

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

MAR 8 1977

Wisconsin Public Service Corporation
ATTN: Mr. E. W. James
Senior Vice President
Power Generation and
Engineering

Docket No. 50-305

P. O. Box 1200
Greer Bay, WI 54305

Gentlemen:

This refers to the inspection conducted by Mr. W. J. Key of this office on February 15-18, 1977, of activities at the Kewaunee Nuclear Power Plant authorized by NRC Operating License No. DPR-42 and to the discussion of our findings with Mr. C. Luoma and other members of your staff at the conclusion of the inspection.

The enclosed copy of our inspection report identifies areas examined during the inspection. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations, and interviews with personnel.

No items of noncompliance with NRC requirements were identified during the course of this inspection.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room, except as follows. If this report contains information that you or your contractors believe to be proprietary, you must apply in writing to this office, within twenty days of your receipt of this letter, to withhold such information from public disclosure. The application must include a full statement of the reasons for which the information is considered proprietary, and should be prepared so that proprietary information identified in the application is contained in an enclosure to the application.



Wisconsin Public
Service Corporation

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We will gladly discuss any questions you have concerning this inspection.

Sincerely,

R. F. Heishman, Chief
Reactor Construction and
Engineering Support Branch

Enclosure: IE Inspection
Rpt No. 050-305/77-03

cc w/encl:
Mr. C. Luoma, Plant
Superintendent
Central Files
Reproduction Unit NRC 20b
PDR
Local PDR
NSIC
TIC

OFFICE>	RIII	RIII	RIII	RIII	
SURNAME>	Key/ls	Jordan	Heishman	Hunter	
DATE>	3/4/77				

UNITED STATES NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report of Construction Inspection

IE Inspection Report No. 050-305/77-03

Licensee: Wisconsin Public Service Corporation
P. O. Box 1200
Green Bay, WI 54305


Kewaunee Nuclear Power Plant
Kewaunee, WI

License No. DPR-43
Category: C

Type of Licensee: PWR W 1560 MWT

Type of Inspection: Routine, Announced Inservice


Dates of Inspection: February 15-18, 1977

Principal Inspector: 
W. J. Key

3/4/77
(Date)

Accompanying Inspectors: None

Other Accompanying Personnel: None

Reviewed By: 
E. L. Jordan, Chief
Engineering Support Section

3/8/77
(Date)

SUMMARY OF FINDINGS

Inspection Summary

Inspection on February 15-18, 1977, (77-03): Reviewed Inservice inspection plan for the second refueling outage, examined certification records of equipment and personnel qualifications. Confirmed certification of calibration blocks for Ultrasonic inspection, certification of liquid penetrant materials, witnessed calibration of instruments, and liquid penetrant examination. Reviewed procedures approved by licensee for performance of inservice examinations.

Enforcement Items

None.

Licensee Action on Previously Identified Enforcement Items

Not applicable.

Other Significant Items

A. Systems and Components

No repairs to equipment were necessary as a result of the volumetric examination. One surface indication was identified by the liquid penetrant examination of the reactor vessel nozzle to safe end. The indication was ground out, reexamined, and found to be clear.

B. Facility Items (Plans and Procedures)

None.

C. Managerial Items

None.

D. Deviations

None.

E. Status of Previously Reported Unresolved Items

Not applicable.

Management Interview

- A. The following personnel attended the management interview.

Wisconsin Public Service Corporation (WPS)

C. R. Luoma, Plant Superintendent
R. W. Lange, Assistant Plant Superintendent
J. S. Richmond, Technical Supervisor
C. R. Steinhardt, Reactor Supervisor

- B. Matters discussed and comments, on the part of management personnel were as follows:

1. The inspector stated that his review of Kewaunee inservice program and procedures indicated no conflict with NRC requirements. The licensee had no comment.
2. The inspector stated that his observation of examination activities indicated that work was being performed in accordance with approved procedures. The licensee had no comment.
3. The inspector stated that since this refueling outage completed the first 3 1/3 year requirements, a new inservice inspection plan and procedures would be needed to meet the requirements of ASME Section XI 1974. The licensee stated, that he was aware of the new requirements and would have his new program and procedures by the next refueling outage.

REPORT DETAILS

Persons Contacted

The following personnel in addition to those listed under the Management Interview section of this report, were contacted during the inspection:

Wisconsin Public Service Corporation (WPS)

J. Ruege, Plant Performance Engineer
D. Ristau, Training Supervisor
D. Berg, Document Control and Storage Coordinator

Westinghouse (W)

E. Manning, Senior Engineer
J. Stepek, Level II Inspector Lead Engineer

Fluor Pioneer Incorporated (Pioneer)

K. N. Becker, Nondestructive Examination Specialist

1. Inspection Program

The inspector reviewed the inspection program for the Level II refueling outage to meet the requirements of SIS-261 for the first 3 1/3 year period. During this outage the following reactor vessel areas were examined in accordance with the requirements of plant Technical Specifications, Section 4.2 and 1971 Edition of Section XI of ASME B&P.V.C including the 1971 summer and winter addenda, to the extent practical due to limitations of component configuration and accessibility.

- a. Flange to Vessel Weld
- b. Nozzle to Vessel Weld Loop "A" Outlet
- c. Nozzle to Safe End Weld Loop "A" Outlet
- d. Nozzle to Safe End Weld SIS No. 48
- e. Vessel Flange Ligaments

The inspector witnessed the liquid penetrant examination of both outlet nozzle welds and the SIS nozzle weld; also witnessed the calibration of the ultrasonic instrument used to perform volumetric examination of the above.

2. Procedure Review

The inspector reviewed the following Westinghouse inservice inspection procedures which were verified to have been reviewed and approved for use during this refueling outage:

- a. ISI-5, Revision 13, dated April 9, 1976, Manual Ultrasonic Examination of Circumferential and Longitudinal Butt Welds
- b. ISI-8, Revision 7, dated April 12, 1976, Visual Examination Procedure
- c. ISI-11, Revision 9, dated May 8, 1976, Liquid Penetrant Procedure
- d. ISI-152, Revision 2, dated September 22, 1976, Operating Procedure for the Inservice Inspection of Reactor Vessel Using the Westinghouse Inspection Tool.

No discrepancies were noted.

3. Inspection of Flange to Vessel Weld Using The (W) Number 2 Remotely Operated Tool

- a. The following (W) calibration data sheets and instrument calibration records which were used to calibrate the inspection tool were reviewed and determined to be acceptable:
 - (1) WMF-Insp-301-01, Preparation and Operation of the Inservice Inspection Tool No. 2.
 - (2) WMF-Insp-301-1E1, Revision 0, Reactor Vessel Remotely Operated Inspection Tool In-house Calibration.
 - (3) ISI-152, Revision 2, Ultrasonic Examination of Reactor Vessel Utilizing Remotely Operated Equipment.
- b. The inspector determined that the following Location and Search Units were used with remotely operated equipment.

No discrepancies were identified.

- (1) Outlet nozzle to shell weld and nozzle protrusion. Search Units TR5, TR6, TR7, and TR8.
- (2) Outlet nozzle safe ends. Search Units TR0, TR1, TR2, TR3 and TR4.
- (3) Flange to shell. Search Units TR0, TR9, TR10, and TR11
- (4) Flange Ligaments, TR0.

4. Inspection Results Using Remotely Operated Tool

There were no reportable indications during inspection of the nozzle to vessel weld outlet nozzle "A" leg nozzle protrusion. The nozzle protrusion computer scan was not performed, due to lack of proper clearance with Y-axis of the tool. Since tool transducer plate could not be retracted in order to scan protrusion area with transducers TR7 and TR8, the nozzle to vessel scan TR5 was left on and covered part of this area. The stud hole areas examined were changed from the original (No. 3 to No. 15 and No. 23 to No. 27), to No. 4 to No. 14 and No. 23 to No. 29. There were no reportable indications during examination of the safe end weld outlet nozzle "A" leg.

The flange to vessel segment areas were changed from the original areas of 15.0° - 105° and 165° - 195° to 22.5° - 97.5° and 165° - 210° there were no reportable indications.

5. Equipment Certifications

A certificate of compliance from Automation Industries Incorporated, Sperry Division on the following instruments used for UT inspection of the vessel were reviewed and determined acceptable:

UM-771, Reflectoscope, S/N 1965-1 and 1900-1
 2.25N, Pulser/Receiver, S/N 66 and 84
 Channel Selector, SN/27
 Timer, D S/N 44 and 64
 H Gates, S/N 37, 36, 44, 69, 48, and 30
 Dac Units, S/N 78, 82, 69, 81, 80, and 67
 RM Chassis, S/N 27, 21, 22, 25, and 29
 TUC, S/N 2.06
 Z Chassis, S/N 37, 32, 52, 43, and 53

6. Liquid Penetrant and Ultrasonic Examination Results

Liquid penetrant examination was performed on Loop "A" inlet and outlet nozzle to safe end butt welds and on 4" SIS low head line No. 48. One small surface indication was noted and ground out, no indication was noted on reexamination. There were no reportable indications noted during ultrasonic examination.

7. Material Certifications

Certifications on the following materials used during this examination were reviewed and determined acceptable.

a. Liquid Penetrant Materials

Spotcheck Cleaner, SKC-S, Batch No. 5B021
Spotcheck Penetrant, SKL-HF/SKL-S, Batch No. 5C057
Spotcheck Developer, SKD-S, Batch No. 3E028

b. Ultrasonic Couplant

Ultragel, II, Batch No. 3176

c. Calibration Standards (UT)

Nozzle Standard, S/N, B2836
Pipe Standard, S/N, 2P3278

8. Qualifications and Certifications for ISI

The inspector verified that the following personnel who were involved in this inservice inspection were qualified to SNT-TC-1A and Section III, ASME, B&PV Code requirements.

Westinghouse (W)

J. J. Stepek,
M. A. Bolligmo,
P. E. Bukes,

Conam Inspection Division (Conam)

R. Stanford,
R. Barnes,