Pressure Vessel Code
Section XI 1989 Edition: Table IWC-2500-1; Examination Category C-F-1
and Item No. C5.21.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable



PILING				CALCULATION BLOCK			
DIA. (mm)	SCHW. (mm)	THICKNESS (m)	INTERNAL	T.O.	SCHW. (mm)	THICKNESS (m)	INTERNAL
3	160/0.438	A 376 TP 204	MS-20		160/0.438	A 376 TP 204	
4	120/0.438	A 276 TP 216	MS-19		120/0.438	A 376 TP 204	

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

SAFETY INJECTION PUMPS

SYSTEM OR COMPONENT: DISCHARGE PUMP TO PEN. 2EN ; 2WST DRAWING NO.: ISLM - 934-2

COMPONENT IDENTIFICATION: SI-W2262 PROCEDURE: GCP-911 REVISION: 0216

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

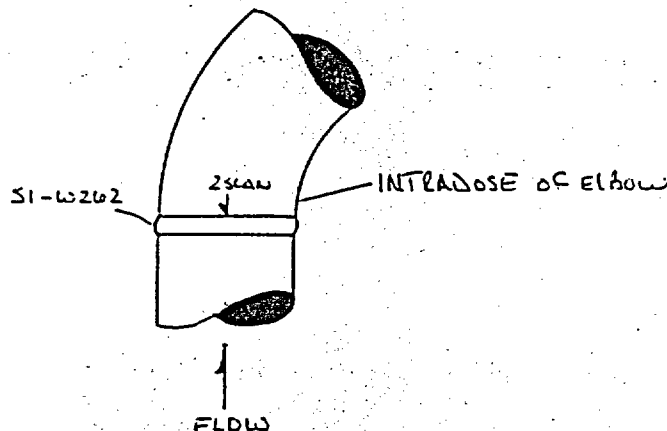
EXAMINER: Todd P. Blif II DATE: 4-22-95
LEVEL

EXAMINER: NA DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

45° SHEAR AND 60° SHEAR, SCAN 2, LIMITED
CONTACT FROM 6" TO 10" ON INTRADOSE OF ELBOW DUE
TO CURVATURE OF ELBOW.

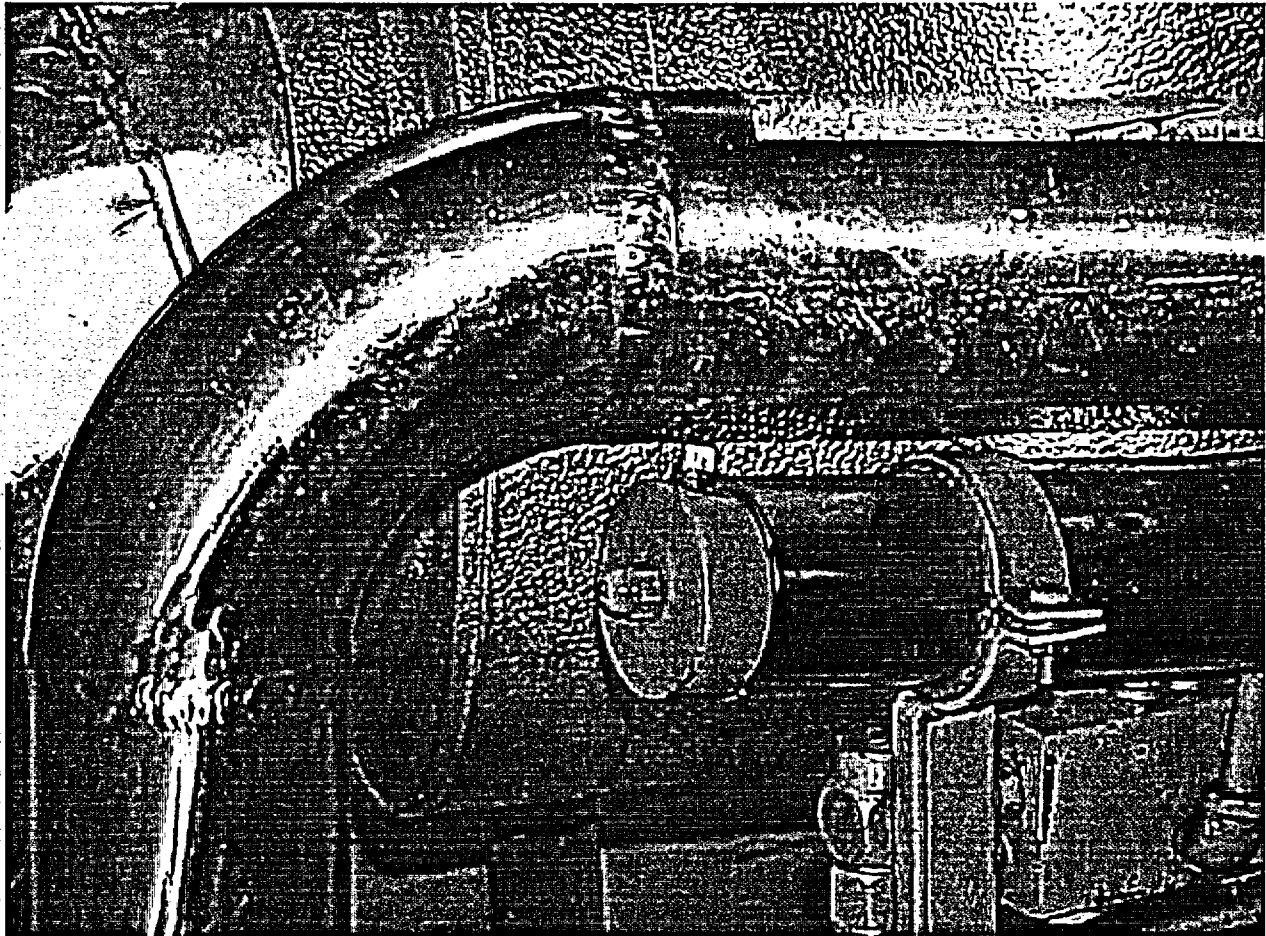
45° SHEAR - 20% REDUCED EXAM. COVERAGE
60° SHEAR - 20% REDUCED EXAM. COVERAGE



PAGE 1 OF 1

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bukes DATE: April 24, 1995

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Roger Morgan DATE: 4/25/95



3" Safety Injection Weld
SI-W262

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-51

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 3" Safety Injection Circumferential Weld SI-W249**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category C-F-1; Item No. C5.21**
- 4. Impracticality of Compliance: 15.5% of the 3" Safety Injection Circumferential Weld SI-W249 was inaccessible due to 4" x 4" x 3" Reducing Tee Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 15.5% of the 3" Safety Injection Circumferential Weld SI-W249 would require modification of the original design of the Safety Injection Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-51

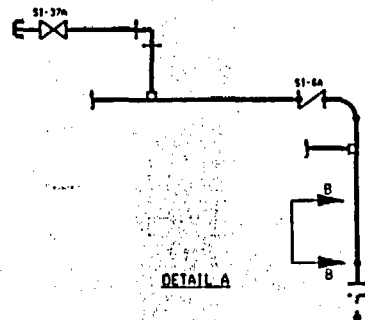
6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWC-2500-1; Examination Category C-H; Item C7.30 each 3 1/3 Year
Period for evidence of leakage. Surface Liquid Penetrant Examination was
performed on 3" Safety Injection Circumferential Weld SI-W249 during
the 3rd Interval as required by ASME Boiler and Pressure Vessel Code
Section XI 1989 Edition: Table IWC-2500-1; Examination Category C-F-1
and Item No. C5.21.

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

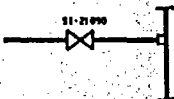
8. Precedents: Not Applicable

9. References: Not Applicable

2-96b-1151



DETAIL A

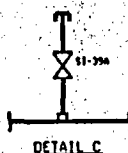
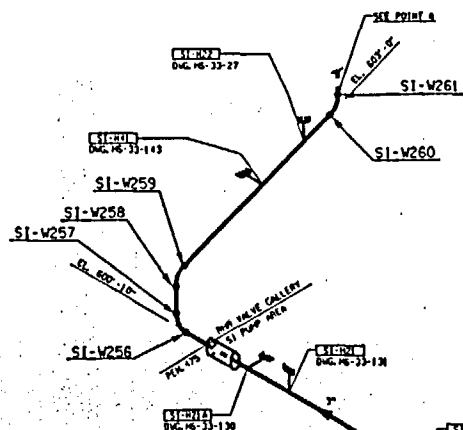


SECTION B-B

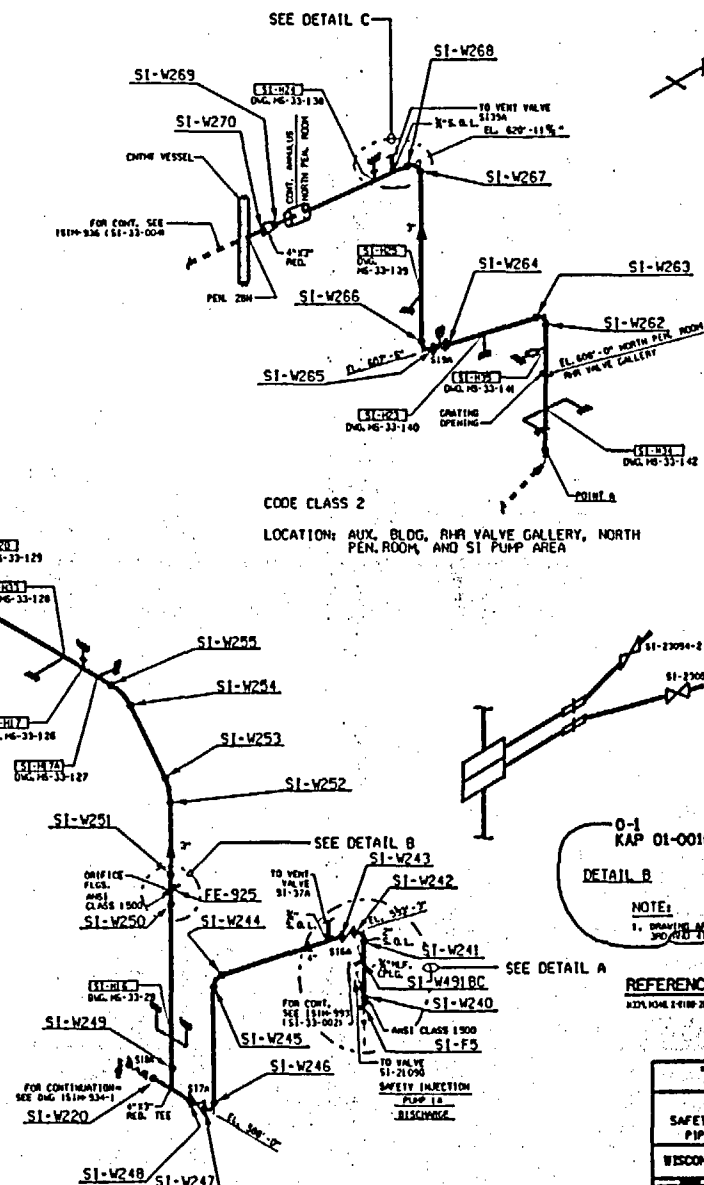
VALVE BOARD NOTING DATA		
I.D.	SIZE / DIA. (IN.)	NOTE
SI-64	12" / 8"	2
SI-70	12" / 8"	2
SI-71	12" / 8"	2

FLANGE NOTING DATA		
SI-70	12" / 8"	2
SI-71	12" / 8"	2

PIPING			CALCULATION BLOCK		
DIA. (IN.)	WGT. (LBS.)	WGT. (LBS.)	I.D.	WGT. (LBS.)	WGT. (LBS.)
12" / 8"	12.7	12.7	12" / 8"	12.7	12.7
12" / 8"	12.7	12.7	12" / 8"	12.7	12.7



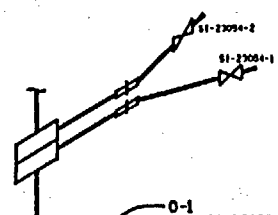
DETAIL C



SEE DETAIL C

CODE CLASS 2

LOCATION: AUX. BLDG. RHR VALVE GALLERY, NORTH PEN. ROOM, AND SI PUMP AREA



DETAIL B

NOTE: 1. DRAWING APPLICABLE FOR 30" AND 10" INTERVALS.

REFERENCE DWGS.

ADD. PAGE 2 (100) 20. 0-100-71. 40-403

IS1 ISOMETRIC SAFETY INJECTION PUMPS DISCH. PIPING TO PEN 20N & RWST	
WISCONSIN PUBLIC SERVICE CORP.	
PROJECT NO. 100-71. 40-403	
DATE: 10/1/71	
BY: [Signature]	
CHECKED: [Signature]	
APPROVED: [Signature]	
IS1-934-2 A	

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SAFETY INJECTION PUMPS

SYSTEM OR COMPONENT: DISCH. PIPING TO PEN. ZBN AND RWST

DRAWING NO.: 151M-934-2

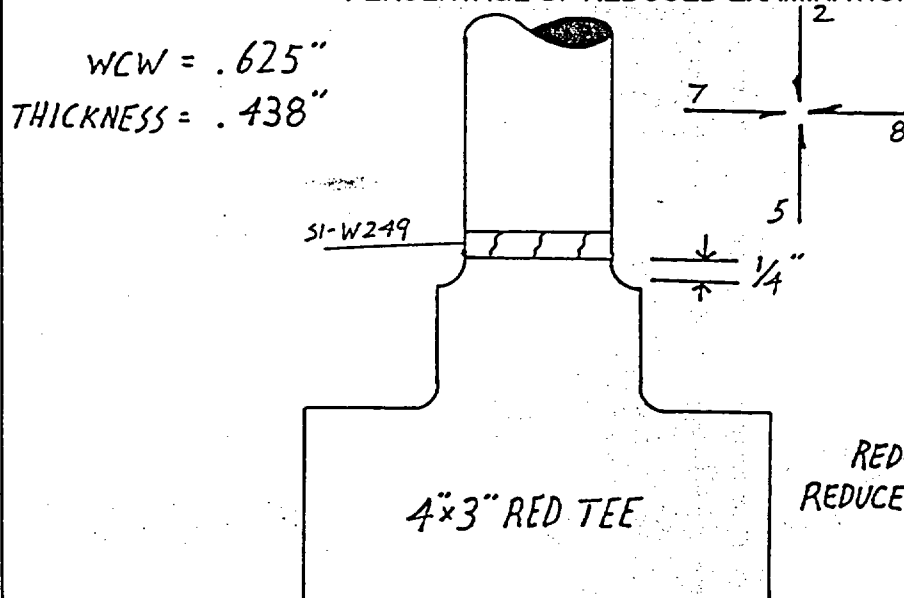
COMPONENT IDENTIFICATION: SI-W249 PROCEDURE: NEP No. 15.16 REVISION: Orig

ULTRASONIC: X LIQUID PENETRANT: _____ MAGNETIC PARTICLE: _____ VISUAL: _____

EXAMINER: Greg Williams II DATE: 11-9-98
LEVEL

EXAMINER: Scott Thomas II DATE: 11-9-98
LEVEL

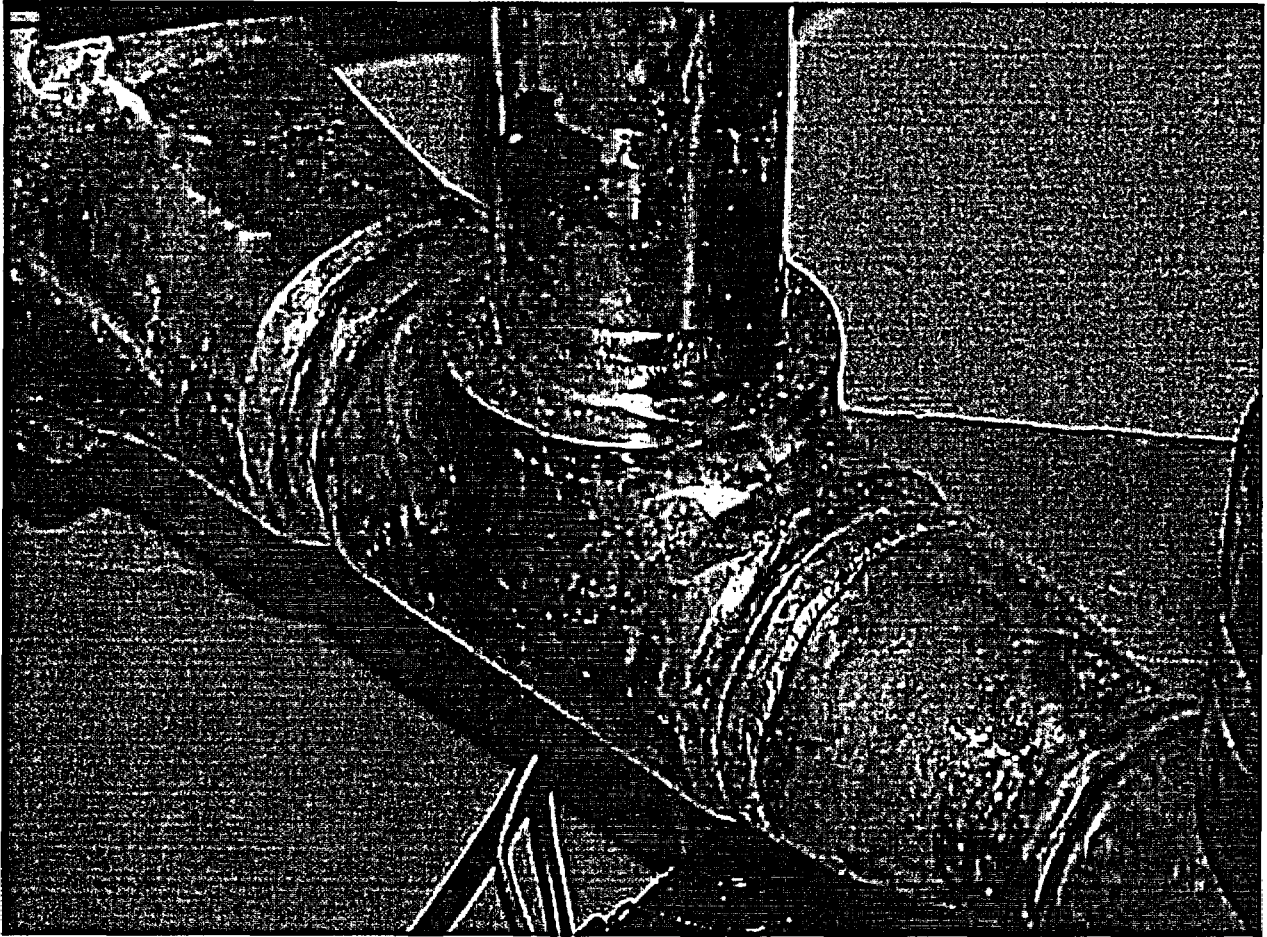
SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND
PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



REDUCED CODE COVERAGE: 15.5%
REDUCED PROCEDURE COVERAGE: 40.5%

SCANS 5, 7, AND 8 LIMITED DUE TO TEE CONFIGURATION
- SEE ABOVE SKETCH FOR DIMENSIONS

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bikes DATE: November 11, 1998
AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Royce McGuire DATE: 11-12-98



3" Safety Injection Weld
SI-W249

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-52

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 3" Safety Injection Circumferential Weld SI-W307**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category C-F-1; Item No. C5.21**
- 4. Impracticality of Compliance: 47.5% of the 3" Safety Injection Circumferential Weld SI-W307 was inaccessible due to 3" x 3" x 3" Tee Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 47.5% of the 3" Safety Injection Circumferential Weld SI-W307 would require modification of the original design of the Safety Injection Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-52

**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWC-2500-1; Examination Category C-H; Item C7.30 each 3 1/3 Year
Period for evidence of leakage. Surface Liquid Penetrant Examination was
performed on 3" Safety Injection Circumferential Weld SI-W307 during
the 3rd Interval as required by ASME Boiler and Pressure Vessel Code
Section XI 1989 Edition: Table IWC-2500-1; Examination Category C-F-1
and Item No. C5.21.**

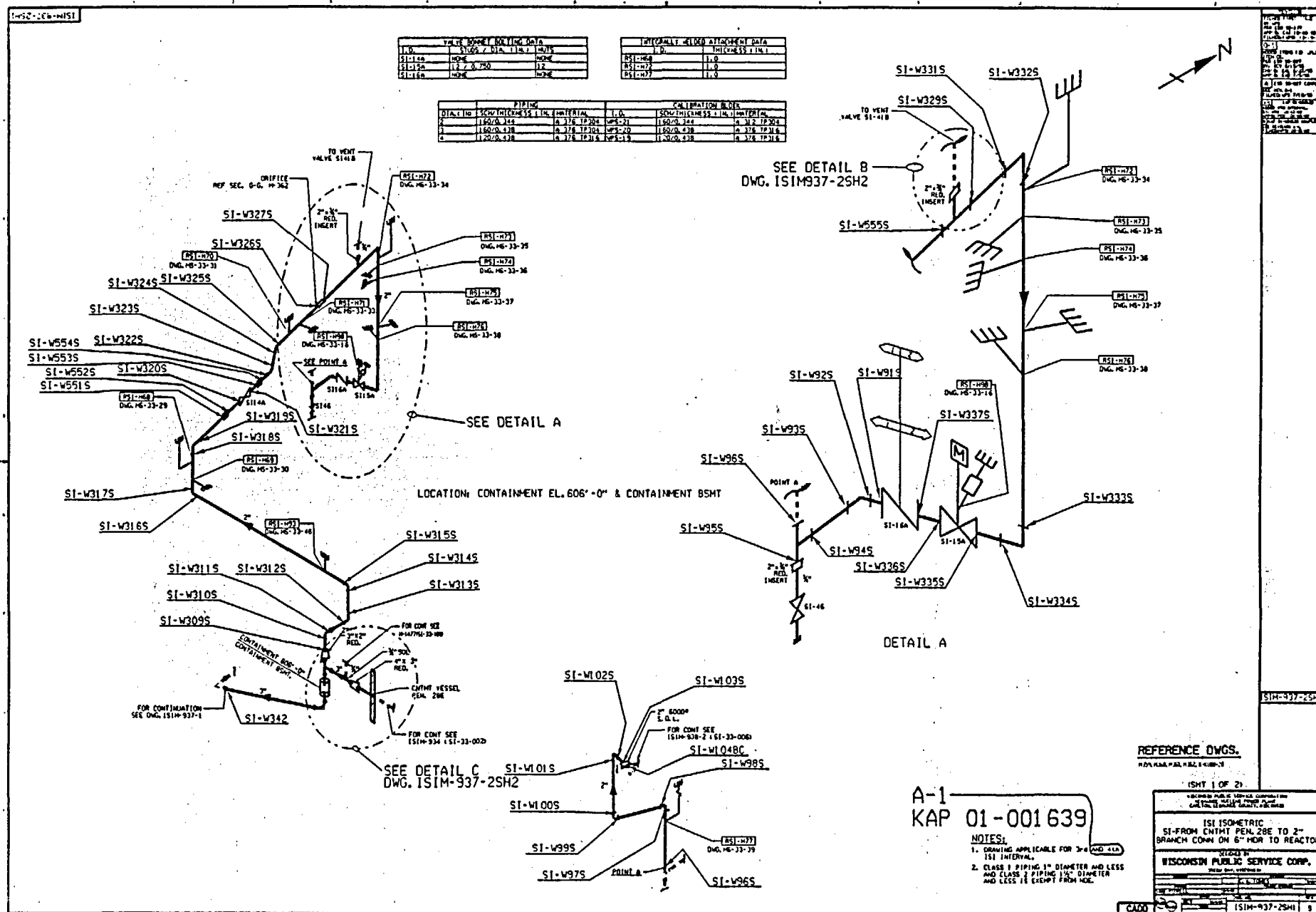
**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

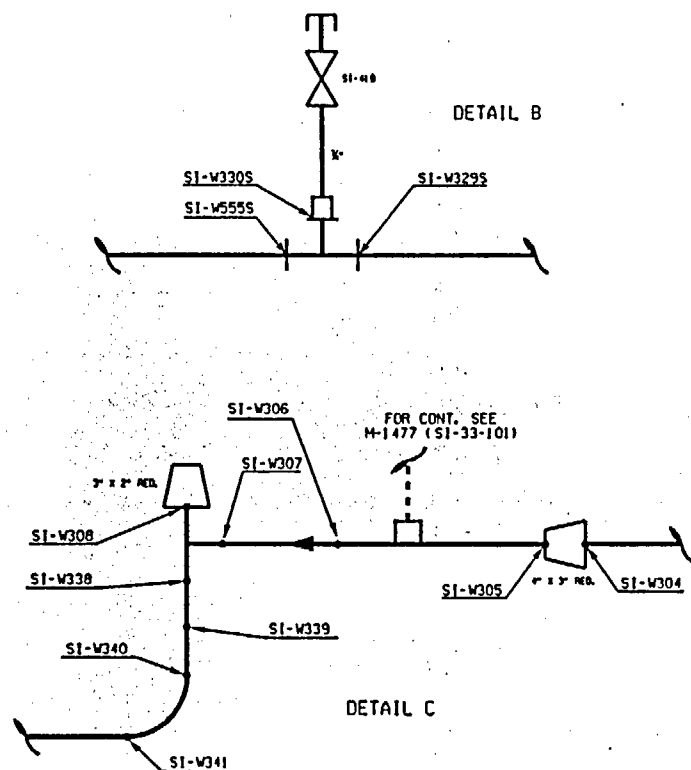
9. References: Not Applicable

INTEGRALLY WELDED ATTACHMENT DATA	
I.D.	THICKNESS (IN.)
RS - M60	1.0
RS - M72	1.0
RS - M77	1.0

SEE DETAIL 8
DWG. ISIM937-2SH2



2452-226-WIS1



NOTES:
1. DRAWING APPLICABLE FOR 3'-6"
TO 10'-0" INTERVAL.

A-1
KAP 01-001639

ISMT 2 OF 21

ISI ISOMETRIC
SI-FROM ENTINT PEN 20E TO 2"
BRANCH CONN ON 6" HBR TO REACTOR

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.

REVIEWED BY
DATE
BY
DATE

ISMT-937-2542 0

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: SI - FROM CNTMT PEN. 28E TO 2" BRANCH CONN ON 6" HDR TO REACTOR

DRAWING NO.: ISIM - 937-2SH2

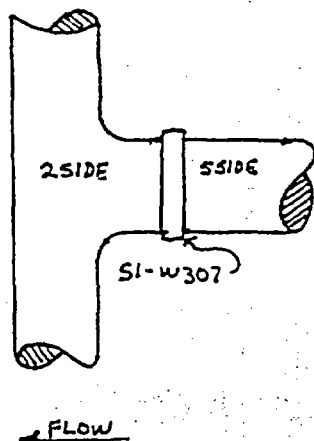
COMPONENT IDENTIFICATION: SI-W307 PROCEDURE: NEP-15.41 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: _____ MAGNETIC PARTICLE: _____ VISUAL: _____

EXAMINER: TIM COBURN II DATE: 10/16/01
LEVEL

EXAMINER: M. J. Hilgach II DATE: 10-16-01
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

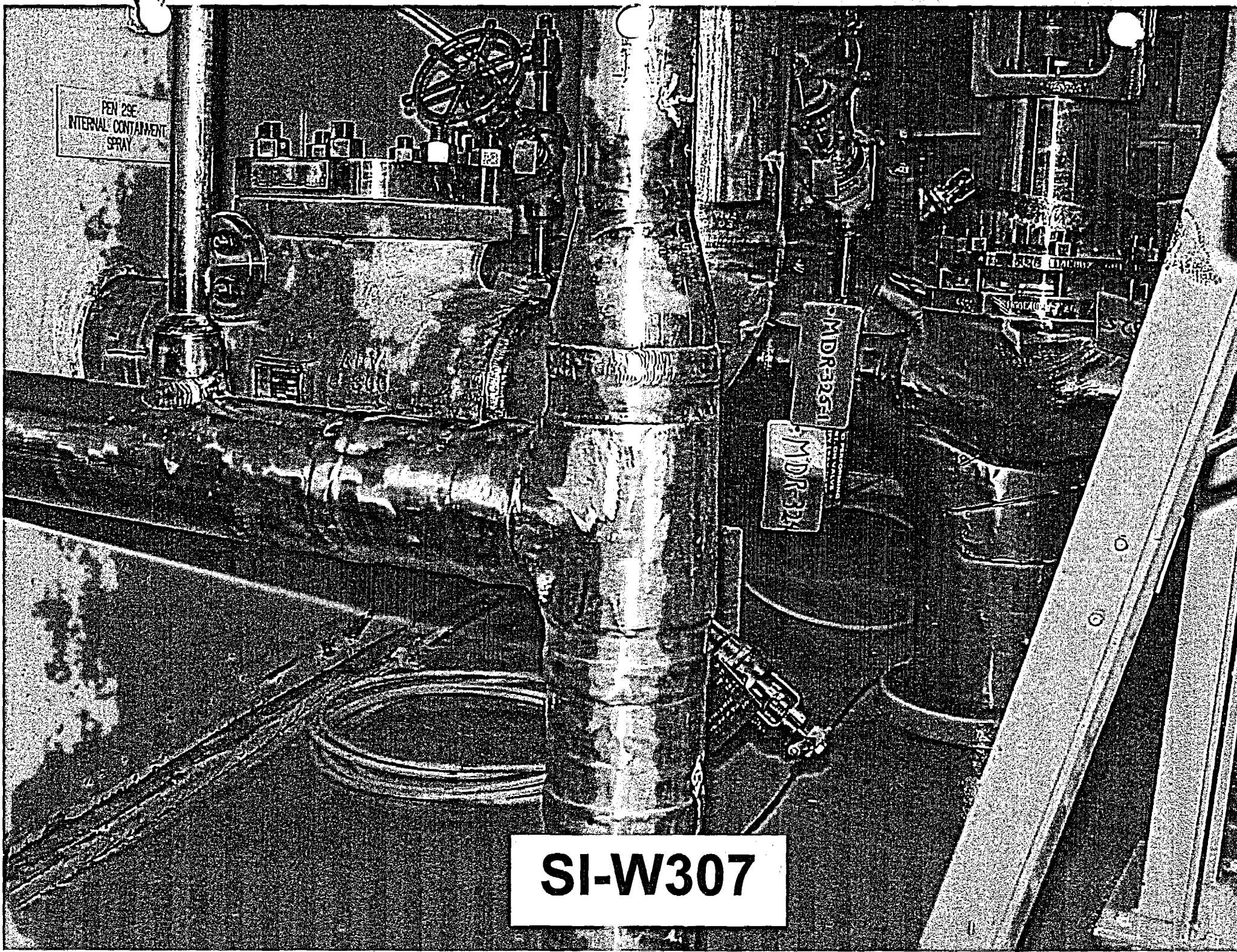


45° 70° - NO SCAN 2 DUE TO TEE CONFIGURATION

REDUCED CODE COVERAGE 47.57.

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bures DATE: October 19, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Lynne M. Mynier DATE: 10-19-01



PEN 23C
INTERNAL CONTAINMENT
SPRAY

MDR32541
MDR32541

SI-W307

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-53

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 10" Residual Heat Removal
Circumferential Weld RHR-W48**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category
C-F-1; Item No. C5.13**
- 4. Impracticality of Compliance: 7.0% of the 10" Residual Heat Removal
Circumferential Weld RHR-W48 was inaccessible due to the Box Rigid
Restraint RR225 Configuration thus restricting Surface Liquid Penetrant
Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 7.0% of the
8" Residual Heat Removal Circumferential Weld RHR-W48 would
require removal of the Box Rigid Restraint RR225.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

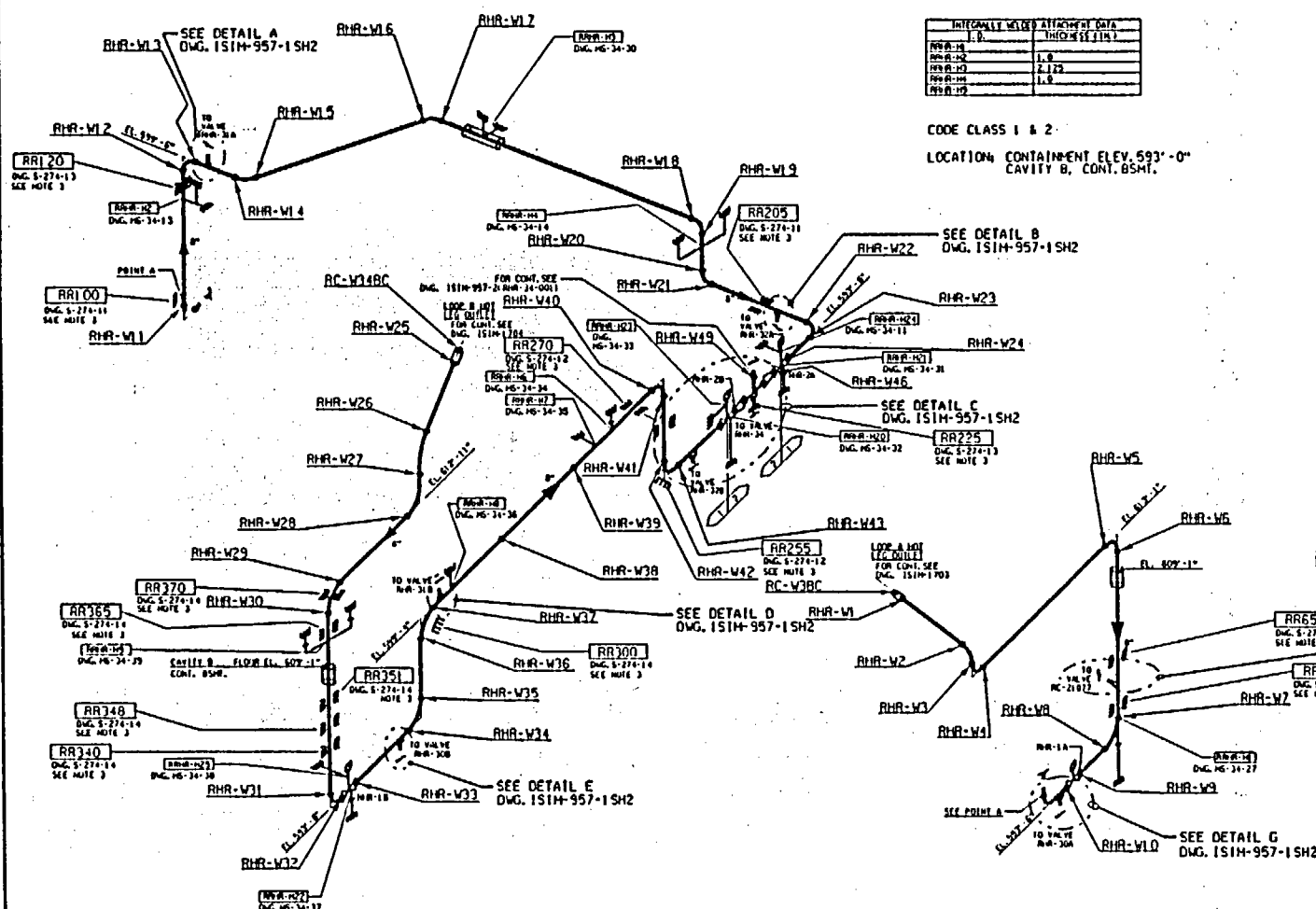
RELIEF REQUEST NO: RR-G-7-53

- 6. Proposed Alternative and Basis for Use: No alternative Code required
Liquid Penetrant examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWC-2500-
1; Examination Category C-H; Item C7.30 each 3 1/3 Year Period for
evidence of leakage.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**

PIPING			COMBINATION OF PIPE		
DIAMETER	SCHEDULE (WALL THICKNESS)	LENGTH	NO.	SCHEDULE (WALL THICKNESS)	LENGTH
8	40S/0.312	4 3/4 FT	WPS-11	40S/0.312	4 3/4 FT
10 TE	40S/0.375	4 4/8 FT	WPS-9	40S/0.375	4 3/4 FT

INTEGRALLY WELDED ATTACHMENT DATA	
I.D.	THICKNESS (IN.)
RP01A-10	
RP01A-12	1.0
RP01A-13	2.125
RP01A-14	1.0
RP01A-15	

LOCATION: CONTAINMENT ELEV. 593'-0"
CAVITY B, CONT. BSMT.



NOTES:

- A-1
KAP 01-001639
1. DRAWING APPLICABLE FOR 3RD AND 4TH
FOR INTERNAL INTERNAL.
2. PASS 10 PIPING 10 DIAMETER ACCESS
FROM REG.
3. CHANGE DESTINATION AND NOT WITHIN
RECEIVING STATION.
4. PASS 10 PIPING 10 DIAMETER ACCESS

REFERENCE DWGS.

[illegible]

SH. 1 OF 2

SUNSHINE POLYMER CORPORATION
ATTORNEY AT LAW
SUNSHINE POLYMER CORPORATION

ISI ISOMETRIC

FROM AC LOOPS A & B

THE PEN. 9 & TO C

Division of
Public Service

SEN. PETER D. VUKOBRADE
SEN. JAMES M. COOPER

[illegible]

ISI M-95

4

WISCONSIN PUBLIC SERVICE CORPORATION

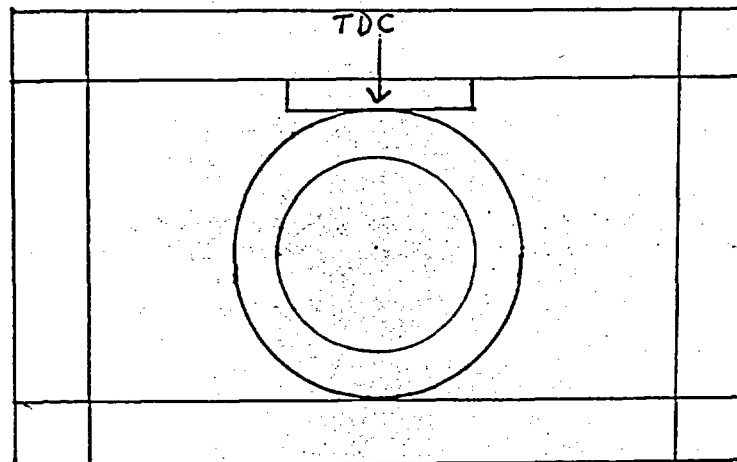
REV.: ORIG.

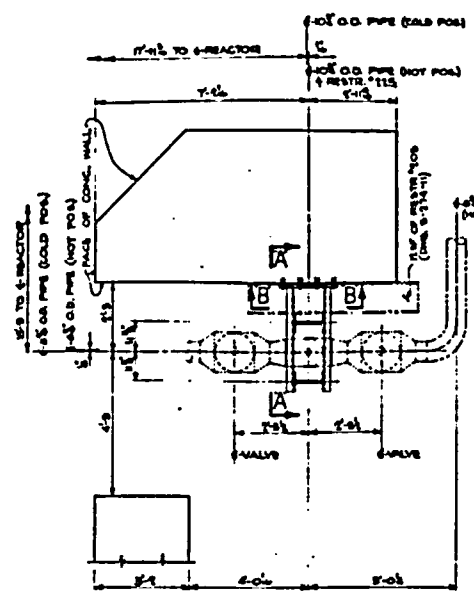
KEWAUNEE NUCLEAR POWER PLANT

ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORDSYSTEM OR COMPONENT: RHR - FROM RC LOOPS A & B HOT LEGS TO
CNTMT PEN 9 & TO CNTMT SUMP BDRAWING NO.: ISIM-957-1SH2COMPONENT IDENTIFICATION: RHR-W48 PROCEDURE: NEP No. 156 REVISION: ORIGULTRASONIC: LIQUID PENETRANT: X MAGNETIC PARTICLE: VISUAL: EXAMINER: Arle Jensen ARLEN JENSEN II DATE: 9-29-01
LEVELEXAMINER: NA NA DATE: NA
LEVELSKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND
PERCENTAGE OF REDUCED EXAMINATION COVERAGE.NO EXAM FROM 1.5" CCW TO 1.5" CW AND 14.5" TO 18.5" FROM TDC, DUE TO
BOY RESTRAINT INTERFERENCE

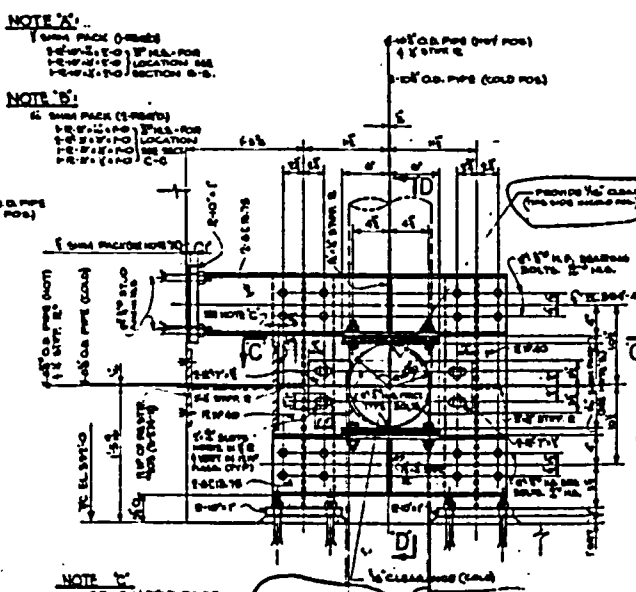
REDUCED EXAM COVERAGE IS 20%.

34" CIRCUMFERENCE 7" REDUCED COVERAGE

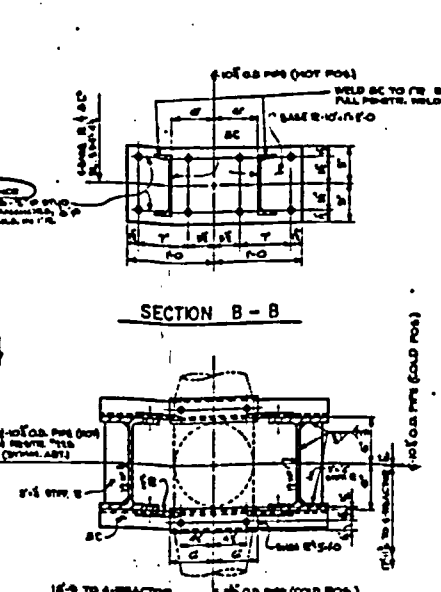
KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Burkes DATE: October 1, 2001AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Roger Trueman DATE: 10-1-01



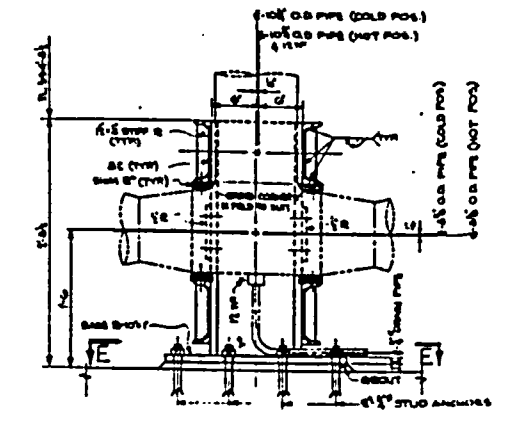
PLAN
R.H.R. LINE 9 PIPE RESTRAINT #225
SCALE 5'-0"



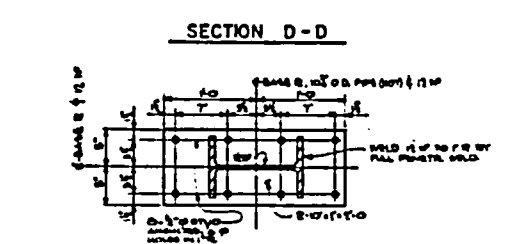
ELEVATION A-A



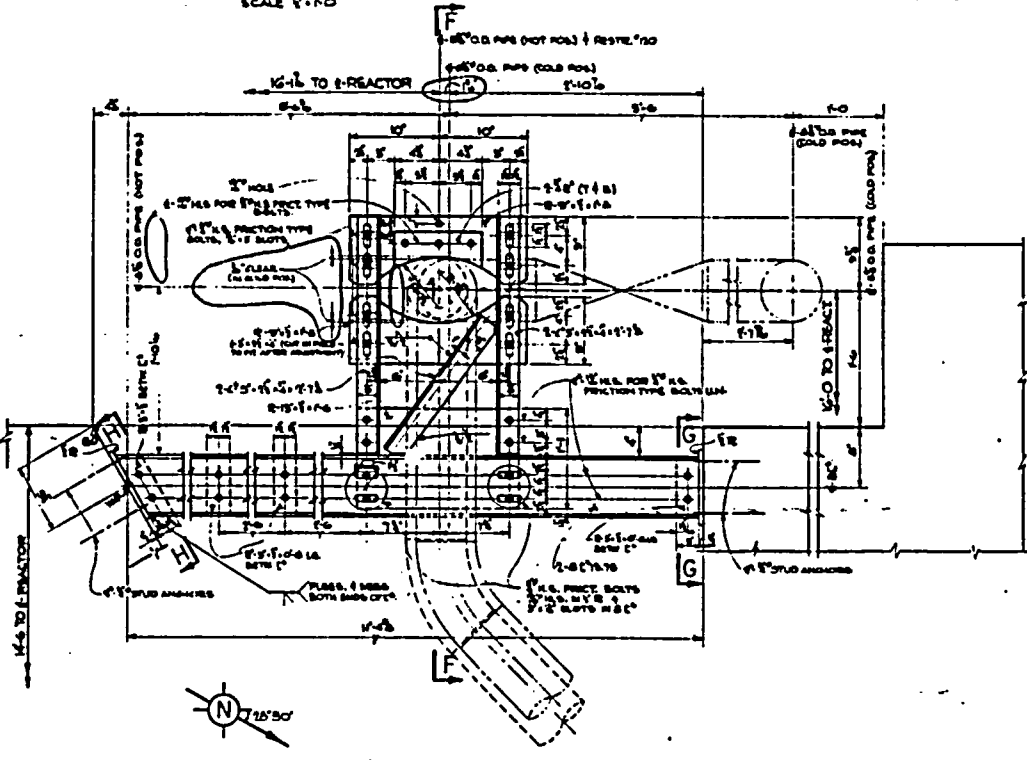
SECTION B-B



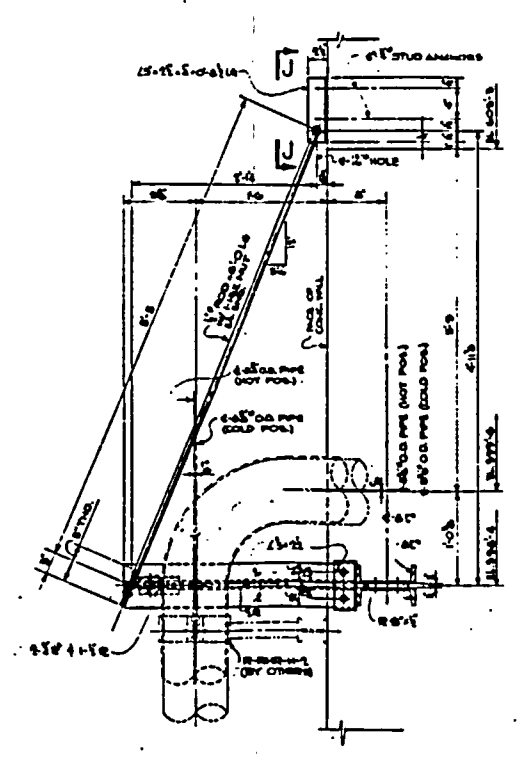
SECTION D-D



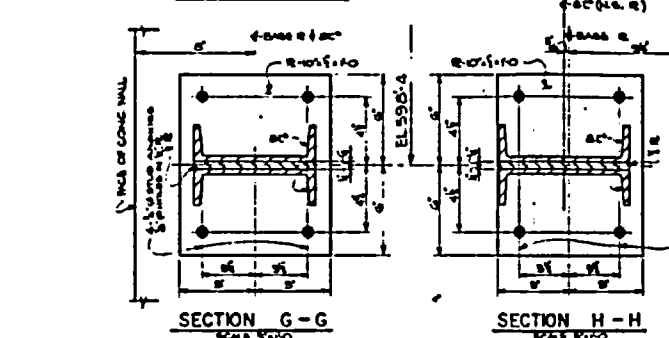
SECTION E-E



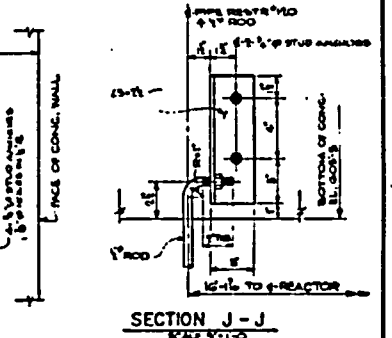
PLAN
R.H.R. LINE 9 PIPE RESTRAINT #120



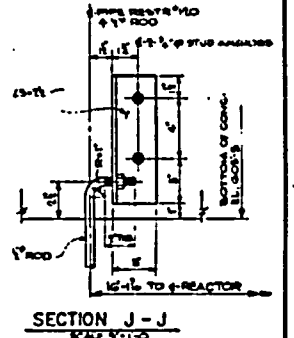
SECTION F-F



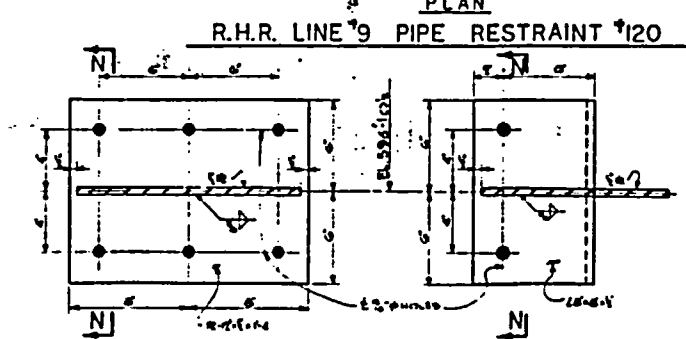
SECTION G-G



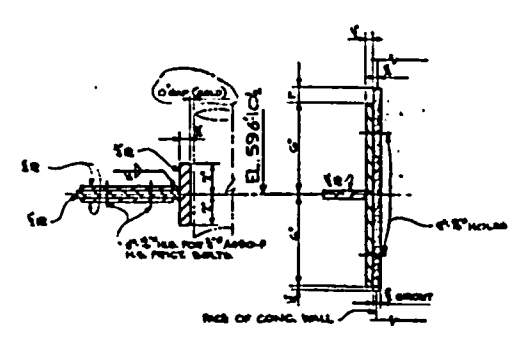
SECTION H-H



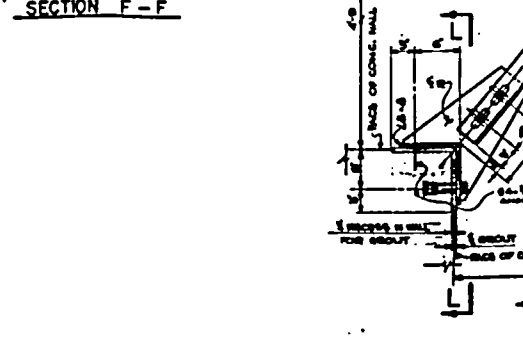
SECTION J-J



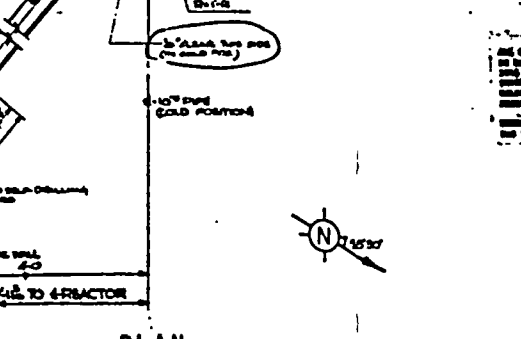
SECTION K-K



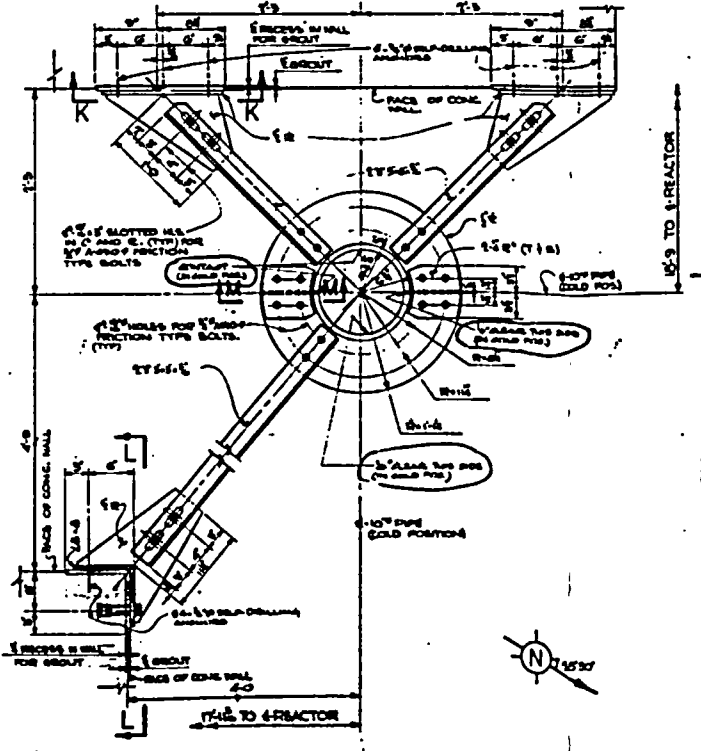
SECTION L-L



SECTION M-M



SECTION N-N

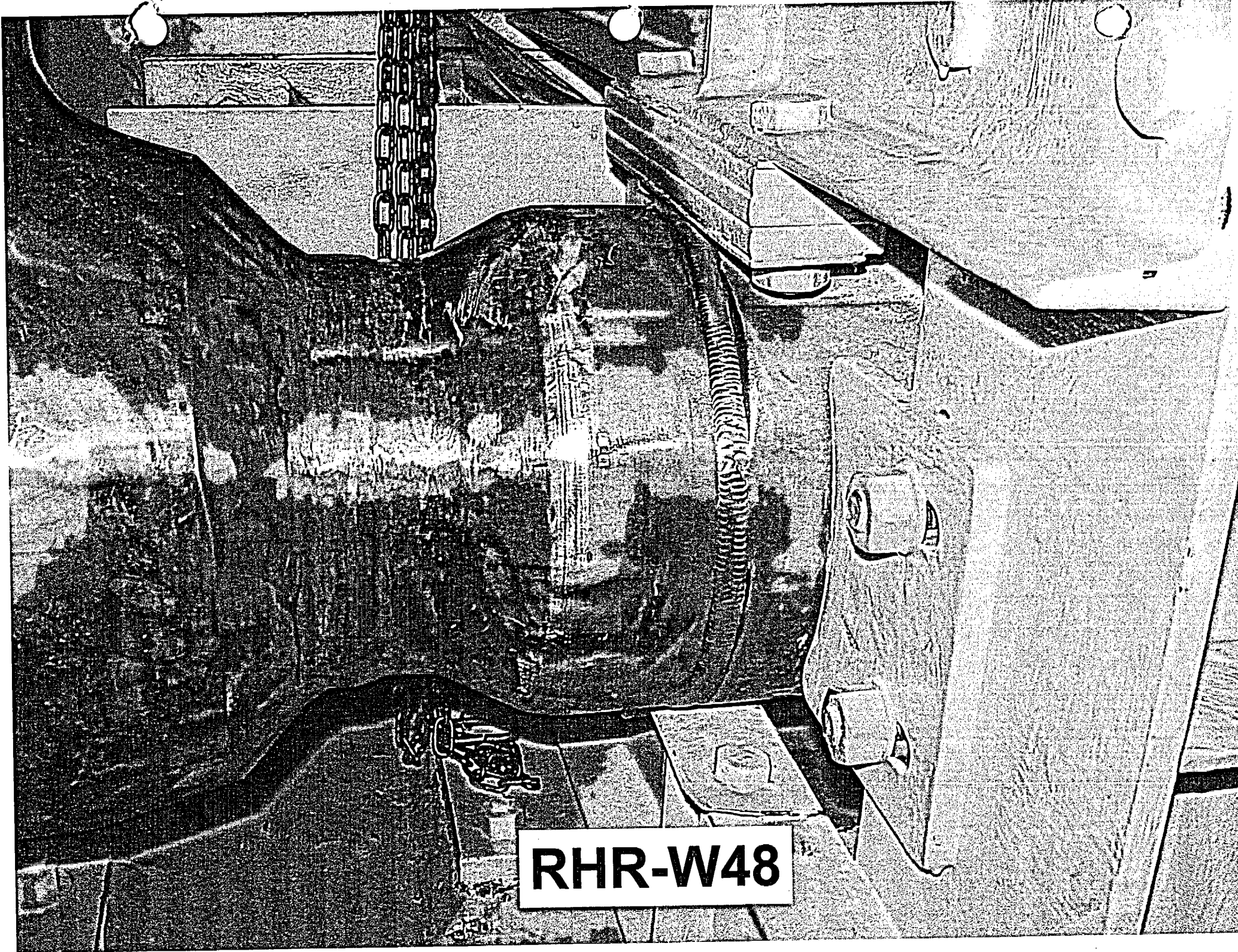


PLAN
R.H.R. PIPE RESTRAINT #410

NOTES:
1. ALL STEEL DRILLING ANCHORS SHALL BE PHILLIPS TYPE ANCHORS AND NOT J.B. ANCHORS.
2. ALL STEEL DRILLING ANCHORS SHALL BE PHILLIPS TYPE ANCHORS AND NOT J.B. ANCHORS.
3. ALL STRUCTURAL SHAPES, PLATES AND STIFFENERS SHALL BE ASTM A36 STEEL UNLESS OTHERWISE SPECIFIED.
4. ALL HIGH STRENGTH BOLDS OR FRICITION TYPE BOLDS SHALL BE ASTM A308.
5. ALL FIELD WELDS TO BE IN ACCORDANCE WITH SPEC'S FOR WELDING 80-250.
6. STEEL ELECTRODES E70 SHALL BE USED FOR ALL WELDS UNLESS OTHERWISE SPECIFIED.
7. THE USE OF ANY OTHER TYPE OF WELD OR WELDING SHALL BE APPROVED BY THE DESIGNER.
8. THE USE OF ANY OTHER TYPE OF WELD OR WELDING SHALL BE APPROVED BY THE DESIGNER.
9. THE USE OF ANY OTHER TYPE OF WELD OR WELDING SHALL BE APPROVED BY THE DESIGNER.

REVISION	DATE	BY	CHKD	APP'D
1	10/1/68	J. L. HARRIS	J. L. HARRIS	J. L. HARRIS
2	10/1/68	J. L. HARRIS	J. L. HARRIS	J. L. HARRIS
3	10/1/68	J. L. HARRIS	J. L. HARRIS	J. L. HARRIS
4	10/1/68	J. L. HARRIS	J. L. HARRIS	J. L. HARRIS
5	10/1/68	J. L. HARRIS	J. L. HARRIS	J. L. HARRIS
6	10/1/68	J. L. HARRIS	J. L. HARRIS	J. L. HARRIS
7	10/1/68	J. L. HARRIS	J. L. HARRIS	J. L. HARRIS
8	10/1/68	J. L. HARRIS	J. L. HARRIS	J. L. HARRIS
9	10/1/68	J. L. HARRIS	J. L. HARRIS	J. L. HARRIS
10	10/1/68	J. L. HARRIS	J. L. HARRIS	J. L. HARRIS

WOODWARD CLARK SERVICE CORPORATION
KANSAS CITY, MISSOURI 64101
MISCELLANEOUS SUPPORTS
STRUCTURE #225, #120, #410
Pioneer Service & Engineering Co.
237127A-S-274-13H



RHR-W48

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-54

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 30" Main Steam Circumferential Weld MS-W3**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category C-F-2; Item No. C5.51**
- 4. Impracticality of Compliance: 37.0% (Calculated by Kewaunee Nuclear Power Plant) of the 30" Main Steam Circumferential Weld MS-W3 was inaccessible due to the Reducing Elbow O.D. Taper and thickness change configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 37.0% of the 30" Main Steam Circumferential Weld MS-W3 would require modification of the original design of the Main Steam Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

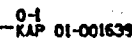
RELIEF REQUEST NO: RR-G-7-54

6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWC-2500-1; Examination Category C-H; Item C7.30 each 3 1/3 Year
Period for evidence of leakage. Surface Magnetic Particle Examination was
performed on the 30" Main Steam Circumferential Weld MS-W3 during
the 3rd Interval as required by ASME Boiler and Pressure Vessel Code
Section XI 1989 Edition: Table IWC-2500-1; Examination Category C-F-2
and Item No. C5.51.

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable



**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

SYSTEM OR COMPONENT: MAIN STM STM GEN 1A DRAWING NO.: 151M-871

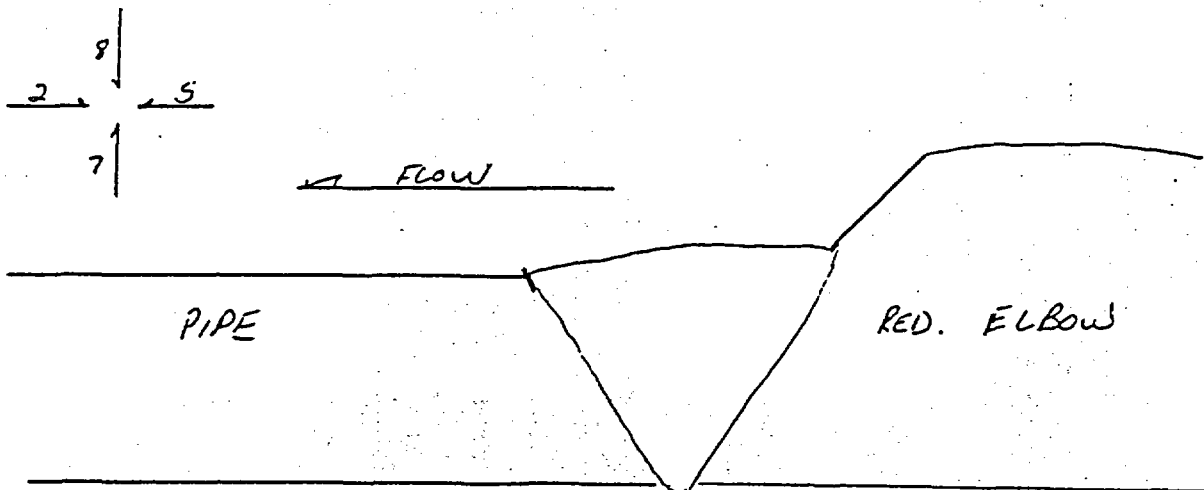
COMPONENT IDENTIFICATION: MS-W3 PROCEDURE: QCP-913 REVISION: OR16

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: Todd P. Bluff II DATE: 4-18-95
LEVEL

EXAMINER: Travis Thomas I DATE: 4-18-95
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



NO SCANS 5, 7, 8 ON RED. ELBOW DUE TO OD
TAPER AND THICKNESS CHANGE. NO 0° SCAN
DUE TO TAPER.

2 of 2

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Eric A. Balstad DATE: 4/19/95

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Travis Thomas DATE: 4/20/95

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-55

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 3" Pressurizer Spray Circumferential Weld PS-W3**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-J; Item No. B9.21**
- 4. Impracticality of Compliance: 27.0% of the 3" Pressurizer Spray Circumferential Weld PS-W3 was inaccessible due to a Branch Connection thus restricting Surface Liquid Penetrant Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 27.0% of the 3" Pressurizer Spray Circumferential Weld PS-W3 would require modification of the original design of the Pressurizer Spray Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

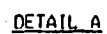
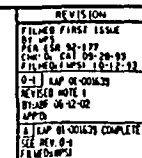
RELIEF REQUEST NO: RR-G-7-55

**6. Proposed Alternative and Basis for Use: No alternative Code required
Liquid Penetrant examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-
1; Examination Category B-P; Item B15.50 each Refueling Outage for
evidence of leakage.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable



CODE CLASS 1

LOCATION: CONTAINMENT BSMT.
RCP 1A & RCP 1B VAULTS

VALUE DATA				
VALUE	ADDRESS	TYPE	STATUS / DATA	REMARKS
PS-1A	MASQUELLAN INT	2nd ORDER	0 / 1 / 15	4

PIPING			CAL BRATION BLOCK		
DIA. I IN	SCH./THICKNESS I IN	MATERIAL	I.D.	SCH./THICKNESS I IN	MATERIAL
3	160/0.438	A 376 TP 304	WPS-30	160/0.438	A 376 TP 304

NOTES:

1. DRAWING APPLICABLE FOR 3" and 4" ISB INTERVAL.
2. CLASS 1 PIPING 1" DIA. AND LESS IS EXEMPT FROM NOE.
3. RUPTURE RESTRAINTS ARE NOT WITHIN THE JURISDICTION OF ASME SECTION X.

REFERENCE DWGS.

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

ISI ISOMETRIC
3' R.C. TO PRESSURIZER

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

GREEN BAY, WISCONSIN			
MIL-00		C. A. JONES	
S. POWELL		DUG. NO.	
REV		REV.	
151M-874-2		A	

CADD

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

SYSTEM OR COMPONENT: 3" R.C. To Pressurizer DRAWING NO.: ISIM-874-2

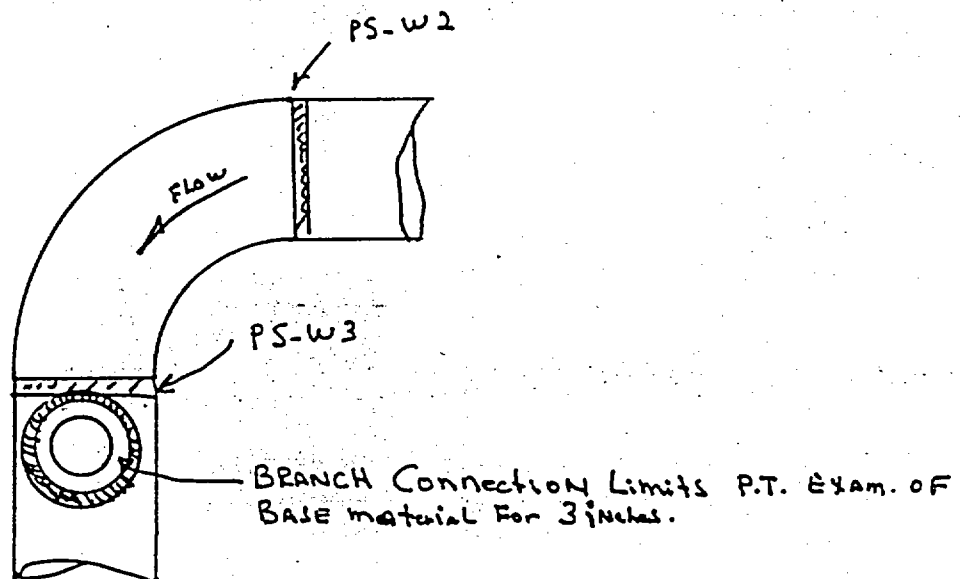
COMPONENT IDENTIFICATION: PS-W3 PROCEDURE: QCP-101 REVISION: ORIG

ULTRASONIC: LIQUID PENETRANT: X MAGNETIC PARTICLE: VISUAL:

EXAMINER: N.A. By II DATE: 4-13-95
LEVEL

EXAMINER: NA NA DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



View Looking Toward RCP-1A

Page 1 of 2

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Eino A. Batistad DATE: 4/15/95
AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Ryan Morgan DATE: 4/16/95

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-56

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 3" Pressurizer Spray Circumferential Weld PS-W34**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-J; Item No. B9.21**
- 4. Impracticality of Compliance: 37.0% of the 3" Pressurizer Spray Circumferential Weld PS-W34 was inaccessible due to a Whip Restraint RRRC7A thus restricting Surface Liquid Penetrant Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 37.0% of the 3" Pressurizer Spray Circumferential Weld PS-W34 would require removal of the Whip Restraint RRRC7A.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-56

- 6. Proposed Alternative and Basis for Use: No alternative Code required
Liquid Penetrant examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-
1; Examination Category B-P; Item B15.50 each Refueling Outage for
evidence of leakage.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

SYSTEM OR COMPONENT: 3" RC. TO PRESSURIZER DRAWING NO.: JSIM-874-1

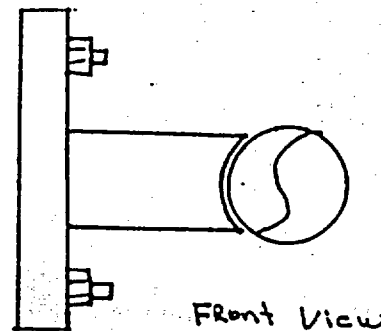
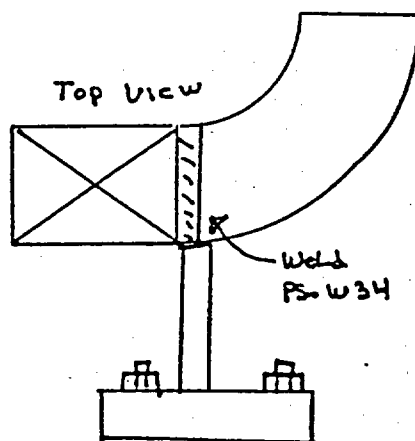
COMPONENT IDENTIFICATION: PS-W34 PROCEDURE: QCP-901 REVISION: ORIG.

ULTRASONIC: LIQUID PENETRANT: X MAGNETIC PARTICLE: VISUAL:

EXAMINER: N.A. Boy II DATE: 4-14-95
LEVEL

EXAMINER: Greg P. Wm II DATE: 4-14-95
LEVEL

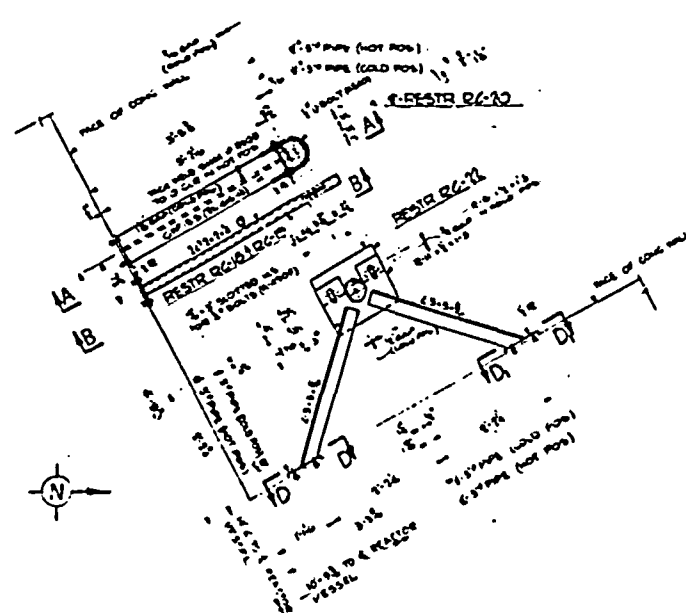
SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



Whip Restraint Limits 3.5" OF CIRCUMFERENCE OF
Weld For P.T. Exam.

Percentage of Reduced Examination Coverage = 63%

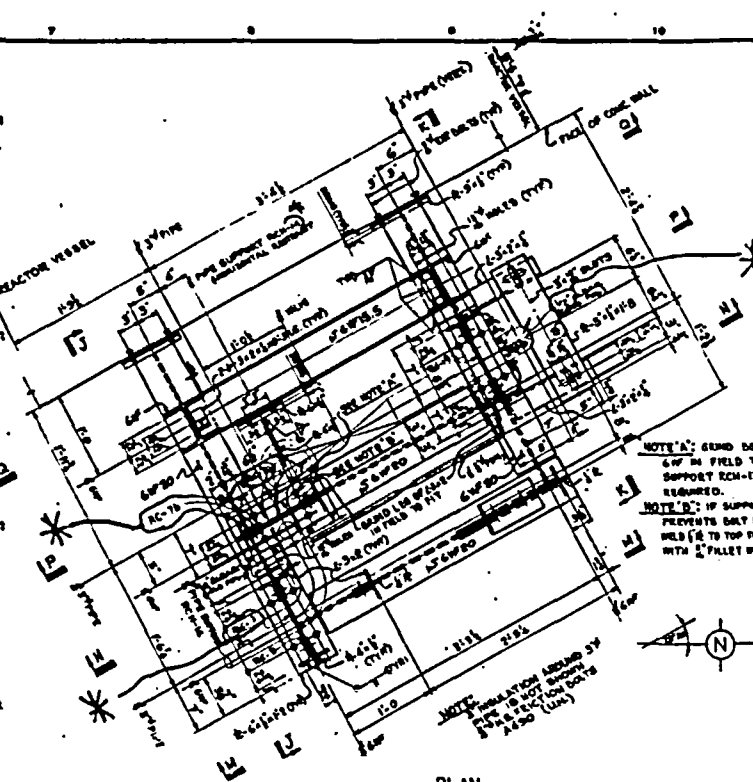
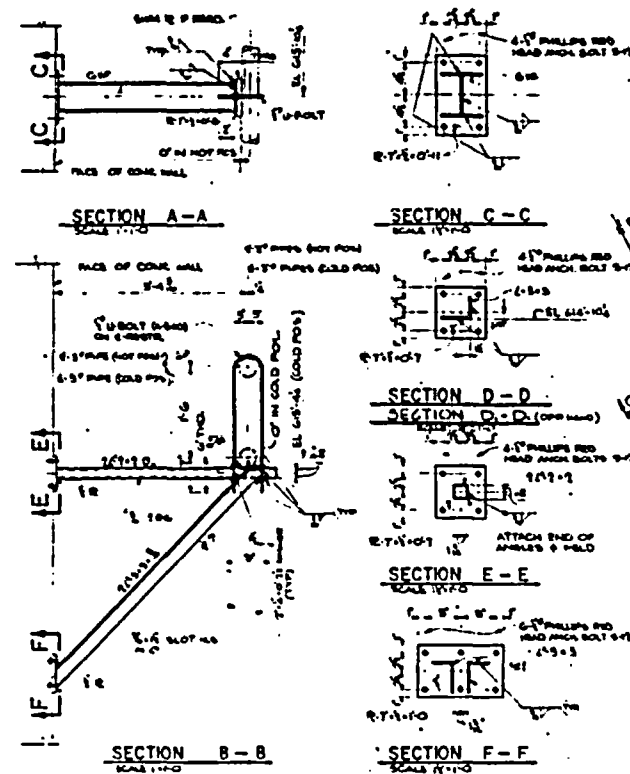
KEWAUNEE NUCLEAR
POWER PLANT REVIEW: E. J. A. Balstad DATE: 4/15/95
AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Roger Torgun DATE: 4/15/95



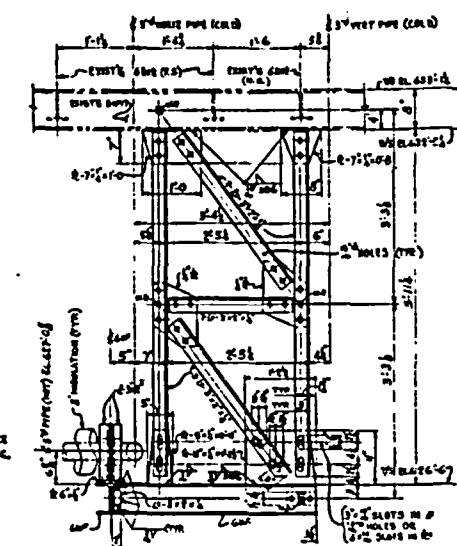
PLAN
REACTOR COOLING SYSTEM PIPE LINE #113
RESTRAINTS RC-18, RC-19, RC-20, RC-22
SCALE: 1/4"=1'-0"



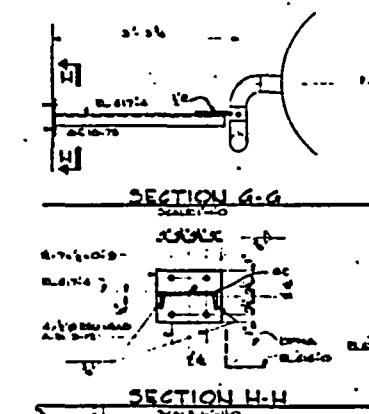
PLAN
REACTOR COOLING SYSTEM PIPE LINE #113
RESTRAINT RC-17
SCALE: 1/4"=1'-0"



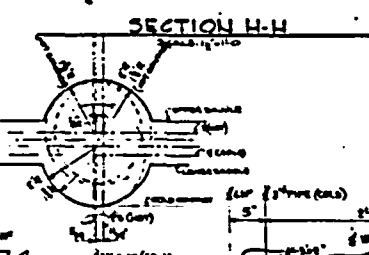
PLAN
PIPE RUPTURE RESTRAINTS FOR LINE #113
RESTRAINTS RC-7, RC-8, RC-9, RC-12
SCALE: 1/4"=1'-0"



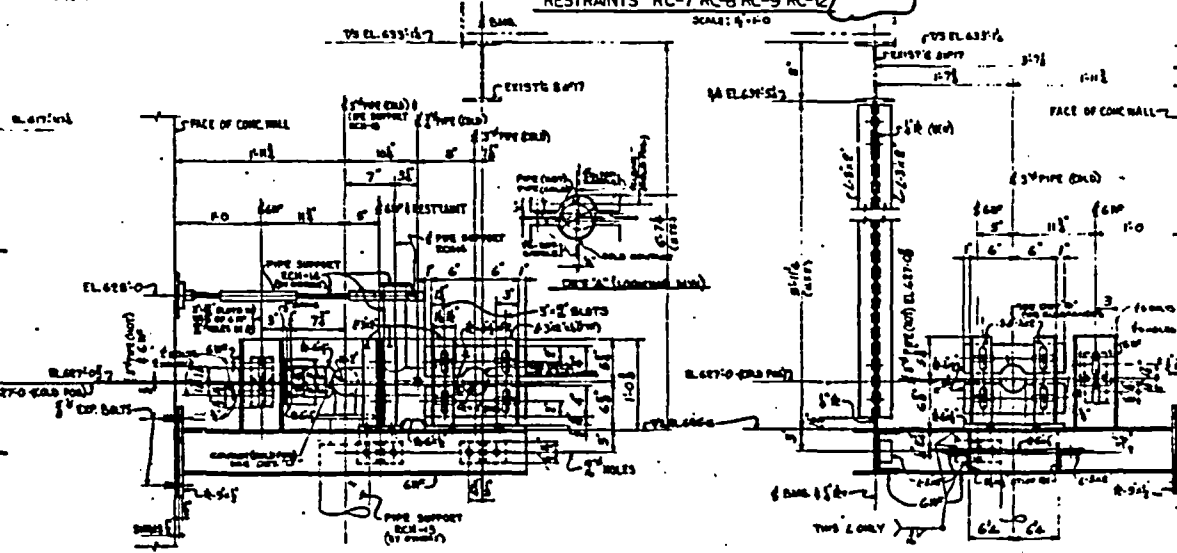
SECTION N-N
SCALE: 1/4"=1'-0"



SECTION G-G
SCALE: 1/4"=1'-0"

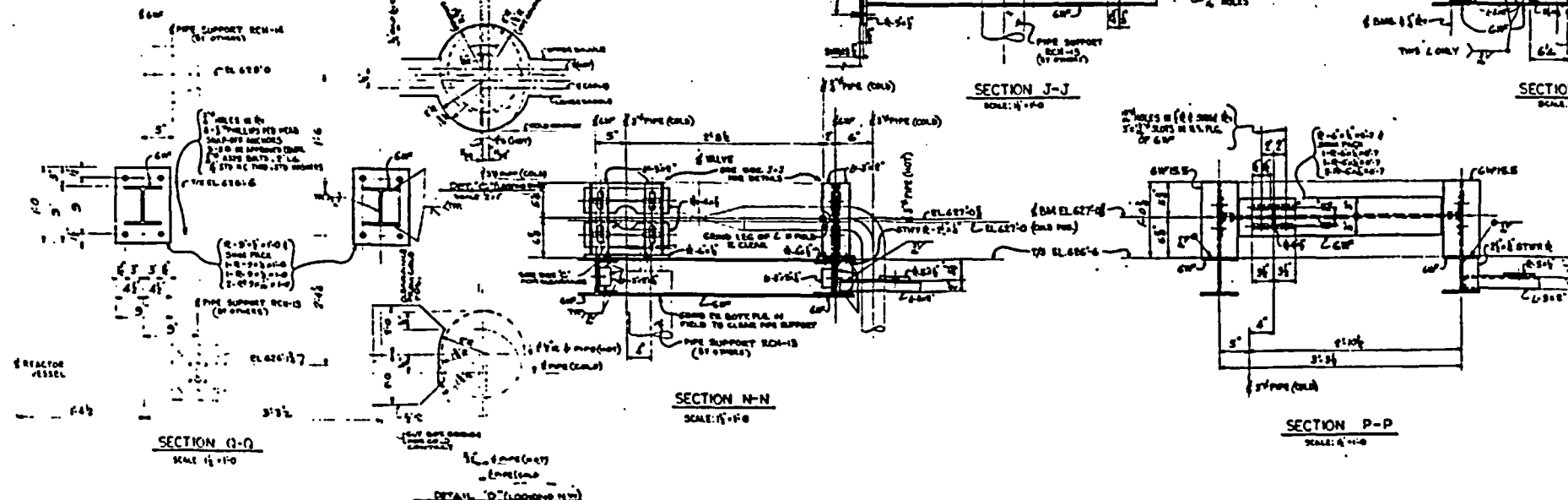


SECTION H-H
SCALE: 1/4"=1'-0"



SECTION J-J
SCALE: 1/4"=1'-0"

SECTION K-K
SCALE: 1/4"=1'-0"



SECTION M-M
SCALE: 1/4"=1'-0"

SECTION N-N
SCALE: 1/4"=1'-0"

SECTION P-P
SCALE: 1/4"=1'-0"

G-1
* RECORD PURP
BUL. 79-14

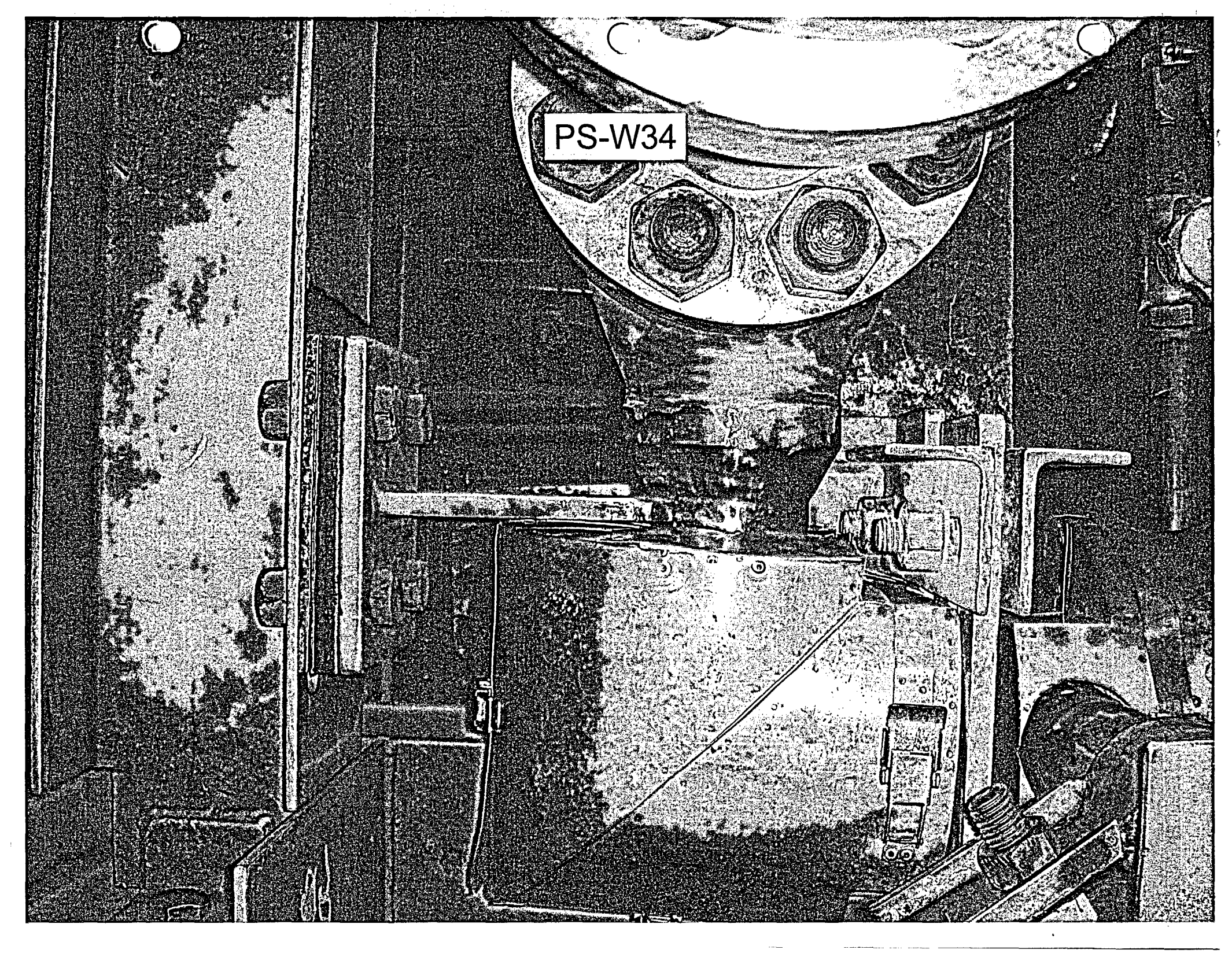
FOR NOTES SEE DWG 23-7127A-S-274-16

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT - UNIT NO. 1
CANTON, KENOSHA COUNTY, WISCONSIN

MISCELLANEOUS SUPPORT STRUCTURES
RC-17, RC-18, RC-19, RC-20 & RC-22, RC-25

Prosear Service & Engineering Co.
237127A-S-274-19H

PS-W34



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-57

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

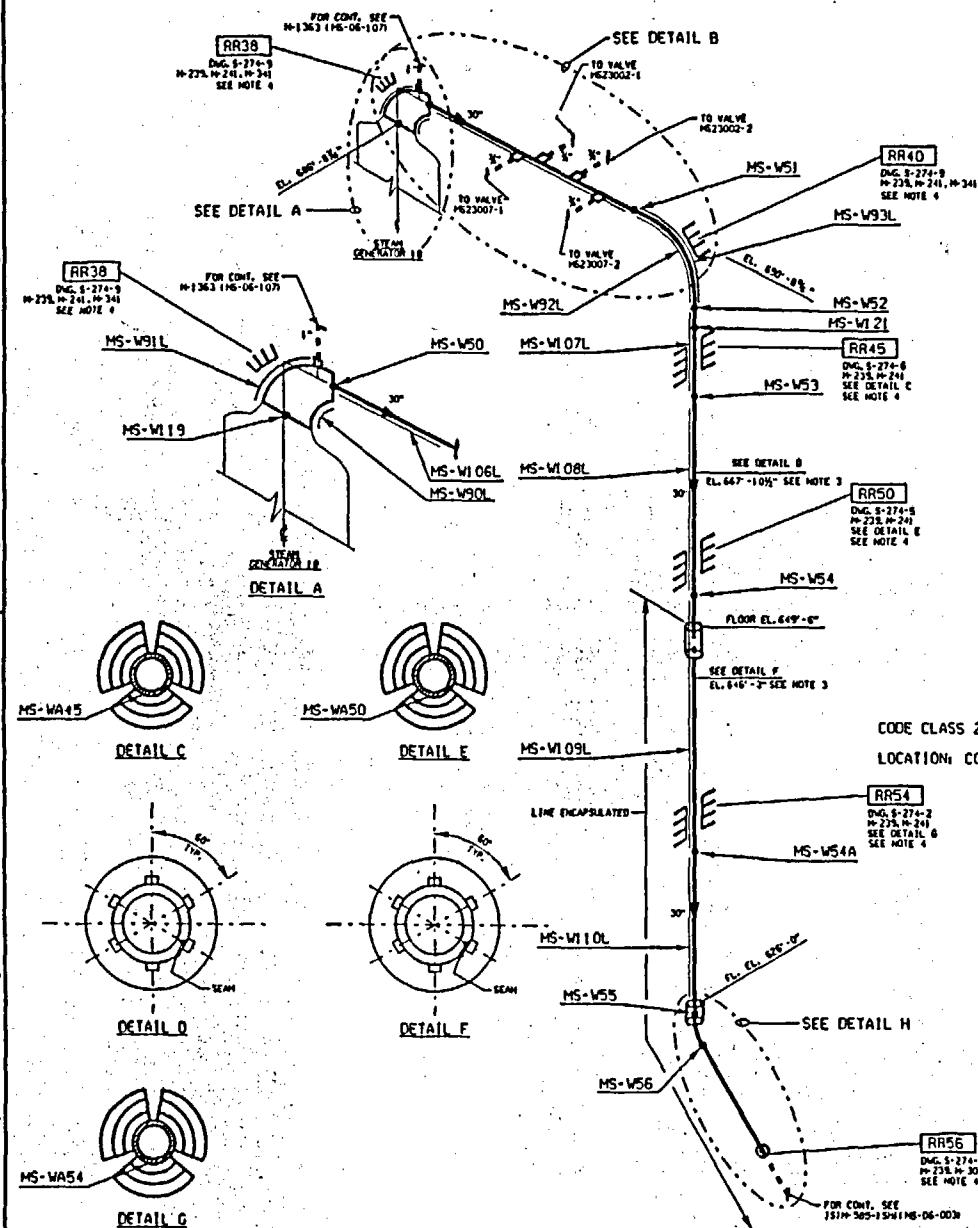
- 1. ASME Code Component Affected: 3" Pressurizer Spray Circumferential Weld PS-W10**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-J; Item No. B9.21**
- 4. Impracticality of Compliance: 36.0% of the 3" Pressurizer Spray Circumferential Weld PS-W10 was inaccessible due to a Hanger Support RRRC19 thus restricting Surface Liquid Penetrant Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 36.0% of the 3" Pressurizer Spray Circumferential Weld PS-W10 would require removal of the Hanger Support RRRC19.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

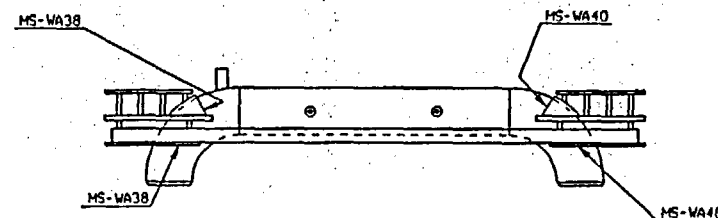
RELIEF REQUEST NO: RR-G-7-57

- 6. Proposed Alternative and Basis for Use: No alternative Code required
Liquid Penetrant examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-
1; Examination Category B-P; Item B15.50 each Refueling Outage for
evidence of leakage.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**

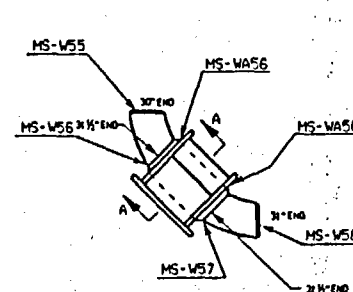


PIPING			CALCULATION BLOCK		
DIA. (IN)	SCH./THICKNESS (IN)	MATERIAL	I.D. (IN)	THICKNESS (IN)	MATERIAL
24.05310 x 27.95410	N/A / 1.254	A-155 KC70 CL.1	MPS-39	N/A / 2.3	SA 508 CL. 2
24.05310 x 27.95410	N/A / 1.016	A-155 KC70 CL.1	MPS-37	N/A / 1.18	SA 508 CL. 2
24.05310 x 27.95410	N/A / 1.016	A-155 KC70 CL.1	MPS-37	N/A / 1.18	SA 508 CL. 2

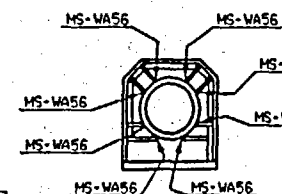
INTERFACED WELDED ATTACHMENT DATA	
ID	THICKNESS (IN)
RR38 (MS-W51)	0.750
RR40 (MS-W52)	0.750
RR45 (MS-W53)	1.25
RR50 (MS-W54)	1.25
RR54 (MS-W54A)	1.25
RR56 (MS-W56)	0.750



DETAIL B



DETAIL H



SECTION A-A

**FUTURE
AS BUILT
FOR DCR 2850**

REFERENCE DWGS.

151M-305-15M1 (MS-06-003)
151M-305-15M1 (MS-06-003)
151M-305-15M1 (MS-06-003)

NOTES:

1. LONG SEAM WELDED ALONG ENTIRE LENGTH OF SPOOL. WELD PER ASTM A-155, KC-70, CL. 1.
2. FOR MORE DETAIL ON VENTURI TUBE (FE-474) REFER TO Dwg. S-100-1374 AND A-11-1044.
3. COMPONENT PROVIDES SUPPORT FOR INSULATION ONLY AND IS NOT WITHIN THE JURISDICTION OF ASME SECTION II.
4. RUPTURE RESTRAINTS ARE NOT WITHIN THE JURISDICTION OF ASME SECTION II.

A-1
KAP 01-001639

151 ISOMETRIC MAIN STEAM GENERATOR 1B			
WISCONSIN PUBLIC SERVICE CORP.			
DATE: 10-1-63			
151M-872	151M-872	151M-872	151M-872

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

SYSTEM OR COMPONENT: 3" RC To Pressurizer DRAWING NO.: 151M-874-2

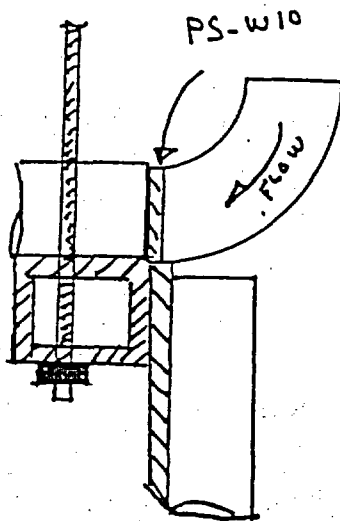
COMPONENT IDENTIFICATION: PS-W10 PROCEDURE: QCP-901 REVISION: 0216

ULTRASONIC: _____ LIQUID PENETRANT: X MAGNETIC PARTICLE: _____ VISUAL: _____

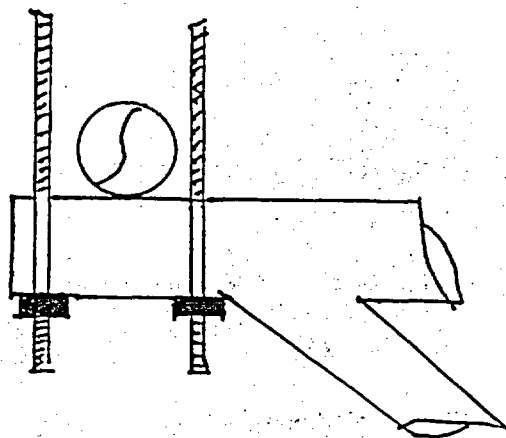
EXAMINER: N.A. Boy II DATE: 4-13-95
LEVEL

EXAMINER: NA NA DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



SIDE VIEW



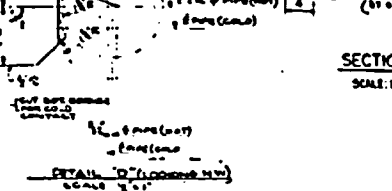
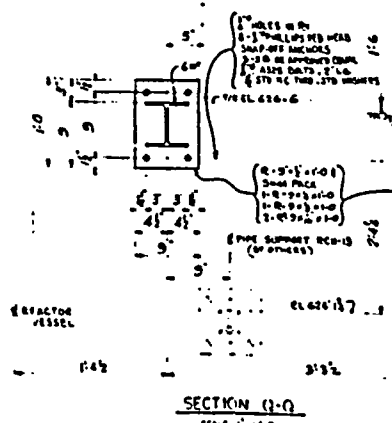
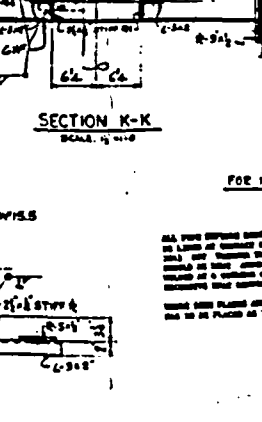
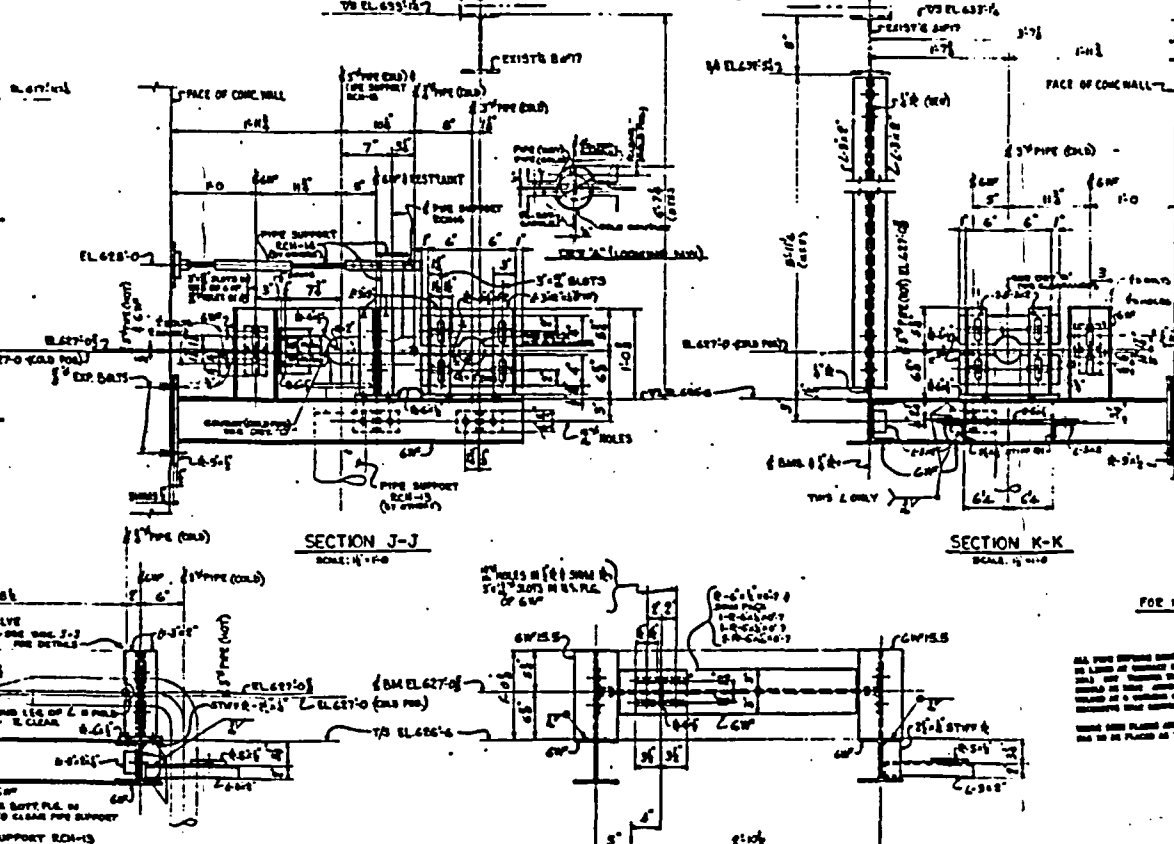
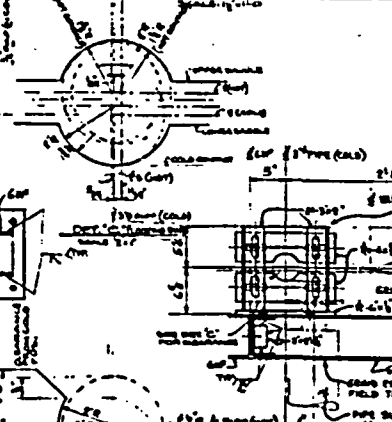
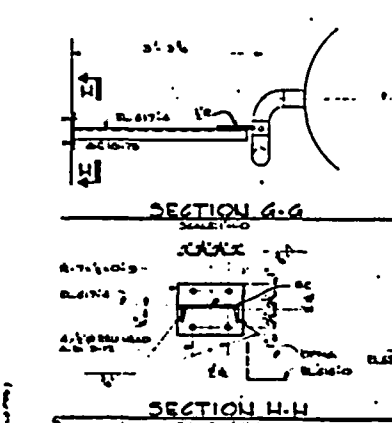
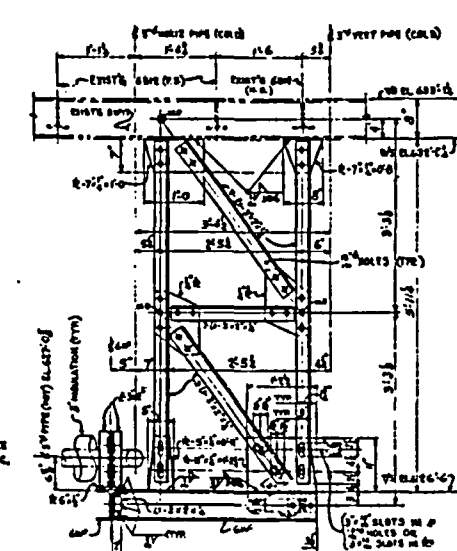
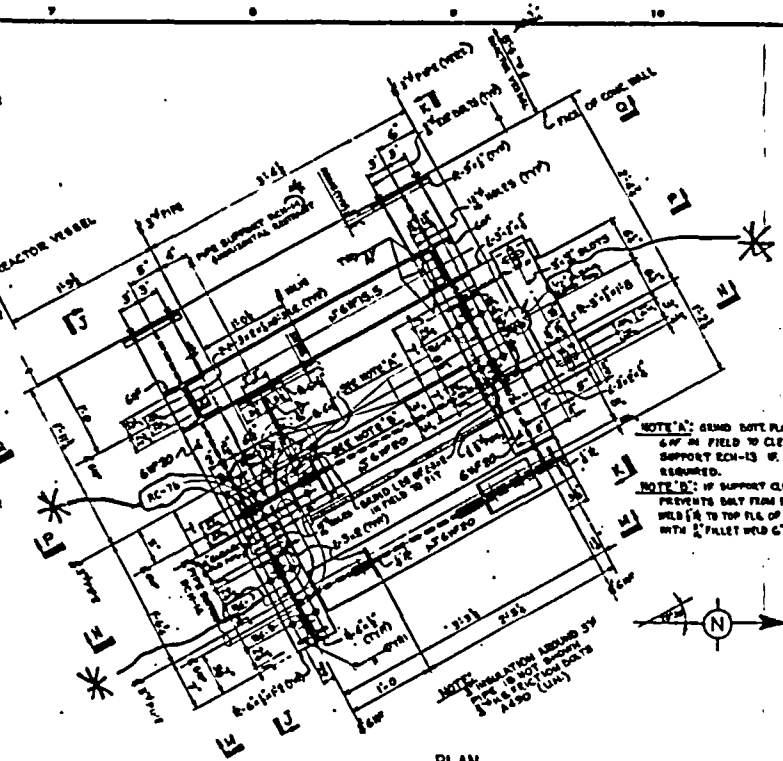
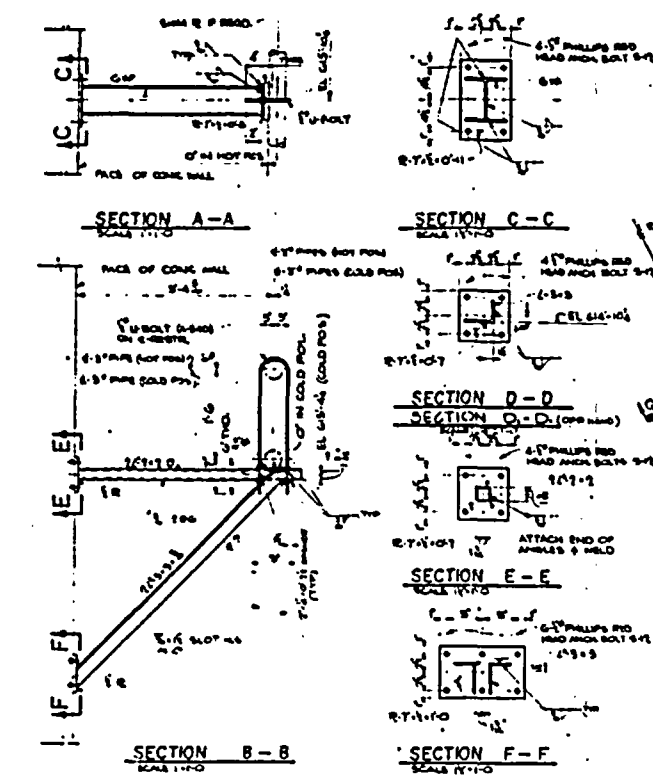
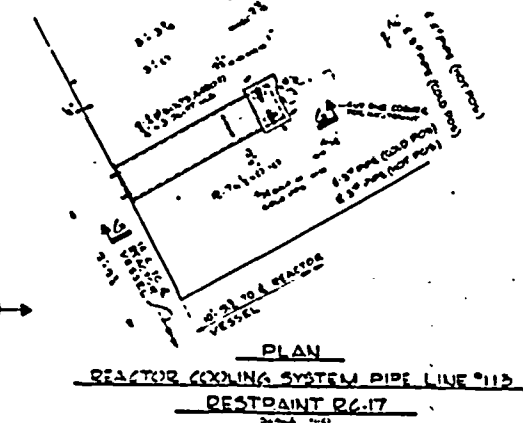
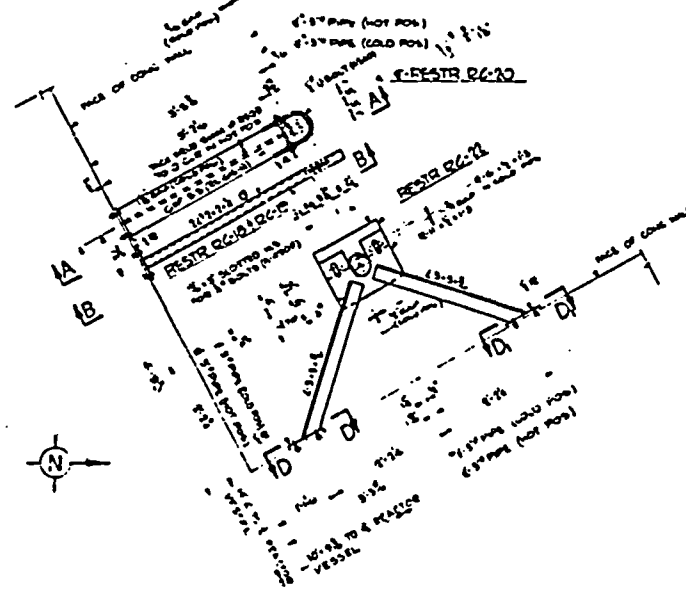
FRONT VIEW FACING Reactor

HANGER Support Limits P.T. EXAM At
Bottom of Weld For 4 inches.

Page 2 of 2

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Eino A. Balstad DATE: 4/15/95

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Progr. Mynen DATE: 4/16/95



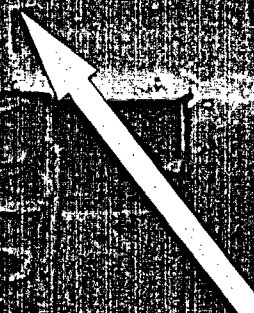
G-1
* RECORD PURP
BUL. 79-14

237127A-S-274-19

WISCONSIN PUBLIC SERVICE CORPORATION KEWAUNEE NUCLEAR POWER PLANT - UNIT NO. 1 CARLTON, KEWAUNEE COUNTY, WISCONSIN	
MISCELLANEOUS SUPPORT STRUCTURES RC-17, RC-18, RC-19, RC-20, RC-21, RC-22	
Pioneer Service & Engineering Co. DESIGNED BY: [Signature] CHECKED BY: [Signature] DATE: 10/1/78	
PROJECT NO. 237127A-S-274-19H	

PS-W10

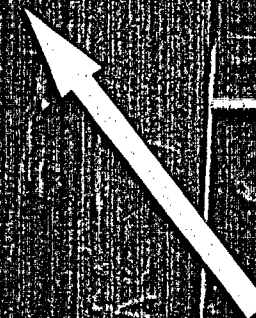
ASBESTOS FREE



19 RC-18 K 61

RRRC19

ASBESTOS FREE



19 RC-18-A

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-58

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 30" Main Steam Circumferential Weld MS-W50**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category C-F-2; Item No. C5.51**
- 4. Impracticality of Compliance: 8.0% the 30" Main Steam Circumferential Weld MS-W50 was inaccessible due to the O.D. Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 8.0% of the 30" Main Steam Circumferential Weld MS-W50 would require modification of the original design of the Main Steam Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

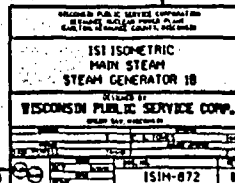
RELIEF REQUEST NO: RR-G-7-58

6. Proposed Alternative and Basis for Use: No alternative Code required. Ultrasonic examination is available due to the limited access. VT-2 Examinations were performed during the 3rd Interval as required by ASME Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWC-2500-1; Examination Category C-H; Item C7.30 each 3 1/3 Year Period for evidence of leakage. Surface Magnetic Particle Examination was performed on the 30" Main Steam Circumferential Weld MS-W50 during the 3rd Interval as required by ASME Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWC-2500-1; Examination Category C-F-2 and Item No. C5.51.

7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 – June 16, 2004

8. Precedents: Not Applicable

9. References: Not Applicable



C-7 **BCH 7080-6 CHMS**
TLE RSN: 0-1
PLACES: 10790

ISM-872

A-1
KAP 01-001639

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: MAIN STEAM STEAM GENERATOR 1B

DRAWING NO.: ISIM-872

COMPONENT IDENTIFICATION: MS-W50 PROCEDURE: NEP-15.40 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

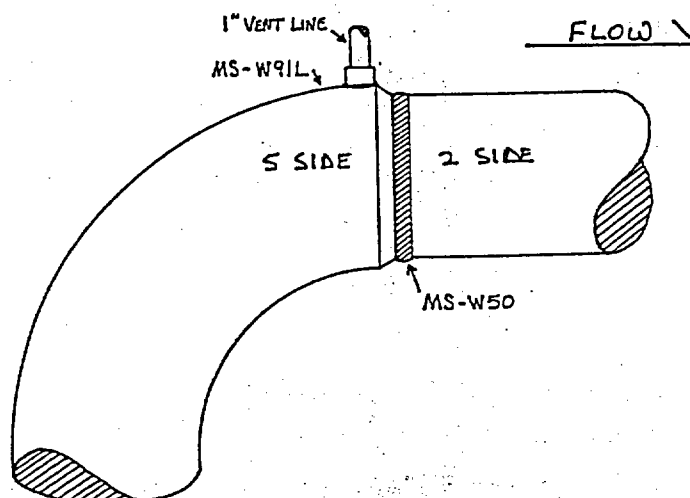
EXAMINER: TIM COBURN [Signature] II DATE: 10/12/01

LEVEL

EXAMINER: [Signature] II DATE: 10/12/01

LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



45° - NO SCAN 5,7,8 ON S SIDE DUE TO O.D. CONFIGURATION.
REDUCED CODE COVERAGE BY 8%.

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bukey DATE: October 19, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: [Signature] DATE: 10-19-01

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-59

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 32" Main Steam Longitudinal Weld MS-W90L**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category C-F-2; Item No. C5.52**
- 4. Impracticality of Compliance: 22.0% the 32" Main Steam Longitudinal Weld MS-W90L was inaccessible due to the 1" Elbow Taper Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 22.0% of the 32" Main Steam Longitudinal Weld MS-W90L would require modification of the original design of the Main Steam Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-59

**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWC-2500-1; Examination Category C-H; Item C7.30 each 3 1/3 Year
Period for evidence of leakage. Surface Magnetic Particle Examination was
performed on the 32" Main Steam Longitudinal Weld MS-W90L during the
3rd Interval as required by ASME Boiler and Pressure Vessel Code Section
XI 1989 Edition: Table IWC-2500-1; Examination C-F-2 and Item No.
C5.52.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: MAIN STEAM STEAM GENERATOR 1B

DRAWING NO.: ISIM-872

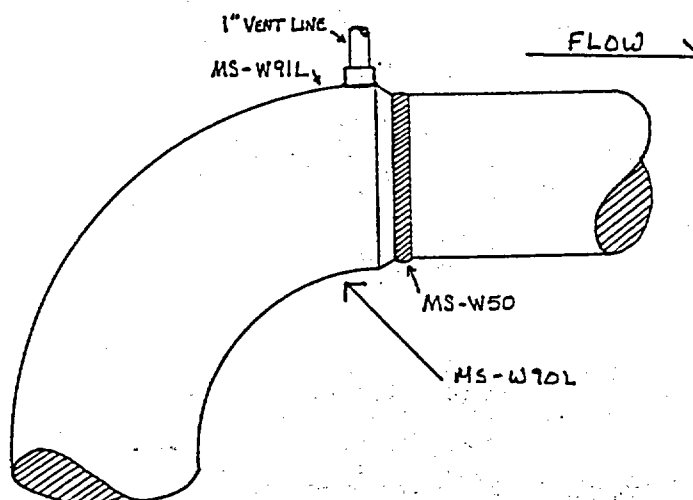
COMPONENT IDENTIFICATION: MS-W90L
MS-W91L PROCEDURE: NEP-15.40 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: TIM COBURN [Signature] II DATE: 10/12/01
LEVEL

EXAMINER: [Signature] II DATE: 10/12/01
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



45° - LIMITED 2,5,7,8 SCAN ON WELD MS-W90L DUE TO 1" ELBOW TAPER.
SCANS 2,5,7,8 LIMITED BY 3" ON WELD MS-W91L DUE TO
1" VENT LINE.

WELD MS-W90L REDUCED CODE COVERAGE BY 22%.

WELD MS-W91L REDUCED CODE COVERAGE BY 63%.

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Butas DATE: October 18, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: [Signature] DATE: 10-19-01

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-60

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

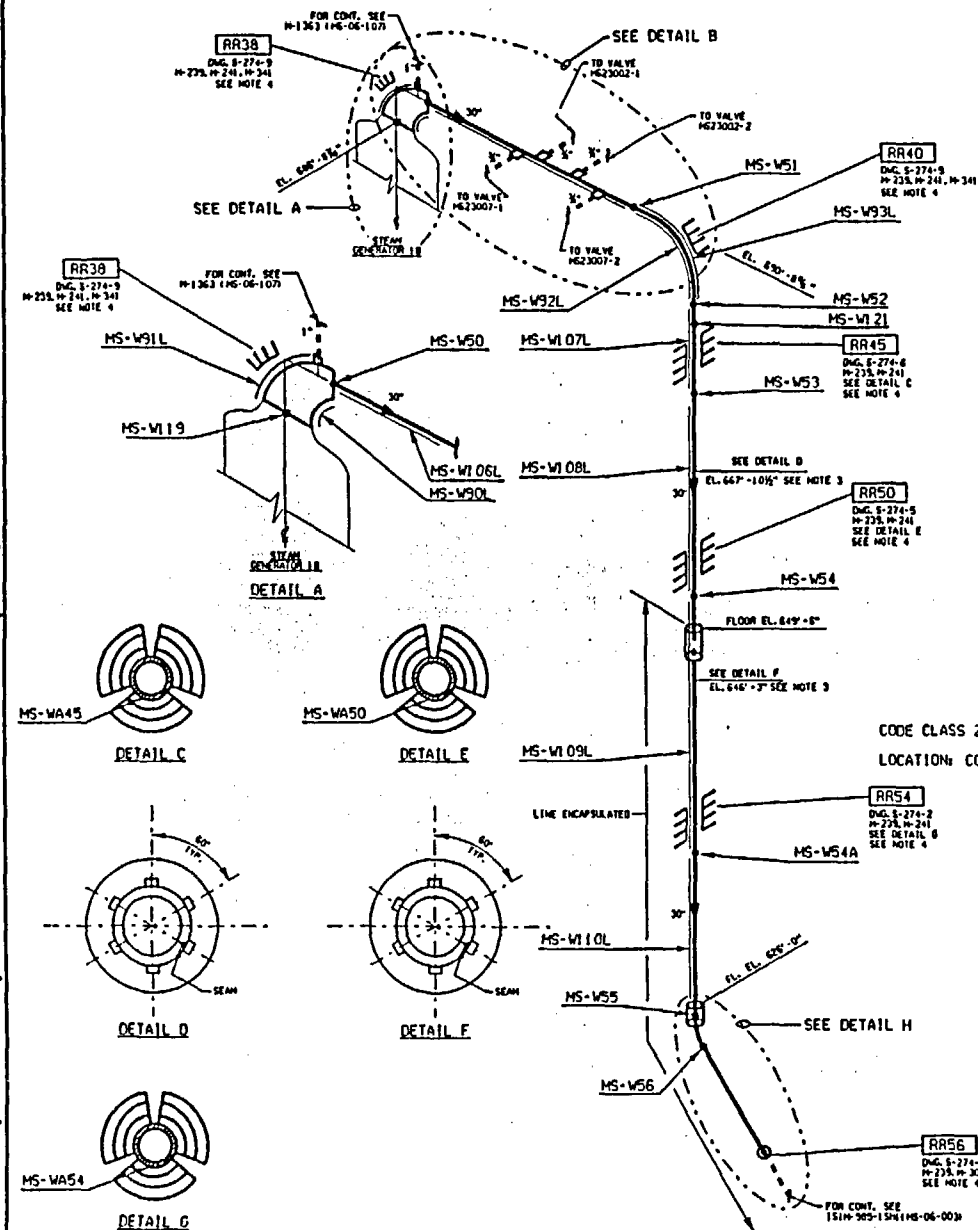
- 1. ASME Code Component Affected: 32" Main Steam Longitudinal Weld MS-W91L**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category C-F-2; Item No. C5.52**
- 4. Impracticality of Compliance: 63.0% of the 32" Main Steam Longitudinal Weld MS-W91L was inaccessible due to a 1" Vent Line thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 63.0% of the 32" Main Steam Longitudinal Weld MS-W91L would require modification of the original design of the Main Steam Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

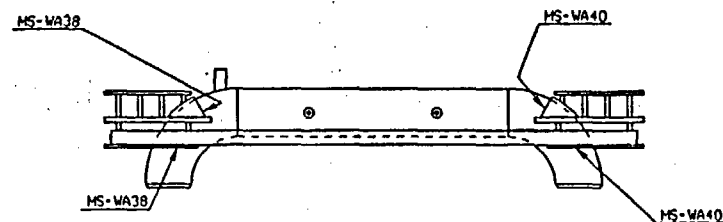
RELIEF REQUEST NO: RR-G-7-60

- 6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWC-2500-1; Examination Category C-H; Item C7.30 each 3 1/3 Year
Period for evidence of leakage.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**

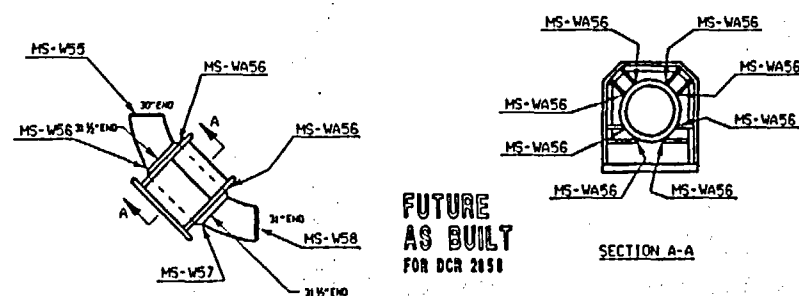


PIPELINE			CONCRETEATION BLOCK		
DIA. (mm)	SEW/INCH/CLASS (in.)	MATERIAL	I.D.	SEW/INCH/CLASS (in.)	MATERIAL
28.00 (31.0)	N/A / 1.266	A 155 KC70 CL 1	48-38	N/A / 2.3	SA 508 CL 2
28.00 (31.0)	N/A / 1.266	A 155 KC70 CL 1	48-39	N/A / 1.10	SA 515 C70 CL
28.00 (31.0)	N/A / 1.266	A 155 KC70 CL 1	48-40	N/A / 1.10	SA 515 C70 CL

INTEGRALLY WELDED ATTACHMENT DATA	
I.D.	THICKNESS (IN.)
RR70 (MS-WA30)	0.750
RR40 (MS-WA40)	0.750
RR45 (MS-WA45)	1.25
RR50 (MS-WA50)	1.25
RR55 (MS-WA55)	1.25
RR60 (MS-WA60)	0.750



DETAIL B



SECTION A-A

FUTURE
AS BUILT
FOR PCR 2151

REFERENCE DWGS.

14238 14239 14240 14241 14242 14243 14244 14245 14246 14247 14248 14249 14250 14251 14252 14253 14254 14255 14256 14257 14258 14259 14260 14261 14262 14263 14264 14265 14266 14267 14268 14269 14270 14271 14272 14273 14274 14275 14276 14277 14278 14279 14280 14281 14282 14283 14284 14285 14286 14287 14288 14289 14290 14291 14292 14293 14294 14295 14296 14297 14298 14299 14300 14301 14302 14303 14304 14305 14306 14307 14308 14309 14310 14311 14312 14313 14314 14315 14316 14317 14318 14319 14320 14321 14322 14323 14324 14325 14326 14327 14328 14329 14330 14331 14332 14333 14334 14335 14336 14337 14338 14339 14340 14341 14342 14343 14344 14345 14346 14347 14348 14349 14350 14351 14352 14353 14354 14355 14356 14357 14358 14359 14360 14361 14362 14363 14364 14365 14366 14367 14368 14369 14370 14371 14372 14373 14374 14375 14376 14377 14378 14379 14380 14381 14382 14383 14384 14385 14386 14387 14388 14389 14390 14391 14392 14393 14394 14395 14396 14397 14398 14399 14400 14401 14402 14403 14404 14405 14406 14407 14408 14409 14410 14411 14412 14413 14414 14415 14416 14417 14418 14419 14420 14421 14422 14423 14424 14425 14426 14427 14428 14429 14430 14431 14432 14433 14434 14435 14436 14437 14438 14439 14440 14441 14442 14443 14444 14445 14446 14447 14448 14449 14450 14451 14452 14453 14454 14455 14456 14457 14458 14459 14460 14461 14462 14463 14464 14465 14466 14467 14468 14469 14470 14471 14472 14473 14474 14475 14476 14477 14478 14479 14480 14481 14482 14483 14484 14485 14486 14487 14488 14489 14490 14491 14492 14493 14494 14495 14496 14497 14498 14499 14500 14501 14502 14503 14504 14505 14506 14507 14508 14509 14510 14511 14512 14513 14514 14515 14516 14517 14518 14519 14520 14521 14522 14523 14524 14525 14526 14527 14528 14529 14530 14531 14532 14533 14534 14535 14536 14537 14538 14539 14540 14541 14542 14543 14544 14545 14546 14547 14548 14549 14550 14551 14552 14553 14554 14555 14556 14557 14558 14559 14560 14561 14562 14563 14564 14565 14566 14567 14568 14569 14570 14571 14572 14573 14574 14575 14576 14577 14578 14579 14580 14581 14582 14583 14584 14585 14586 14587 14588 14589 14590 14591 14592 14593 14594 14595 14596 14597 14598 14599 14600 14601 14602 14603 14604 14605 14606 14607 14608 14609 14610 14611 14612 14613 14614 14615 14616 14617 14618 14619 14620 14621 14622 14623 14624 14625 14626 14627 14628 14629 14630 14631 14632 14633 14634 14635 14636 14637 14638 14639 14640 14641 14642 14643 14644 14645 14646 14647 14648 14649 14650 14651 14652 14653 14654 14655 14656 14657 14658 14659 14660 14661 14662 14663 14664 14665 14666 14667 14668 14669 14670 14671 14672 14673 14674 14675 14676 14677 14678 14679 14680 14681 14682 14683 14684 14685 14686 14687 14688 14689 14690 14691 14692 14693 14694 14695 14696 14697 14698 14699 14700 14701 14702 14703 14704 14705 14706 14707 14708 14709 14710 14711 14712 14713 14714 14715 14716 14717 14718 14719 14720 14721 14722 14723 14724 14725 14726 14727 14728 14729 14730 14731 14732 14733 14734 14735 14736 14737 14738 14739 14740 14741 14742 14743 14744 14745 14746 14747 14748 14749 14750 14751 14752 14753 14754 14755 14756 14757 14758 14759 14760 14761 14762 14763 14764 14765 14766 14767 14768 14769 14770 14771 14772 14773 14774 14775 14776 14777 14778 14779 14780 14781 14782 14783 14784 14785 14786 14787 14788 14789 14790 14791 14792 14793 14794 14795 14796 14797 14798 14799 14800 14801 14802 14803 14804 14805 14806 14807 14808 14809 14810 14811 14812 14813 14814 14815 14816 14817 14818 14819 14820 14821 14822 14823 14824 14825 14826 14827 14828 14829 14830 14831 14832 14833 14834 14835 14836 14837 14838 14839 14840 14841 14842 14843 14844 14845 14846 14847 14848 14849 14850 14851 14852 14853 14854 14855 14856 14857 14858 14859 14860 14861 14862 14863 14864 14865 14866 14867 14868 14869 14870 14871 14872 14873 14874 14875 14876 14877 14878 14879 14880 14881 14882 14883 14884 14885 14886 14887 14888 14889 14890 14891 14892 14893 14894 14895 14896 14897 14898 14899 14900 14901 14902 14903 14904 14905 14906 14907 14908 14909 14910 14911 14912 14913 14914 14915 14916 14917 14918 14919 14

NOTES:

1. LONG SEAM WELDS Σ ALONG ENTIRE LENGTH OF SPOOL PIECE PER ASTM A-153, AC-70, CL-1.
2. FOR MORE DETAIL ON VENTURE TUBE (FE-074) REFER TO DUG-22-100-1376 AND AB1-1046.
3. COMPONENT PROVIDES SUPPORT FOR INSULATION ONLY AND IS NOT WITH THE JURISDICTION OF ASME SECTION II.
4. RUPTURE RESTRAINTS ARE NOT WITHIN THE JURISDICTION OF ASME SECTION II.

NOTES CONT.

7. CLASS 2 PIPING 4" DIAMET
LESS IS EXEMPT FROM NDE.
8. DRAWING APPLICABLE FOR
200 (15) INTERVAL.

A-1
KAP 01-001639

ISSUED BY PUBLIC SERVICE CORPORATION
 151 ISOMETRIC
 MAIN STEAM
 STEAM GENERATOR 10
 WISCONSIN PUBLIC SERVICE CORP.
 151M-872

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: MAIN STEAM STEAM GENERATOR 1B

DRAWING NO.: ISIM-872

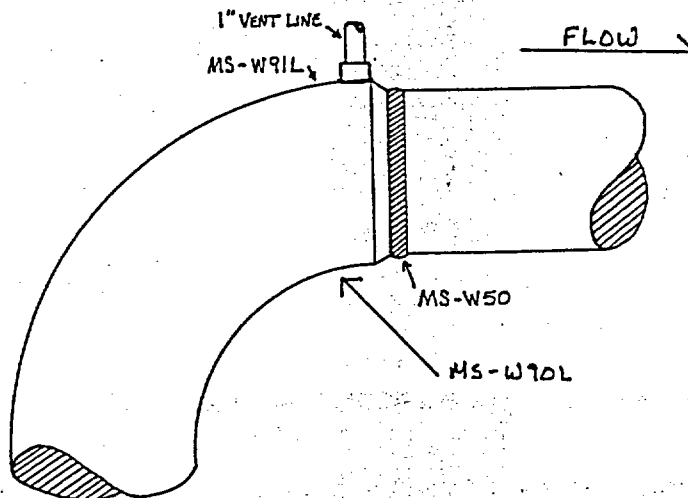
COMPONENT IDENTIFICATION: MS-W90L
MS-W91L PROCEDURE: NEP-15.40 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: TIM COBURN [Signature] II DATE: 10/12/01
LEVEL

EXAMINER: [Signature] II DATE: 10/12/01
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



45° - LIMITED 2,5,7,8 SCAN ON WELD MS-W90L DUE TO 1" ELBOW TAPER.
SCANS 2,5,7,8 LIMITED BY 3" ON WELD MS-W91L DUE TO
1" VENT LINE.

WELD MS-W90L REDUCED CODE COVERAGE BY 22%.

WELD MS-W91L REDUCED CODE COVERAGE BY 63%.

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Butko DATE: October 18, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: [Signature] DATE: 10-19-01

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-61

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 32" Main Steam Longitudinal Weld MS-W91L**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category C-F-2; Item No. C5.52**
- 4. Impracticality of Compliance: 50.0% the 32" Main Steam Longitudinal Weld MS-W91L was inaccessible due to a 1" Vent Line thus restricting Surface Magnetic Particle Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 50.0% of the 32" Main Steam Longitudinal Weld MS-W91L would require modification of the original design of the Main Steam Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

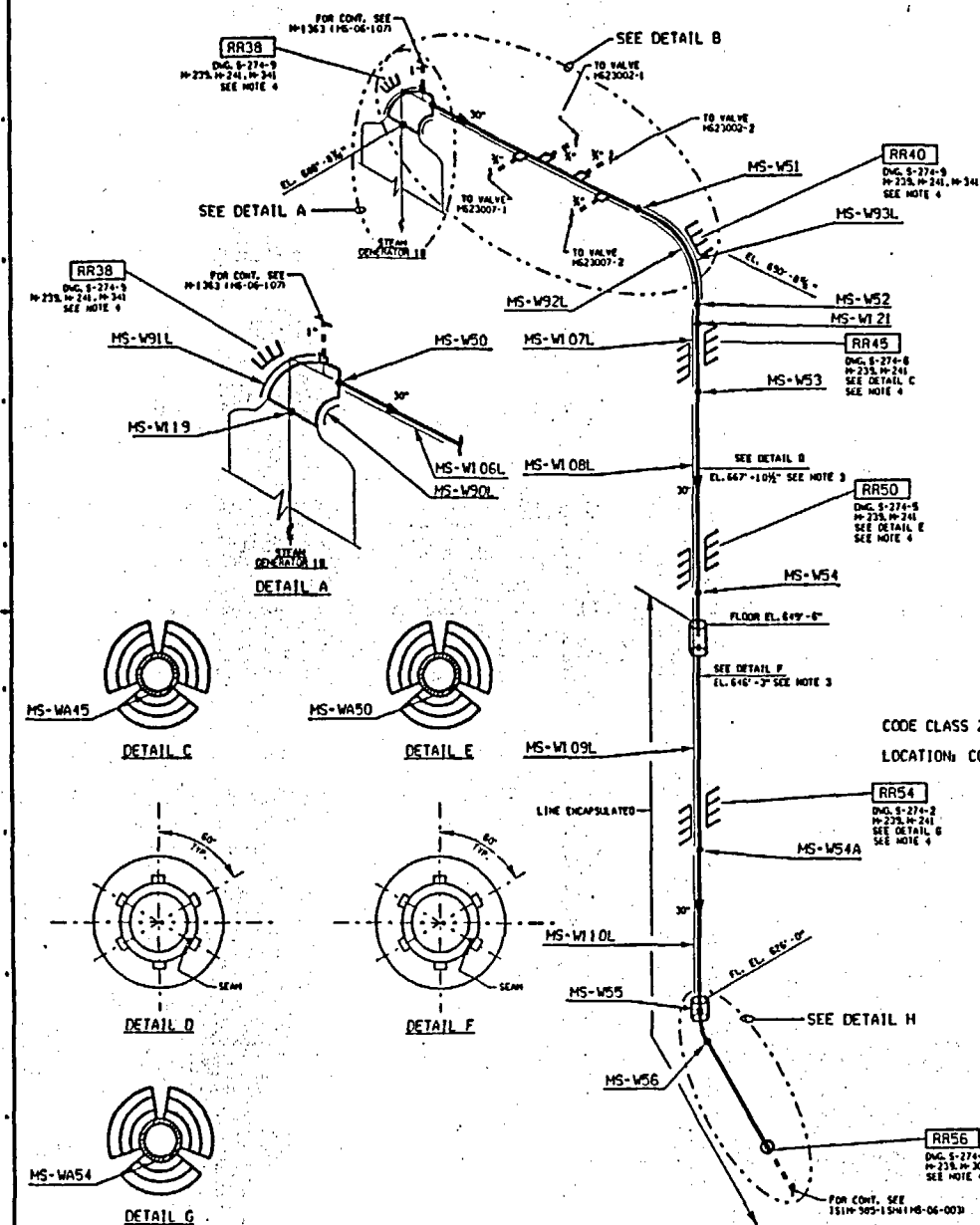
RELIEF REQUEST NO: RR-G-7-61

6. Proposed Alternative and Basis for Use: No alternative Code required Surface Magnetic Particle Examination is available due to the limited access. VT-2 Examinations were performed during the 3rd Interval as required by ASME Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWC-2500-1; Examination Category C-H; Item C7.30 each 3 1/3 Year Period for evidence of leakage.

7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 – June 16, 2004

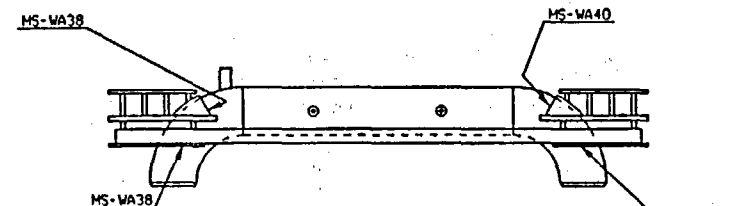
8. Precedents: Not Applicable

9. References: Not Applicable

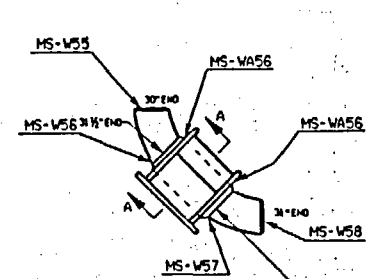


PIPING			CALCIBRATION REF		
DIA. IN	SCHW. INCHES	MATERIAL	I.D.	SCHW. INCHES	MATERIAL
22.09310 ± 27.56410	N/A / 1.266	A 155 AC70 CL 1	24.38	N/A / 2.3	SA 508 CL 2
N/A	N/A / 1.260	A 155 AC70 CL 1	24.37	N/A / 1.10	SA 515 CR70 CL
27.75410	N/A / 1.046	A 155 AC70 CL 1	24.37	N/A / 1.10	SA 515 CR70 CL

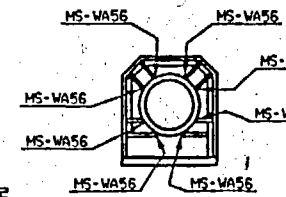
INTERCOMPARISON OF ATTACHMENT DATA	
Q.	THICKNESS (IN.)
RIR 20 (MS-WA-30)	0.750
RIR 40 (MS-WA-40)	0.750
RIR 65 (MS-WA-65)	1.25
RIR 80 (MS-WA-80)	1.25
RIR 94 (MS-WA-94)	1.25
RIR 96 (MS-WA-96)	1.750



DETAIL B



DETAIL 1



SECTION A-A

FUTURE
AS BUILT
FOR AGE 2151

REFERENCE DVCS

1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315 1316 1317 1318 1319 1320 1321 1322 1323 1324 1325 1326 1327 1328 1329 1330 1331 1332 1333 1334 1335 1336 1337 1338 1339 1340 1341 1342 1343 1344 1345 1346 1347 1348 1349 1350 1351 1352 1353 1354 1355 1356 1357 1358 1359 1360 1361 1362 1363 1364 1365 1366 1367 1368 1369 1370 1371 1372 1373 1374 1375 1376 1377 1378 1379 1380 1381 1382 1383 1384 1385 1386 1387 1388 1389 1390 1391 1392 1393 1394 1395 1396 1397 1398 1399 1400 1401 1402 1403 1404 1405 1406 1407 1408 1409 1410 1411 1412 1413 1414 1415 1416 1417 1418 1419 1420 1421 1422 1423 1424 1425 1426 1427 1428 1429 1430 1431 1432 1433 1434 1435 1436 1437 1438 1439 1440 1441 1442 1443 1444 1445 1446 1447 1448 1449 1450 1451 1452 1453 1454 1455 1456 1457 1458 1459 1460 1461 1462 1463 1464 1465 1466 1467 1468 1469 1470 1471 1472 1473 1474 1475 1476 1477 1478 1479 1480 1481 1482 1483 1484 1485 1486 1487 1488 1489 1490 1491 1492 1493 1494 1495 1496 1497 1498 1499 1500 1501 1502 1503 1504 1505 1506 1507 1508 1509 1510 1511 1512 1513 1514 1515 1516 1517 1518 1519 1520 1521 1522 1523 1524 1525 1526 1527 1528 1529 1530 1531 1532 1533 1534 1535 1536 1537 1538 1539 1540 1541 1542 1543 1544 1545 1546 1547 1548 1549 1550 1551 1552 1553 1554 1555 1556 1557 1558 1559 1560 1561 1562 1563 1564 1565 1566 1567 1568 1569 1570 1571 1572 1573 1574 1575 1576 1577 1578 1579 1580 1581 1582 1583 1584 1585 1586 1587 1588 1589 1590 1591 1592 1593 1594 1595 1596 1597 1598 1599 1600 1601 1602 1603 1604 1605 1606 1607 1608 1609 1610 1611 1612 1613 1614 1615 1616 1617 1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632 1633 1634 1635 1636 1637 1638 1639 1640 1641 1642 1643 1644 1645 1646 1647 1648 1649 1650 1651 1652 1653 1654 1655 1656 1657 1658 1659 1660 1661 1662 1663 1664 1665 1666 1667 1668 1669 1670 1671 1672 1673 1674 1675 1676 1677 1678 1679 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691 1692 1693 1694 1695 1696 1697 1698 1699 1700 1701 1702 1703 1704 1705 1706 1707 1708 1709 1710 1711 1712 1713 1714 1715 1716 1717 1718 1719 1720 1721 1722 1723 1724 1725 1726 1727 1728 1729 1730 1731 1732 1733 1734 1735 1736 1737 1738 1739 1740 1741 1742 1743 1744 1745 1746 1747 1748 1749 1750 1751 1752 1753 1754 1755 1756 1757 1758 1759 1760 1761 1762 1763 1764 1765 1766 1767 1768 1769 1770 1771 1772 1773 1774 1775 1776 1777 1778 1779 1780 1781 1782 1783 1784 1785 1786 1787 1788 1789 1790 1791 1792 1793 1794 1795 1796 1797 1798 1799 1800 1801 1802 1803 1804 1805 1806 1807 1808 1809 1810 1811 1812 1813 1814 1815 1816 1817 1818 1819 1820 1821 1822 1823 1824 1825 1826 1827 1828 1829 1830 1831 1832 1833 1834 1835 1836 1837 1838 1839 1840 1841 1842 1843 1844 1845 1846 1847 1848 1849 1850 1851 1852 1853 1854 1855 1856 1857 1858 1859 1860 1861 1862 1863 1864 1865 1866 1867 1868 1869 1870 1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096

NOTES:

1. LONG SEAM WELD IS ALONG ENTIRE LENGTH OF SPOOL PIECE PER ASTM A-155, KC-70, CL-1.
2. FOR MORE DETAIL ON VENTURI TUBE (FE-474) REFER TO DNG. XX-100-1376 AND AB-1044.
3. COMPONENT PROVIDES SUPPORT FOR INSULATION ONLY AND IS NOT WITHIN THE JURISDICTION OF ASME SECTION XI.
4. RUPTURE RESTRAINTS ARE NOT WITHIN THE JURISDICTION OF ASME SECTION XI.

NOTES CONT.

2. CLASS 2 PIPING 4" DIAM
LESS IS EXEMPT FROM NDE
6. DRAWING APPLICABLE FOR
3" & 4" 151 INTERVAL.

A-1
KAP 01-001639

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: MAIN STEAM STEAM GENERATOR 1B

DRAWING NO.: ISTM - 872

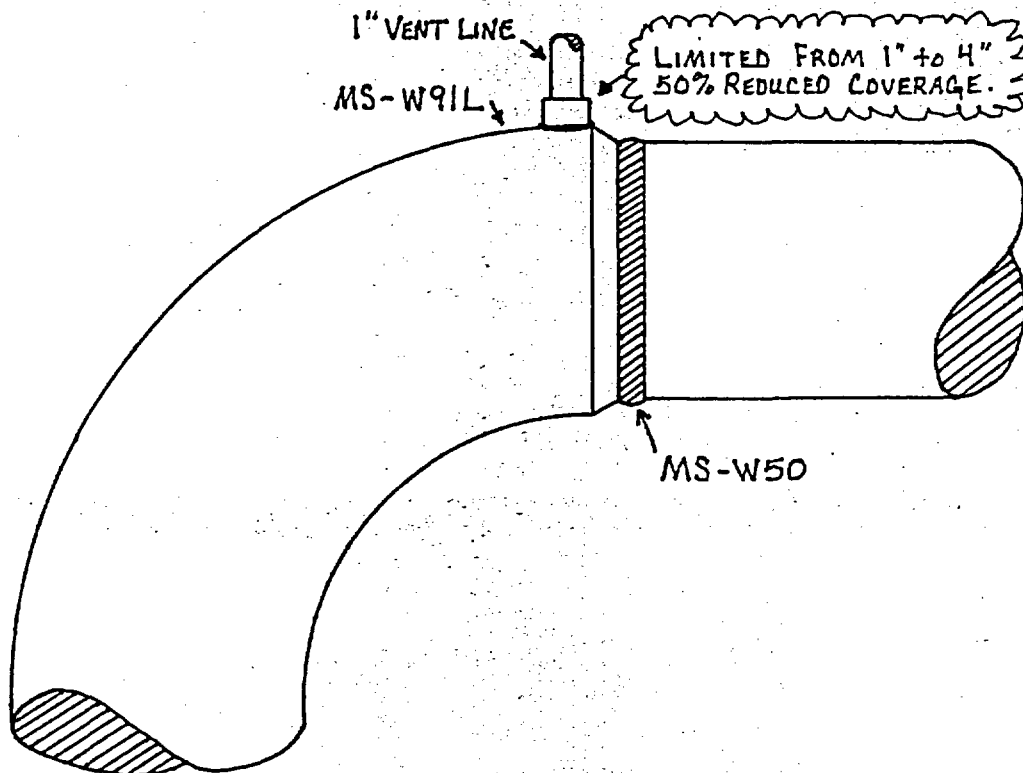
COMPONENT IDENTIFICATION: MS-W91L PROCEDURE: NEP No. 15.7 REVISION: ORIG

ULTRASONIC: LIQUID PENETRANT: MAGNETIC PARTICLE: X VISUAL:

EXAMINER: Brian A. Krott II DATE: 10/11/01
LEVEL

EXAMINER: Simon Crothers II DATE: 10/11/01
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bukes DATE: October 13, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Logan McIntyre DATE: 10-15-01

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-62

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 16" Feedwater Circumferential Weld FW-W24**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category C-F-2; Item No. C5.51**
- 4. Impracticality of Compliance: 8.0% the 16" Feedwater Circumferential Weld FW-W24 was inaccessible due to the Valve Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 8.0% of the 16" Feedwater Circumferential Weld FW-W24 would require modification of the original design of the Feedwater Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-62

- 6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWC-2500-1; Examination Category C-H; Item C7.30 each 3 1/3 Year
Period for evidence of leakage. Surface Magnetic Particle Examination was
performed on 16" Feedwater Circumferential Weld FW-W24 during the 3rd
Interval as required by ASME Boiler and Pressure Vessel Code Section XI
1989 Edition: Table IWC-2500-1; Examination Category C-F-2 and Item
No. C5.51.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: FEEDWATER FROM ANCHORED ELL TO STEAM GEN. 1A

DRAWING NO.: ISM-970

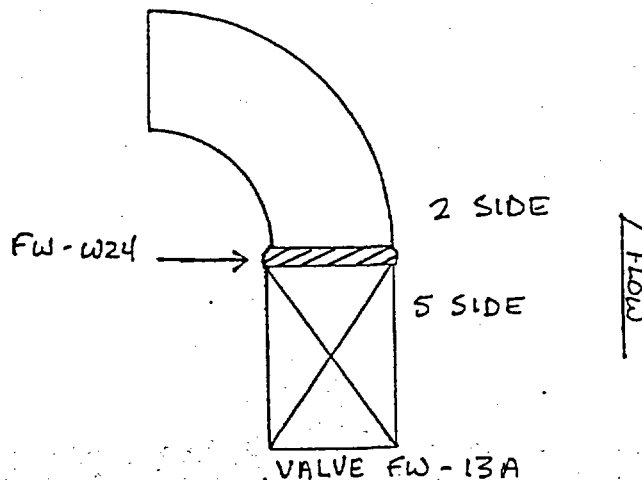
COMPONENT IDENTIFICATION: FW-W24 PROCEDURE: NEP-15.40 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: TIM CORBURN [Signature] II DATE: 10/20/01
LEVEL

EXAMINER: NA NA DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



45° - SCAN 5, 7, 8 RESTRICTED DUE TO VALVE CONFIGURATION.

60° - SCAN 5 RESTRICTED DUE TO VALVE CONFIGURATION.

REDUCED CODE COVERAGE BY 8%.

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Butkus DATE: October 27, 2001

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: [Signature] DATE: 10-29-01

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-63

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 16" Feedwater Circumferential Weld FW-W52**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category C-F-2; Item No. C5.51**
- 4. Impracticality of Compliance: 8.0% the 16" Feedwater Circumferential Weld FW-W52 was inaccessible due to the Valve Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 8.0% of the 16" Feedwater Circumferential Weld FW-W52 would require modification of the original design of the Feedwater Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-63

**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWC-2500-1; Examination Category C-H; Item C7.30 each 3 1/3 Year
Period for evidence of leakage. Surface Magnetic Particle Examination was
performed on 16" Feedwater Circumferential Weld FW-W52 during the 3rd
Interval as required by ASME Boiler and Pressure Vessel Code Section XI
1989 Edition: Table IWC-2500-1; Examination Category C-F-2 and Item
No. C5.51.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: FEEDWATER FROM ANCHORED ELL TO STM GEN. 1B

DRAWING NO.: ISIM-971

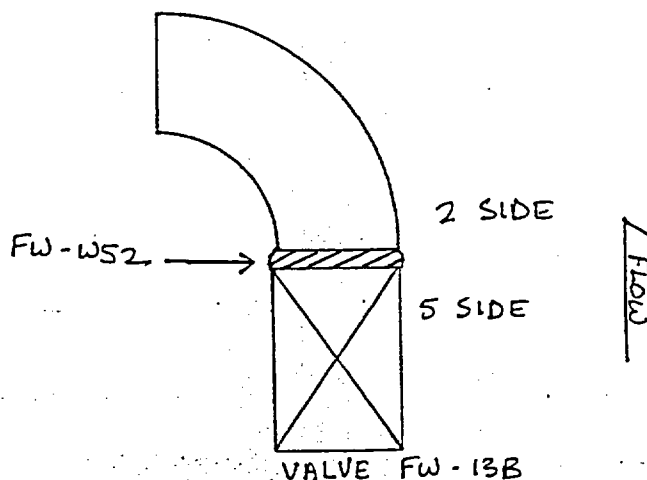
COMPONENT IDENTIFICATION: FW-WS2 PROCEDURE: NEP-15.4 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

EXAMINER: TIM COBURN [Signature] II DATE: 10/20/01
LEVEL

EXAMINER: NA NA DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.



45° - SCAN 5, 7, 8 RESTRICTED DUE TO VALVE CONFIGURATION.
60° - SCAN 5 RESTRICTED DUE TO VALVE CONFIGURATION.

REDUCED CODE COVERAGE BY 8%.

KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip E. Butkus DATE: October 27, 2001
AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Loren J. McQuinn DATE: 10/29/01

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-64

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Regenerative Heat Exchanger
Tubesheet to Shell Circumferential Weld
ARG-W11**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWC-2500-1; Examination Category
C-A; Item No. C1.30**
- 4. Impracticality of Compliance: 41.4% of the Regenerative Heat Exchanger
Tubesheet to Shell Circumferential Weld ARG-W11 was inaccessible due to
Pipe Clamp Connected to Rigid Support Bracket Assembly thus restricting
Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 41.4% of the
Tubesheet to Shell Circumferential Weld ARG-W11 would require removal
and modification of the Rigid Support Bracket Assembly in a 1R - 2R per
hour Radiation Field of the Regenerative Heat Exchanger.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-64

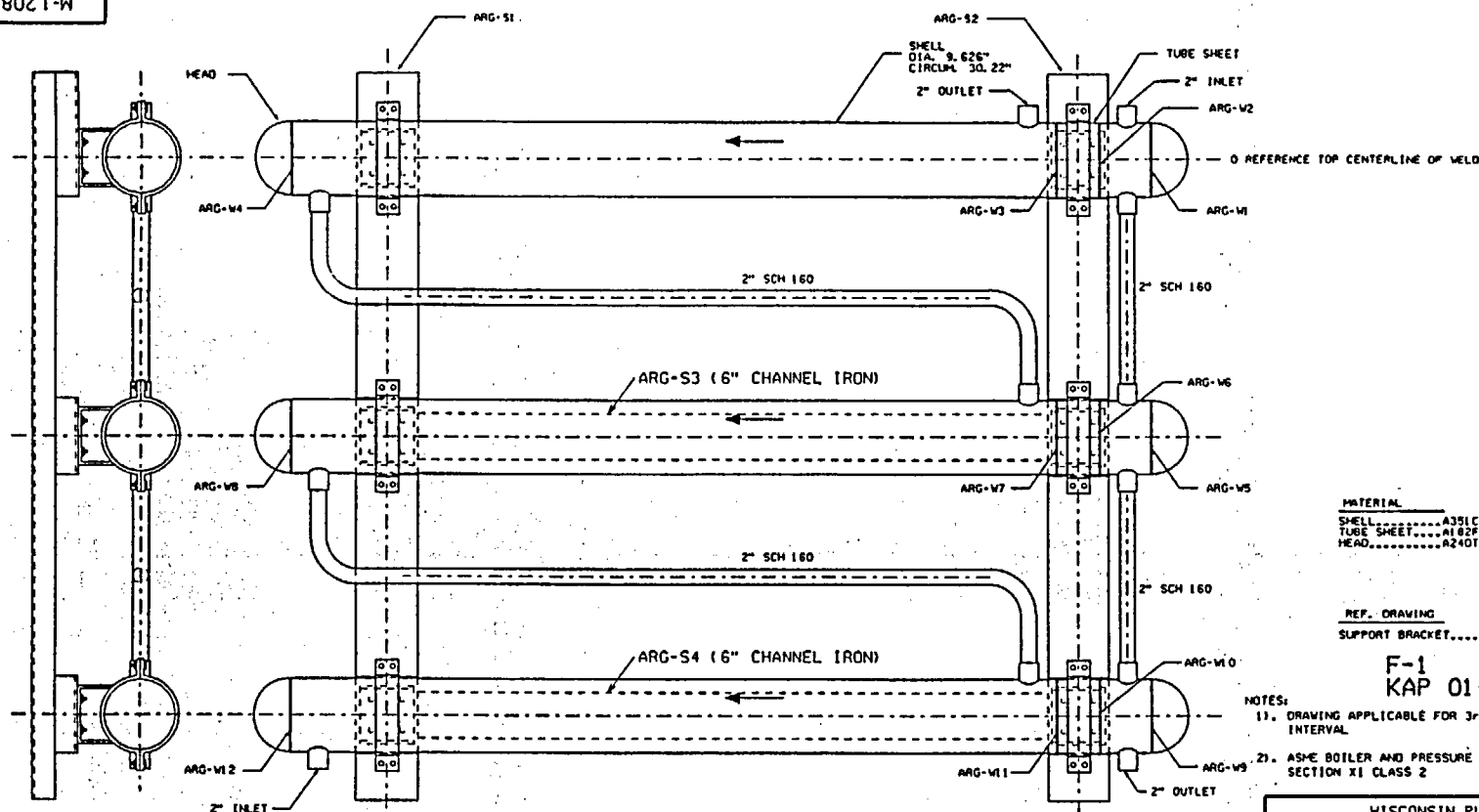
**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access caused by the
Rigid Support Bracket and the High Radiation Fields. VT-2 Examinations
were performed during the 3rd Interval as required by ASME Boiler and
Pressure Vessel Code Section XI 1989 Edition: Table IWC-2500-1;
Examination Category C-H; Item C7.10 each 3 1/3 Year Period for evidence
of leakage.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

8021-W



CALIBRATION BLOCK			
I.D.	DIAMETER / SCHEDULE	MATERIAL	
WPS-27	9.5" 0.975" T	A351 CFB	

135-031

COMPONENT WELD DATA	
I.D.	THICKNESS
ARG-V1	1.900"
ARG-V2	1.900"
ARG-V3	1.900"
ARG-V4	1.938"
ARG-V5	1.938"
ARG-V6	1.938"
ARG-V7	1.938"
ARG-V8	1.938"
ARG-V9	1.938"
ARG-V10	1.938"
ARG-V11	1.938"
ARG-V12	1.938"
ARG-V13	1.938"
ARG-V14	1.938"
ARG-V15	1.938"
ARG-V16	1.938"
ARG-V17	1.938"
ARG-V18	1.938"
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ARG-V31	1.938"
ARG-V32	1.938"
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ARG-V78	1.938"
ARG-V79	1.938"
ARG-V80	1.938"
ARG-V81	1.938"
ARG-V82	1.938"
ARG-V83	1.938"
ARG-V84	1.938"
ARG-V85	1.938"
ARG-V86	1.938"
ARG-V87	1.938"
ARG-V88	1.938"
ARG-V89	1.938"
ARG-V90	1.938"
ARG-V91	1.938"
ARG-V92	1.938"
ARG-V93	1.938"
ARG-V94	1.938"
ARG-V95	1.938"
ARG-V96	1.938"
ARG-V97	1.938"
ARG-V98	1.938"
ARG-V99	1.938"
ARG-V100	1.938"

LOCATION: CONTAINMENT 593' ELEVATION

CADD

MATERIAL
SHELL.....A351CFB
TUBE SHEET.....A182F304
HEAD.....A240TP304

REF. DRAWING
SUPPORT BRACKET.....XK-100-492

F-1
KAP 01-001639

- NOTES:
1. DRAWING APPLICABLE FOR 3rd (AND 4th) ISI INTERVAL
 2. ASME BOILER AND PRESSURE VESSEL CODE SECTION XI CLASS 2

REVISION

E-1 PDR 0175
ADDED ARG-S3 & S4
16" CHANNEL (IRON)
BY: JMS 06-06-00
APP'D: DAK 06-09-00

F PDR 0175 COMP.
SEE REV. E-1
FILMED: (WPS) 06-13-00

F-1 KAP 01-001639
REVISED NOTE 1.
BY: ABF 06-03-02
APP'D:

G KAP 01-001639
COMPLETE
SEE REV. F-1.
FILMED: (WPS)

C ESR 92-177 COMP.
SEE REV. B-1
FILMED WPS: 10-19-93

C-1 REVISED NOTE 2

PER ESR 92-177
BY: DOG 11-17-93
CHK'D: RJS 11-17-93
APP'D: CAT 11-19-93

D ESR 91-277 COMP.
SEE REV. C-1
FILMED: WPS 11-30-93

D-1 RE PUR 0295
ADDED REF NUMBER
BY: BJD 7-19-99
APP'D: DAK 7-26-99

E RE PUR 0295 COMP.
SEE REV. D-1
FILMED: WPS 8-3-99

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

REGENERATIVE HEAT EXCHANGER ARG

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	P. E. BUKES	APPROVED	5/13/93
CHECKED		PROJECT APPROVED	
D. H.	1/17/83		
DRAWN	D. R. / D. S. 1/13/83	DWG. NO.	M-1208
SCALE	NONE	REV.	G

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: REGENERATIVE HEAT EXCHANGER ARG

DRAWING NO.: NI-1208

COMPONENT IDENTIFICATION: ARG-W11 PROCEDURE: NEPN. 15.17 REVISION: ORIG

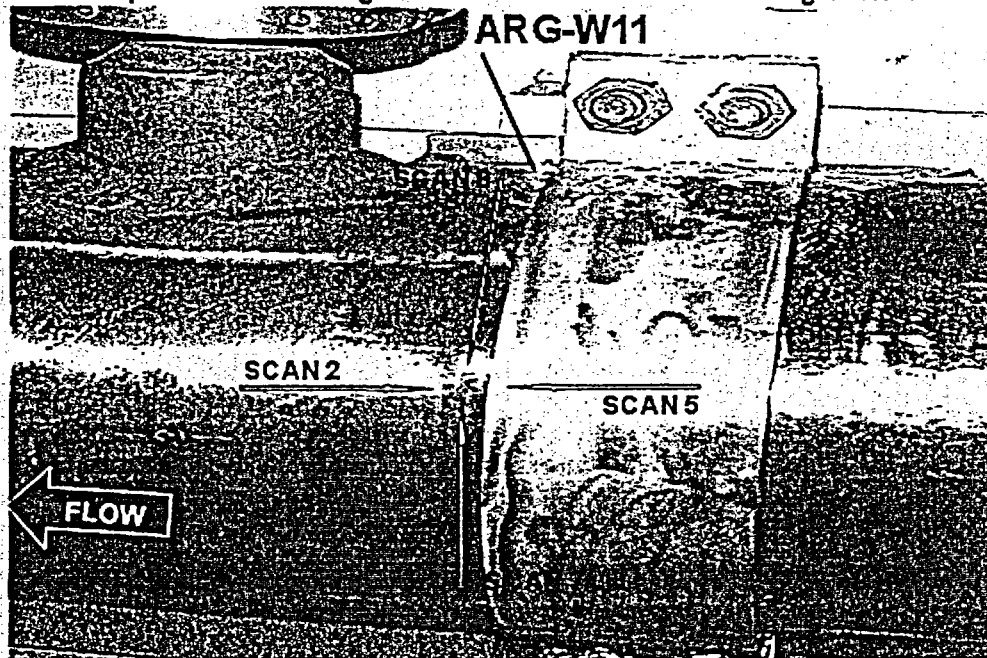
ULTRASONIC: X LIQUID PENETRANT: _____ MAGNETIC PARTICLE: _____ VISUAL: _____

EXAMINER: *J. Timm* III DATE: 4-25-03
LEVEL

EXAMINER: NA DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

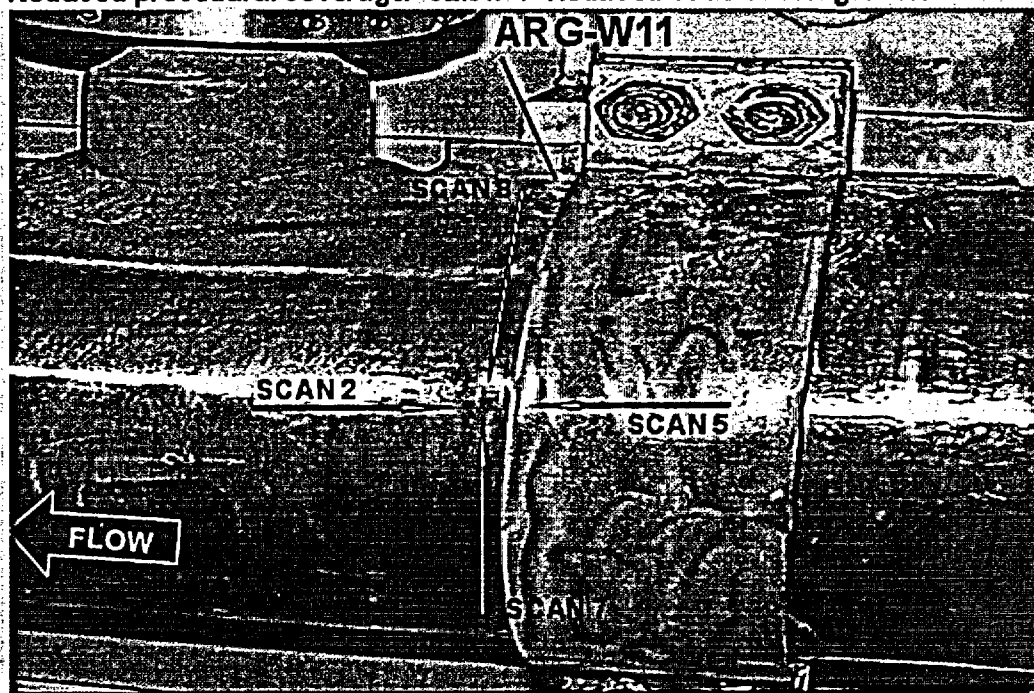
No scan 5, scan 7 & 8 limited to weld and downstream base metal only, due to pipe clamp connected to rigid support bracket assembly. Scan 2, 7 & 8, also limited to 90% of length due to welded lugs around circumference of vessel.
Reduced procedural coverage: 62.8% / Reduced code coverage: 41.4%



KEWAUNEE NUCLEAR POWER PLANT REVIEW: *Phillip E. Buker* DATE: April 25, 2003

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: *Roger Myer* DATE: 4-25-03

No scan 5, scan 7 & 8 limited to weld and downstream base metal only, due to pipe clamp connected to rigid support bracket assembly. Scan 2, 7 & 8, also limited to 90% of length due to welded lugs around circumference of vessel.
Reduced procedural coverage: 62.8% / Reduced code coverage: 41.4%



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-65

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 12" Reactor Coolant Pipe Branch
Connection Weld RC-W50BC**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category
B-J; Item No. B9.31**
- 4. Impracticality of Compliance: 53.0% of Reactor Coolant Pipe 12" Branch
Connection Weld RC-W50BC was inaccessible for Ultrasonic Examination
due to the Branch Nozzle Configuration thus restricting Ultrasonic
Examination.**
- 5. Burden Caused by Compliance: To provide for access to perform
Ultrasonic Examination for Reactor Coolant Pipe 12" Branch Connection
Weld RC-W50BC would require modification of the original design of the
Reactor Coolant Pipe.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-65

6. Proposed Alternative and Basis for Use: No alternative Code required Ultrasonic Examination is available for Reactor Coolant Pipe 12" Branch Connection RC-W50BC due to the Branch Nozzle Configuration. VT-2 Examinations were performed during the 3rd Interval as required by ASME Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-1; Examination Category B-P; Item No. B15.50 each Refueling Outage for evidence of leakage. Surface Liquid Penetrant Examination was performed on Reactor Coolant Pipe 12" Branch Connection Weld RC-W50BC during the 3rd Interval as required by ASME Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-1; Examination Category B-J and Item No. B9.31.

7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 – June 16, 2004

8. Precedents: Not Applicable

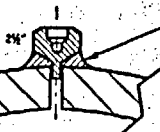
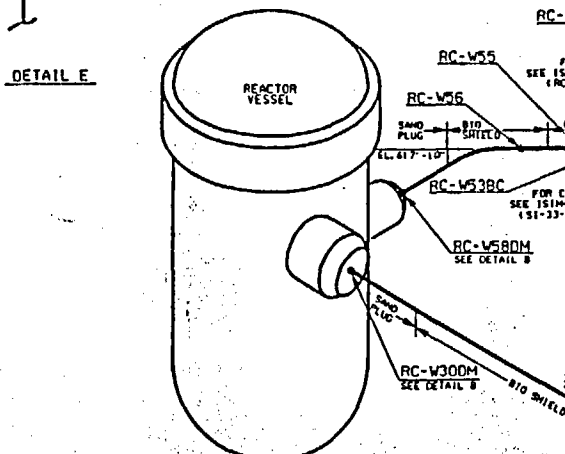
9. References: Not Applicable

RC-14181

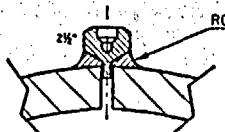
CODE CLASS 1

LOCATION: CONTAINMENT ELEV. 606'-0"
SAND PLUG, BIO SHIELD, CAVITY B

DETAIL E

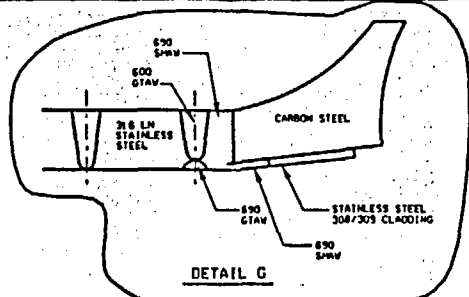


DETAIL C

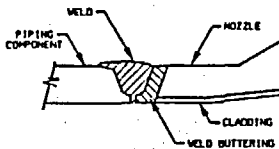


DETAIL D

ITEM NO.	DESCRIPTION	UNIT	QTY	REMARKS
1	PIPE 1/2" O.D. x 1/4" THICK	FT	100	FOR DETAIL E
2	PIPE 1/2" O.D. x 1/4" THICK	FT	100	FOR DETAIL E
3	PIPE 1/2" O.D. x 1/4" THICK	FT	100	FOR DETAIL E
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87	PIPE 1/2" O.D. x 1/4" THICK	FT	100	FOR DETAIL E
88	PIPE 1/2" O.D. x 1/4" THICK	FT	100	FOR DETAIL E
89	PIPE 1/2" O.D. x 1/4" THICK	FT	100	FOR DETAIL E
90	PIPE 1/2" O.D. x 1/4" THICK	FT	100	FOR DETAIL E
91	PIPE 1/2" O.D. x 1/4" THICK	FT	100	FOR DETAIL E
92	PIPE 1/2" O.D. x 1/4" THICK	FT	100	FOR DETAIL E
93	PIPE 1/2" O.D. x 1/4" THICK	FT	100	FOR DETAIL E
94	PIPE 1/2" O.D. x 1/4" THICK	FT	100	FOR DETAIL E
95	PIPE 1/2" O.D. x 1/4" THICK	FT	100	FOR DETAIL E
96	PIPE 1/2" O.D. x 1/4" THICK	FT	100	FOR DETAIL E
97	PIPE 1/2" O.D. x 1/4" THICK	FT	100	FOR DETAIL E
98	PIPE 1/2" O.D. x 1/4" THICK	FT	100	FOR DETAIL E
99	PIPE 1/2" O.D. x 1/4" THICK	FT	100	FOR DETAIL E
100	PIPE 1/2" O.D. x 1/4" THICK	FT	100	FOR DETAIL E



DETAIL G



DETAIL B

TYPICAL DISSIMILAR METAL WELD CONFIGURATION

REFERENCE DRAWINGS

XX-100-10, XX-100-106, M-355, M-363, A81-36, A81-1505

NOTES:

1. DRAWING APPLICABLE FOR 3-D & 4-D ISV INTERVAL.
2. RUPTURE RESTRAINTS ARE NOT WITHIN THE JURISDICTION OF THIS SECTION.
3. CLASS 1 PIPING 1" DIAMETER AND LESS IS EXCEPT FROM MCE.

WISCONSIN PUBLIC SERVICE CORP.	
ISV ISOMETRIC REACTOR COOLANT PIPING LOOP B	
DATE	10/1/74
BY	10/1/74
CHECKED BY	10/1/74
APPROVED BY	10/1/74
SCALE	10/1/74
PROJECT NO.	10/1/74
SHEET NO.	10/1/74

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: REACTOR COOLANT PIPING LOOP B

DRAWING NO.: ISIM-1704

COMPONENT IDENTIFICATION: RC-W50BC PROCEDURE: NEP No. 15.39 REVISION: Orig

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

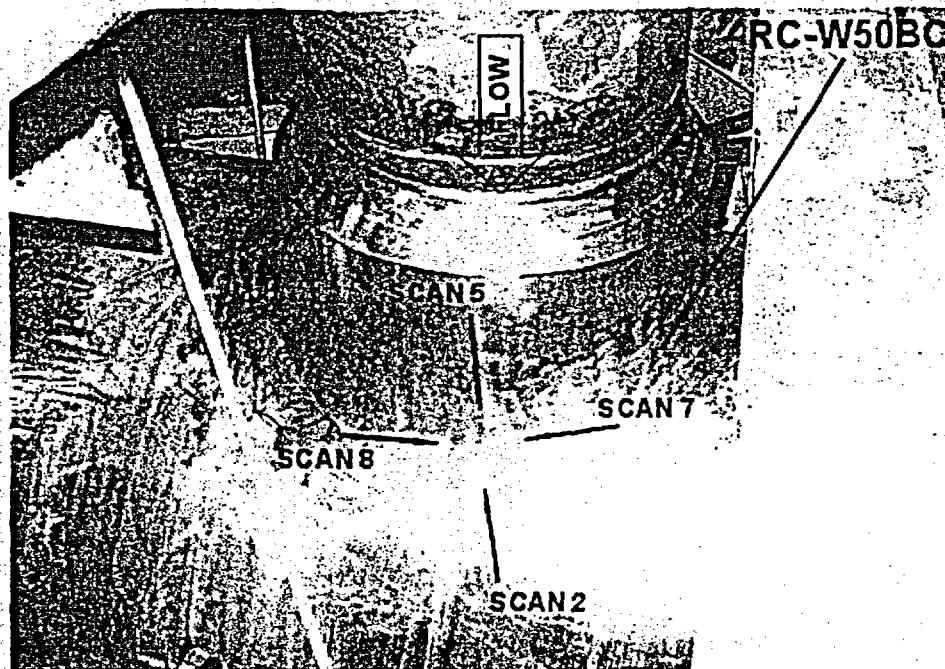
EXAMINER: [Signature] II DATE: 4/17/03
LEVEL

EXAMINER: A.W. JENSEN [Signature] II DATE: 4-17-03
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

No scan 2, scan 7 & 8 limited to weld and upstream base metal only, due to branch connection configuration.

Reduced procedural coverage: 53%

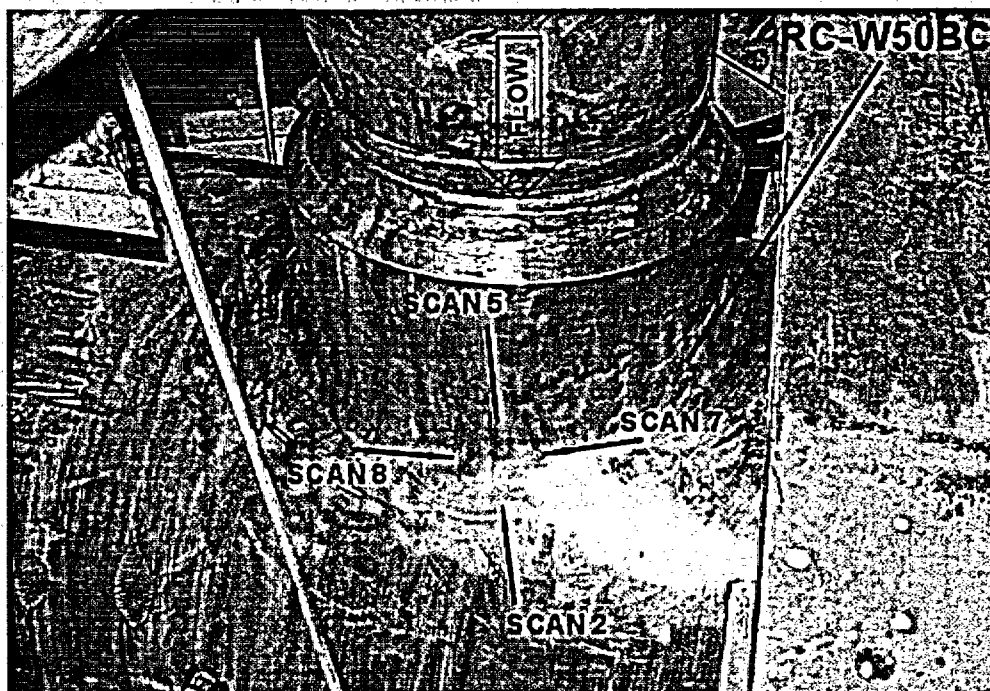


KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip C. Bukes DATE: April 22, 2003

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: [Signature] DATE: 4-22-03

No scan 2, scan 7 & 8 limited to weld and upstream base metal only, due to branch connection configuration.

Reduced procedural coverage: 53%



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-66

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 12" Safety Injection Circumferential Weld SI-W75**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-J; Item No. B9.11**
- 4. Impracticality of Compliance: 50.0% of the 12" Safety Injection Circumferential Weld SI-W75 was inaccessible due to the Valve To Elbow Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 50.0% of the 12" Safety Injection Circumferential Weld SI-W75 would require modification of the original design of Safety Injection Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-66

**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-
1; Examination Category B-P; Item B15.50 each Refueling Outage for
evidence of leakage. Surface Liquid Penetrant Examination was performed
on 12" Safety Injection Circumferential Weld SI-W75 during the 3rd Interval
as required by ASME Boiler and Pressure Vessel Code Section XI 1989
Edition: Table IWB-2500-1; Examination Category B-J and Item No. B9.11.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

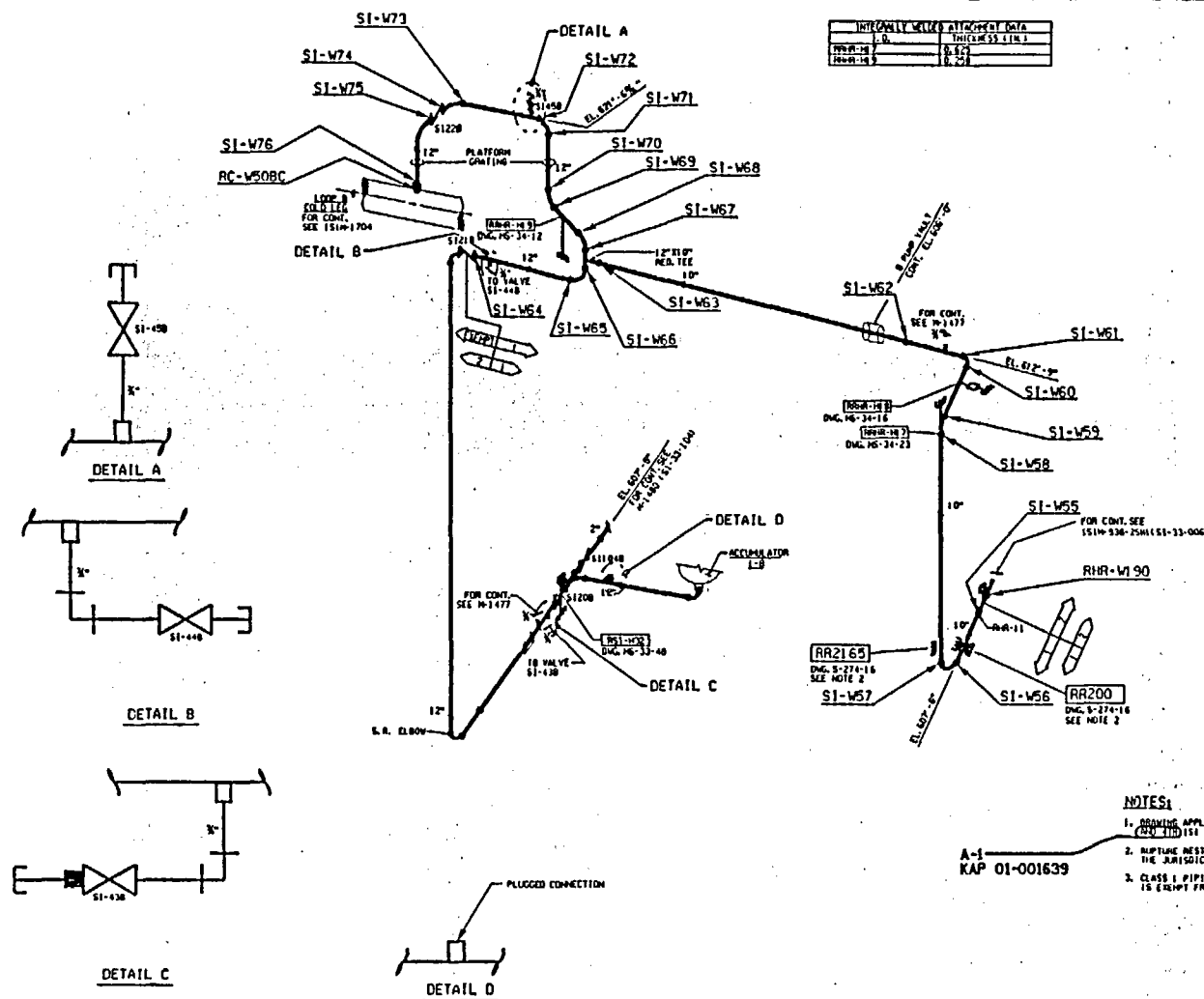
1-956-PWS1

LOCATION: CONTAINMENT, EL. 606'-0"
"B" PMP VAULT

ITEM NO.	SIZE / THICKNESS / MATERIAL	ITEM NO.	SIZE / THICKNESS / MATERIAL
1.1	160/1.312	1.2	160/1.312
1.2	160/1.312	1.3	160/1.312
1.3	160/1.312	1.4	160/1.312

ITEM NO.	SIZE / THICKNESS / MATERIAL	ITEM NO.	SIZE / THICKNESS / MATERIAL
1.1	160/1.312	1.2	160/1.312
1.2	160/1.312	1.3	160/1.312
1.3	160/1.312	1.4	160/1.312

ITEM NO.	SIZE / THICKNESS / MATERIAL	ITEM NO.	SIZE / THICKNESS / MATERIAL
1.1	160/1.312	1.2	160/1.312
1.2	160/1.312	1.3	160/1.312
1.3	160/1.312	1.4	160/1.312



NOTES

1. DRAWING APPLICABLE FOR 310 (20 110) 151 INTERVAL.
2. PIPELINE RESTRAINTS ARE NOT WITHIN THE JURISDICTION OF ASME SECTION XI.
3. CLASS I PIPING 1" DIAMETER AND LESS IS EXEMPT FROM IEC.

A-1
KAP 01-001639

REFERENCE DWGS.

150#-538-1, 150#-538-2, 150#-538-3, 150#-538-4, 150#-538-5, 150#-538-6, 150#-538-7, 150#-538-8, 150#-538-9, 150#-538-10, 150#-538-11, 150#-538-12, 150#-538-13, 150#-538-14, 150#-538-15, 150#-538-16, 150#-538-17, 150#-538-18, 150#-538-19, 150#-538-20, 150#-538-21, 150#-538-22, 150#-538-23, 150#-538-24, 150#-538-25, 150#-538-26, 150#-538-27, 150#-538-28, 150#-538-29, 150#-538-30, 150#-538-31, 150#-538-32, 150#-538-33, 150#-538-34, 150#-538-35, 150#-538-36, 150#-538-37, 150#-538-38, 150#-538-39, 150#-538-40, 150#-538-41, 150#-538-42, 150#-538-43, 150#-538-44, 150#-538-45, 150#-538-46, 150#-538-47, 150#-538-48, 150#-538-49, 150#-538-50, 150#-538-51, 150#-538-52, 150#-538-53, 150#-538-54, 150#-538-55, 150#-538-56, 150#-538-57, 150#-538-58, 150#-538-59, 150#-538-60, 150#-538-61, 150#-538-62, 150#-538-63, 150#-538-64, 150#-538-65, 150#-538-66, 150#-538-67, 150#-538-68, 150#-538-69, 150#-538-70, 150#-538-71, 150#-538-72, 150#-538-73, 150#-538-74, 150#-538-75, 150#-538-76, 150#-538-77, 150#-538-78, 150#-538-79, 150#-538-80, 150#-538-81, 150#-538-82, 150#-538-83, 150#-538-84, 150#-538-85, 150#-538-86, 150#-538-87, 150#-538-88, 150#-538-89, 150#-538-90, 150#-538-91, 150#-538-92, 150#-538-93, 150#-538-94, 150#-538-95, 150#-538-96, 150#-538-97, 150#-538-98, 150#-538-99, 150#-538-100.

WISCONSIN PUBLIC SERVICE CORP.	
ISOMETRIC	
SI-FROM CONTN PENDING TO REACTOR	
FROM ACMTB TO LOOP B COLD LEG	
REVISED BY	
DATE	
DRAWN BY	
DATE	
CHECKED BY	
DATE	
APPROVED BY	
DATE	

150#-538-1

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: FROM CNTMT PEN. ID TO REACTOR
SI - FROM ACMTR 1B TO LOOP B COLD LEG

DRAWING NO.: 151M - 938 - 1

COMPONENT IDENTIFICATION: SI-W75 PROCEDURE: NEP-15.411 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

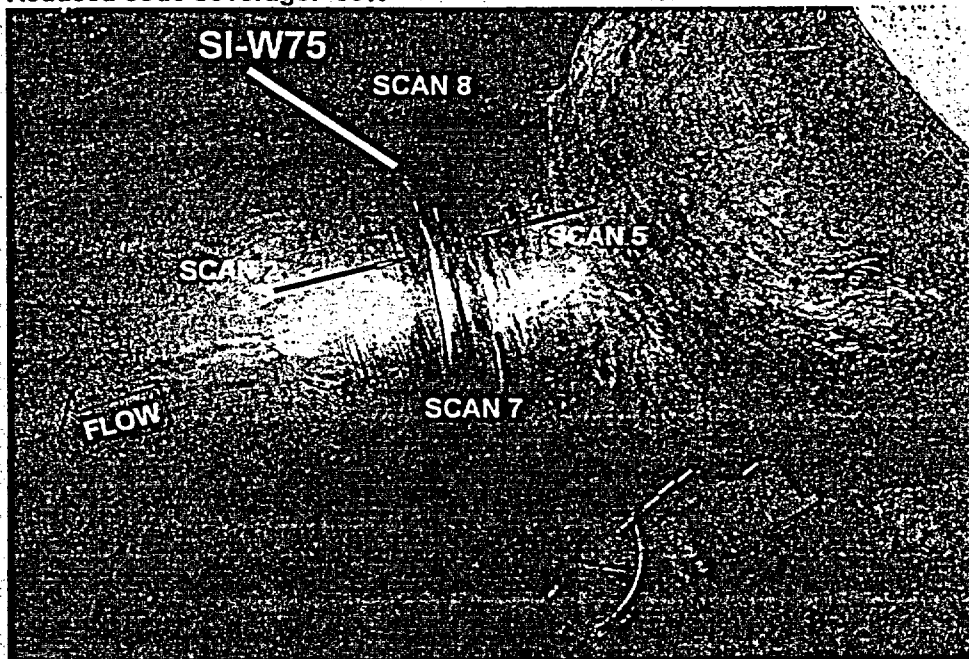
EXAMINER: [Signature] II DATE: 4/18/03
LEVEL

EXAMINER: A.W. JENSEN [Signature] II DATE: 4-18-03
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

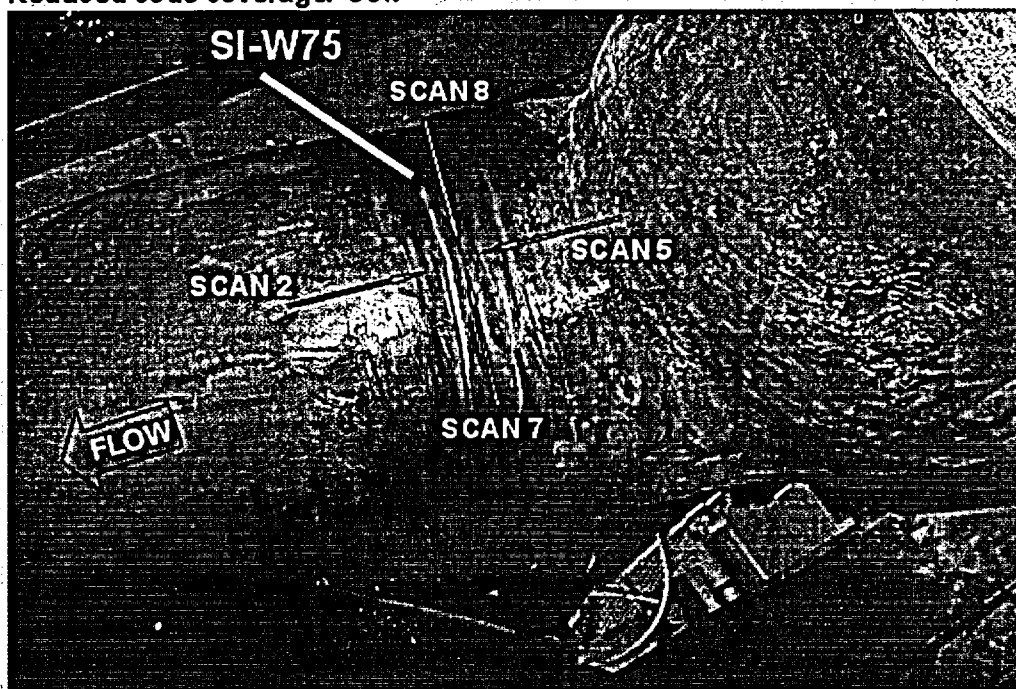
No scan 5, scan 7 & 8 limited to weld and downstream base metal only, due to valve to elbow configuration.

Reduced code coverage: 50%



KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillip C. Bures DATE: April 22, 2003
AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: [Signature] DATE: 4-22-03

No scan 5, scan 7 & 8 limited to weld and downstream base metal only, due to valve to elbow configuration.
Reduced code coverage: 50%



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-67

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 12" Safety Injection Circumferential Weld SI-W119**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-J; Item No. B9.11**
- 4. Impracticality of Compliance: 50.0% of the 12" Safety Injection Circumferential Weld SI-W119 was inaccessible due to the Elbow to Valve Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 50.0% of the 12" Safety Injection Circumferential Weld SI-W119 would require modification of the original design of Safety Injection Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-67

6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-
1; Examination Category B-P; Item B15.50 each Refueling Outage for
evidence of leakage. Surface Liquid Penetrant Examination was performed
on 12" Safety Injection Circumferential Weld SI-W119 during the 3rd
Interval as required by ASME Boiler and Pressure Vessel Code Section XI
1989 Edition: Table IWB-2500-1; Examination Category B-J and Item No.
B9.11.

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

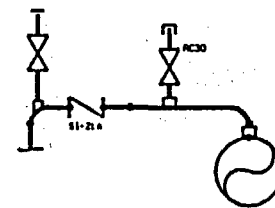
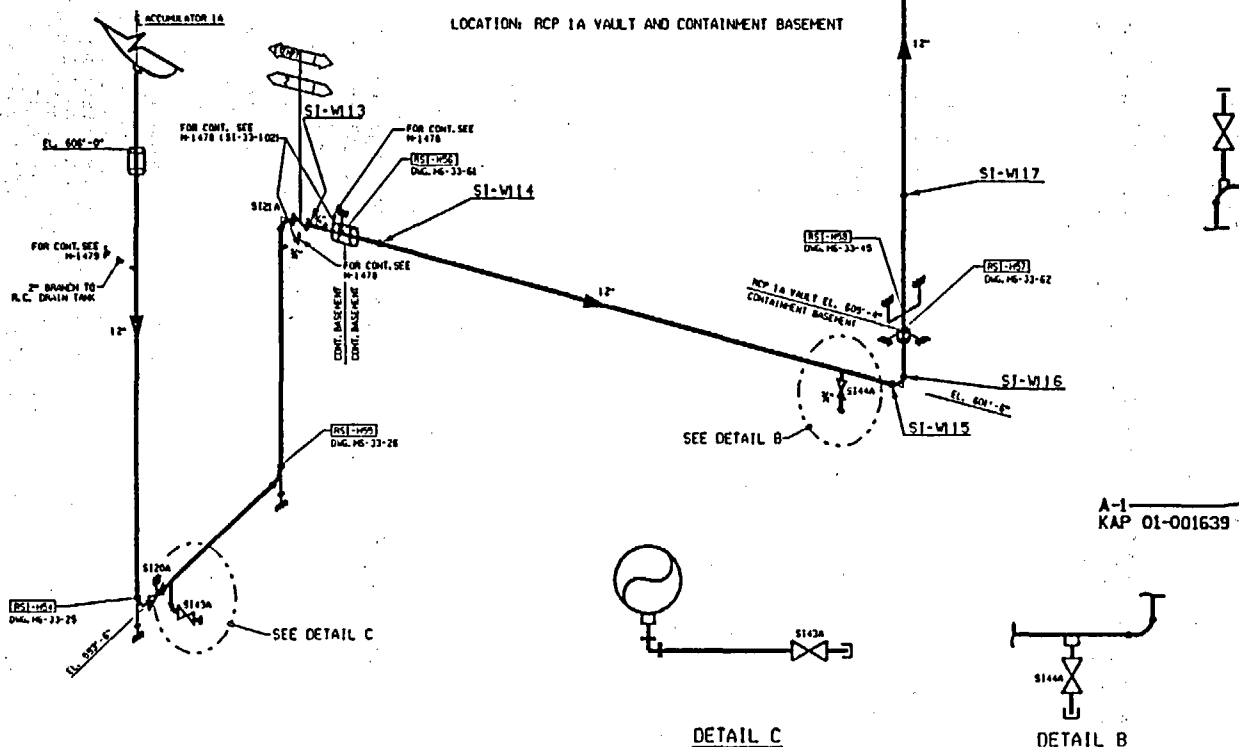
9. References: Not Applicable

SEA-051

VALVE DATA				
VALVE ID	FUNCTION	TYPE	STATUS	DATE
SI20A	ISOLATING VALVE	CO	CHECK	11/7/75
SI21A	ISOLATING VALVE	CO	CHECK	11/7/75

PIPING		CALCULATION	
SIZE	THICKNESS	SIZE	THICKNESS
12"	1.601, 312	12"	1.601, 312

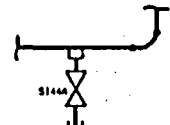
ISOLATING VALVE DATA	
VALVE ID	THICKNESS
SI20A	1.601, 312
SI21A	1.601, 312
SI22A	1.601, 312
SI23A	1.601, 312
SI24A	1.601, 312



DETAIL A



DETAIL C



DETAIL B

- NOTES
1. DRAWING APPLICABLE FOR 3RD AND 4TH 151 INTERVAL.
 2. CLASS 1 PIPING, 1" DIAMETER AND LESS IS EXEMPT FROM HSE.
 3. RUPTURE RESTRAINTS ARE NOT WITHIN THE JURISDICTION OF ASME SECTION III.

REFERENCE DWGS.
KAP 01-001639

REVISIONS	
NO.	DESCRIPTION
1	ISSUED FOR CONSTRUCTION
2	REVISION
3	REVISION
4	REVISION
5	REVISION
6	REVISION
7	REVISION
8	REVISION
9	REVISION
10	REVISION

1100-970

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

REV.: ORIG.

SYSTEM OR COMPONENT: SI - FROM ACCUMULATOR 1A TO LOOP 'A' COLO LEL

DRAWING NO.: 151M-935

COMPONENT IDENTIFICATION: SI-W119 PROCEDURE: NEP-15.41 REVISION: A

ULTRASONIC: Y LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

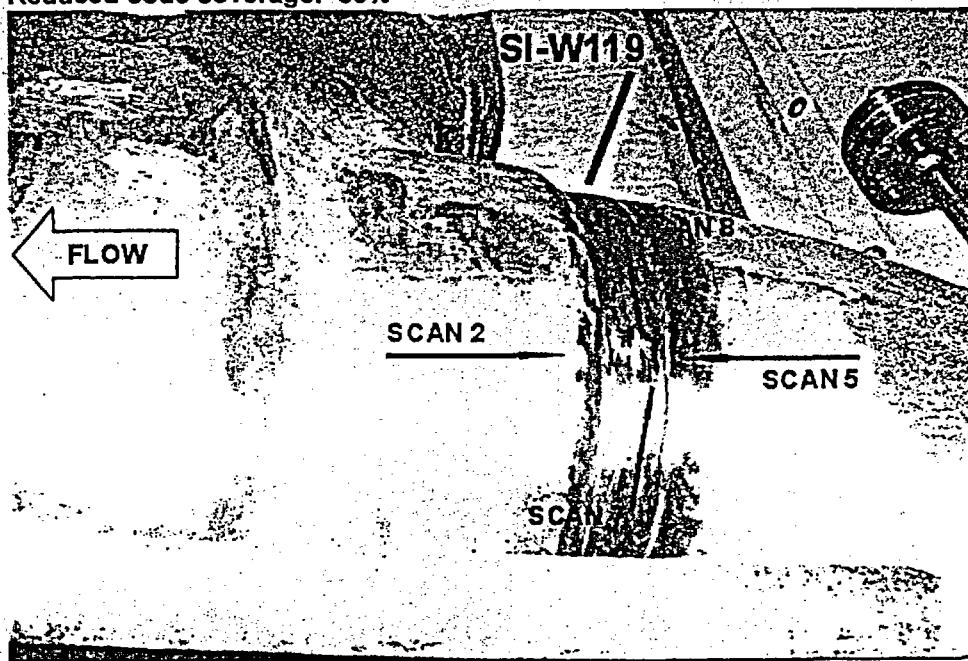
EXAMINER: J.L. Devers JD III DATE: 4-21-03
LEVEL

EXAMINER: NA DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

No scan 2, scan 7 & 8 limited to weld and upstream base metal only, due to elbow to valve configuration.

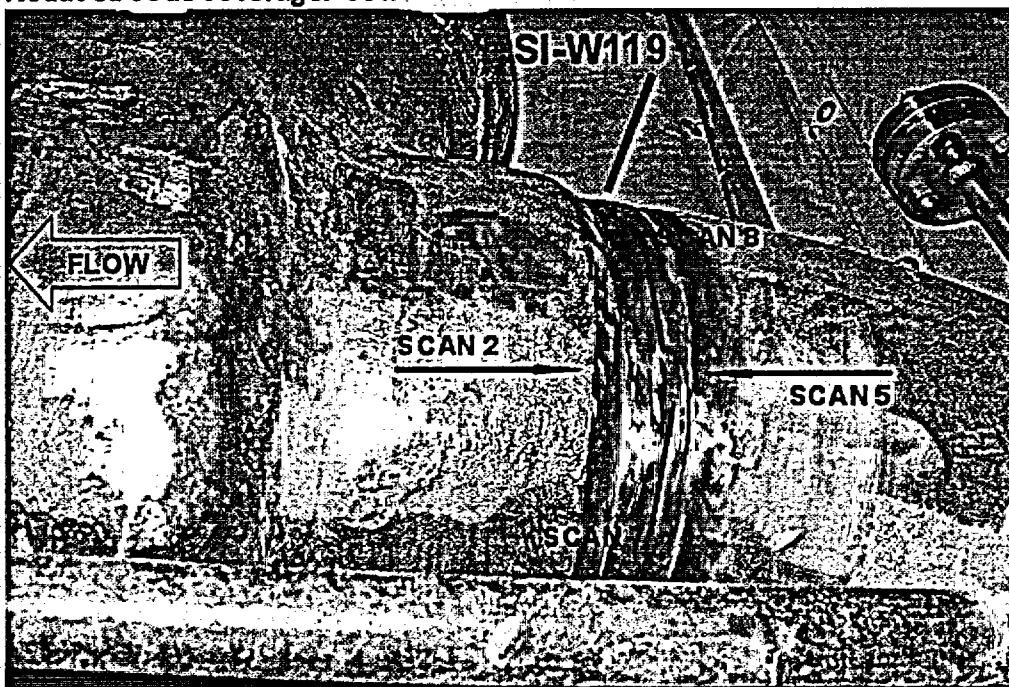
Reduced code coverage: 50%



KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip C. Bures DATE: April 22, 2003

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Logan Mizur DATE: 4-22-03

No scan 2, scan 7 & 8 limited to weld and upstream base metal only, due to elbow to valve configuration.
Reduced code coverage: 50%



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-68

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 6" Safety Injection Circumferential Weld SI-W47**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-J; Item No. B9.11**
- 4. Impracticality of Compliance: 50.0% of the 6" Safety Injection Circumferential Weld SI-W47 was inaccessible due to the Pipe to Valve Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 50.0% of the 6" Safety Injection Circumferential Weld SI-W47 would require modification of the original design of Safety Injection Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-68

**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWB-2500-1; Examination Category B-P; Item B15.50 each Refueling
Outage for evidence of leakage. Surface Liquid Penetrant Examination was
performed on 6" Safety Injection Circumferential Weld SI-W47 during the
3rd Interval as required by ASME Boiler and Pressure Vessel Code Section
XI 1989 Edition: Table IWB-2500-1; Examination Category B-J and Item
No. B9.11.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

000000-0001

REVISIONS
1. 11/11/68
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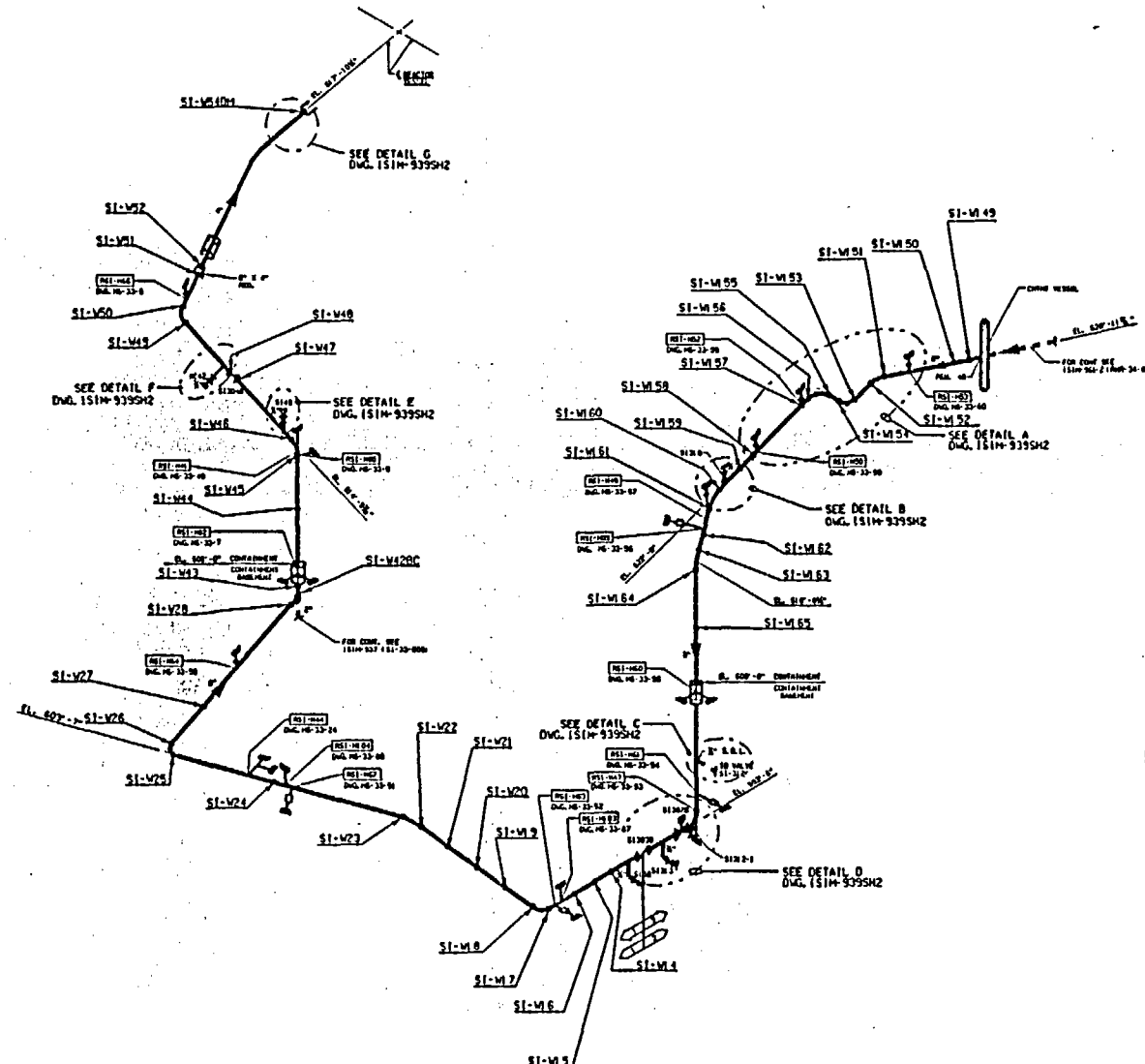
LOCATION, CONTAINMENT AND CONTAINMENT BSM

NO.	DESCRIPTION	DATE	BY	CHKD
1	11/11/68	11/11/68	11/11/68	11/11/68
2	11/11/68	11/11/68	11/11/68	11/11/68
3	11/11/68	11/11/68	11/11/68	11/11/68

NO.	DESCRIPTION	DATE	BY	CHKD
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NO.	DESCRIPTION	DATE	BY	CHKD
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NO.	DESCRIPTION	DATE	BY	CHKD
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3	11/11/68	11/11/68	11/11/68	11/11/68



REFERENCE DWGS.
KAP 01-001639

NOTES:
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100. 11/11/68

1511 OF 21

WISCONSIN PUBLIC SERVICE CORP.

1000-57000

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: SAFETY INJECTION FROM CNTMT PEN. 4B TO REACTOR

DRAWING NO.: 151M-9395H1

COMPONENT IDENTIFICATION: SI-W47 PROCEDURE: NEP-15.41 REVISION: A

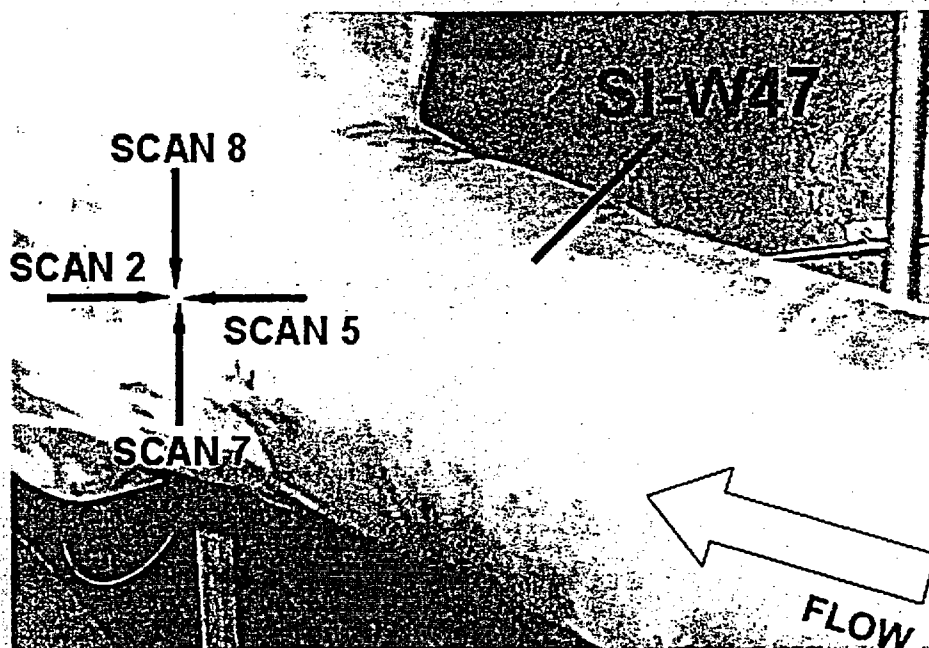
ULTRASONIC: X LIQUID PENETRANT: _____ MAGNETIC PARTICLE: _____ VISUAL: _____

EXAMINER: [Signature] II DATE: 4/21/03
LEVEL

EXAMINER: NA NA DATE: NA
LEVEL

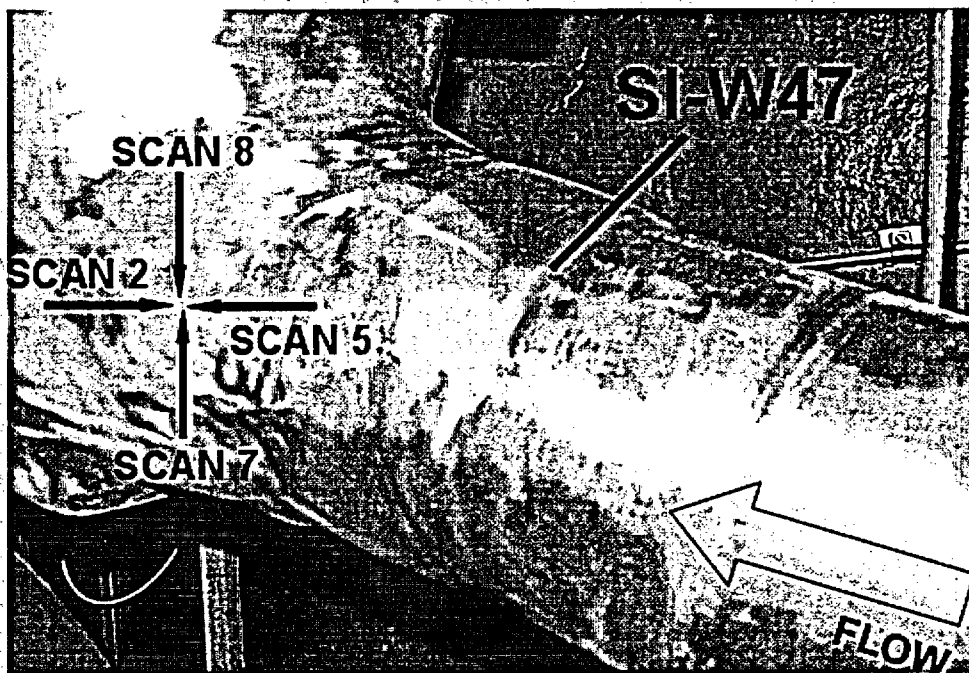
SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

No scan 2, scan 7 & 8 limited to weld and upstream base metal only, due to pipe to valve configuration
REDUCED CODE COVERAGE: 50%



KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillips E. Butkus DATE: April 22, 2003
AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Roger [Signature] DATE: 4-22-03

No scan 2, scan 7 & 8 limited to weld and upstream base metal only, due to
pipe to valve configuration
REDUCED CODE COVERAGE: 50%



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-69

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 6" Reactor Coolant Circumferential Weld RC-W29**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category B-J; Item No. B9.11**
- 4. Impracticality of Compliance: 50.0% of the 6" Reactor Coolant Circumferential Weld RC-W29 was inaccessible due to the Pipe to Nozzle Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 50.0% of the 6" Reactor Coolant Circumferential Weld RC-W29 would require modification of the original design of Reactor Coolant Piping.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-69

**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. VT-2
Examinations were performed during the 3rd Interval as required by ASME
Boiler and Pressure Vessel Code Section XI 1989 Edition: Table
IWB-2500-1; Examination Category B-P; Item B15.50 each Refueling
Outage for evidence of leakage. Surface Liquid Penetrant Examination was
performed on 6" Reactor Coolant Circumferential Weld RC-W29 during
the 3rd Interval as required by ASME Boiler and Pressure Vessel Code
Section XI 1989 Edition: Table IWB-2500-1; Examination Category B-J and
Item No. B9.11.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

**WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD**

REV.: ORIG.

SYSTEM OR COMPONENT: SI - FROM CNTMT PEN. 2BN TO ACMTRS AND COLD LET LOOPS

DRAWING NO.: 151M-982

COMPONENT IDENTIFICATION: RC-W29 PROCEDURE: NEP-15.41 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: _____ MAGNETIC PARTICLE: _____ VISUAL: _____

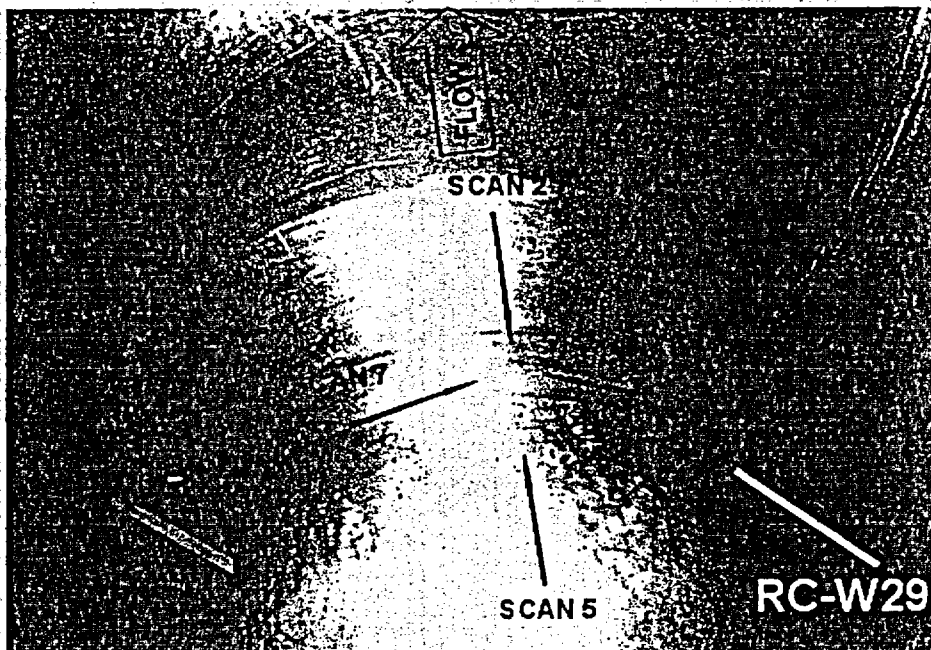
EXAMINER: [Signature] II DATE: 4/21/03
LEVEL

EXAMINER: NA NA DATE: NA
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

No scan 2, scan 7 & 8 limited to weld and upstream base metal only, due to pipe to nozzle configuration.

REDUCED CODE COVERAGE: 50%

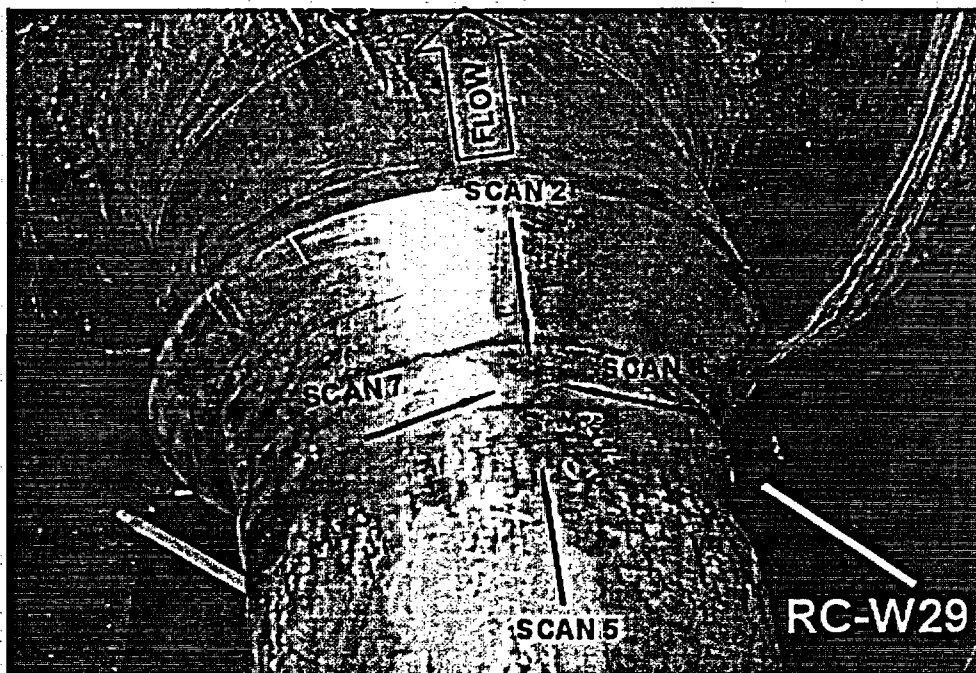


KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip C. Bukes DATE: April 22, 2003

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger [Signature] DATE: 4-22-03

No scan 2, scan 7 & 8 limited to weld and upstream base metal only, due to pipe to valve configuration

REDUCED CODE COVERAGE: 50%



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-70

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: 27.5" I.D. Reactor Coolant Pipe
Circumferential Weld RC-W19**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category
B-J; Item No. B9.11**
- 4. Impracticality of Compliance: 54.0% of Reactor Coolant Pipe 27.5" I.D.
Circumferential Weld RC-W19 was inaccessible for Ultrasonic Examination
due to the Reactor Coolant Pump To Pipe Configuration thus restricting
Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to perform
Ultrasonic Examination for Reactor Coolant Pipe 27.5" I.D. Circumferential
Weld RC-W19 would require modification of the original design of the
Reactor Coolant Pump and Reactor Coolant Pipe.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-70

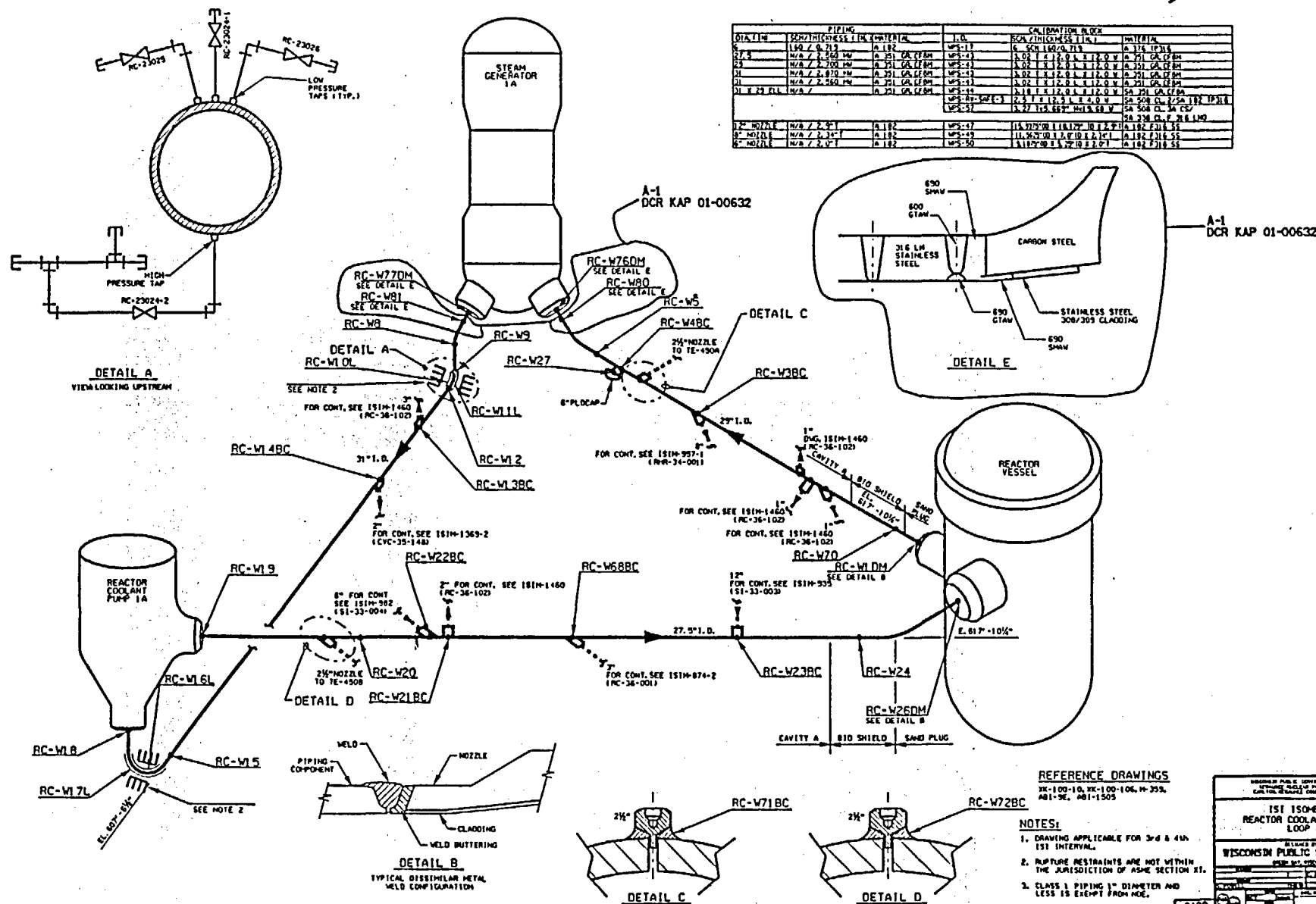
6. Proposed Alternative and Basis for Use: No alternative Code required Ultrasonic Examination is available for Reactor Coolant Pipe 27.5" I.D. Circumferential Weld RC-W19 due to the Reactor Coolant Pump To Reactor Coolant Pipe Configuration. VT-2 Examinations were performed during the 3rd Interval as required by ASME Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-1; Examination Category B-P; Item No. B15.50 each Refueling Outage for evidence of leakage. Surface Liquid Penetrant Examination was performed on Reactor Coolant Pipe 27.5" I.D. Circumferential Weld RC-W19 during the 3rd Interval as required by ASME Boiler and Pressure Vessel Code Section XI 1989 Edition: Table IWB-2500-1; Examination Category B-J and Item No. B9.11.

7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 – June 16, 2004

8. Precedents: Not Applicable

9. References: Not Applicable

PIPING				CALCULATION BOOK			
DATA ITEM	SIZE/THICKNESS/LENGTH	UNIT	NO.	AREA/THICKNESS/LENGTH	UNIT	WATERMARK	
1	1/2" x 0.215" x 10'	A 182	CS-11	6.50 IN ² 0.000 0.715	A 176 17P15		
2	1/2" x 0.215" x 10'	A 182	CS-12	6.50 IN ² 0.000 0.715	A 176 17P15		
3	1/2" x 0.215" x 10'	A 182	CS-13	6.50 IN ² 0.000 0.715	A 176 17P15		
4	1/2" x 0.215" x 10'	A 182	CS-14	6.50 IN ² 0.000 0.715	A 176 17P15		
5	1/2" x 0.215" x 10'	A 182	CS-15	6.50 IN ² 0.000 0.715	A 176 17P15		
6	1/2" x 0.215" x 10'	A 182	CS-16	6.50 IN ² 0.000 0.715	A 176 17P15		
7	1/2" x 0.215" x 10'	A 182	CS-17	6.50 IN ² 0.000 0.715	A 176 17P15		
8	1/2" x 0.215" x 10'	A 182	CS-18	6.50 IN ² 0.000 0.715	A 176 17P15		
9	1/2" x 0.215" x 10'	A 182	CS-19	6.50 IN ² 0.000 0.715	A 176 17P15		
10	1/2" x 0.215" x 10'	A 182	CS-20	6.50 IN ² 0.000 0.715	A 176 17P15		
11	1/2" x 0.215" x 10'	A 182	CS-21	6.50 IN ² 0.000 0.715	A 176 17P15		
12	1/2" x 0.215" x 10'	A 182	CS-22	6.50 IN ² 0.000 0.715	A 176 17P15		
13	1/2" x 0.215" x 10'	A 182	CS-23	6.50 IN ² 0.000 0.715	A 176 17P15		
14	1/2" x 0.215" x 10'	A 182	CS-24	6.50 IN ² 0.000 0.715	A 176 17P15		
15	1/2" x 0.215" x 10'	A 182	CS-25	6.50 IN ² 0.000 0.715	A 176 17P15		
16	1/2" x 0.215" x 10'	A 182	CS-26	6.50 IN ² 0.000 0.715	A 176 17P15		
17	1/2" x 0.215" x 10'	A 182	CS-27	6.50 IN ² 0.000 0.715	A 176 17P15		
18	1/2" x 0.215" x 10'	A 182	CS-28	6.50 IN ² 0.000 0.715	A 176 17P15		
19	1/2" x 0.215" x 10'	A 182	CS-29	6.50 IN ² 0.000 0.715	A 176 17P15		
20	1/2" x 0.215" x 10'	A 182	CS-30	6.50 IN ² 0.000 0.715	A 176 17P15		
21	1/2" x 0.215" x 10'	A 182	CS-31	6.50 IN ² 0.000 0.715	A 176 17P15		
22	1/2" x 0.215" x 10'	A 182	CS-32	6.50 IN ² 0.000 0.715	A 176 17P15		
23	1/2" x 0.215" x 10'	A 182	CS-33	6.50 IN ² 0.000 0.715	A 176 17P15		
24	1/2" x 0.215" x 10'	A 182	CS-34	6.50 IN ² 0.000 0.715	A 176 17P15		
25	1/2" x 0.215" x 10'	A 182	CS-35	6.50 IN ² 0.000 0.715	A 176 17P15		
26	1/2" x 0.215" x 10'	A 182	CS-36	6.50 IN ² 0.000 0.715	A 176 17P15		
27	1/2" x 0.215" x 10'	A 182	CS-37	6.50 IN ² 0.000 0.715	A 176 17P15		
28	1/2" x 0.215" x 10'	A 182	CS-38	6.50 IN ² 0.000 0.715	A 176 17P15		
29	1/2" x 0.215" x 10'	A 182	CS-39	6.50 IN ² 0.000 0.715	A 176 17P15		
30	1/2" x 0.215" x 10'	A 182	CS-40	6.50 IN ² 0.000 0.715	A 176 17P15		
31	1/2" x 0.215" x 10'	A 182	CS-41	6.50 IN ² 0.000 0.715	A 176 17P15		
32	1/2" x 0.215" x 10'	A 182	CS-42	6.50 IN ² 0.000 0.715	A 176 17P15		
33	1/2" x 0.215" x 10'	A 182	CS-43	6.50 IN ² 0.000 0.715	A 176 17P15		
34	1/2" x 0.215" x 10'	A 182	CS-44	6.50 IN ² 0.000 0.715	A 176 17P15		
35	1/2" x 0.215" x 10'	A 182	CS-45	6.50 IN ² 0.000 0.715	A 176 17P15		
36	1/2" x 0.215" x 10'	A 182	CS-46	6.50 IN ² 0.000 0.715	A 176 17P15		
37	1/2" x 0.215" x 10'	A 182	CS-47	6.50 IN ² 0.000 0.715	A 176 17P15		
38	1/2" x 0.215" x 10'	A 182	CS-48	6.50 IN ² 0.000 0.715	A 176 17P15		
39	1/2" x 0.215" x 10'	A 182	CS-49	6.50 IN ² 0.000 0.715	A 176 17P15		
40	1/2" x 0.215" x 10'	A 182	CS-50	6.50 IN ² 0.000 0.715	A 176 17P15		
41	1/2" x 0.215" x 10'	A 182	CS-51	6.50 IN ² 0.000 0.715	A 176 17P15		
42	1/2" x 0.215" x 10'	A 182	CS-52	6.50 IN ² 0.000 0.715	A 176 17P15		
43	1/2" x 0.215" x 10'	A 182	CS-53	6.50 IN ² 0.000 0.715	A 176 17P15		
44	1/2" x 0.215" x 10'	A 182	CS-54	6.50 IN ² 0.000 0.715	A 176 17P15		
45	1/2" x 0.215" x 10'	A 182	CS-55	6.50 IN ² 0.000 0.715	A 176 17P15		
46	1/2" x 0.215" x 10'	A 182	CS-56	6.50 IN ² 0.000 0.715	A 176 17P15		
47	1/2" x 0.215" x 10'	A 182	CS-57	6.50 IN ² 0.000 0.715	A 176 17P15		
48	1/2" x 0.215" x 10'	A 182	CS-58	6.50 IN ² 0.000 0.715	A 176 17P15		
49	1/2" x 0.215" x 10'	A 182	CS-59	6.50 IN ² 0.000 0.715	A 176 17P15		
50	1/2" x 0.215" x 10'	A 182	CS-60	6.50 IN ² 0.000 0.715	A 176 17P15		
51	1/2" x 0.215" x 10'	A 182	CS-61	6.50 IN ² 0.000 0.715	A 176 17P15		
52	1/2" x 0.215" x 10'	A 182	CS-62	6.50 IN ² 0.000 0.715	A 176 17P15		
53	1/2" x 0.215" x 10'	A 182	CS-63	6.50 IN ² 0.000 0.715	A 176 17P15		
54	1/2" x 0.215" x 10'	A 182	CS-64	6.50 IN ² 0.000 0.715	A 176 17P15		
55	1/2" x 0.215" x 10'	A 182	CS-65	6.50 IN ² 0.000 0.715	A 176 17P15		
56	1/2" x 0.215" x 10'	A 182	CS-66	6.50 IN ² 0.000 0.715	A 176 17P15		
57	1/2" x 0.215" x 10'	A 182	CS-67	6.50 IN ² 0.000 0.715	A 176 17P15		
58	1/2" x 0.215" x 10'	A 182	CS-68	6.50 IN ² 0.000 0.715	A 176 17P15		
59	1/2" x 0.215" x 10'	A 182	CS-69	6.50 IN ² 0.000 0.715	A 176 17P15		
60	1/2" x 0.215" x 10'	A 182	CS-70	6.50 IN ² 0.000 0.715	A 176 17P15		
61	1/2" x 0.215" x 10'	A 182	CS-71	6.50 IN ² 0.000 0.715	A 176 17P15		
62	1/2" x 0.215" x 10'	A 182	CS-72	6.50 IN ² 0.000 0.715	A 176 17P15		
63	1/2" x 0.215" x 10'	A 182	CS-73	6.50 IN ² 0.000 0.715	A 176 17P15		
64	1/2" x 0.215" x 10'	A 182	CS-74	6.50 IN ² 0.000 0.715	A 176 17P15		
65	1/2" x 0.215" x 10'	A 182	CS-75	6.50 IN ² 0.000 0.715	A 176 17P15		
66	1/2" x 0.215" x 10'	A 182	CS-76	6.50 IN ² 0.000 0.715	A 176 17P15		
67	1/2" x 0.215" x 10'	A 182	CS-77	6.50 IN ² 0.000 0.715	A 176 17P15		
68	1/2" x 0.215" x 10'	A 182	CS-78	6.50 IN ² 0.000 0.715	A 176 17P15		
69	1/2" x 0.215" x 10'	A 182	CS-79	6.50 IN ² 0.000 0.715	A 176 17P15		
70	1/2" x 0.215" x 10'	A 182	CS-80	6.50 IN ² 0.000 0.715	A 176 17P15		
71	1/2" x 0.215" x 10'	A 182	CS-81	6.50 IN ² 0.000 0.715	A 176 17P15		
72	1/2" x 0.215" x 10'	A 182	CS-82	6.50 IN ² 0.000 0.715	A 176 17P15		
73	1/2" x 0.215" x 10'	A 182	CS-83	6.50 IN ² 0.000 0.715	A 176 17P15		
74	1/2" x 0.215" x 10'	A 182	CS-84	6.50 IN ² 0.000 0.715	A 176 17P15		
75	1/2" x 0.215" x 10'	A 182	CS-85	6.50 IN ² 0.000 0.715	A 176 17P15		
76	1/2" x 0.215" x 10'	A 182	CS-86	6.50 IN ² 0.000 0.715	A 176 17P15		
77	1/2" x 0.215" x 10'	A 182	CS-87	6.50 IN ² 0.000 0.715	A 176 17P15		
78	1/2" x 0.215" x 10'	A 182	CS-88	6.50 IN ² 0.000 0.715	A 176 17P15		
79	1/2" x 0.215" x 10'	A 182	CS-89	6.50 IN ² 0.000 0.715	A 176 17P15		
80	1/2" x 0.215" x 10'	A 182	CS-90	6.50 IN ² 0.000 0.715	A 176 17P15		
81	1/2" x 0.215" x 10'	A 182	CS-91	6.50 IN ² 0.000 0.715	A 176 17P15		
82	1/2" x 0.215" x 10'	A 182	CS-92	6.50 IN ² 0.000 0.715	A 176 17P15		
83	1/2" x 0.215" x 10'	A 182	CS-93	6.50 IN ² 0.000 0.715	A 176 17P15		
84	1/2" x 0.215" x 10'	A 182	CS-94	6.50 IN ² 0.000 0.715	A 176 17P15		
85	1/2" x 0.215" x 10'	A 182	CS-95	6.50 IN ² 0.000 0.715	A 176 17P15		
86	1/2" x 0.215" x 10'	A 182	CS-96	6.50 IN ² 0.000 0.715	A 176 17P15		
87	1/2" x 0.215" x 10'	A 182	CS-97	6.50 IN ² 0.000 0.715	A 176 17P15		
88	1/2" x 0.215" x 10'	A 182	CS-98	6.50 IN ² 0.000 0.715	A 176 17P15		
89	1/2" x 0.215" x 10'	A 182	CS-99	6.50 IN ² 0.000 0.715	A 176 17P15		
90	1/2" x 0.215" x 10'	A 182	CS-100	6.50 IN ² 0.000 0.715	A 176 17P15		
91	1/2" x 0.215" x 10'	A 182	CS-101	6.50 IN ² 0.000 0.715	A 176 17P15		
92	1/2" x 0.215" x 10'	A 182	CS-102	6.50 IN ² 0.000 0.715	A 176 17P15		
93	1/2" x 0.215" x 10'	A 182	CS-103	6.50 IN ² 0.000 0.715	A 176 17P15		
94	1/2" x 0.215" x 10'	A 182	CS-104	6.50 IN ² 0.000 0.715	A 176 17P15		
95	1/2" x 0.215" x 10'	A 182	CS-105	6.50 IN ² 0.000 0.715	A 176 17P15		
96	1/2" x 0.215" x 10'	A 182	CS-106	6.50 IN ² 0.000 0.715	A 176 17P15		
97	1/2" x 0.215" x 10'	A 182	CS-107	6.50 IN ² 0.000 0.715	A 176 17P15		
98	1/2" x 0.215" x 10'	A 182	CS-108	6.50 IN ² 0.000 0.715	A 176 17P15		
99	1/2" x 0.215" x 10'	A 182	CS-109	6.50 IN ² 0.000 0.715	A 176 17P15		
100	1/2" x 0.215" x 10'	A 182	CS-110	6.50 IN ² 0.000 0.715	A 176 17P15		



1. DRAWING APPLICABLE FOR 3rd & 4th 15' INTERVAL.
2. RUPTURE RESTRAINTS ARE NOT WITHIN THE JURISDICTION OF ASME SECTION
2. CLASS 1 PIPING 1" DIAMETER AND LESS IS EXEMPT FROM NDE.

1514-1703	1514-1703	1514-1703
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WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
ULTRASONIC, LIQUID PENETRANT, MAGNETIC PARTICLE AND
VISUAL EXAMINATION LIMITATION TO EXAMINATION RECORD

REV.: ORIG.

SYSTEM OR COMPONENT: REACTOR COOLANT PIPING LOOP A

DRAWING NO.: ISIM-1703

COMPONENT IDENTIFICATION: RC-W19 PROCEDURE: NEP No. 15.13 REVISION: A

ULTRASONIC: X LIQUID PENETRANT: MAGNETIC PARTICLE: VISUAL:

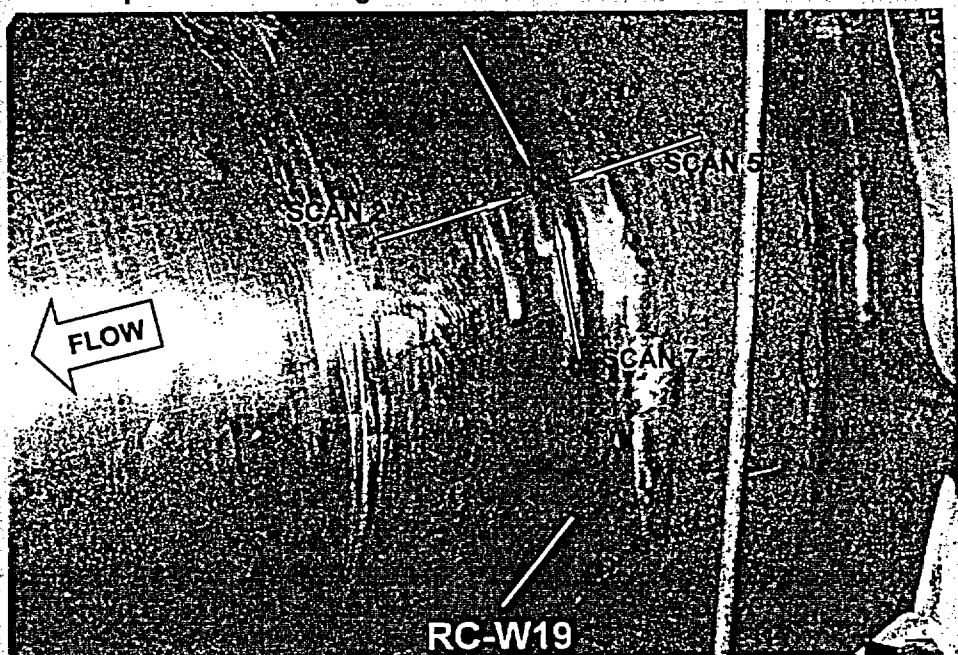
EXAMINER: A.W. JENSEN II DATE: 4-21-03
LEVEL

EXAMINER: II DATE: 4/21/03
LEVEL

SKETCH TO PROVIDE: APPROXIMATE SIZE, LOCATION, ORIENTATION, TYPE OF LIMITATION AND PERCENTAGE OF REDUCED EXAMINATION COVERAGE.

No scan 5, scan 7 & 8 limited to weld and downstream base metal only, due to pump to pipe configuration.

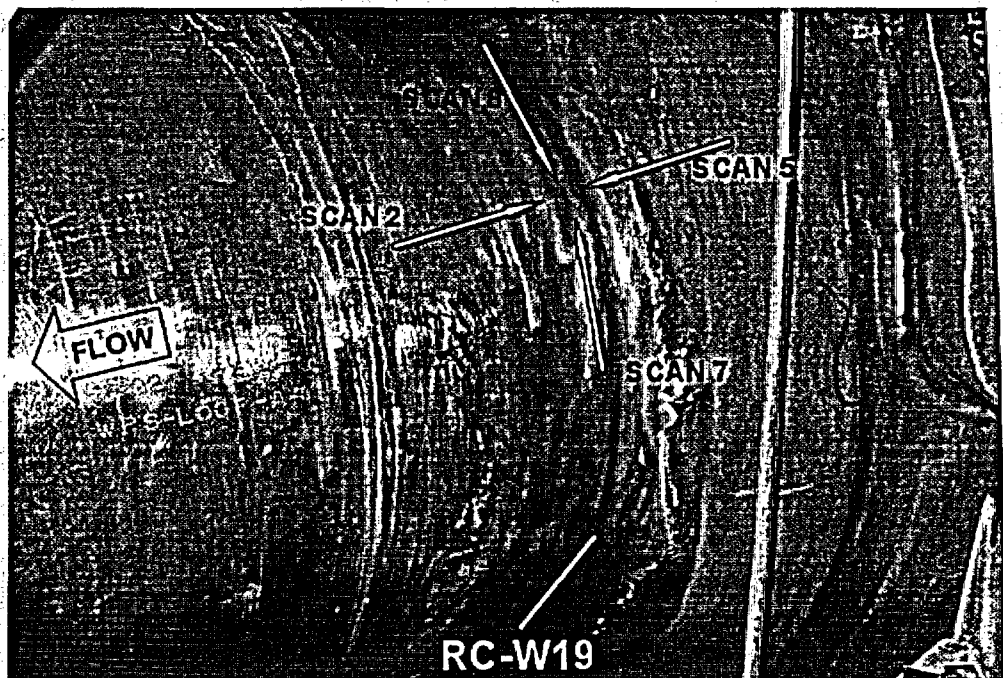
Reduced procedural coverage: 54%



KEWAUNEE NUCLEAR
POWER PLANT REVIEW: Phillips E. Bakes DATE: April 22, 2003

AUTHORIZED NUCLEAR
INSERVICE INSPECTOR REVIEW: Roger W. Wynn DATE: 4-22-03

No scan 5, scan 7 & 8 limited to weld and downstream base metal only, due to pump to pipe configuration.
Reduced procedural coverage: 54%



KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-71

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Reactor Vessel Shell To Flange Weld
RV-W1**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category
B-A; Item No. B1.30**
- 4. Impracticality of Compliance: 25.56% (Single Side Coverage) and 46.98%
(Two Direction Coverage) of the Remote Ultrasonic Examination of the
Reactor Vessel Shell To Flange Weld RV-W1 was inaccessible due to the
Flange To Shell Configuration thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 25.56% (Single
Side Coverage) and 46.98% (Two Direction Coverage) of the Reactor
Vessel Shell To Flange Weld RV-W1 would require modification of the
original design of Reactor Vessel.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-71

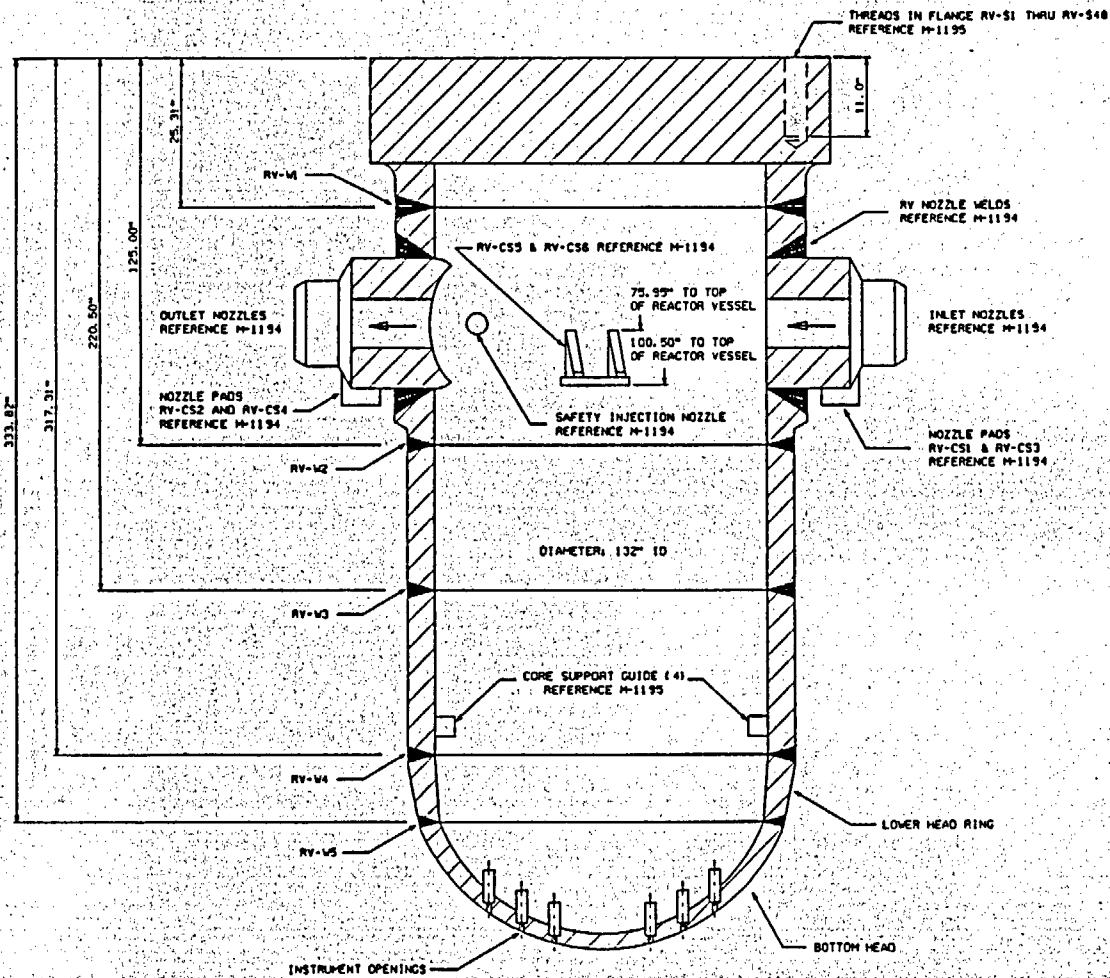
**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

6611-W



COMPONENT WELD DATA			
I.D.	THICKNESS	MATERIAL	
RV-M	9.44"	A508-64 CL. 2 CS	
RV-W2	7.0"	A508-64 CL. 2 CS	
RV-W3	7.0"	A508-64 CL. 2 CS	
RV-W4	7.0"	A508-64 CL. 2 CS	
RV-W5	4.12" MIN.	A533 GR. B CL. 1 CS	

CALIBRATION BLOCK		
I.D.	DIMETER/SCHEDULE	MATERIAL
WPS-RV-1	16" I.D. x 8" L x 8.625" W	SA508 CL. 2 CS
WPS-RV-2	9.0" I.D. x 32" L x 6.0" W	SA508 CL. 2 CS
WPS-RV-3	7.0" I.D. x 28" L x 6.0" W	SA508 CL. 2 CS
WPS-RV-4	5.0" I.D. x 18" L x 6.0" W	SA508 CL. 2 CS

NOTES:

- 1). DRAWING APPLICABLE FOR 3-d (AND 4th) ISI INTERVAL
- 2). ASME BOILER AND PRESSURE VESSEL CODE SECTION XI CLASS I
- 3). RV INSTRUMENT PENETRATION 10 % RV-P1 THRU RV-P36

D-1
KAP 01-001639

REVISION

A	POD 0011 COMPL SEE REV 0-1 APP'D: CAT 10/23/89 FILM'D: (WPS) 11/7/89
A-1	REDRAFTED TO CAD PER ESR 92-177 OWN: E. SAXTON 4/1/93 CHK'D: B. TROTTER 5/12/93 APP'D: CAT 7-23-93
B	ESR 92-177 COMPL SEE REV. A-1 FILM'D: (WPS) 08-03-93
B-1	REV. NOTES PER ESR 92-177 BY: LML 10-1-93 CHK'D: RJS 10-4-93 APP'D: CAT 10-07-93
C	ESR 92-177 COMPL SEE REV. B-1 FILM'D: (WPS) 10-19-93
C-1	RE PUR 0295 ADDED ITEM NO. BY: BJD 7-19-99 APP'D: DAK 7-26-99
D	RE PUR 0295 COMPL SEE REV. C-1 FILM'D: (WPS) 8-3-99
D-1	KAP 01-001639 REVISED NOTE 1. BY: ABF 06-03-02 APP'D:
E	KAP 01-001639 COMPLETE SEE REV. D-1. FILM'D: (WPS)

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

REACTOR VESSEL
RV

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	APPROVED	
CHECKED	PHILLIP E. BUKES	6/16/93
D. M.	PROJECT APPROVED	
DATE	11/17/83	
ESS	DWG. NO.	REV.
SCALE	1/1/93	
NONE	M-1193	E

CADD

LOCATION: CONTAINMENT

157-011

REACTOR VESSEL WELD RESULTS SUMMARY

PLANT NAME Kewaunee Unit 1

WELD NO. RV-W1 COMPONENT Shell to Flange Weld

LIMITATIONS: NO ☐ YES ☒

74.44 % Complete (Single Sided Coverage)

See Coverage Breakdown Sheet

RESULTS

NO. OF INDICATIONS

N/A

NI X

STATUS

N/A

RI

EXAM DOCUMENTATION

INDICATION DOCUMENTATION

☒ PARAGON ANALYSIS LOG

☐ ASSESSMENT SHEET

☒ PARAGON ACQUISITION LOG

☐ PARAGON HARD COPY

☒ SCAN PRINT OUT

☐ OTHER (Specify)

☒ COVERAGE BREAKDOWN

Comments: See figures 1 and 2 for limitations

Analyst *[Signature]*

Date: 11/12/04

R.V. COVERAGE ESTIMATE BREAKDOWNS

PLANT NAME Kewaunee

WesDyne

WELD NO. RV-W1

International

COMPONENT Shell to Flange Weld

BEAM ANGLE BREAK DOWN

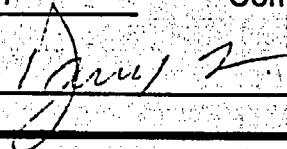
SINGLE SIDE COVERAGE

BEAM DIRECTION	45 Shear		45 L Single		45 L Dual		From Seal Surf.	
	WELD	VOLUME	WELD	VOLUME	WELD	VOLUME	WELD	VOLUME
Perpendicular	100.00	100.00	88.93	54.55	0.00	26.05	100.00	91.00
Parallel	100.00	57.64	100.00	57.64	100.00	57.64		
AVERAGE	89.41		75.28		45.92		95.50	

Comments: Coverage estimates for the shell PDI Exam are based on single side coverage.

Combined Perp. 70.07 Combined Para. 78.82 Combined Average 74.44

Analyst



Date

11/12/04

REACTOR VESSEL WELD RESULTS SUMMARY

PLANT NAME	<u>Kewaunee</u>	Unit	<u>1</u>
WELD NO.	<u>RV-W1</u>	COMPONENT	<u>Shell to Flange Weld</u>
LIMITATIONS:	NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>	<u>53.02 % Complete (Two Directions)</u> <u>See Coverage Breakdown Sheet</u>
RESULTS		NO. OF INDICATIONS	<u>N/A</u>
NI	<u>X</u>	STATUS	<u>N/A</u>
RI	<u> </u>		
<u>EXAM DOCUMENTATION</u>		<u>INDICATION DOCUMENTATION</u>	
<input checked="" type="checkbox"/> PARAGON ANALYSIS LOG		<input type="checkbox"/> ASSESSMENT SHEET	
<input checked="" type="checkbox"/> PARAGON ACQUISITION LOG		<input type="checkbox"/> PARAGON HARD COPY	
<input checked="" type="checkbox"/> SCAN PRINT OUT		<input type="checkbox"/> OTHER (Specify)	
<input checked="" type="checkbox"/> COVERAGE BREAKDOWN			
Comments:	<u>See figures 1 and 2 for limitations</u>		
Analyst <u><i>D. J. [Signature]</i></u> Date: <u>11/12/11</u>			

R.V. COVERAGE ESTIMATE BREAKDOWNS

PLANT NAME Kewaunee

WesDyne

WELD NO. RV-W1

International

COMPONENT Shell to Flange Weld

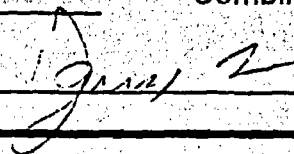
BEAM ANGLE BREAK DOWN

BEAM DIRECTION	TWO DIRECTIONAL COVERAGE							
	45 Shear		45 L Single		45 L Dual		From Seal Surf.	
	WELD	VOLUME	WELD	VOLUME	WELD	VOLUME	WELD	VOLUME
Perpendicular	0.00	0.00	0.00	3.78	0.00	22.92	100.00	91.00
Parallel	100.00	57.64	100.00	57.64	100.00	57.64		
AVERAGE	39.41		40.35		45.14		95.50	

Comments: Coverage estimates for the shell PDI Exam are based on 2 directional coverage.

Combined Perp. 27.21 Combined Para. 78.82 Combined Average 53.02

Analyst



Date

11/12/04

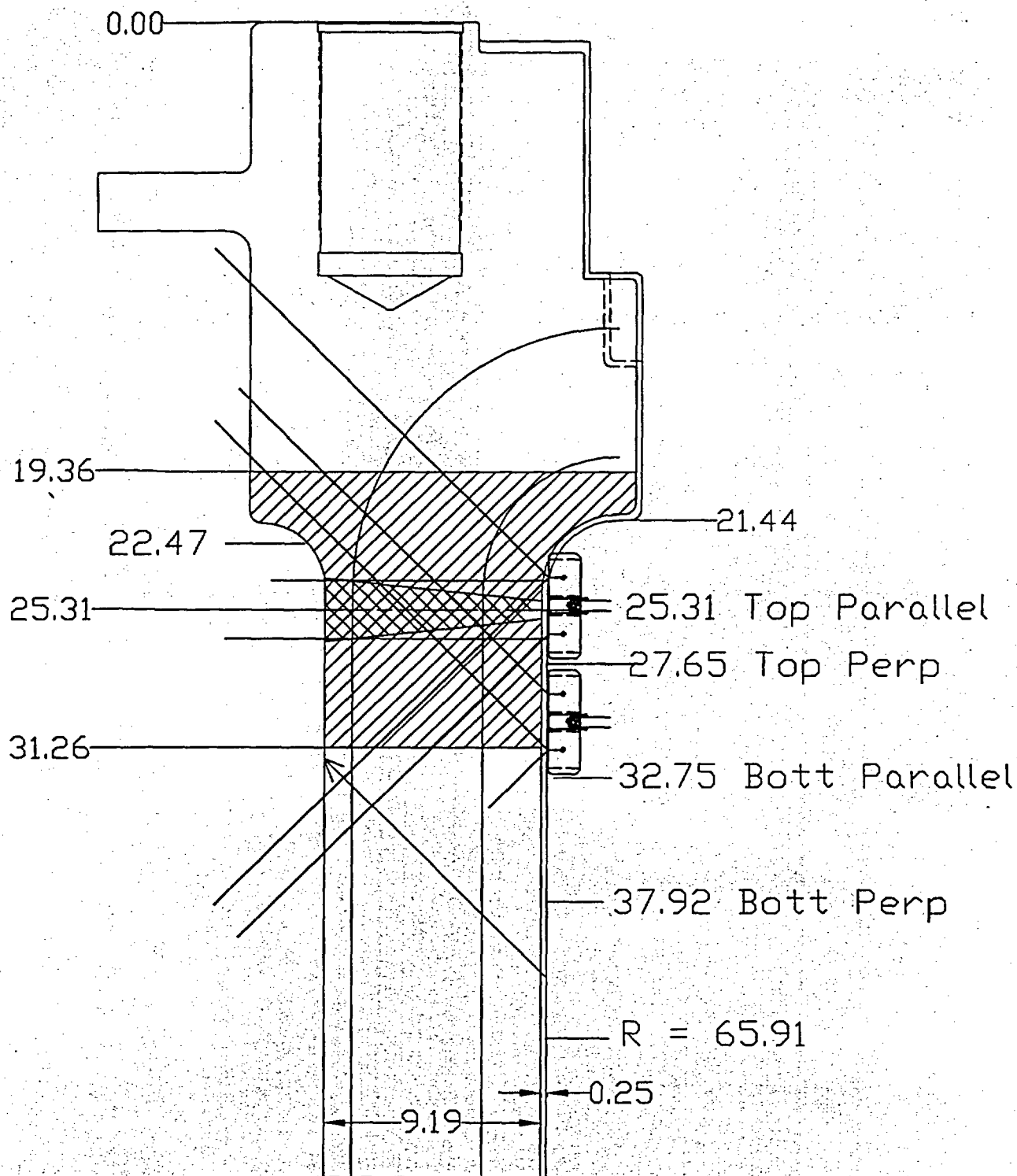


Figure 1

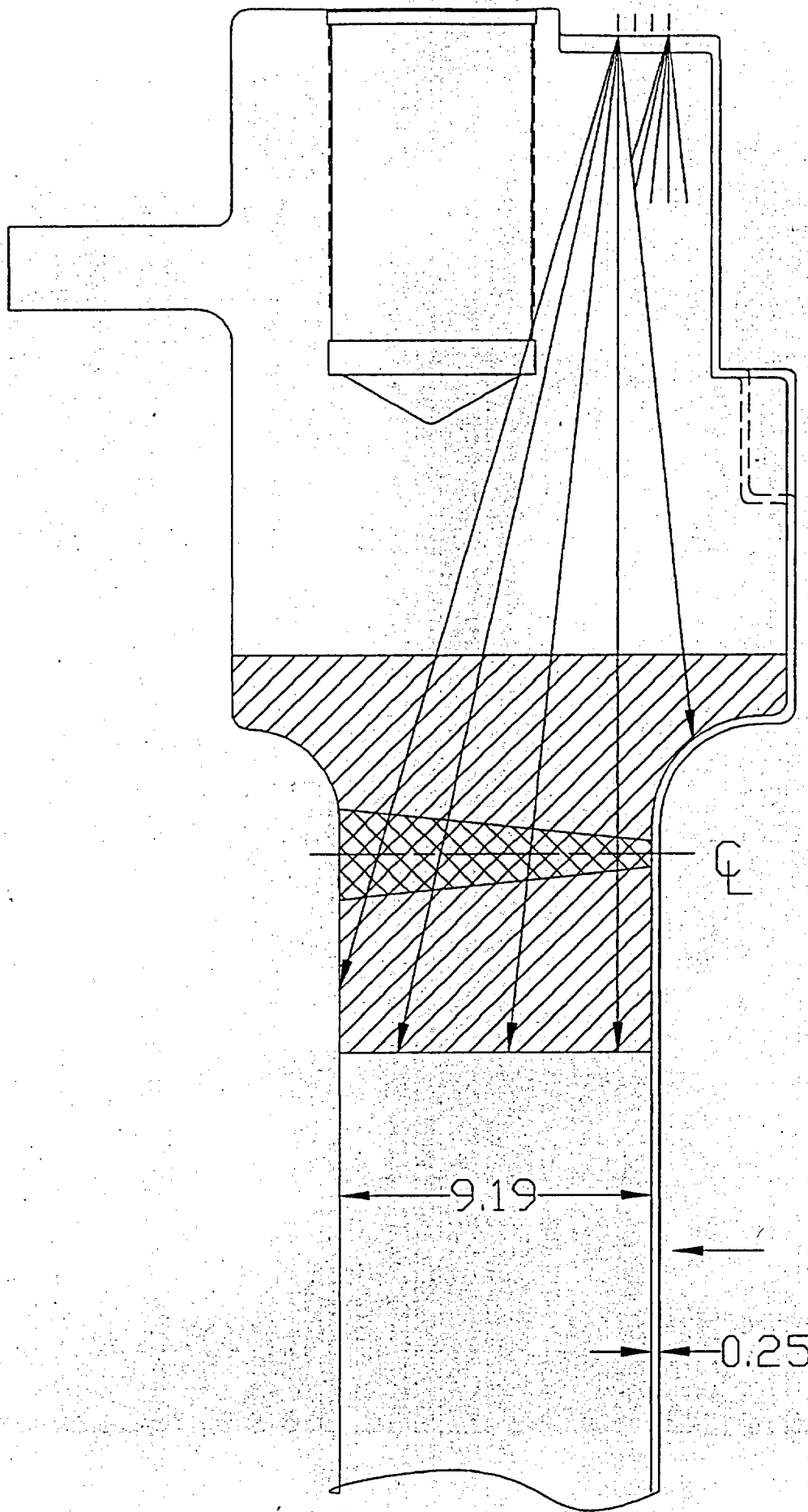


Figure 2

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-72

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Reactor Vessel Safety Injection Nozzle
To Vessel Weld RV-W11**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category
B-D; Item No. B3.90**
- 4. Impracticality of Compliance: 11.69% (Two Sided Coverage) of the Remote
Ultrasonic Examination of the Reactor Vessel Safety Injection Nozzle to
Vessel Weld RV-W11 was inaccessible due to the Safety Injection Nozzle
Protrusion thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 11.69% (Two
Sided Coverage) of the Reactor Vessel Safety Injection Nozzle to Vessel
Weld RV-W11 would require modification of the original design of Reactor
Vessel Safety Injection Nozzle.**

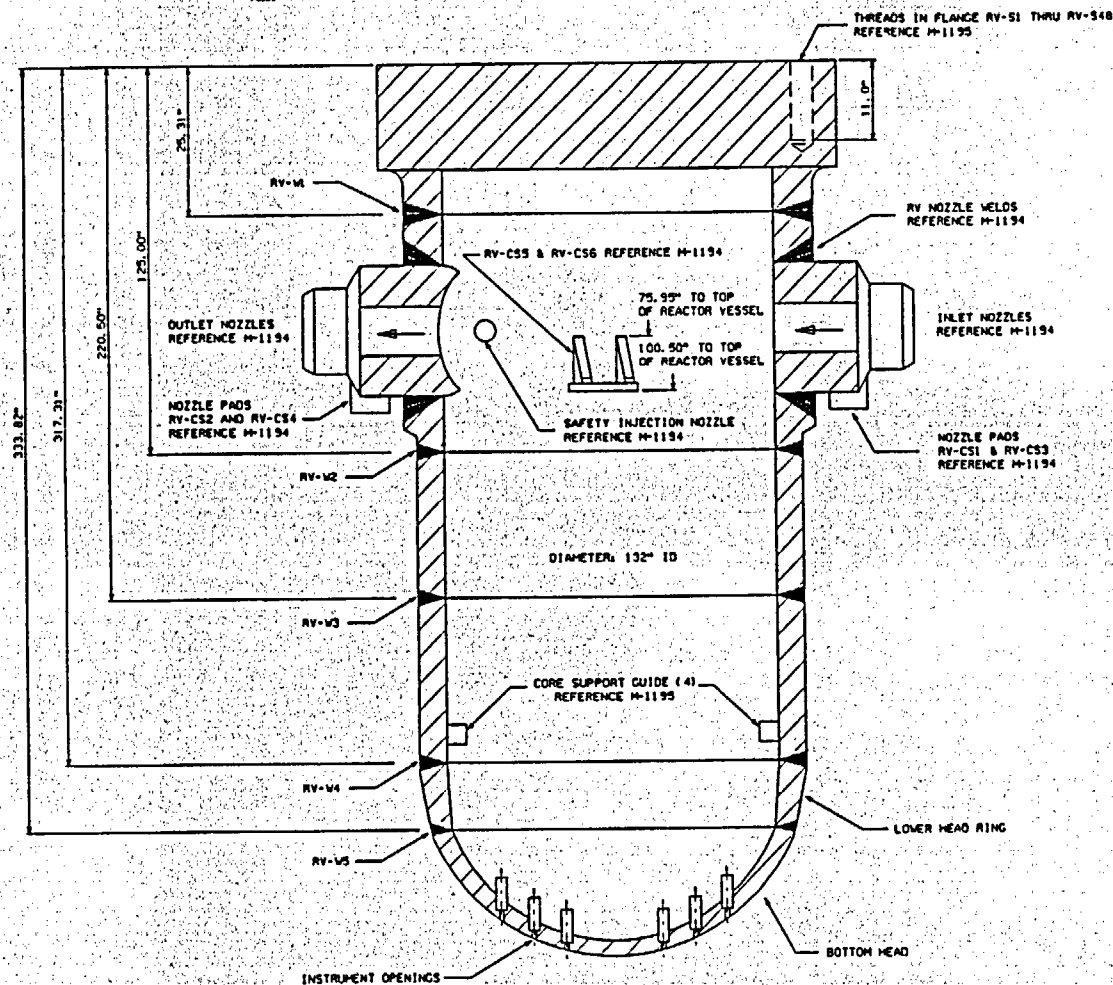
KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-72

- 6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. However,
90.04% coverage of the Reactor Vessel Safety Injection Nozzle to Vessel
Weld RV-W11 was achieved performing Remote Ultrasonic Examination
with personnel qualified for performing Single Sided Examination of the
Reactor Vessel Safety Injection Nozzle To Vessel Weld RV-W11.**
- 7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**
- 8. Precedents: Not Applicable**
- 9. References: Not Applicable**

CG11-W



COMPONENT WELD DATA		
I.D.	THICKNESS	MATERIAL
RV-M1	9.44"	A508-64 CL. 2 CS
RV-M2	7.0"	A508-64 CL. 2 CS
RV-M3	7.0"	A508-64 CL. 2 CS
RV-M4	7.0"	A508-64 CL. 2 CS
RV-S1	4.12" MIN.	A533 GR. B CL. 1 CS

CALIBRATION BLOCK		
I.D.	DIMETER/SCHEDULE	MATERIAL
WPS-RV-1	10" T x 3" L x 8.0" W	SASOB CL. 2 CS
WPS-RV-2	9.0" T x 32" L x 6.0" W	SASOB CL. 2 CS
WPS-RV-3	7.0" T x 24" L x 6.0" W	SASOB CL. 2 CS
WPS-RV-4	5.0" T x 18" L x 6.0" W	SASOB CL. 2 CS

- NOTES:
- DRAWING APPLICABLE FOR 3-d AND 4th ISI INTERVAL
 - ASME BOILER AND PRESSURE VESSEL CODE SECTION XI CLASS I
 - RV INSTRUMENT PENETRATION ID #S: RV-P1 THRU RV-P36

D-1
KAP 01-001639

REVISION	
A	PDD 0011 COMPL SEE REV. 0-1 APP'D: CAT 10/23/99 FILM'D: (WPS) 11/7/99
A-1	REDRAFTED TO CAD PER ESR 92-177 OWN: E. SAXTON 4/1/93 CHK'D: B. TROTTER 5/12/93 APP'D: CAT 7-23-93
B	ESR 92-177 COMPL. SEE REV. A-1 FILMED: (WPS) 08-03-93
B-1	REV. NOTES PER ESR 92-177 BY: LML 10-1-93 CHK'D: RJS 10-4-93 APP'D: CAT 10-07-93
C	ESR 92-177 COMPL. SEE REV. B-1 FILMED: (WPS) 10-19-93
C-1	RE PUR 0295 ADDED ITEM NO. BY: BJD 7-19-99 APP'D: OAK 7-26-99
D	RE PUR 0295 COMPL. SEE REV. C-1 FILMED: (WPS) 8-3-99
D-1	KAP 01-001639 REVISED NOTE 1. BY: ABF 06-03-02 APP'D:
E	KAP 01-001639 COMPLETE SEE REV. D-1. FILMED: (WPS)

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

REACTOR VESSEL RV

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	PHILLIP E. BUKES	6/16/93
CHECKED	PROJECT APPROVED	
D. M.	1/17/93	
ESS	SCALE	DWG. NO.
NONE		M-1193
		REV.
		E

CADD

LOCATION: CONTAINMENT

157-011

LOCATION: CONTAINMENT

CALIBRATION BLOCK			
U.S.	METER	SCHEDULE	MATERIAL
WFS-AV-1	16" 11u 31" 81.6 629" W		SA-508-64 (L) C5
WFS-AV-2	9" 0" 12" 126" 0" W		SA-508-64 (L) C5
WFS-AV-3	7" 0" 12" 126" 0" W		SA-508-64 (L) C5
WFS-515-01	6" 0" 12" 126" 0" W		SA-508-64 (L) C5

11. DRAWING APPLICABLE FOR 3rd AND 4TH ISI INTERVAL

21. ASME BOILER AND PRESSURE VESSEL CODE
SECTION XI CLASS I

REVISION	
F	KAP 01-001639 COMPLETE SEE REV. E-1. FILMED (MPS)
A-1	
REDRAFTED TO CAD PER ESR 92-177 OWN: E. SARTON 4/1/93 CHK'D BY: B. TROTTER 5/12/93 APPRO'D: CAT 7-23-93	
E ESR 92-177 COMPL. SEE REV. A-1 FILMED (MPS) 08-03-93	
B-1	
REV. NOTES PER ESR 92-177 BY: LML 10-1-93 CHK'D BY: RJS 10-4-93 APPRO'D: CAT 10-07-93	
C ESR 92-177 COMPL. SEE REV. B-1 FILMED (MPS) 10-19-93	
C-1 PDR 0149 REVISED WELD ATTCH. DATA, ADDED INLET AND OUTLET NOZZEL WELD DATA. BY: JSPICE 2-21-97 APPRO'D: PCM 02-21-97	
D PDR 0149 COMPL. SEE REV. C-1 FILMED (MPS) 02-25-97	
D-1 RE PUR 0295 ADDED ITEM NO. BY: BJD 7-19-99 APPRO'D: DAK 7-26-99	
E RE PUR 0295 COMPL. SEE REV. D-1 FILMED (MPS) 8-3-99	
F-1 KAP 01-001639 REVISED NOTE 1: BY: ABF 06-03-02 APPRO'D:	

E-1
KAP 01-001639

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

REACTOR VESSEL
NOZZLES AND
INTEGRALLY WELDED ATTACHMENTS

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED		APPROVED		
		PHILLIP E. BUKES	(signature)	
CHECKED		PROJECT APPROVED		
D. M.		(1/17/83)		
<div><div>FILE</div><div>SEARCHED</div></div>	Drawn	DWG. NO.	REV.	
	ESS	6/1/83	M-1194	F
	SCALE			
	NAME			

CADD

REACTOR VESSEL WELD RESULTS SUMMARY

PLANT NAME Kewaunee Unit 1

WELD NO. RV-W11 COMPONENT Safety Injection Noz-Shell @288.5°

LIMITATIONS: NO ☐ YES ☒ 88.31 % Complete (two sided coverage)
See Coverage Breakdown Sheet

RESULTS

NO. OF INDICATIONS 1

NI

STATUS Code Allowable

RI X

EXAM DOCUMENTATION

INDICATION DOCUMENTATION

☒ PARAGON ANALYSIS LOG

☒ ASSESSMENT SHEET

☒ PARAGON ACQUISITION LOG

☒ PARAGON HARD COPY

☒ SCAN PRINT OUT

☐ OTHER (Specify)

☒ COVERAGE BREAKDOWN

Comments:

Coverage calculation is based on the Bore and Star scan (combined) as perpendicular,
and the Tan Scan (parallel). Figure 1 depicts the limitation.

Analyst *[Signature]* Date: 11/13/07

R.V. COVERAGE ESTIMATE BREAKDOWNS

PLANT NAME Kewaunee

WesDyne

WELD NO. RV-W11

International

COMPONENT Safety Injection Noz-Shell @288.5°

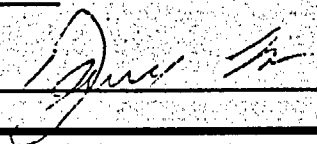
BEAM ANGLE BREAK DOWN

BEAM DIRECTION	TWO SIDED COVERAGE							
	45 Shear		45 L Single		45 L Dual		Combined Bore/Star	
	WELD	VOLUME	WELD	VOLUME	WELD	VOLUME	WELD	VOLUME
TAN Scan								
Parallel	100.00	51.00	100.00	65.36	100.00	64.11		
Combined Bore&Star								
Perpendicular							100.00	93.09
AVERAGE	75.50		82.68		82.06		96.54	

Comments: Coverage calculation is based on the Bore and Star scan (combined) as perpendicular, and the Tan Scan (parallel). Figure 1 depicts the limitation.

Combined Perp. 96.54 Combined Para. 80.08 Combined Average 88.31

Analyst



Date

11/13/04

REACTOR VESSEL WELD RESULTS SUMMARY

PLANT NAME Kewaunee Unit 1

WELD NO. RV-W11 COMPONENT Safety Injection Noz-Shell @288.5°

LIMITATIONS: NO ☐ YES ☒ 90.04 % Complete (single sided coverage)
See Coverage Breakdown Sheet

RESULTS

NO. OF INDICATIONS 1

NI

STATUS Code Allowable

RI X

EXAM DOCUMENTATION

INDICATION DOCUMENTATION

☒ PARAGON ANALYSIS LOG

☒ ASSESSMENT SHEET

☒ PARAGON ACQUISITION LOG

☒ PARAGON HARD COPY

☒ SCAN PRINT OUT

☐ OTHER (Specify)

☒ COVERAGE BREAKDOWN

Comments:

Coverage calculation is based on the Bore and Star scan (combined) as perpendicular, and the Tan Scan (parallel). Figure 1 depicts the limitation.

Analyst *[Signature]* Date: 11/13/04

R.V. COVERAGE ESTIMATE BREAKDOWNS

PLANT NAME Kewaunee

WesDyne

WELD NO. RV-W11

International

COMPONENT Safety Injection Noz-Shell @288.5°

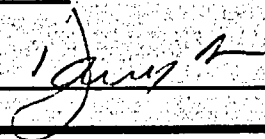
BEAM ANGLE BREAK DOWN

BEAM DIRECTION	SINGLE SIDED COVERAGE							
	45 Shear		45 L Single		45 L Dual		Combined Bore/Star	
	WELD	VOLUME	WELD	VOLUME	WELD	VOLUME	WELD	VOLUME
TAN Scan								
Parallel	100.00	51.00	100.00	65.36	100.00	64.11		
Combined Bore&Star								
Perpendicular							100.00	100.00
AVERAGE	75.50		82.68		82.06		100.00	

Comments: Coverage calculation is based on the Bore and Star scan (combined) as perpendicular, and the Tan Scan (parallel). Figure 1 depicts the limitation.

Combined Perp. 100.00 Combined Para. 80.08 Combined Average 90.04

Analyst



Date

11/13/64

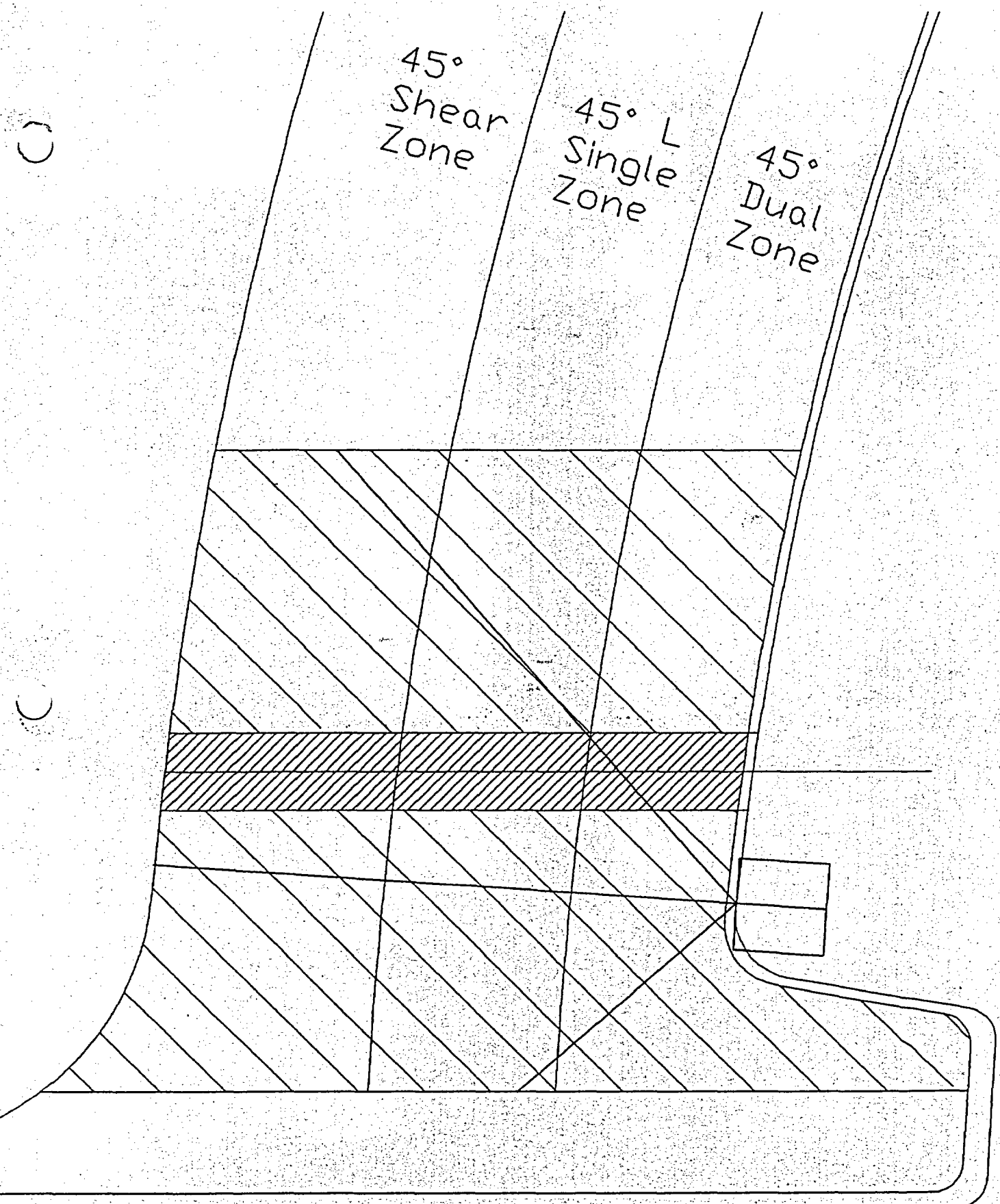


Figure 1
Tan/Star Coverage Illustration
of the Safety Injection Nozzle
Protrusion Limitation

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-73

**PROPOSED ALTERNATIVE
IN ACCORDANCE WITH 10CFR 50.55a(g)(5)(iii).**

INSERVICE INSPECTION IMPRACTICALITY

- 1. ASME Code Component Affected: Reactor Vessel Lower Head
Circumferential Weld RV-W4**
- 2. Applicable Code Edition and Addenda: 1989, No Addenda**
- 3. Applicable Code Requirement: Table IWB-2500-1; Examination Category
B-A; Item No. B1.21**
- 4. Impracticality of Compliance: 13.86% (Two Direction Coverage) of the
Remote Ultrasonic Examination of the Reactor Vessel Lower Head
Circumferential Weld RV-W4 was inaccessible due to the 4 Lower Core
Supports thus restricting Ultrasonic Examination.**
- 5. Burden Caused by Compliance: To provide for access to the 13.86% (Two
Direction Coverage of the Reactor Vessel Lower Head Circumferential
Weld RV-W4 would require modification of the original design of Reactor
Vessel.**

KEWAUNEE NUCLEAR POWER PLANT

THIRD 10 - YEAR INTERVAL JUNE 16, 1994 - JUNE 16, 2004

RELIEF REQUEST NO: RR-G-7-73

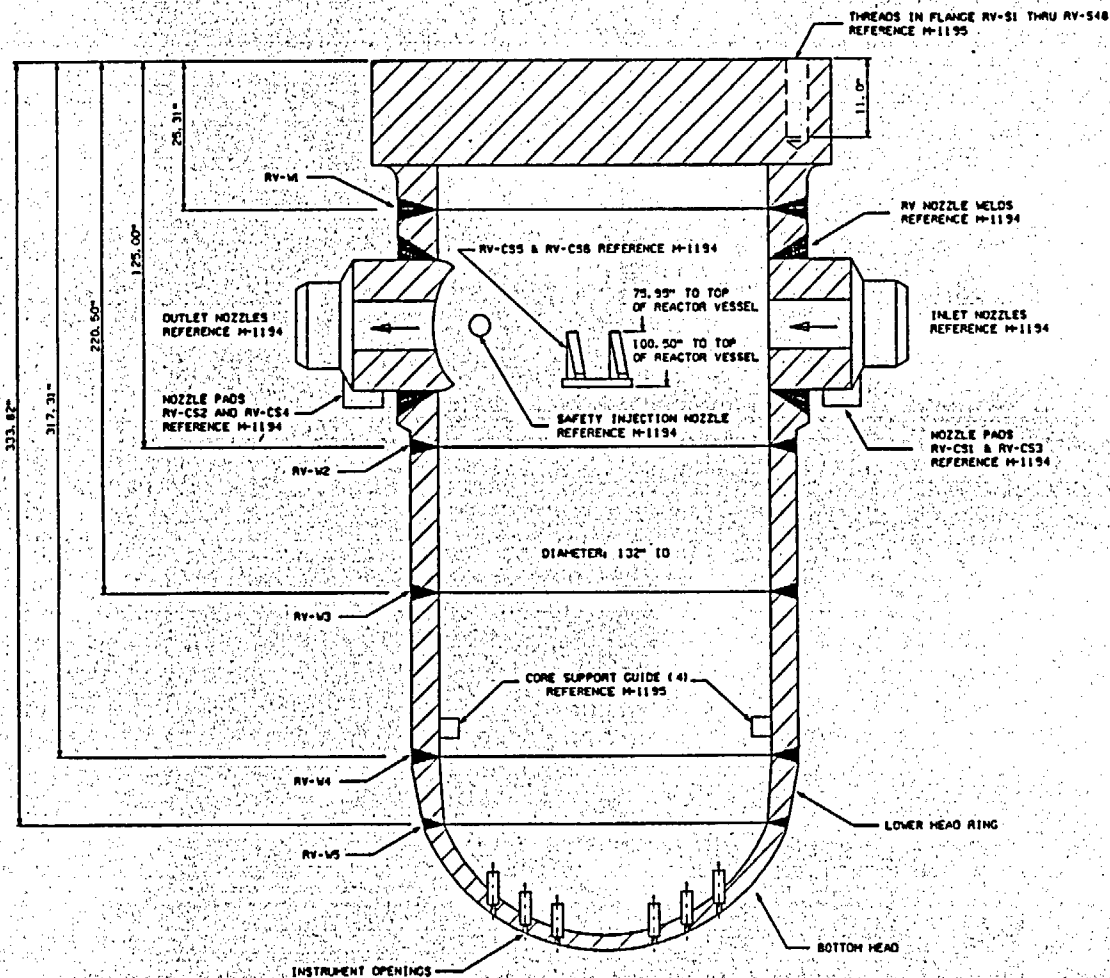
**6. Proposed Alternative and Basis for Use: No alternative Code required
Ultrasonic examination is available due to the limited access. However,
90.82% coverage of the Reactor Vessel Lower Head Circumferential
Weld RV-W4 was achieved performing Remote Ultrasonic Examination
with personnel qualified for Single Sided Examination of the Reactor Vessel
Lower Head Circumferential Weld RV-W4.**

**7. Duration of Proposed Alternative: 3rd Ten Year Interval June 16, 1994 –
June 16, 2004**

8. Precedents: Not Applicable

9. References: Not Applicable

6611-W



157-011

LOCATION: CONTAINMENT

COMPONENT WELD DATA		
I.D.	THICKNESS	MATERIAL
RV-M	9.44"	A508-64 CL. 2 CS
RV-W2	7.0"	A508-64 CL. 2 CS
RV-W3	7.0"	A508-64 CL. 2 CS
RV-W4	7.0"	A508-64 CL. 2 CS
RV-W5	4.12" MIN	A533 GR. B CL. 1 CS

CALIBRATION BLOCK		
I.D.	DIAMETER/SCHEDULE	MATERIAL
WPS-RV-1	11.6" I.D. x 8.1" L x 8.625" W	SA508 CL. 2 CS
WPS-RV-2	9.0" I.D. x 3.2" L x 6.0" W	SA508 CL. 2 CS
WPS-RV-3	7.0" I.D. x 2.0" L x 6.0" W	SA508 CL. 2 CS
WPS-RV-4	5.0" I.D. x 1.0" L x 6.0" W	SA508 CL. 2 CS

NOTES:

1. DRAWING APPLICABLE FOR 3rd AND 4th ISI INTERVAL.
2. ASME BOILER AND PRESSURE VESSEL CODE SECTION XI CLASS I
3. RV INSTRUMENT PENETRATION ID #5: RV-P1 THRU RV-P36

D-1
KAP 01-001639

REVISION

A	PDD 0011 COMPL SEE REV 0-1 APP'D: CAT 10/23/89 FILM'D: (WPS) 11/7/89
A-1	REDRAFTED TO CAD PER ESR 92-177 CHK'D: B. TROTTER 4/1/93 APP'D: CAT 7-23-93
B	ESR 92-177 COMPL SEE REV. A-1 FILM'D: (WPS) 08-03-93
B-1	REV. NOTES PER ESR 92-177 BY: LML 10-1-93 CHK'D: RJS 10-4-93 APP'D: CAT 10-07-93
C	ESR 92-177 COMPL SEE REV. B-1 FILM'D: (WPS) 10-19-93
C-1	RE PUR 0295 ADDED ITEM NO. BY: BJD 7-15-99 APP'D: DAK 7-26-99
D	RE PUR 0295 COMPL SEE REV. C-1 FILM'D: (WPS) 8-3-99
D-1	KAP 01-001639 REVISED NOTE 1. BY: ABF 06-03-02 APP'D:
E	KAP 01-001639 COMPLETE SEE REV. D-1. FILM'D: (WPS)

WISCONSIN PUBLIC SERVICE CORPORATION
KEWAUNEE NUCLEAR POWER PLANT
CARLTON, KEWAUNEE COUNTY, WISCONSIN

REACTOR VESSEL RV

DESIGNED BY
WISCONSIN PUBLIC SERVICE CORP.
GREEN BAY, WISCONSIN

DESIGNED	APPROVED	
CHECKED	PHILLIP E. BUKES	6/16/93
D. H.	PROJECT APPROVED	
DATE	1/17/83	
ESS	NO.	REV.
NONE	M-1193	E

CADD

REACTOR VESSEL WELD RESULTS SUMMARY

PLANT NAME Kewaunee Unit 1

WELD NO. RV-W4 COMPONENT Lower Shell to Lower Head

LIMITATIONS: NO ☒ YES ☐ 90.82 % Complete (One Direction)
See Coverage Breakdown Sheet

RESULTS

NO. OF INDICATIONS N/A

NI X

STATUS N/A

RI

EXAM DOCUMENTATION

INDICATION DOCUMENTATION

☒ PARAGON ANALYSIS LOG

☐ ASSESSMENT SHEET

☒ PARAGON ACQUISITION LOG

☐ PARAGON HARD COPY

☒ SCAN PRINT OUT

☐ OTHER (Specify)

☒ COVERAGE BREAKDOWN

Comments: See figure 1 for limitations

Analyst James R Date: 11/12/04

R.V. COVERAGE ESTIMATE BREAKDOWNS

PLANT NAME Kewaunee

WesDyne

WELD NO. RV-W4

International

COMPONENT Lower Shell to Lower Head

BEAM ANGLE BREAK DOWN

ONE DIRECTIONAL COVERAGE

BEAM DIRECTION	45 Shear		45 L Single		45 L Dual			
	WELD	VOLUME	WELD	VOLUME	WELD	VOLUME	WELD	VOLUME
Perpendicular	100.00	100.00	83.56	88.35	79.45	86.04		
Parallel	100.00	92.55	100.00	92.55	79.45	87.86		
AVERAGE	98.14		91.12		83.20			

Comments: Coverage estimates for the shell PDI exam are based on 1 directional coverage.

Combined Perp. 89.57 Combined Para. 92.07 Combined Average 90.82

Analyst

Jimmy Z

Date

11/12/01

REACTOR VESSEL WELD RESULTS SUMMARY

PLANT NAME Kewaunee Unit 1

WELD NO. RV-W4 COMPONENT Lower Shell to Lower Head

LIMITATIONS: NO ☒ YES ☐ 86.14 % Complete (Two Directions)
See Coverage Breakdown Sheet

RESULTS NO. OF INDICATIONS N/A

NI X STATUS N/A

RI

EXAM DOCUMENTATION

- ☒ PARAGON ANALYSIS LOG
- ☒ PARAGON ACQUISITION LOG
- ☒ SCAN PRINT OUT
- ☒ COVERAGE BREAKDOWN

INDICATION DOCUMENTATION

- ☐ ASSESSMENT SHEET
- ☐ PARAGON HARD COPY
- ☐ OTHER (Specify)

Comments: See figure 1 for limitations

Analyst *[Signature]* Date: 11/12/04

R.V. COVERAGE ESTIMATE BREAKDOWNS

PLANT NAME Kewaunee

WesDyne

WELD NO. RV-W4

International

COMPONENT Lower Shell to Lower Head

BEAM ANGLE BREAK DOWN

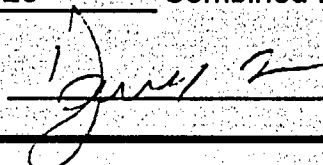
TWO DIRECTIONAL COVERAGE

BEAM DIRECTION	45 Shear		45 L Single		45 L Dual			
	WELD	VOLUME	WELD	VOLUME	WELD	VOLUME	WELD	VOLUME
Perpendicular	79.45	80.58	79.45	79.53	79.45	82.74		
Parallel	100.00	92.55	100.00	92.55	79.45	87.86		
AVERAGE	88.15		87.88		82.38			

Comments: Coverage estimates for the shell PDI exam are based on 2 directional coverage.

Combined Perp. 80.20 Combined Para. 92.07 Combined Average 86.14

Analyst



Date

11/12/01

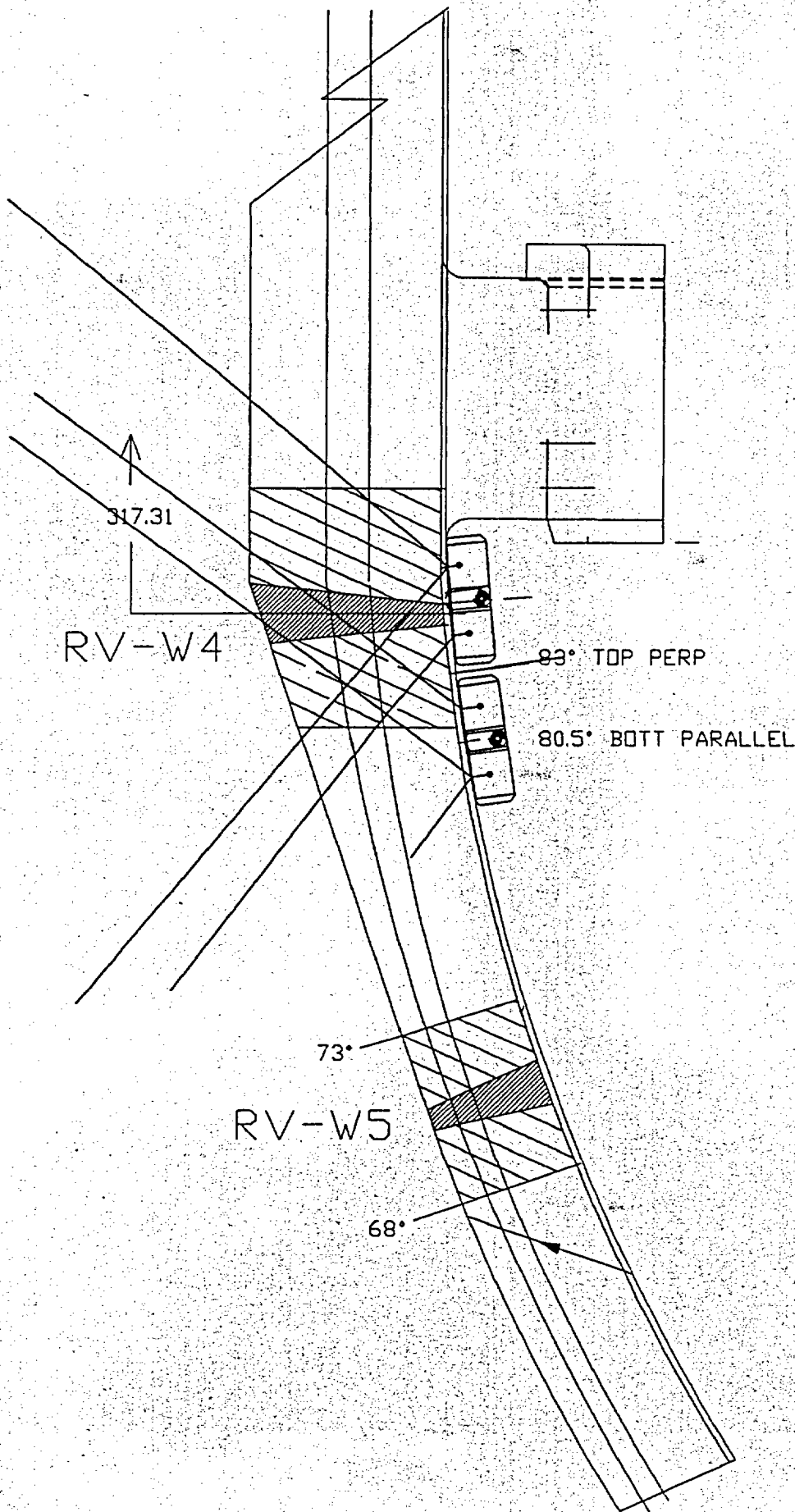


Figure 1