UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

TELEPHONE
(312) 858-2660

A. RO Inspection Report No. 050-305/73-09

Transmittal Date : June 11, 1973

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UNITED STATES
ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

TELEPHONE
(312) 858-2660

June 11, 1973

Wisconsin Public Service Corporation
ATTN: Mr. E. W. James, Senior Vice President
Power Generation and Engineering
P. O. Box 1200
Green Bay, Wisconsin 54305

Docket No. 50-305

Gentlemen:

This refers to the inspection conducted by Mr. Feierabend of this office on May 14 - 16, 1973, of your activities at the Kewaunee Nuclear Power Plant authorized by AEC Construction Permit No. CPPR-50, and to the discussions with Mr. Giesler and other representatives on May 16, 1973.

Areas examined during this inspection included preoperational testing status of previously identified unresolved items and fuel handling operations. Within these areas, the inspection consisted of selective examination of procedures and representative records, interviews with plant personnel and observations by the inspector.

No violations of AEC requirements were identified within the areas examined during this inspection.

A copy of our report of this inspection is enclosed. In accordance with Section 2.790 of the AEC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter with the enclosed inspection report will be placed in the AEC's Public Document Room. If the inspection report contains information which you or your contractors believe to be proprietary, it is necessary that you submit a written application to this office, within 20 days of the date of this letter, requesting that such information be withheld from public disclosure. If such an application is submitted, it must identify the basis for which information is claimed to be proprietary and should be prepared so that proprietary information identified is contained in a separate part of the document since the application, excluding this separate part, will also be placed in the Public Document Room. If we do not receive an application to withhold information, or are not otherwise contacted within the specified time period, the enclosed report will be placed in the Public Document Room with a copy of this letter.

Unless you wish to make application to withhold information, no reply to this letter is necessary; however, should you have any questions concerning this inspection, we will be glad to discuss them with you.

Sincerely yours,

Boyce H. Grier
Regional Director

Enclosure:
RO Inspection Rpt No. 050-305/73-09

cc: C. W. Giesler, Superintendent
Nuclear Power - w/o encl

bcc: RO Chief, FS&EB
RO:HQ (4)
Licensing (4)
DR Central Files
Regions I & II
PDR
Local PDR
NSIC
DTIE
OGC, Beth, P-506A
R. Renfrow, GC (2)

U. S. ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS

REGION III

RO Inspection Report No. 050-305/73-09

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

Kewaunee Nuclear Power Plant
Kewaunee, Wisconsin

License No. CPPR-50
Category: B

Type of Licensee: PWR 560 Mwe (W)

Type of Inspection: Routine, Announced

Dates of Inspection: May 14 - 16, 1973

Date of Previous Inspection: May 13, 1973

Principal Inspector: for D M Hunnicutt C. D. Feierabend — 6/8/73 (Date)

Accompanying Inspectors: None

Other Accompanying Personnel: None

Reviewed By: D M Hunnicutt D. M. Hunnicutt, Chief
Reactor Testing and Startup Branch — 6/8/73 (Date)

SUMMARY OF FINDINGS

Enforcement Action: None

Licensee Action on Previously Identified Enforcement Matters: None

Unusual Occurrences

One of the holdup tanks in the reactor coolant volume control system was damaged during draining operations following completion of a hydrostatic test.

Other Significant Findings

A. Current Findings

Initial shipments of reactor fuel have been received and placed in the new fuel storage racks. (Paragraph 5)

B. Unresolved Items: None

C. Status of Previously Reported Unresolved Items

1. Review of Operating Logs by Supervisory Personnel (RO Inspection Report No. 050-305/73-02)

The licensee has issued an administrative control directive (ACD) outlining requirements for daily review of logs by operations and technical staff supervisory personnel. This item is considered resolved.

2. Failure of Instrument Air Header (RO Inspection Report No. 050-305/73-02)

Licensee and vendor personnel have investigated overheating of the instrument air header and determined that the cause of the failure was malfunction of the instrument air dryer. This item remains unresolved pending resolution of the problem.

3. Failure of Service Water Pumps to Start on Loss of Pressure (RO Inspection Report No. 050-305/73-02)

The inspector was informed that the cause of failure was a defective control switch which has been replaced. Switches will be replaced on all service water pumps. This item remains unresolved pending satisfactory tests after completion of switch replacement.

4. Maintenance of Hold Card Log
(RO Inspection Report No. 050-305/73-02)

Supervisory personnel have inventoried the hold card log and reconciled the log with the cards. The licensee is preparing an ACD for tagging procedures. This item remains unresolved pending implementation of the ACD.

Management Interview

An informal discussion was held with Mr. Giesler during the inspection and a management interview was conducted with Messrs. Luoma, Richmond, and Steinhardt at the conclusion of the inspection on May 16, 1973.

The inspector described the scope and results of the inspection which included observation of fuel handling activities, discussion of the reactor containment leak rate test and portions of tests associated with the reactor coolant hydrostatic test.

The inspector stated that he had been informed of some damage to one of the holdup tanks following hydrostatic testing of the tank. The licensee stated that Westinghouse had initiated actions to repair the damage and that the occurrence would be reported in accordance with 10 CFR 50.55e.

REPORT DETAILS

1. Persons Contacted

Wisconsin Public Service Corporation (WPS)

C. Giesler, Superintendent, Nuclear Power
C. Luoma, Plant Superintendent
W. White, Test Director
M. Stern, Startup Group Test Engineer
D. Hinz, Startup Group Test Engineer
J. Richmond, Plant Test Coordinator
C. Steinhardt, Reactor Supervisor
G. Kingston, Shift Supervisor

Nuclear Services Corporation (NSC)

W. Rowley, Manual and Procedures Coordinator
C. Whitworth, Planning and Scheduling Engineer

Westinghouse Electric Corporation (W)

D. Cathcart, Senior Surveillance Engineer

2. General

Hydrostatic testing of the reactor coolant system has been successfully completed. Preoperational testing was continuing. Local leak rate testing of reactor containment penetrations were in progress, in preparation for initial integrated leak rate test of the containment.

3. Preoperational Testing

The inspector reviewed portions of test records for filling and venting of the reactor coolant system and initial operation of the reactor coolant pumps. The tests were not complete at the time of review. Testing of one of the reactor coolant pumps had been suspended due to excessive vibration. A W representative was scheduled to arrive onsite to perform final onsite balancing.

4. Containment Leak Rate Test

The inspector discussed preparations for the integrated containment leak rate test with the test engineer. Local leak rate testing was approximately 70% complete with no major deficiencies identified. The

inspector was informed that the test sequence will be in accordance with ANSI N45.4-1972. Current schedules indicate that the test may be completed early in June.

5. Fuel Handling

The first shipment of reactor fuel was received onsite on May 10, 1973. The inspector observed plant personnel performing fuel handling operations, including unloading, inspecting and placing new fuel in storage locations. The operations were performed in accordance with written procedures. Receipt and inspection records were completed as the operations were performed and verified.

The inspection included radiation surveys, verification of shipping seals, visual examination of the container and shock overload indicators for evidence of shock or rough handling and visual inspection of the fuel assemblies and inserts. No significant deficiencies were observed.

The inspector discussed the fuel handling operations with the cognizant engineers and supervisory personnel. This included discussion of the scope of fuel inspection, areas where technique may be improved and provisions for protecting the fuel during storage.

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A. RO Inspection Report No. 050-305/73-08

Transmittal Date : June 15, 1973

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DIRECTORATE OF REGULATORY OPERATIONS
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

TELEPHONE
(312) 858-2660

June 15, 1973

Wisconsin Public Service Corporation
ATTN: Mr. E. W. James, Senior Vice President
Power Generation and Engineering
P. O. Box 1200
Green Bay, Wisconsin 54305

Docket No. 50-305

Gentlemen:

This refers to the inspection by Mr. Williams of this office on May 14-16, 1973, of construction activities at the Kewaunee site authorized by AEC Construction Permit No. CPPR-50 and to the discussion of our findings at at the conclusion of the inspection with Messrs. Mathews, Luoma, and Fitzpatrick of your staff.

The area examined during the inspection is identified in the attached report. Within this area, the inspection consisted of selective examination of procedures and representative records, interviews with plant personnel, and observations by the inspector.

No violations of AEC requirements were identified within the area examined during the inspection.

A copy of our report of this inspection is enclosed and, in accordance with Section 2.790 of the AEC'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 AEC's Public Document Room. If the enclosed inspection report contains information which you or your contractors believe to be proprietary, it is necessary that you submit a written application to this office, within 20 days of the date of this letter, requesting that such information be withheld from public disclosure. If such an application is submitted, it must identify the basis for which information is claimed to be proprietary and should be prepared so that proprietary information identified is contained in a separate part of the document, since the application, excluding this separate part, will also be placed in the Public Document Room. If we do not receive an application to withhold information, or are not otherwise contacted

within the specified time period, the enclosed report will be placed in the Public Document Room with a copy of this letter.

Unless you wish to make application to withhold information, no reply to this letter is necessary; however, should you have questions concerning this inspection, we will be glad to discuss them with you.

Sincerely yours,

Boyce H. Grier
Regional Director

Enclosure:
RO Inspection Rpt No. 050-305/73-08

bcc: RO Chief, FS&EB
RO:HQ (4)
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NSIC
DTIE
OGC, Beth, P-506A
R. Renfrow, GC (2)

U. S. ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS

REGION III

Report of Construction Inspection

RO Inspection Report No. 050-305/73-08

Licensee: Wisconsin Public Service Co.
P. O. Box 1200
Green Bay, Wisconsin

Kewaunee Nuclear Power Plant
Kewaunee, Wisconsin

License No. CPPR-50
Category: B

Type of Licensee: PWR (W) -560 Mwe

Type of Inspection: Special, Announced

Date of Inspection: May 14-16, 1973

Date of Previous Inspection: April 30 - May 3, 1973

Principal Inspector: C. C. Williams D W Hayes for 6/14/73 (Date)

Accompanying Inspector: None

Other Accompanying Personnel: None

Reviewed By: D. W. Hayes, Senior Project Inspector (Acting) D W Hayes 6/14/73 (Date)
Reactor Construction Branch

SUMMARY OF FINDINGS

Enforcement Action

A. Violations

No violations of AEC requirements were identified.

B. Safety Matters

No immediate safety items were encountered during this inspection.

Licensee Action on Previously Identified Enforcement Matters

No previously identified enforcement matters were reviewed. (Special inspection)

Design Changes

No design changes were identified.

Unusual Occurrences

No unusual occurrences were identified.

Other Significant Findings

A. Current Findings

The initial cold hydrostatic test of the reactor coolant system and associated high pressure piping was successfully completed on May 16, 1973. A test pressure of 3107 psig was maintained on the system for 30 minutes. The code inspector verified the test over pressure value and conducted his inspection at 2485 psig (normal operating pressure). All applicable code and AEC requirements were met for the test. (Paragraphs 1, 2, 3 and 4)

B. Unresolved Items

No unresolved matters were identified during this inspection.

C. Status of Previously Reported Unresolved Matters

No previously reported unresolved matters were reviewed.

Management Interview

A. The following personnel attended the management interview at the conclusion of the inspection.

Wisconsin Public Service Corporation (WPS)

E. R. Mathews, Assistant Vice President Power Generation and Engineering
C. R. Luoma, Plant Superintendent
G. V. Fitzpatrick, Quality Control Supervisor

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

1. The inspector stated that review of procedures for the hydrostatic test indicated a substantial amount of organization and detailed instruction. However, on Monday, May 14, 1973, observation of the conduct of the test and interviews with WPS construction and operations personnel indicated an unacceptable amount of confusion, misdirection and lack of control on the part of management. Furthermore the test control center (plant control room) was conjested with personnel apparently not directly involved with the test. The inspector related that after he identified his concern in regard to this situation, immediate corrective action was taken and adequate control of the test was re-established and the test control center was cleared of personnel not involved with the test.

   The licensee's representative stated that the responsibility for the control of the test had been assigned to a well qualified test director and that the conditions noted by the inspector occurred while he was off duty (after several very long periods of work). Although the director had delegated certain responsibilities to his relief personnel, they did not have autonomous authority for the conduct of the test and were instructed to call him (test director) if major changes or events became apparent. This situation may have contributed to the conditions observed by the inspector. In addition the licensee's representative stated that they will examine their procedures to eliminate the potential of reoccurrence of this type of situation during future test operations.

2. The inspector stated that review of the QC documentation prior to implementation of the test indicated that several potentially compromising errors were manifest in transcribing test instrument identification data. Although this condition was adequately resolved prior to the test, it indicates a need for increased emphasis on accuracy of data acquisition and QC surveillance.

   The licensee's representative acknowledged this observation, and indicated that corrective action would be taken.

REPORT DETAILS

Persons Contacted

The following persons, in addition to individuals listed under the Management Interview Section of this report, were contacted during the inspection.

Wisconsin Public Service Corporation (WPS)

M. E. Stearn, Test Director (Engineer)
R. O. Ramsett, Plant Quality Engineer
Wally White, Engineer

Phillips-Getschow Company (P-G)

John M. Steidl, QC Supervisor
K. Burd, QC Inspector

Pioneer Service and Engineering Company (PS&E)

Francis Fanello, QC Engineer
O. M. Hockensmith, Field Engineer
F. Mutter, Field Engineer
V. Gross, QC Engineer

Westinghouse Electric Corporation (W)

R. W. Schulz, Site Manager
C. D. Cowfer, Senior Engineer (NDT)

Nuclear Service Company (NSC)

J. H. Bernard, Preoperations Engineer

Hartford Insurance Co. (HD)

F. F. Roose, Code Inspector

Lumberman Insurance Co. (LI)

W. C. Cullen, Code Inspector

Results of Inspection

1. On May 15, 1973, at approximately 4:00 a.m., hydrostatic test of the reactor coolant system and associated high pressure auxiliary piping

systems for Kewaunee Unit 1, verified the mechanical integrity of the systems within the defined code boundaries. A hydrostatic test pressure of 3107 psig was maintained for 30 minutes. The code inspector verified the hydrostatic pressure of 3107 psig and then conducted his inspection at 2485 psig. The licensee's QC inspection personnel also conducted their inspection at this time.

The piping was inspected, using the requirements of ASA B31.1 for power piping, plus addenda and nuclear code cases as prescribed in AEC 10 CFR Part 50.55 (a). The Hydrostatic test pressures were observed by the inspector and recorded on video tape by the licensee. The completed and signed test procedures, test records and the calibration data for the pressure, temperature and recording devices were reviewed and found to conform to the appropriate requirements.

2. Procedures and Test Records Examined (WPS)

The following documents were reviewed:

a. "Primary System Cold Hydrostatic Test - Reactor Coolant System" No. PT-RC-02 and Addenda.

b. "Primary System Filling and Venting - Reactor Coolant System" No. PT-RC-01 and Addenda.

c. Field Hydrostatic Test Procedures No. NSS-01 - (Residual Heat Removal System Test No. AC-1.) AC-1

d. Test instrumentation data sheets, page 96 of procedure No. PT-RC-01.

e. Test instrument data sheet, page 84 of procedure No. PT-RC-02.

f. System temperature charts.

g. System pressure charts.

h. Log of NSS component temperatures.

i. Calibration records for the 5000 psig Heise Pressure Gauge.

j. Phillips-Getschow Company QC inspectors identification list.

k. Pioneer Services and Engineering Company inspection personnel identification list.

l. Value lineup and status of test prerequisite log for each test procedure.

m. Shift operators log #3.

n. The WPS Reactor Coolant System Hydrostatic Test organization chart.

o. The hydrostatic test data sheet documenting that a satisfactory test occurred, at 3107 psig and 2485 psig. This data sheet was signed and verified by the authorized code inspector on May 16, 1973.

p. The hydrostatic test data sheet reporting that a satisfactory test of the residual heat removal system had occurred on May 15, 1973. A system pressure of 910 psig was maintained for 40 minutes. The above was verified and signed off by the authorized code inspector and the PS&E representative.

q. Water chemistry records were reviewed and conformed to the requirements of the test procedure and addenda.

3. Piping Inspection Records

Three piping inspection teams were used. Each team was made up of a Code Inspector, two (2) PS&E Engineers and two (2) PG QC Inspectors. The teams were under the direction of a PS&E Test Engineer. Each team possessed documented instructions including marked up Isometric drawings, a data sheet for each weld and the assigned area of surveillance. Furthermore each weld had been tagged with identification tabs. Each tab was removed from the weld at the time of its inspection and placed in the "Weld inspection log". Each weld identification tab placed in the log was signed by the QC inspector.

4. Nuclear Steam Supply Test Temperature and Pressure

The temperature and pressure for the RPV and NSS components was recorded by the main control room computer. This was in addition to recording charts and pressure gauge indications monitored by WPS and PS&E personnel.