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 MARCHI, M.L.      Wisconsin Public Service Corp. *See Report*  
 RECIP. NAME      RECIPIENT AFFILIATION  
                                  Document Control Branch (Document Control Desk)

SUBJECT: Forwards response to 970417 RAI re 1995 inservice insp summary rept. Exam data sheets for each of exams limited by geometric, metallurgical or design/access restrictions, encl.

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**WISCONSIN PUBLIC SERVICE CORPORATION**

600 North Adams • P.O. Box 19002 • Green Bay, WI 54307-9002

June 16, 1997

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

Ladies/Gentlemen:

Docket 50-305  
Operating License DPR-43  
Kewaunee Nuclear Power Plant  
1995 Inservice Inspection Summary Report - Request for Additional Information

- Reference: 1) Letter from ML Marchi (WPSC) to Document Control Desk (US NRC) dated August 11, 1995.  
2) Letter from RJ Laufer (US NRC) to ML Marchi (WPSC) dated April 14, 1997.

By letter dated August 11, 1995, Wisconsin Public Service Corporation (WPSC) submitted the 1995 Inservice Inspection Summary Report for the Kewaunee Nuclear Power Plant (KNPP) to the Nuclear Regulatory Commission (NRC). On April 14, 1997, the NRC informed WPSC that the staff has performed a review of the 1995 Inservice Summary Report and that additional information is needed related to the augmented reactor vessel examination and to the examinations that were limited by geometric, metallurgical, or design/access restrictions.

WPSC's responses to each of the NRC's questions are provided in Attachment 1 to this letter. Attachment 2 to this letter includes a copy of the examination data sheets for each of the examinations that were limited by geometric, metallurgical, or design/access restrictions.

If you have any additional questions or require additional information please contact a member of my staff.

Sincerely,

M. L. Marchi  
Manager-Nuclear Business Group

CAT  
Attach.  
cc - US NRC - Region III  
US NRC Senior Resident Inspector



9706240250 970616  
PDR ADOCK 05000305  
G PDR

A047/1

50-305

KEWAUNEE

WPSC

RAI - 1995 INSERVICE INSPECTION SUMMARY

Rec'd w/ ltr dtd 6/16/97.....9706240250

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ATTACHMENT 1

Letter from M. L. Marchi (WPSC)

To

Document Control Desk (NRC)

Dated

June 16, 1997

Response to NRC Request for Additional Information  
Regarding the 1995 Inservice Inspection Summary Report

Request 1

The 1995 Inservice Inspection (ISI) Summary Report for the Kewaunee Nuclear Power Plant states that 10 CFR 50.55a(g)(6)(ii)(A) augmented examinations of the reactor vessel were performed. However, it is not clear from the report whether it was possible to examine essentially 100% of the length of all reactor vessel shell welds as described in the regulation. Clarification on the regulation was provided in NRC Information Notice (IN) 96-32, "Implementation of 10 CFR 50.55a(g)(6)(ii)(A), 'Augmented Examination of Reactor Vessel,' " dated June 5, 1996.

Taking into consideration the information provided in IN 96-32, please clarify whether essentially 100% of each reactor vessel shell weld was examined.

WPSC Response

The augmented examination specified in 10 CFR 50.55a(g)(6)(ii)(A) applies to reactor vessel shell welds specified in Item B1.10 of Examination Category B-A, "Pressure Retaining Welds in Reactor Vessel," in Table IWB-2500-1 of Subsection IWB of the 1989 Edition of Section XI, Division 1, of the ASME Boiler and Pressure Vessel Code. The KNPP reactor vessel contains two (2) circumferential shell welds that fall under Item B1.10 of Examination Category B-A. Both of these reactor vessel shell welds, RV-W2 and RV-W3, were examined during the 1995 refueling outage. A review of our inspection records indicate that 100% coverage was achieved during examination of both of these welds.

Request 2

The Examination Summary portion of the 1995 ISI Summary Report for the Kewaunee Nuclear Power Plant states that:

Examinations performed were intended to examine 100% of the required surface or volume. In some cases, examinations were limited by geometric, metallurgical, or design/access restrictions. In each case, the occurrence and cause of the limitation was documented. In all cases, the maximum amount achievable was examined.

In the cases where the examinations were limited, please identify the component, why the examination was limited, and whether or not a relief request was submitted to the NRC. Also, please indicate if there were any preservice indications that were not reexamined due to the limitations described above.

WPSC Response

Neither Section XI nor the Code of Federal Regulation provides adequate guidance regarding examination coverage. Information Notice 96-32 provides guidance for examination coverage for

the one time augmented examination of the reactor vessel. The KNPP Third Ten Year Inservice Inspection Plan, applicable from June 16, 1994 thru June 16, 2004, invoked ASME Boiler and Pressure Vessel Code Case N-460 which is endorsed by Regulatory Guide 1.147. This Code Case establishes a minimum value of 90% coverage for examination of Class 1 and 2 welds. However, no guidance exists for examination coverage for visual inspections, surface examinations, or ultrasonic examination of non-welded components. KNPP's approach to implementing Section XI examinations is to conduct the best examination possible. To this end, the entire accessible portion of the examination boundary is examined by visual, surface, and/or volumetric methods.

For ultrasonic examination of pipe welds, Section XI only requires, as a minimum, the use of a 45° transducer and scanning from one side of the weld. WPSC has elected to augment these ultrasonic examinations. At KNPP, Class 1 and 2 pipe welds (excluding the cast stainless steel reactor coolant piping) are examined using 0°, 45°, and 60° transducers from both sides of the weld, if accessible. The cast stainless steel reactor coolant pipe welds are examined by using 0° and 41° transducers from both sides of the weld, if accessible. For ultrasonic examination of class 1 and 2 vessels, KNPP conducts each examination using 0°, 45°, and 60° transducers which satisfies the Code rules. The above description of how examinations are conducted at KNPP is necessary for understanding the data on the ISI limitations encountered at KNPP. To help interpret the data, the limitations are presented in four separate groups:

- 1) Surface examinations where the examination coverage is less than 100%,
- 2) Volumetric examinations for Class 1 and 2 vessels where the examination coverage is less than 100%,
- 3) Class 1 and 2 pipe welds where the examination coverage based on performing scans using 0°, 45°, and 60° transducers is less than 100%, and
- 4) Other examinations where the examination coverage is less than 100%.

It should be recognized that the numerical value representing the extent of limitation encountered for ultrasonic examination of the Class 1 and 2 pipe welds cannot be directly compared to the magnitude of limitation that would have been encountered had the examination only been performed using a 45° transducer from one side of the weld, especially if performed from only one side of the weld. The KNPP extent of limitation is based on an internal procedural requirement to perform two perpendicular and two parallel scans using 0°, 45°, and 60° transducers, resulting in a potential for 12 individual examinations. The method used at KNPP to calculate examination volume for the Class 1 and 2 welds subtracts the volume of weld not examined from each of these 12 potential scans from the total available weld volume, rather than adding the additional volume examined with the augmented scans to the volume achieved from the Code required 45° scan. Thus, for a case when 100% of a weld volume is ultrasonically examined from one or both sides of a pipe weld using a 45° transducer, thereby satisfying the minimum goal of achieving greater than 90% coverage; there still might be a limitation reported in the table below because less than 90% of the total calculated

volume may have been examined due to limitations encountered with the 0° and 60° transducers. In another case the ability to scan from only one side of the weld would be reported as a 25% limitation (completion of a perpendicular scan and two parallel scans with each transducer), even though 100% of the volume was examined 9 times. The ISI data sheets do not have the detailed information to convert the percent coverage based on scanning with 0°, 45°, and 60° transducers to a percent coverage based on scanning with only a 45° transducer. This approach (i.e., using 0°, 45°, and 60° transducers) for ultrasonic examination of the Class 1 and 2 pipe welds ensures that a maximum amount of weld volume is always examined.

Details regarding these limitations can be found on the examination data sheets which are located in Attachment 2. A review of the preservice and inservice inspection reports confirms that indications have not been found in these examination areas.

Summary of Limitations for 1995 Inservice Inspection				
Item/ Group	Component Identification	Method of Examination	% Recorded As Not Examined and Limitation	Relief Request Submitted
1-1	Integrally Welded Attachment AHRS1- SW1 to Residual Heat Exchanger AHRS1- 1A	PT	20.7%. Support Leg	No
2-1	Integrally Welded Attachments APSI- 1A-S1 and APSI-1A- S4 to Safety Injection Pump APSI-1A	MT	14.6% each. Support Configuration	No
3-1	Integrally Welded Attachment APSI-1B- S2 to Safety Injection Pump APSI-1B	MT	14.6%. Support Configuration	No
4-1	Circumferential Weld PS-W34 on 3" dia Pipe from Reactor Coolant to Pressurizer	PT	37%. Whip Restraint	No

Summary of Limitations for 1995 Inservice Inspection				
Item/ Group	Component Identification	Method of Examination	% Recorded As Not Examined and Limitation	Relief Request Submitted
5-1	Circumferential Weld PS-W3 on 3" dia Pipe from Reactor Coolant to Pressurizer	PT	27%. Branch Connection	No
6-1	Circumferential Weld PS-W10 on 3" dia Pipe from Reactor Coolant to Pressurizer	PT	36%. Hanger Support	No
7-1	Integrally Welded Attachment SI-H17A to Safety Injection Pump Discharge	PT	90%. Welded Name Plate and Shim	No
8-1	Circumferential Weld FW-W53 on 16" dia Feedwater Pipe	MT	9%. Auxiliary Feedwater Line	No
9-1	Circumferential Weld PR-W12 on 3" dia Reactor Coolant from Pressurizer	PT	74%. Whip Restraint	No
9-2	Circumferential Weld P-W3 on Pressurizer	UT	Less than 2%. 3" diameter ground area 0.2" deep and four (4) welded lugs	No
10-2	Circumferential Weld P-W5 on Pressurizer	UT	Less than 2%. Two (2) instrumentation lines and four (4) welded lugs	No
11-2	Circumferential Weld AHRSI-W1 on Residual Heat Exchanger AHRSI-1A	UT	77%. Inlet and Outlet Nozzles, Welded Support, and Flange Configuration	No



Summary of Limitations for 1995 Inservice Inspection				
Item/ Group	Component Identification	Method of Examination	% Recorded As Not Examined and Limitation	Relief Request Submitted
12-2	Circumferential Weld APD-1A-W1 to Charging Pump Pulsation Dampener APD-1A	UT	9%. Welded Name Plate	No
13-2	Circumferential Welds on Pulsation Dampener S/N GHI 1846	UT	9%. Welded Name Plate	No
14-2	Reactor Vessel Loop A Outlet Nozzle to Vessel Weld RV-W7	UT	Perpendicular 2.84% Tangent 56.76% Nozzle Boss Radius and Nozzle Boss	No
15-2	Reactor Vessel Loop B Outlet Nozzle to Vessel Weld RV-W10	UT	Perpendicular 2.84% Tangent 56.76% Nozzle Boss Radius and Nozzle Boss	No
16-2	Reactor Vessel Closure Head Flange Weld RV-W12	UT	12% (KNPP Calc.). Lifting Lug: Flange Configuration	No
17-3	Circumferential Weld SI-W234 on 3" dia Safety Injection Pump Discharge Line	UT	20%. Elbow Intrados	No
18-3	Circumferential Weld SI-W262 on 3" dia Safety Injection Pump Discharge Line	UT	20%. Elbow Intrados	No
19-3	Circumferential Weld SI-W120 on 12" dia Safety Injection from Accumulator 1A	UT	50%. Valve to Pipe Configuration	No

Summary of Limitations for 1995 Inservice Inspection				
Item/ Group	Component Identification	Method of Examination	% Recorded As Not Examined and Limitation	Relief Request Submitted
20-3	Circumferential Weld SI-W123 on on 12" dia Safety Injection from Accumulator 1A	UT	50%. Elbow to Branch Configuration	No
21-3	Circumferential Weld RHR-W188 on 10" dia Safety Injection Line from Cntmt. Pen. 10	UT	49.8%. Tee Configuration	No
22-3	Circumferential Weld SI-W13 on 6" dia Safety Injection Line from Cntmt. Pen. 48	UT	37.5%. Valve Body	No
23-3	Circumferential Weld SI-W14 on 6" dia Safety Injection Line from Cntmt. Pen. 48	UT	6.5%. Socket	No
24-3	Circumferential Weld PR-W2 on 6" dia Reactor Coolant from Pressurizer	UT	61.3%. Nozzle Configuration	No
25-3	Circumferential Weld RHR-W33 on 8" dia Residual Heat Removal Line from RC Loops A and B	UT	62.5%. Valve Body	No
26-3	Circumferential Weld FW-W29 on 16" dia Feedwater Line	UT	15%. Nozzle Taper	No
27-3	Circumferential Weld FW-W53 on 16" dia Feedwater Line	UT	11%. Auxiliary Feedwater Line	No

Summary of Limitations for 1995 Inservice Inspection				
Item/ Group	Component Identification	Method of Examination	% Recorded As Not Examined and Limitation	Relief Request Submitted
28-3	Branch Connection Weld RC-W23BC on Loop A RC Pipe	UT	100%. Branch Nozzle Configuration	No
29-3	Circumferential Weld FW-W57 on 16" dia Feedwater Line	UT	8.8%. Nozzle Configuration	No
30-3	Circumferential Weld MS-W3 on 30" dia 1A Main Steam Line	UT	37% (KNPP Calc.). Reducing Elbow OD Taper	No
32-4	RCP-1A Flange Bolts RCP-B1 to RCP-B8	UT	7.3%. Bolt Configuration	No

The process for conducting Section XI examinations at KNPP deals with these limitations as follows. Each limitation is considered on a case by case basis and is informally reviewed by the KNPP staff and Authorized Nuclear Inservice Inspector to determine if additional activities (i.e., base material scans, development and use of new ultrasonic techniques, etc.) can and should be initiated to improve the quality of the examination. After each limitation is evaluated and other options are pursued, as appropriate, to improve the quality of the examination, KNPP will classify each examination as acceptable or not acceptable based in part on satisfying the 90% examination volume criteria. For the credited examinations that are classified as not acceptable, a relief request will be generated and submitted to the NRC. WPSC would submit such a relief request within one year after completion of the ten-year inservice examination interval.

### Request 3

Please clarify whether all of the examinations for the sample weld population were completed.

### WPSC Response

The weld population at KNPP is defined in terms of an inspection period and interval which generally consists of a 40 month and 10 year duration, respectively. Inservice inspections were performed during the 1995 refueling outage to complete the 3rd period, 2nd Interval Code requirements and to satisfy the requirements of the 1st period of the 3rd Interval. The 2nd 10 year interval was extended by one year to permit 100% examination of the reactor vessel to be performed

in 1995 which eliminated the need to examine the reactor vessel using the automated equipment twice within a 40 month duration. Thus, the 2nd interval ran from June 16, 1984 thru June 16, 1995. For the 2nd Interval, taking into account that some of the originally scheduled welds were not examined for various reasons while other welds within the same category were substituted and examined in their place, the sample weld population was satisfied in terms of percent welds examined. Any examinations conducted during the 1995 refueling outage were credited to only one period/interval.

The 1st period of the 3rd Interval runs from June 16, 1994 thru October 16, 1997. Thus, an account of the sample weld population completed during the 1995 refueling outage by itself has little significance. A review of our inspection records after having completed inservice inspections during the 1996/97 refueling outage that finished the 1st period, taking into account that some of the originally scheduled welds were not examined for various reasons while other welds within the same category were substituted and examined in their place, indicates that the sample weld population was satisfied for the 1st period of the 3rd Interval in terms of percent welds examined.

ATTACHMENT 2

Letter from M. L. Marchi (WPSC)

To

Document Control Desk (NRC)

Dated

June 16, 1997

NDE Data Sheets for Examinations Limited by  
Geometric, Metallurgical, or Design/Access Restrictions

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

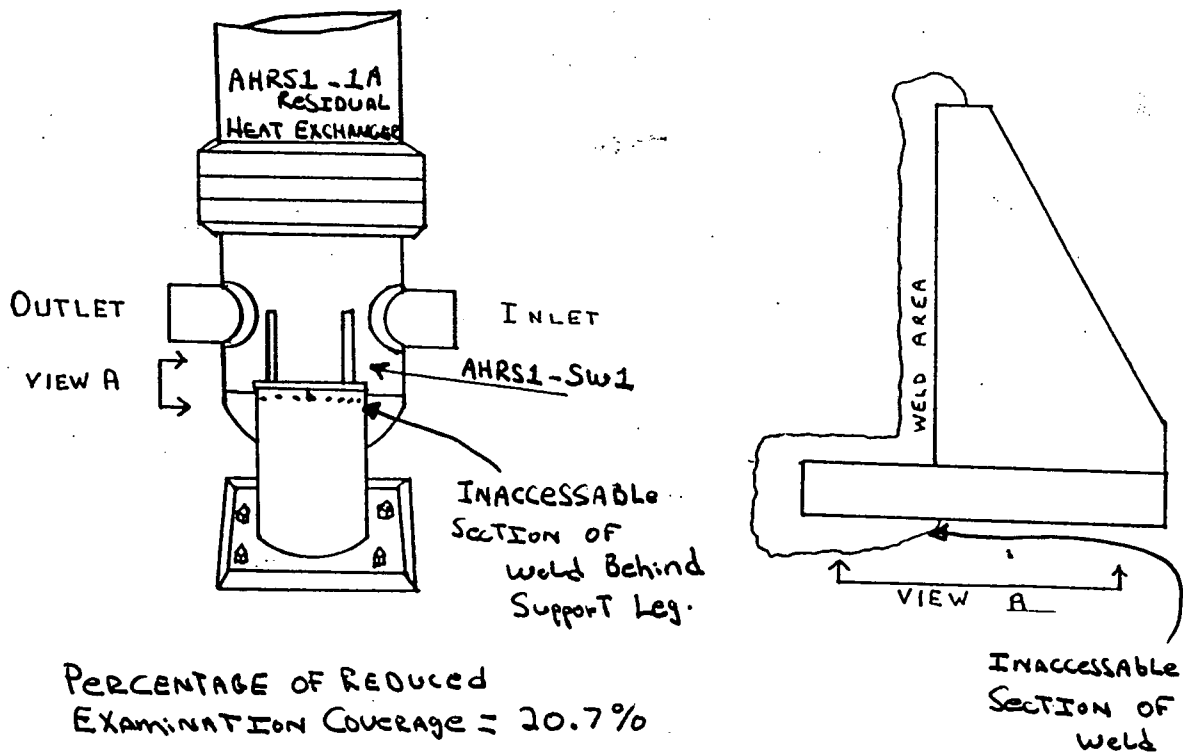
COMPONENT IDENTIFICATION: AHRS1-Sw1 PROCEDURE: QCP-901 REVISION: ORIG.

ULTRASONIC: \_\_\_\_\_ LIQUID PENETRANT: X MAGNETIC PARTICLE: \_\_\_\_\_ VISUAL: \_\_\_\_\_

EXAMINER: N.A. Bey \_\_\_\_\_ 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.



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

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-52  
APSI-1A-51  
APSI-1A-54 PROCEDURE: QCP-902 REVISION: ORIG

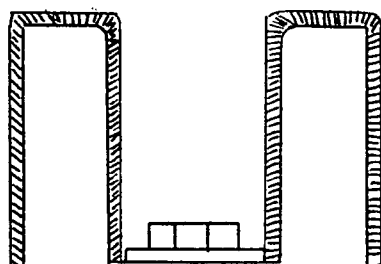
ULTRASONIC:      LIQUID PENETRANT:      MAGNETIC PARTICLE: X VISUAL:     

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

EXAMINER: Ned A. Boy II DATE: 4-22-95  
LEVEL

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

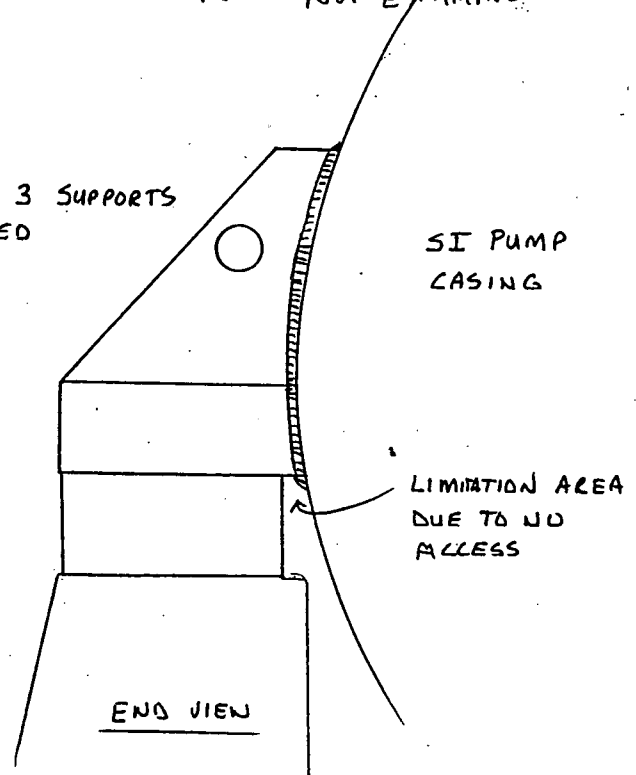
PERCENTAGE OF REDUCED EXAM COVERAGE 85.4% EXAMINED  
14.6% NOT EXAMINED



SIDE VIEW

TYP. OF 3 SUPPORTS EXAMINED

LIMITATION AREA ON BACK SIDE



END VIEW

SI PUMP CASING

LIMITATION AREA DUE TO NO ACCESS

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip C. Baker DATE: April 24, 1995

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Rayn. Johnson DATE: 4/24/95

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

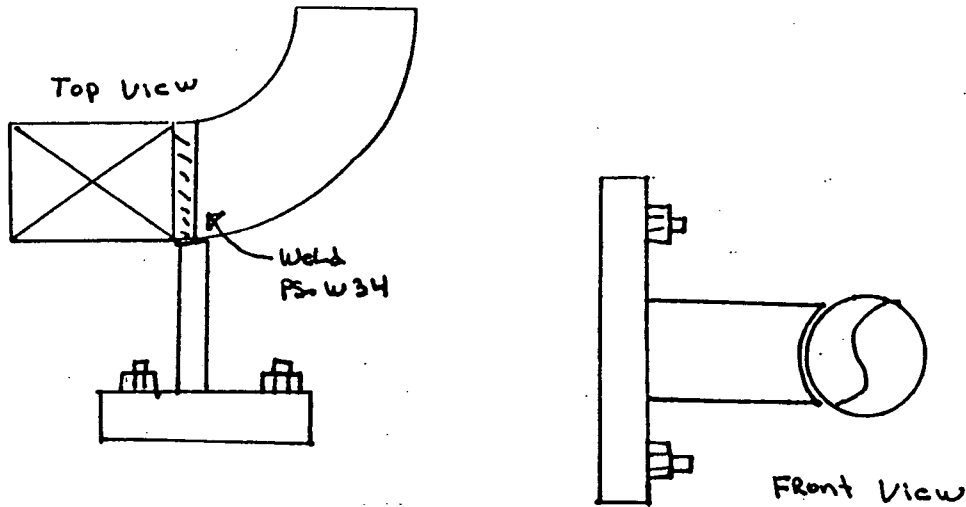
COMPONENT IDENTIFICATION: PS-W34 PROCEDURE: QCP-901 REVISION: ORIG.

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: Eino A. Balstad DATE: 4/15/95

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger Johnson DATE: 4/18/95



### 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

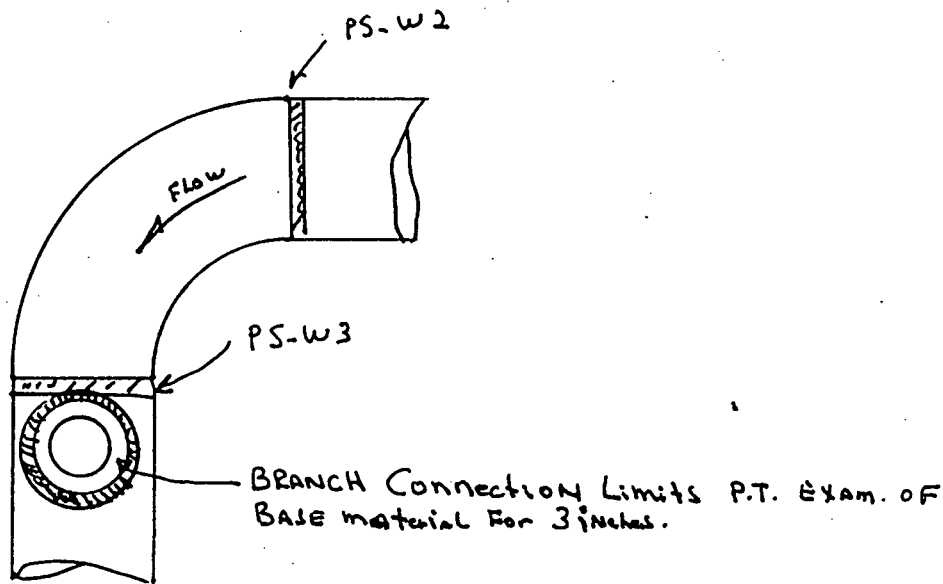
COMPONENT IDENTIFICATION: PS-W3 PROCEDURE: QCP-901 REVISION: ORIG

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: Erin A. Baitstad DATE: 4/15/95

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Rayn Wagner DATE: 4/16/95

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.: ISIM-874-2

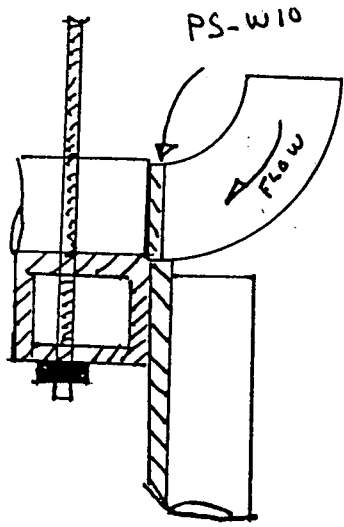
COMPONENT IDENTIFICATION: PS-w10 PROCEDURE: QCP-901 REVISION: ORIG

ULTRASONIC:      LIQUID PENETRANT: X MAGNETIC PARTICLE:      VISUAL:     

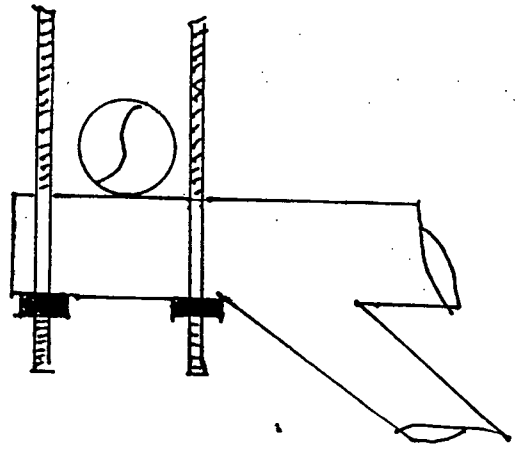
EXAMINER: N.A. Boy II DATE: 4-13-95  
LEVEL

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.

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Eino A. Balstad DATE: 4/15/95

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger Myrnes DATE: 4/16/95

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

SAFETY INJECTION PUMP DISCH.  
SYSTEM OR COMPONENT: PIPING TO PEN 28N & RWST DRAWING NO.: ISIM-934-2

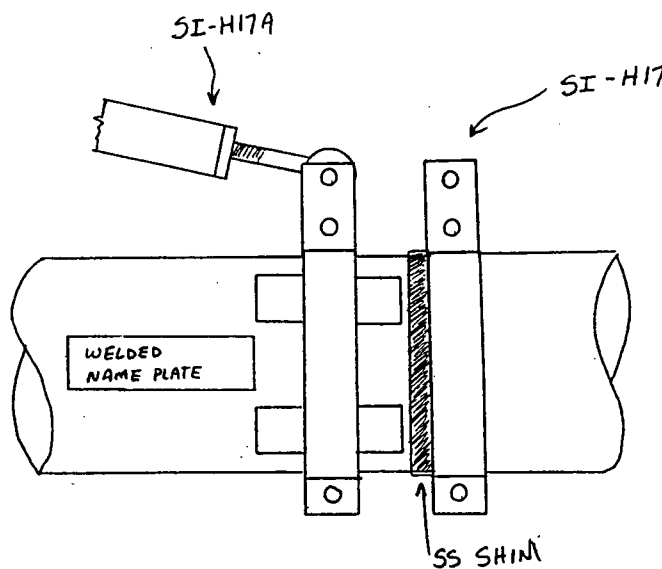
COMPONENT IDENTIFICATION: SI-H17A PROCEDURE: QCP-901 REVISION: ORIG

ULTRASONIC:        LIQUID PENETRANT: X MAGNETIC PARTICLE:        VISUAL:       

EXAMINER: Jerry P. Wm II DATE: 4-18-95  
LEVEL

EXAMINER: M.A. Berg II DATE: 4-18-95  
LEVEL

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



- NAME PLATE .20" FROM TOE OF WELD ON 2 LUGS

- STAINLESS STEEL SHIM @ TOE OF WELD ON 4 LUGS

PERCENTAGE OF REDUCED EXAMINATION COVERAGE = 90%

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Eino A. Balstad DATE: 4/18/95

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger Mygum DATE: 4/19/95

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

SYSTEM OR COMPONENT: FEEDWATER FROM ANCHORED EU TO STM GEN. 1B DRAWING NO.: 1S1M-971

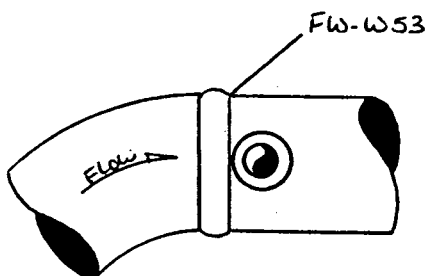
COMPONENT IDENTIFICATION: FW-W53 PROCEDURE: QCP-902 REVISION: 0216

ULTRASONIC:        LIQUID PENETRANT:        MAGNETIC PARTICLE: X VISUAL:       

EXAMINER: Jeff Dewes II DATE: 4-6-95  
LEVEL

EXAMINER: Travis Thomas TRAINEE DATE: 4-6-95  
LEVEL

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



EXAM LIMITED TO WELD  $\frac{1}{2}$  UPSTREAM BASE METAL ONLY  
FROM 37.0" TO 42.0" CW. DUE TO AUL. FEEDWATER TIE-IN.

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Eric A. Balstad DATE: 4/8/95

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Rogn Mjølhus DATE: 4/9/95

**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.: IS/M-940-1

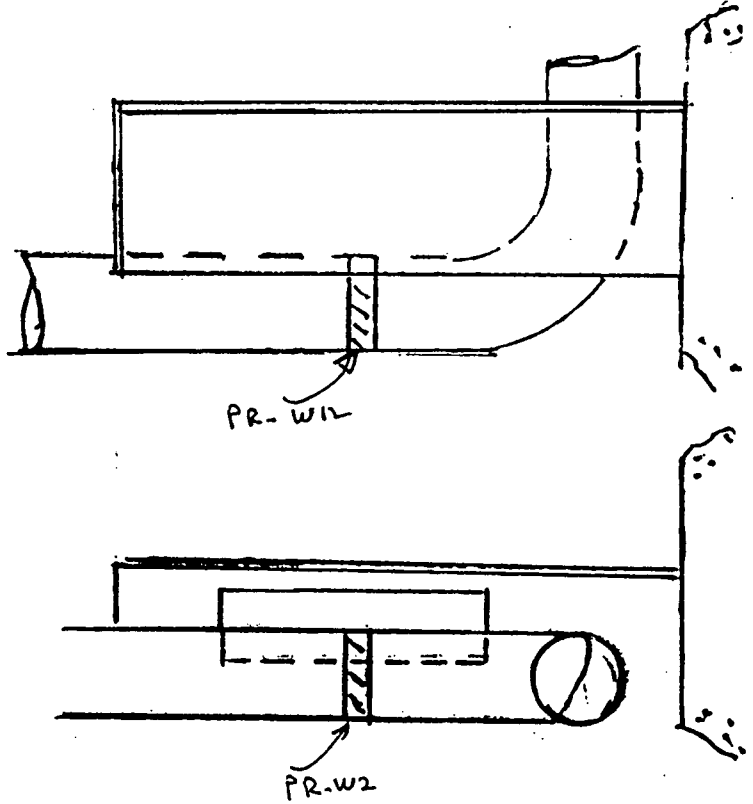
COMPONENT IDENTIFICATION: PR-W12 PROCEDURE: QCP-901 REVISION: ORIG.

ULTRASONIC:        LIQUID PENETRANT: X MAGNETIC PARTICLE:        VISUAL:       

EXAMINER: N.A. 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. Belstad DATE: 4/17/95  
AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger M. Wynn DATE: 4/19/95

**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.: 11-1200

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

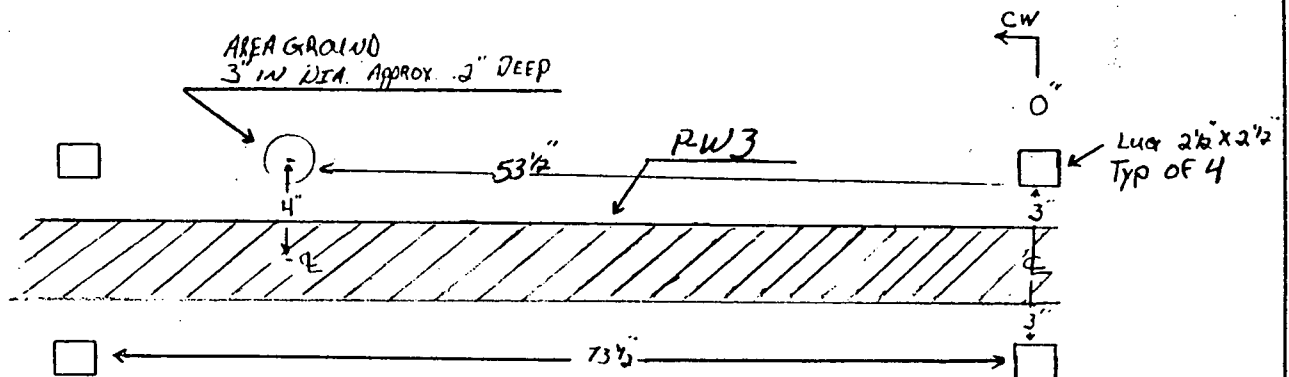
ULTRASONIC: X LIQUID PENETRANT: \_\_\_\_\_ MAGNETIC PARTICLE: \_\_\_\_\_ VISUAL: \_\_\_\_\_

EXAMINER: Jeffrey M. Johnson II DATE: 4-18-95 4-19-95  
LEVEL

EXAMINER: Mark / Olson II 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 E. Baker DATE: April 23, 1995

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger M. [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

SYSTEM OR COMPONENT: PRESSURIZER DRAWING NO.: M-1200

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

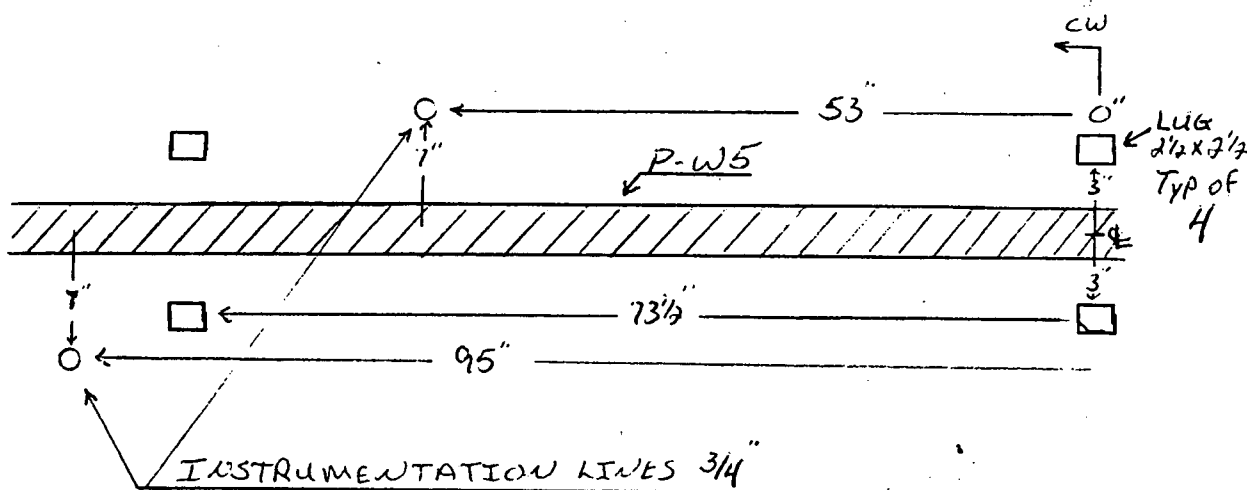
ULTRASONIC: X LIQUID PENETRANT: \_\_\_\_\_ MAGNETIC PARTICLE: \_\_\_\_\_ VISUAL: \_\_\_\_\_

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. Bukes 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

RESIDUAL HEAT EXCHANGERS

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

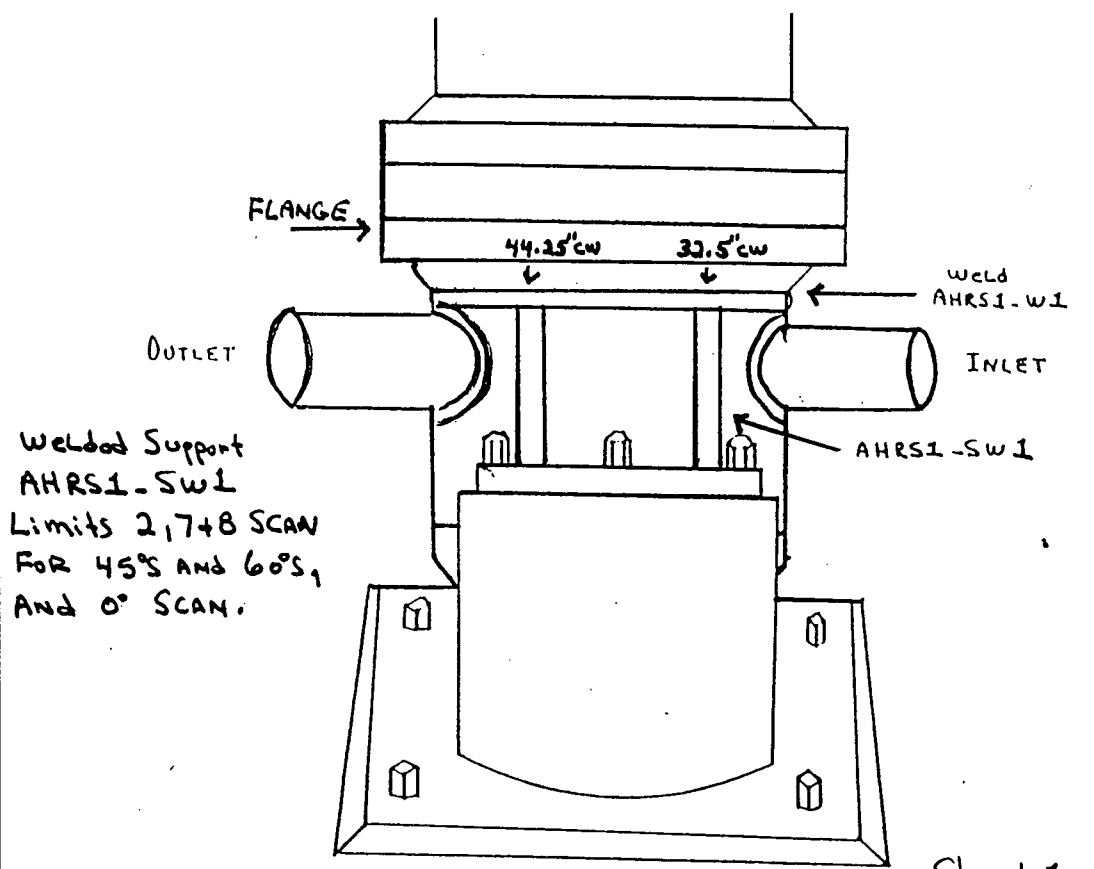
COMPONENT IDENTIFICATION: AHRS1-W1 PROCEDURE: QCP-911 REVISION: ORIG.

ULTRASONIC: X LIQUID PENETRANT:        MAGNETIC PARTICLE:        VISUAL:       

EXAMINER: N.A. Berg 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 Johnson 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

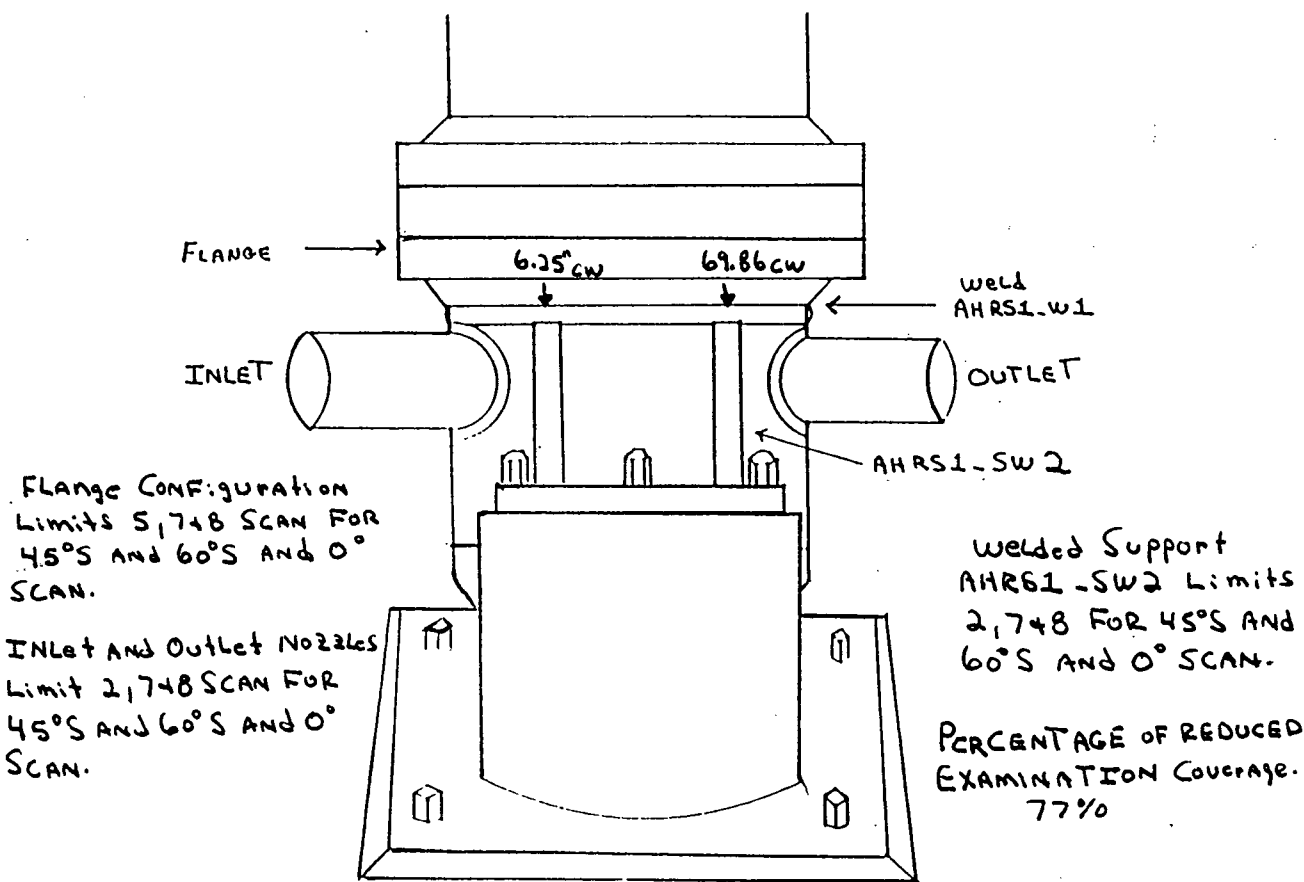
COMPONENT IDENTIFICATION: AHRS1-W1 PROCEDURE: QCP-911 REVISION: ORIG.

ULTRASONIC: X LIQUID PENETRANT:        MAGNETIC PARTICLE:        VISUAL:       

EXAMINER: N.A. Big 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: Eric A. Balstad DATE: 4/27/95

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger Mjvun DATE: 4/27/95

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

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

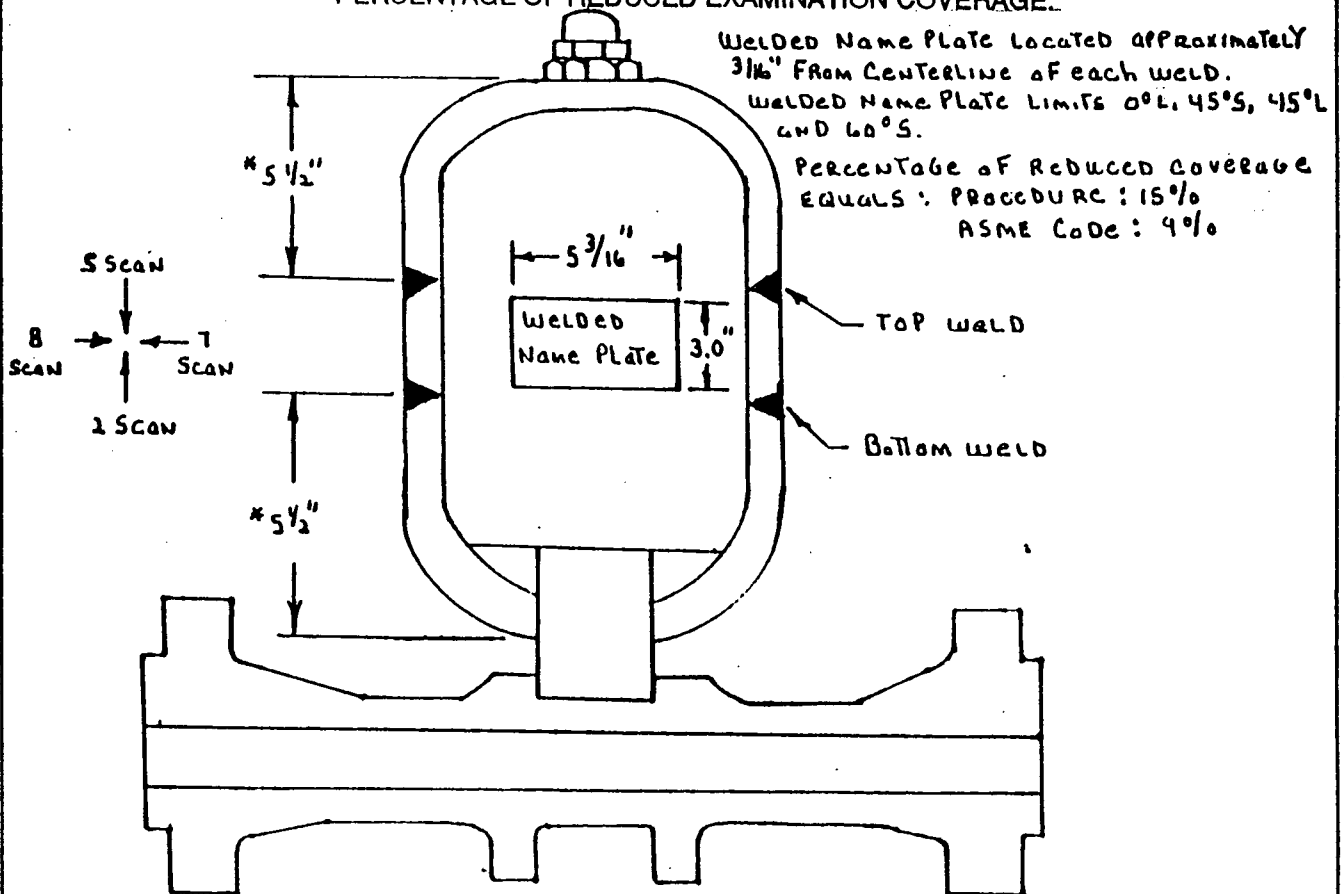
COMPONENT IDENTIFICATION: APP-1A-W1 PROCEDURE: GCP-911 REVISION: 0216

ULTRASONIC: X LIQUID PENETRANT: \_\_\_\_\_ MAGNETIC PARTICLE: \_\_\_\_\_ VISUAL: \_\_\_\_\_

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

EXAMINER: Jeff Dewes 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 Morgan DATE: 4/6/95

**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: DAMPENER S/N GH 1 1846 DRAWING NO.: M-1210

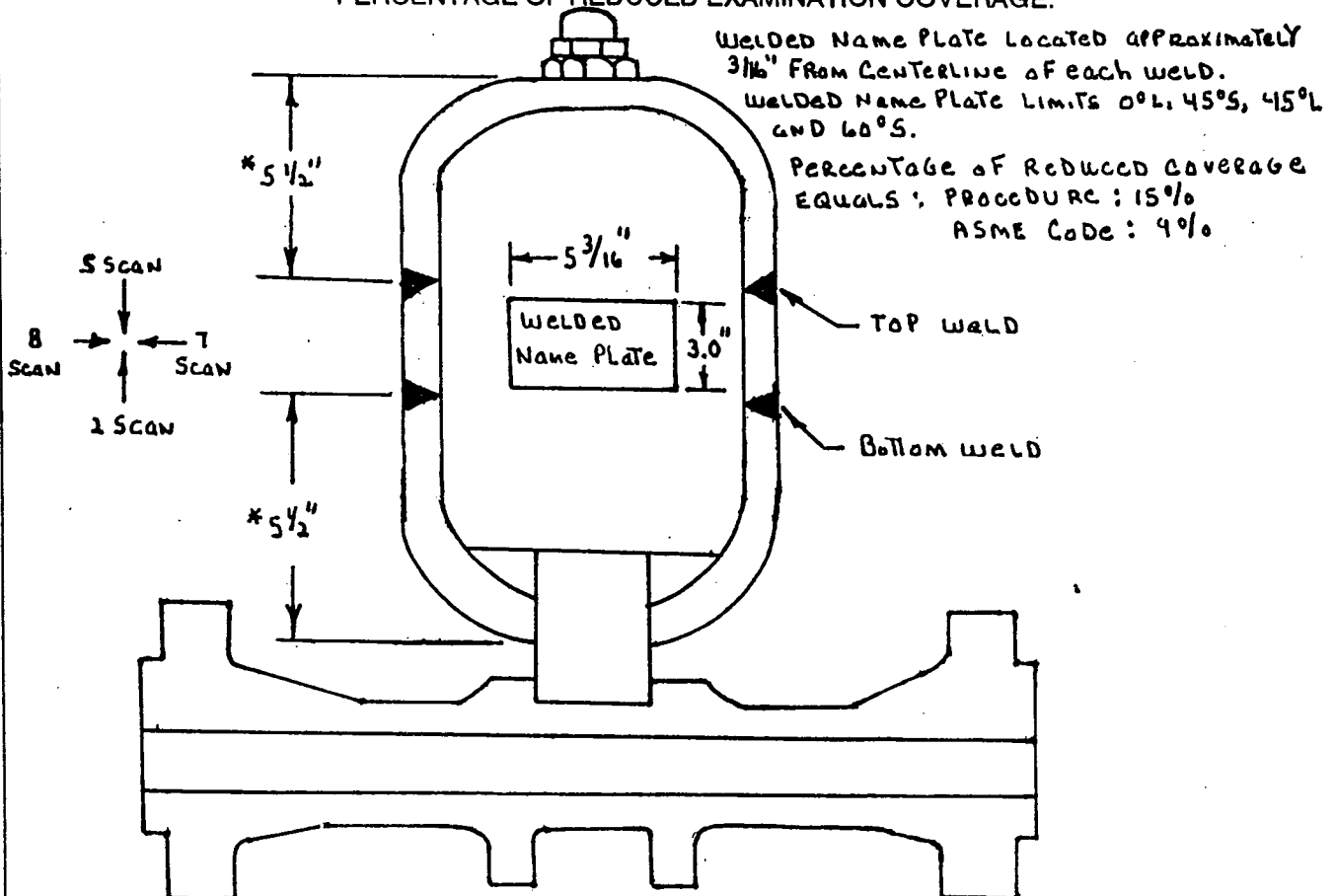
COMPONENT IDENTIFICATION: TOP WELD: BOTTOM WELD PROCEDURE: QCP 911 REVISION: ORIG.

ULTRASONIC: X LIQUID PENETRANT:        MAGNETIC PARTICLE:        VISUAL:       

EXAMINER: Phillips C. Buker II DATE: Jan. 19, 23, 24, 1995  
LEVEL DATE: Feb. 3, 24, 1995

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: Eino B. Baitala DATE: 2/28/95  
AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger Mygum DATE: 2/28/95

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%	

**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

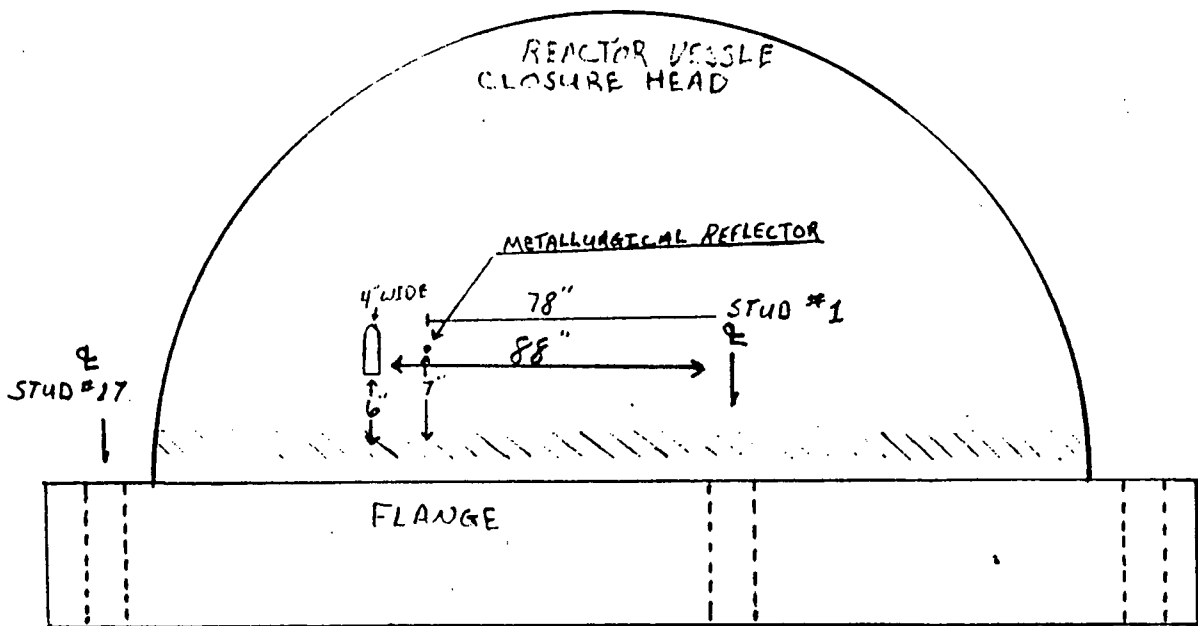
COMPONENT IDENTIFICATION: RV-W12 PROCEDURE: GCP 904 REVISION: ORIG.

ULTRASONIC: X LIQUID PENETRANT: \_\_\_\_\_ MAGNETIC PARTICLE: \_\_\_\_\_ VISUAL: \_\_\_\_\_

EXAMINER: Jerry 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 Q OF #1 STUD.

SCAN LIMITED ON FLANGE SIDE TO 3" FROM WELD Q  
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 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

SAFETY INJECTION PUMPS DISCHARGE  
SYSTEM OR COMPONENT: DISCHARGE PIPING FROM PEN. 28E RWST DRAWING NO.: ISIM - 934-1

COMPONENT IDENTIFICATION: SI-W234 PROCEDURE: QLP-911 REVISION: ORIG

ULTRASONIC: X LIQUID PENETRANT: \_\_\_\_\_ MAGNETIC PARTICLE: \_\_\_\_\_ VISUAL: \_\_\_\_\_

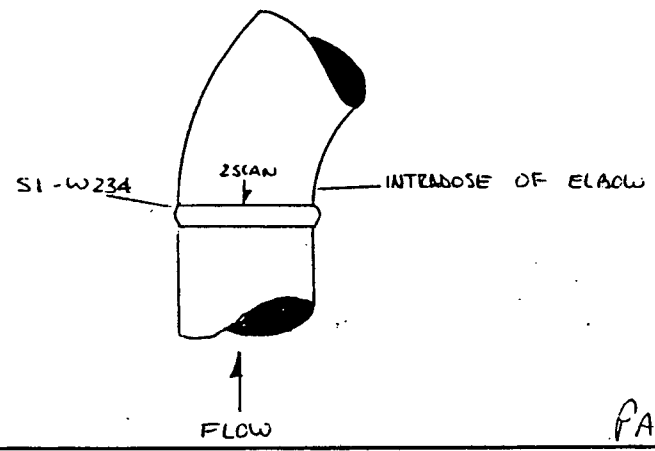
EXAMINER: J. P. Bluff II DATE: 4-22-95  
LEVEL

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. Bueker DATE: April 24, 1995

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger W. Johnson DATE: 4/25/95

**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 PIPING TO PEN. 2EN ; RWST DRAWING NO.: ISLM - 934-2

COMPONENT IDENTIFICATION: SI - W262 PROCEDURE: QCP-911 REVISION: ORIG

ULTRASONIC: X LIQUID PENETRANT:        MAGNETIC PARTICLE:        VISUAL:       

EXAMINER: Todd P. Blif II DATE: 4-22-95  
LEVEL

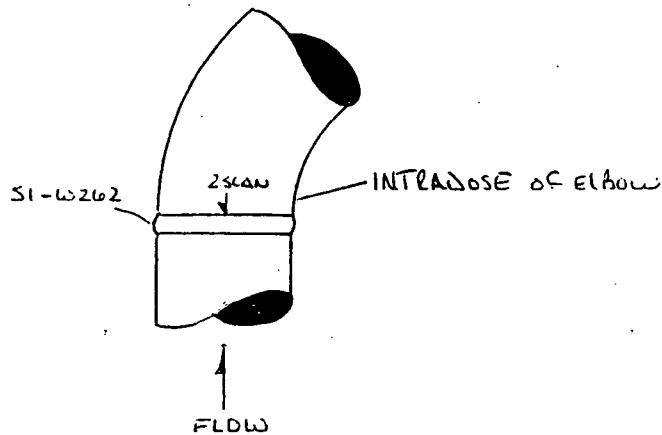
EXAMINER: NA DATE: NA  
LEVEL

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 2

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip C. Bukes DATE: April 24 1995

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger Matyuan DATE: 4/25/95

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 A CDJ LEG DRAWING NO.: 151M-935

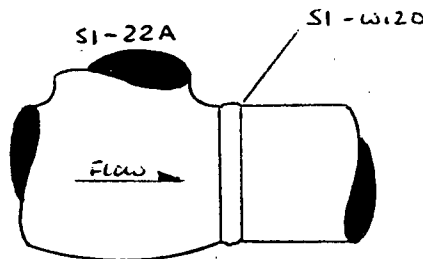
COMPONENT IDENTIFICATION: SI-W120 PROCEDURE: QCP-911 REVISION: 0216

ULTRASONIC: X LIQUID PENETRANT:        MAGNETIC PARTICLE:        VISUAL:       

EXAMINER: Jeff Deves II DATE: 4-22-95  
LEVEL

EXAMINER: Jim Ikon 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. Bukac DATE: April 25, 1995  
AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger Mufson DATE: 4/25/95



**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 AC0301E6 DRAWING NO.: 151M-935

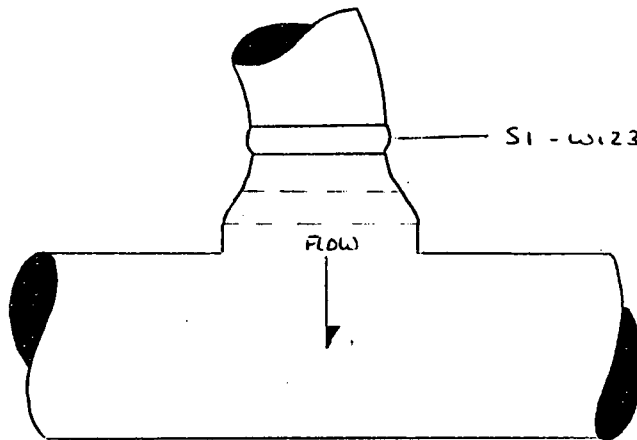
COMPONENT IDENTIFICATION: SI-W123 PROCEDURE: QCP-911 REVISION: 0216

ULTRASONIC: X LIQUID PENETRANT:        MAGNETIC PARTICLE:        VISUAL:       

EXAMINER: Jeff Jones 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 UPSTREAM BASE METAL ONLY DUE TO ELBOW TO BRANCH CONNECTION CONFIGURATION.  
D° SCAN ALSO LIMITED TO WELD AND UPSTREAM BASE METAL DUE TO ELBOW TO BRANCH CONNECTION CONFIGURATION.

5 of 5

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillips C. Bueker DATE: April 24, 1995

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Lozga Mufson DATE: 4/25/95

**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 ACMTR 1B To Loop B Cold Leg. DRAWING NO.: 151M-938-2 SH 1

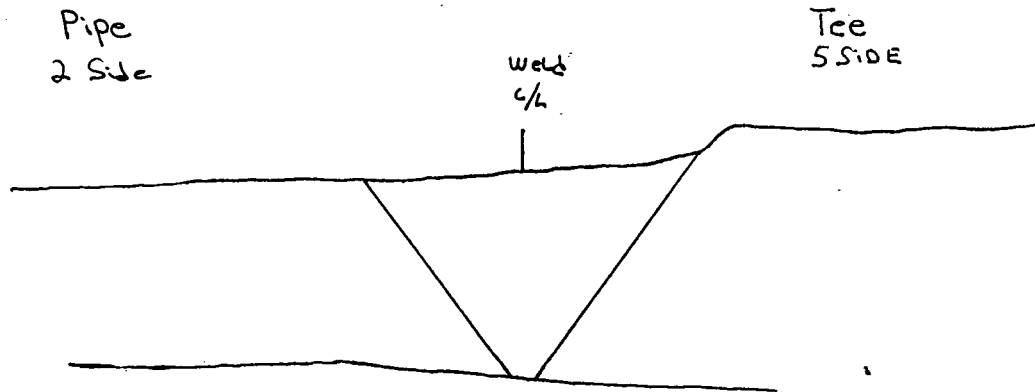
COMPONENT IDENTIFICATION: RHR-W188 PROCEDURE: QCP 911 REVISION: ORIG.

ULTRASONIC: X LIQUID PENETRANT:        MAGNETIC PARTICLE:        VISUAL:       

EXAMINER: N.A. Boy 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. J. A. Balstad DATE: 4/12/95  
AUTHORIZED NUCLEAR  
INSERVICE INSPECTOR REVIEW: Roger Johnson DATE: 4/12/95

**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 SHIF2

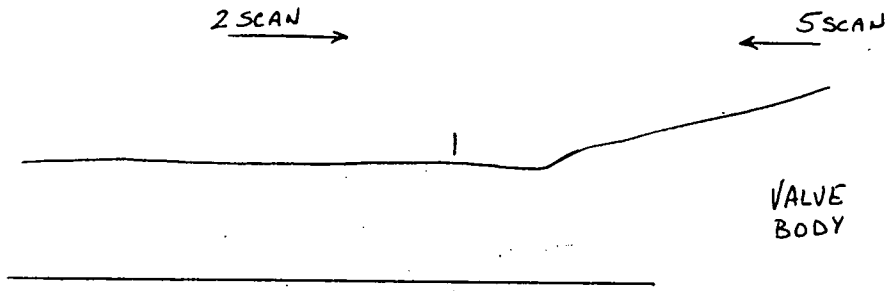
COMPONENT IDENTIFICATION: SI-W13 PROCEDURE: QCP-911 REVISION: ORIG

ULTRASONIC: X LIQUID PENETRANT:        MAGNETIC PARTICLE:        VISUAL:       

EXAMINER: N.A. Bey II DATE: 4-8-95  
LEVEL

EXAMINER: Jerry 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°S, 45°RL  
60°S & 0° PERCENTAGE OF REDUCED EXAMINATION  
COVERAGE : 62.5%

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Eric A. Balstad DATE: 4/12/95  
AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger M. J... DATE: 4/12/95

**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:       

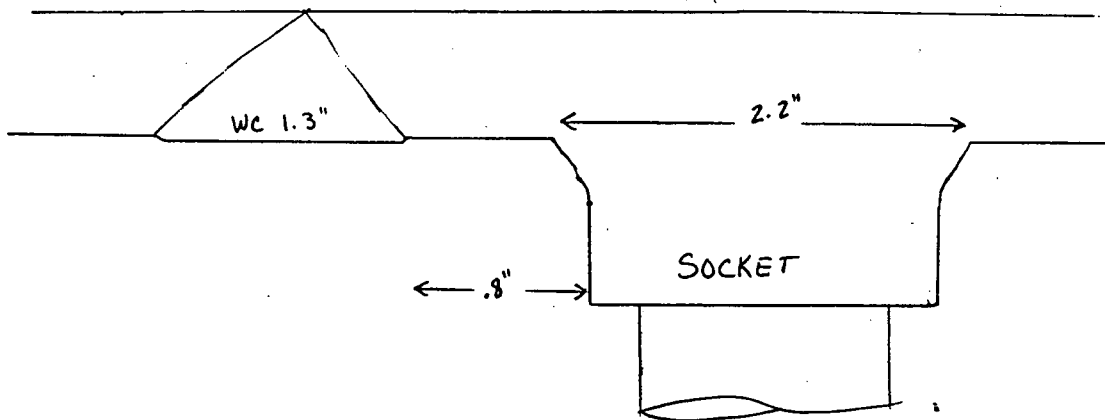
EXAMINER: N. A. Berg II DATE: 4-8-95  
LEVEL

EXAMINER: Greg P. W... II DATE: 4-8-95  
LEVEL

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

2 SIDE →

← 5 SIDE



SOCKET @ 8.3" TO 10.5" .8" FROM TOE OF WELD

LIMITED SCANS 5 FOR THE 45°, 45°RL & 60°s

PERCENTAGE OF REDUCED EXAMINATION COVERAGE = 93.5%

Pg 4 of 4

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Eric A. Balstad DATE: 4/12/95

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Loza Johnson DATE: 4/12/95



**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: Neil A. Boyf. 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



5,718 SCANS FOR  
Value body Limited 45° S, 60° S, 45° RL AND 0°  
Percentage of Reduced Examination Coverage = 62.5 %

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Eric A. Batstad DATE: 4/11/95

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Royce Johnson DATE: 4/12/95

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

SYSTEM OR COMPONENT: FW FROM ANCHORED ELL TO STM GEN IA DRAWING NO.: 151M-970

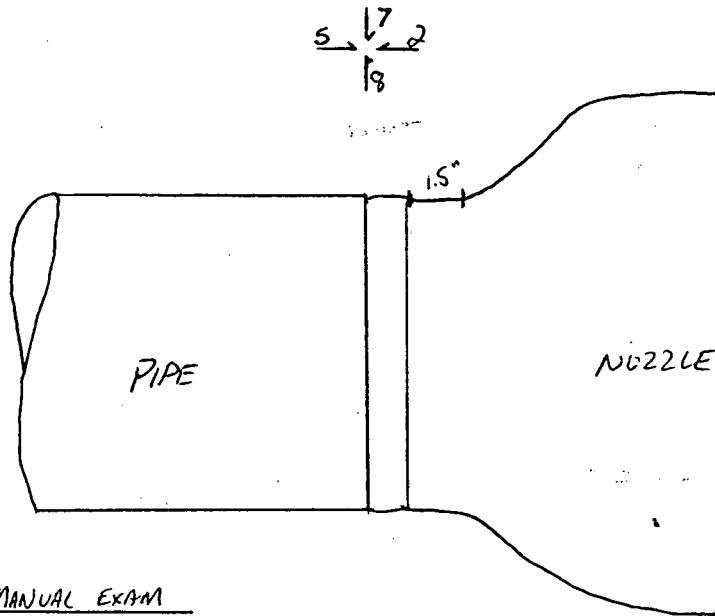
COMPONENT IDENTIFICATION: FW-W29 PROCEDURE: QCP-913 REVISION: 0R16

ULTRASONIC: X LIQUID PENETRANT:        MAGNETIC PARTICLE:        VISUAL:       

EXAMINER: Josh P. Bly II DATE: 4-6-95  
LEVEL

EXAMINER: Mehul / Mer II DATE: 4-6-95  
LEVEL

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



MANUAL EXAM

60° SHEAR SCAN AREA WAS LIMITED TO 1.5" DUE TO NOZZLE TAPER

60° SHEAR - 15% REDUCED EXAM. COVERAGE

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillips E. Bures DATE: April 26, 1995

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger M. Johnson DATE: 4/27/95

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

SYSTEM OR COMPONENT: FEED WATER FROM ANCHORED ELL TO STM GEN 1B DRAWING NO.: ISIM - 971

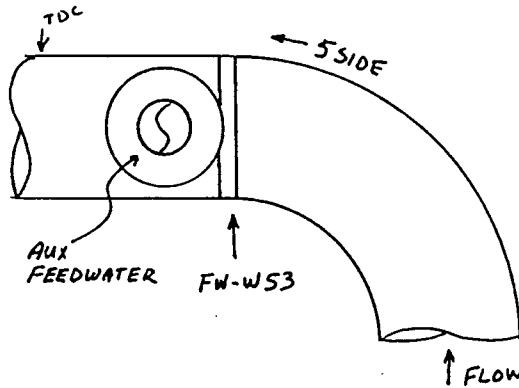
COMPONENT IDENTIFICATION: FW-W53 PROCEDURE: QCP-913 REVISION: ORIG

ULTRASONIC: X LIQUID PENETRANT:        MAGNETIC PARTICLE:        VISUAL:       

EXAMINER: Jerry P. Wm II DATE: 4-9-95  
LEVEL

EXAMINER: NDA. Bey II DATE: 4-9-95  
LEVEL

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



8" AUX. FEEDWATER SADDLE WELD LIMITED SCANS 2,7,8  
FOR THE 45°, 60°, 70° FROM 33" TO 44" FROM TDC.  
PERCENTAGE OF REDUCED EXAM COVERAGE; 89% EXAMINED  
11% NOT EXAMINED

Page 2 of 2

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillip E. Buker DATE: April 24, 1995

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger Johnson DATE: 4/25/95



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 PIPING Loop A DRAWING NO.: ISIM-1703

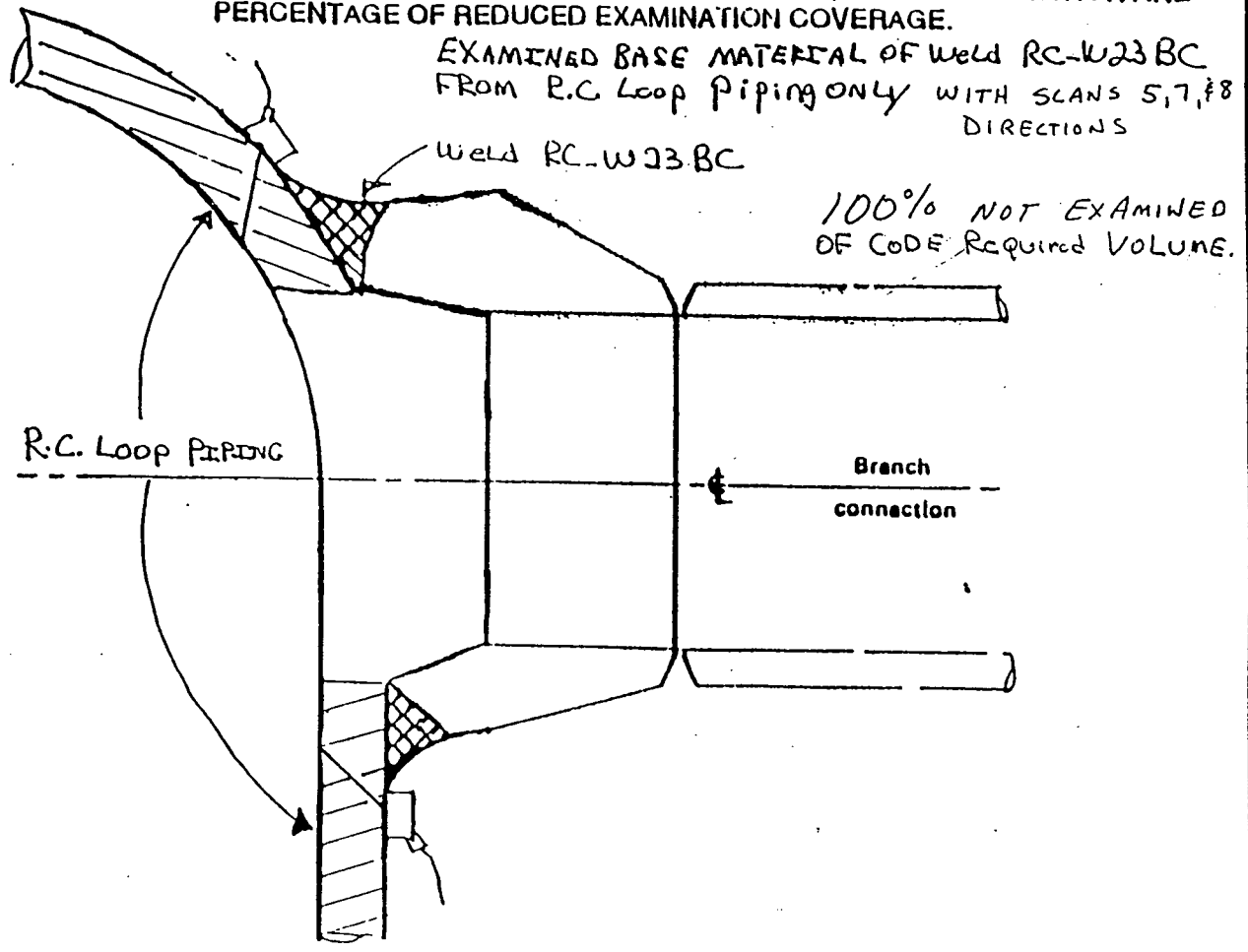
COMPONENT IDENTIFICATION: RC-W23BC PROCEDURE: QCP-908 REVISION: ORIG.

ULTRASONIC: X LIQUID PENETRANT:        MAGNETIC PARTICLE:        VISUAL:       

EXAMINER: N.A. Bell II DATE: 4-20-95  
LEVEL

EXAMINER: Greg P. Wm II DATE: 4-20-95  
LEVEL

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



KEWAUNEE NUCLEAR POWER PLANT REVIEW: Phillips C. Bures DATE: April 23, 1995  
AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Greg M... DATE: 4/24/95

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

SYSTEM OR COMPONENT: FW - FROM ANCHORED ELL TO STM GEN. 1B DRAWING NO.: ISIM-971

COMPONENT IDENTIFICATION: FW-W57 PROCEDURE: QCP 913 REVISION: ORIG

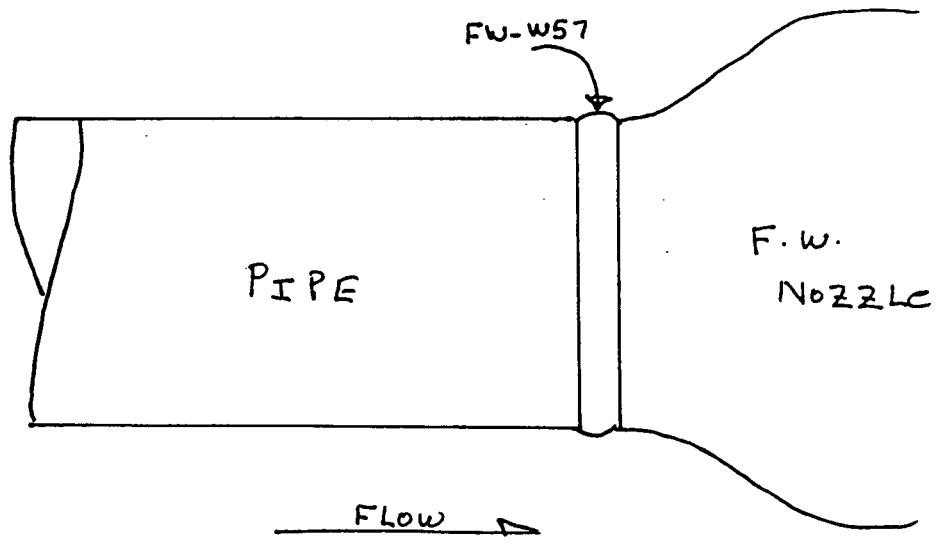
ULTRASONIC: X LIQUID PENETRANT:        MAGNETIC PARTICLE:        VISUAL:       

EXAMINER: N.A. Boy II DATE: 4-9-95  
LEVEL

EXAMINER: James P. White II DATE: 4-9-95  
LEVEL

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

8.8% OF REDUCED EXAM COVERAGE



NOZZLE CONFIGURATION LIMITED 2SCAN FOR 45°S AND 60°S.

KEWAUNEE NUCLEAR POWER PLANT REVIEW: Eino A. Balstad DATE: 4/25/95

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Roger Mykura DATE: 4/26/95

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

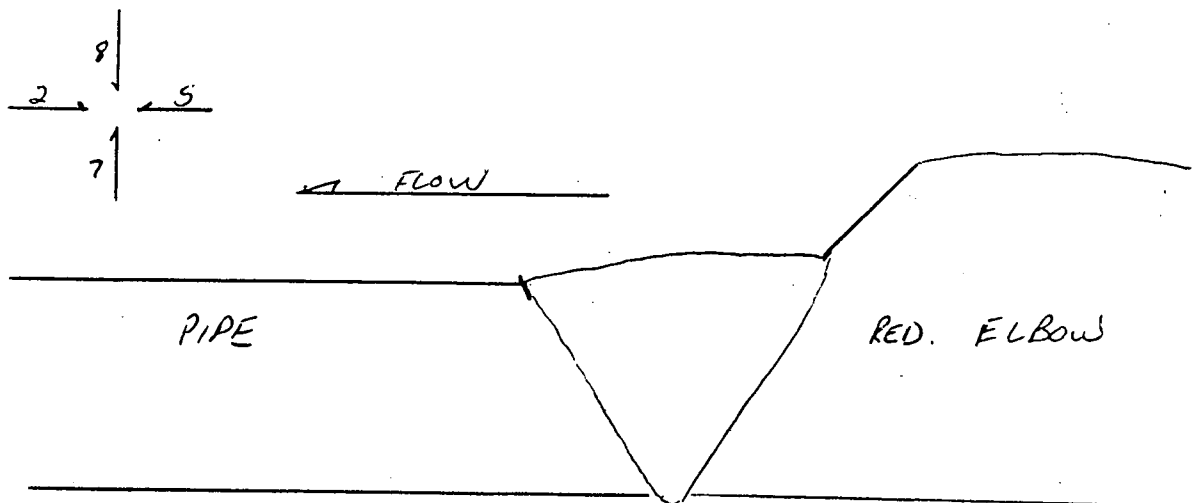
COMPONENT IDENTIFICATION: MS-W3 PROCEDURE: QCP-913 REVISION: ORIG

ULTRASONIC: X LIQUID PENETRANT:      MAGNETIC PARTICLE:      VISUAL:     

EXAMINER: Todd P. Blif II DATE: 4-18-95  
LEVEL

EXAMINER: David 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: Eino A. Balstad DATE: 4/19/95

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Logan Nyman DATE: 4/20/95

**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

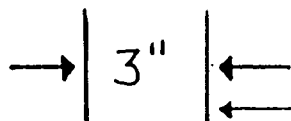
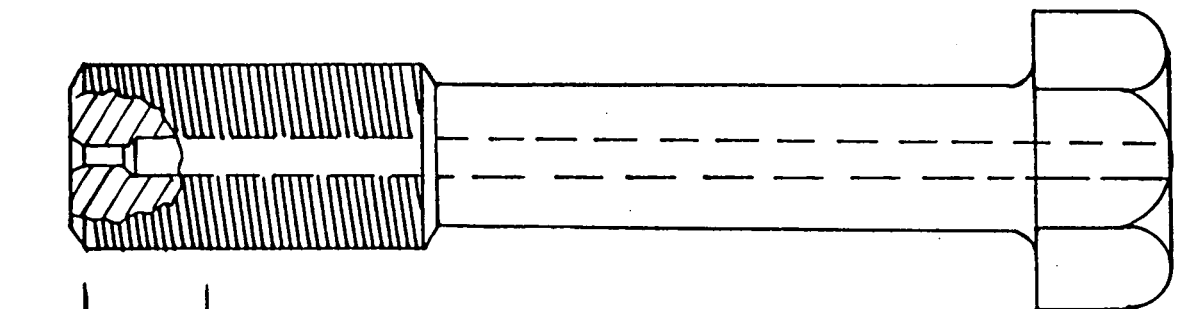
COMPONENT IDENTIFICATION: WPS-41 PROCEDURE: QCP-910 REVISION: ORIG

ULTRASONIC:  LIQUID PENETRANT:  MAGNETIC PARTICLE:  VISUAL:

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

EXAMINER: N.A. Boyd II DATE: 4-21-95  
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  
& 70° FORWARD EXAM

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

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

AUTHORIZED NUCLEAR INSERVICE INSPECTOR REVIEW: Ray Morgan DATE: 4/24/95