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 AUTH. NAME AUTHOR AFFILIATION  
 HINTZ, D.C. Wisconsin Public Service Corp.  
 RECIP. NAME RECIPIENT AFFILIATION  
 THOMPSON, H.L. Division of Licensing

SUBJECT: Forwards inservice insp summary rept per Article IWA-6230 of  
 Section XI of ASME Boiler & Pressure Vessel Code.

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**WISCONSIN PUBLIC SERVICE CORPORATION**

P.O. Box 700, Green Bay, Wisconsin 54305

July 9, 1985

Mr. H. L. Thompson Jr., Director  
Office of Nuclear Reactor Regulation  
Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Gentlemen:

Docket 50-305  
Operating License DPR-43  
Kewaunee Nuclear Power Plant  
ISI Summary Report

Reference: 1) Letter from C. W. Giesler to H. R. Denton dated March 30, 1984

Wisconsin Public Service Corporation has developed a second ten-year Inservice Inspection (ISI) plan which is being implemented at the Kewaunee Nuclear Power Plant in accordance with 10 CFR 50.55a. The plan was written to meet Section XI of the ASME Boiler and Pressure Vessel Code (1980 Edition including addenda through winter 1981) and was submitted to you with reference 1.

In accordance with Article IWA-6230 of the aforementioned ASME code, we hereby provide, as attachments to this letter, the inservice inspection summary report and the associated NIS-1 form for the recently completed inspections of the Kewaunee Nuclear Power Plant.

Very truly yours,

A handwritten signature in dark ink, appearing to read "D. C. Hintz".

D. C. Hintz  
Manager - Nuclear Power

DSN/js  
Attach.

cc - Mr. S. A. Varga, US NRC  
Mr. Robert Nelson, US NRC

8507160667 850709  
PDR ADDCK 05000305  
Q PDR

Handwritten initials "A" and "H" with the number "47" below them, possibly indicating a file number or date.

# FORM NIS-1 OWNERS' DATA REPORT FOR INSERVICE INSPECTIONS

As required by the Provisions of the ASME Code Rules

1. Owner Wisconsin Public Service Corp., P.O. Box 1200, Green Bay, Wisconsin 54305  
(Name and Address of Owner)
2. Plant Kewaunee, Route 1, P.O. Box 48, Kewaunee, Wisconsin 54216  
(Name and Address of Plant)
3. Plant Unit 1 4. Owner Certificate of Authorization (if required) N/A
5. Commercial Service Date 6-16-74 6. National Board Number for Unit N/A
7. Components Inspected

Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.	State or Province No.	National Board No.
Reactor Vessel	Combustion Engineering	69202	--	21010
Pressurizer	Westinghouse Tampa Div.	1151	--	68-23
St. Gen. A	Westinghouse Tampa Div.	1141	--	6928
St. Gen. B	Westinghouse Tampa Div.	1142	--	6929
R. C. Pump A	Westinghouse Cheswick Div.	RCPCPI-01	--	--
R. C. Pump B	Westinghouse Cheswick Div.	RCPCPI-02	--	--
R. C. Piping	S. W. Fabricating	--	--	--
Cl. 1&2 Piping	Phillips Getschow	--	--	--
R.V. Internals	W Pensacola Div.	RCRIUI & RCRIUI	--	Z202 & 8080833-7
RHR Ht.Ex. 1A	Joseph Oat & Sons	1817-1E	--	344
Charging Pump Surge Vessel 1A	Greer Products	6576	--	--
Volume Control Tank	Joseph Oat & Sons	1787-1C	--	376
Reactor Coolant Filter	AMF Cuno	CSFLRC-01-121	--	2616
Ex. Let. Hx. 1A	Sentry Equip.	3996-5E	--	364
Ex. Let. Hx. 1B	Sentry Equip.	3996-6E	--	365
S.W. Heat Ex.	Atlas Industrial	734	--	596

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8½ in. x 11 in., (2) information in items 1 through 6 on this data report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

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7. Components Inspected

Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.	State or Province No.	National Board No.
Letdown Ht.Ex.	Atlas Industrial	1206	--	1031

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8½ in. x 11 in., (2) information in items 1 through 6 on this data report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

## FORM NIS-1 (back)

CA TOMES 6-30-85

8. Examination Dates 2-14-85 to 4-6-85 9. Inspection Interval from 6-16-84 to 6-16-94
10. Abstract of Examinations. Include a list of examinations and a statement concerning status of work required for current interval. Reference Tab C
11. Abstract of Conditions Noted Reference Tab B and Tab F
12. Abstract of Corrective Measures Recommended and Taken Reference Tab B and Tab F

We certify that the statements made in this report are correct and the examinations and corrective measures taken conform to the rules of the ASME Code, Section XI.

Date JUNE 30 19 85 Signed Claw Steinhart By WISCONSIN PUBLIC SERVICE CORP.  
Owner

Certificate of Authorization No. (if applicable) N/A Expiration Date N/A

## CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of WISCONSIN and employed by HARTFORD STEAM BOILER of HARTFORD CT. have inspected the components described in this Owners' Data Report during the period 2-14-85 to 4-6-85, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owners' Data Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owners' Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date July 2 19 85

Roy Motzumi  
Inspector's Signature

Commissions NB 7741 Wis 38  
National Board, State, Province and No.

WISCONSIN PUBLIC SERVICE CORPORATION  
KEWAUNEE NUCLEAR POWER PLANT UNIT NO. 1  
1st Outage, 1st Period, 2nd Interval  
1985

INTRODUCTION

An Inservice Inspection was performed at the Kewaunee Nuclear Power Plant Unit No. 1 from February 13, 1985 thru April 6, 1985 by Westinghouse Electric Corporation Nuclear Services Integration Division, Inspection Services.

Examinations were performed to the requirements of the 1980 Edition Section XI of the ASME Boiler and Pressure Vessel Code up to and including Winter 1981 Addenda and Westinghouse position on USNRC Regulatory Guide 1.150.

The Examination Program Plan located under Tab C was prepared by Kewaunee Nuclear Power Plant Unit No. 1 for the 1st Outage, 1st Period, 2nd Interval as identified in the 2nd Ten Year Plan (1984-1994).

The following items were examined (Reference Tab C):

1. Reactor Vessel
2. Reactor Vessel Upper and Lower Internals
3. Pressurizer
4. Steam Generators A and B
5. Excess Letdown Heat Exchangers 1A & 1B
6. Class 1 & Class 2 Piping, Valves and Supports
7. Reactor Coolant Pumps A & B
8. Residual Heat Exchanger 1A
9. Letdown Heat Exchanger
10. Charging Pump Surge Vessel APCH-1A
11. Seal Water Heat Exchanger
12. Volume Control Tank
13. Reactor Coolant Filter
14. Class 1 System Leakage Test (Performed in conjunction with 1st Ten Year System Hydrostatic Test).

The examinations were performed in accordance with an approved Examination Program Plan located under Tab C of the Final Report.

Examination procedures were approved prior to the start of examinations and certification documents relative to personnel, equipment and materials were reviewed and determined to be satisfactory.

Witnessing and surveillance of the examinations and related activities were conducted by personnel from: Hartford Steam Boiler Inspection and Insurance Company; Nuclear Regulatory Commission and Wisconsin Public Service Corporation Quality Assurance Department.

### BALANCE OF PLANT EXAMINATIONS

#### RESULTS

Examinations resulted in the following recordable indications being noted on the basis of procedure recording criteria, which generally are more critical than specified ASME Section XI Acceptance Standards.

1. Ten (10) recordable indications were noted by surface examination methods and dispositioned by Kewaunee Nuclear Power Plant Personnel as follows:
  - (A) Five (5) indications were repaired, re-examined and found to be acceptable.
  - (B) Four (4) indications were accepted by ASME Section XI Standards.
  - (C) One (1) indication was repaired and will be monitored during the next refueling outage.
2. Thirty seven (37) indications were noted by visual examination methods on supports and Hangers and dispositioned by Kewaunee Nuclear Power Plant Personnel. When repairs were involved the Support or Hanger was re-examined for acceptance.
3. Thirty two (32) indications were noted by visual examination methods during the Class 1 System Leakage Test and dispositioned by Kewaunee Nuclear Power Plant Personnel.
4. Four (4) indications were noted by visual examination methods on valve bolting or interior and dispositioned by Kewaunee Nuclear Power Plant Personnel. When repairs were involved the valves were re-examined for acceptance,

Specific Data relative to the above indications and their dispositions are located under Tab F of the Final Report.

REACTOR VESSEL ULTRASONIC EXAMINATIONS

EXAMINATIONS

Examinations of the Kewaunee Unit 1 reactor vessel were conducted to interrogate as much of the required examination volumes as was practical, within geometric, metallurgical, and physical limitations. Procedures applied during these examinations specified:

- a. Examinations of the vessel flange-to-upper shell circumferential weld were performed from the flange seal surface. Beam angles for these examinations were selected to provide near-normal incidence to the plane of the weld and to provide coverage of the weld and adjacent based material on the flange and shell side for a distance equal to one-half the weld thickness. Indications detected within the inner 25% of the vessel through-wall thickness measured from the inner surface which equaled or exceeded 20% of the distance-amplitude-curve and were interpreted to be valid were recorded. Indications detected in the outer 75% of vessel through-wall which equaled or exceeded 50% of the distance-amplitude-curve and were interpreted to be valid were recorded.
- b. Examinations of nozzle-to-shell welds were performed from the nozzle bores. Beam angles for these examinations were selected to provide near-normal incidence to the plane of the weld and to provide coverage of the nozzle, weld, and adjacent base material on the shell side for a distance equal to one-half the weld thickness. Nozzle inner radius examinations were conducted remotely from the nozzle bores.
- c. Examinations of nozzle-to-safe end welds and adjacent base material for a distance of the weld thickness on both sides of the welds were examined using straight beam and four directional angle beam interrogation. Indications which equaled or exceeded 50% of the distance-amplitude-curve and were interpreted to be valid were recorded.



- d. Examinations of the vessel flange ligaments were conducted from the top of the flange using a straight beam. Indications which equaled or exceeded 50% of the distance-amplitude-curve and were interpreted to be valid were recorded.

All indications were identified as valid or not valid and are traceable by an indication numbering system to the data printout. Valid indications having peak amplitudes less than the appropriate interpretation and investigation level needed only have their peak amplitude noted.

### RESULTS

Ultrasonic examinations of the Kewaunee Unit 1 reactor vessel resulted in 1 recordable indication. This indication was evaluated in accordance with ASME Section XI 1980 Edition including Winter 1981 Addenda, and was found to be within the allowable limits specified therein.

The remote immersion examination detected numerous non-valid indications which were investigated and interpreted as being the result of redirected sound energy, component geometry, and other innocuous sources.

Examination data for each weld is included in Tab I, of the final report.