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

TELEPHONE
(312) 858-2660

August 8, 1972

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

Docket No. 50-305

Gentlemen:

Thank you for your letter dated August 4, 1972, informing us of the steps you have taken to correct the item of apparent noncompliance which we brought to your attention in our letter dated July 17, 1972. We will examine this matter during our next inspection.

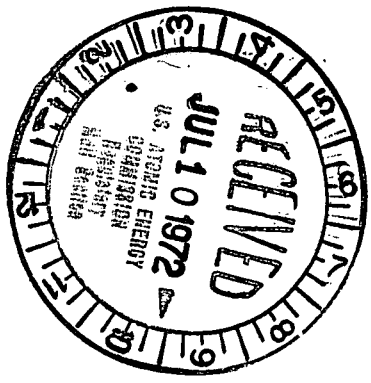
Your cooperation with us is appreciated.

Sincerely yours,

Boyce H. Grier
Regional Director

cc: E. R. Mathews, Manager
Power Engineering
R. C. Straub, Manager
Nuclear Department
L. O. Ramsett, Quality
Assurance Supervisor

bcc w/ltr dtd 8-4-72:
J. B. Henderson, RO
H. D. Thornburg, RO
R. H. Engelken, RO
G. W. Reinmuth, RO
J. G. Keppler, RO
P. A. Morris, RO
A. Giambusso, L
RO Files
DR Central Files
PDR
Local PDR
NSIC
DTIE



WISCONSIN PUBLIC SERVICE CORPORATION

P.O. Box 1200, Green Bay, Wisconsin 54305

August 4, 1972

U.S. Atomic Energy Commission
Directorate of Regulatory
Operations, Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Attention: Mr. Boyce H. Grier
Regional Director

Gentlemen:

Ref: Docket No. 50-305
Construction Deficiency Notice
Dated July 17, 1972

The following is the response to your letter of July 17, 1972, which stated the following in the enclosure:

> Part 50, Appendix B, Criterion XV, states, in part, that: "Measures shall be established to control materials, parts, or components which do not conform to requirements in order to prevent their inadvertent use or installation. These measures shall include procedures for identification . . ." In addition, the Kewaunee Quality Control Procedure No. QCIP-560 requires that nonconforming components shall be so identified.
>
> Contrary to the above, Class I instrument controllers LC112C, TC418, PC629, PC628, PC430B, and PC430C were being installed in relay racks even though quality deficiencies identified and discussed during an earlier regulatory inspection had not been resolved, and these instruments were not tagged or otherwise identified as being in nonconformance.

The above report is factual. These instrument controllers were furnished by Westinghouse and were accompanied by a properly prepared and signed QCR; therefore, they were installed. At a later date, they were checked by the WPS - I&C group and found that their type did not agree with the type called for by the Westinghouse specification. A non-conformance report was made out with a copy sent to Westinghouse for resolution. At this time, hold tags

should have been placed on these items. Immediately after the AEC inspection, the instruments were tagged and moved to a designated hold area. About the middle of June, Westinghouse reported that the instruments received were the correct type and the specification was in error.

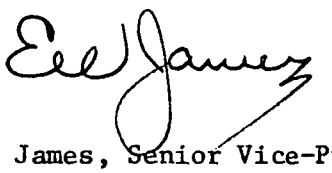
To prevent a recurrence of any delay between the writing of a nonconformance report and the placing of hold cards, after the nonconformances are uncovered, the nonconformance report will be prepared as required by the Kewaunee Quality Control Procedure QCIP-560 and a "Hold Tag" will also be prepared.

The Cognizant Field Engineer will immediately, after signing the nonconformance report, assure himself that the "Hold Tag" is properly utilized.

Since the above disclosure of a delay between the writing of a nonconformance report and placement of "Hold Cards", audits have been, and will continue to be made on "Hold Card" status on a bi-weekly basis. These audits are conducted by a Pioneer Service & Engineering Company Assistant Field Engineer and a Quality Control Inspector from the WPS Quality Control Field Group.

This procedure should preclude the recurrence of a similar nonconformance as cited on construction deficiency dated July 17, 1972, as a result of the AEC audit of June 5-7, 1972.

Very truly yours,



E. W. James, Senior Vice-President
Power Generation & Engineering

EWJ:sna

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

TELEPHONE
(312) 858-2660

July 21, 1972

J. B. Henderson, Chief, Reactor Construction Branch
Directorate of Regulatory Operations, Headquarters

WISCONSIN PUBLIC SERVICE CORPORATION (KEWAUNEE)
DOCKET NO. 50-305

The attached report of a routine inspection at the subject facility construction site on June 5-7, 1972, is transmitted for information.

One item of noncompliance was discussed with the licensee at the conclusion of the inspection and is to be called to the attention of corporate management by enclosure to the letter summarizing the results of the inspection.

C E Jones for
W. E. Vetter, Chief
Reactor Construction Branch

Attachment:
RO Rpt No. 050-305/72-11 by
R. A. Rohrbacher, C. E. Jones,
D. W. Hayes, and C. M. Erb

cc: J. G. Keppler, RO
R. B. Minogue, RS (3)
R. S. Boyd, L (2)
R. C. DeYoung, L (2)
D. J. Skovholt, L (3)
H. R. Denton, L (2)
P. A. Morris, RO
R. H. Engelken, RO
H. D. Thornburg, RO
G. W. Reinmuth, RO
RO Files
DR Central Files

U. S. ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS

REGION III

RO Inspection Report No. 050-305/72-11

Subject: Wisconsin Public Service Corporation
Kewaunee
Kewaunee, Wisconsin

License No. CPPR-50
Priority: N/A
Category: B

Type of Licensee: PWR (Westinghouse) - 560 Mwe

Type of Inspection: Routine, Announced

Dates of Inspection: June 5-7, 1972

Dates of Previous Inspection: June 3-4, 1972

Principal Inspector: R. A. Rohrbacher — 7-20-72 (Date)

Accompanying Inspectors: C. E. Jones — 7-20-72 (Date)

D. W. Hayes — 7-21-72 (Date)

C. M. Erb — 7/20/72 (Date)

Other Accompanying Personnel: None

Reviewed By: W. E. Vetter, Chief
Reactor Construction Branch — 7-21-72 (Date)

Proprietary Information: None

SECTION I

Enforcement Action

A. Noncompliance

Contrary to 10 CFR 50, Appendix B, instruments, known to have quality deficiencies, were installed. Moreover, the instruments were not tagged or otherwise identified as nonconforming components. (Paragraph 3, Section III)

B. Nonconformance

See A above, which also constitutes nonconformance.

C. Safety Items

None

Licensee Action on Previously Identified Enforcement Matters

A. Balance-of-Plant Wiring Found Routed Common with Wiring for Both Safeguard Systems (RO Report No. 305/72-03)

Pioneer Service and Engineering Company (PS&E), the facility design engineers, has nearly completed a review of the wiring installed within the control room consoles and panels, and corrective work resulting from this review is about 50 percent complete. Final inspection of this item will be made following completion of the corrective work.

B. Lack of Separation of Wiring for the Reactor Trip Channels (RO Report No. 305/72-03)

No change in status from previous reports. This condition is being evaluated by PS&E, and revised drawings are to be issued. (RO Report Nos. 305/72-04 and 72-07)

C. Solitary Manual Scram Switch Does Not Meet Single Failure Criterion RO Report No. 305/72-03)

Design work, to add a second reactor manual scram switch, is in progress and details are to be included in Amendment No. 19 to the Kewaunee FSAR. This item remains open.

Unresolved Items

A. Identification of Reactor Protection System Equipment

Reactor protective system components within the containment structure have not been distinctively identified. (Paragraph 4, Section III)

B. Relay Rack Seismic Requirements

It is not clear that the seismic requirements of a Class I relay rack containing instrument controllers would be met after installation of the rack in its cabinet. This item remains open pending further investigation by the licensee. (Paragraph 9, Section II)

Status of Previously Reported Unresolved Items

A. Separation of Redundant System Control Switches and Associated Wiring Within Panels (RO Report No. 305/72-03)

Wiring to redundant system switches and other electrical components is being rerouted to obtain maximum possible separation within the consoles and panels. Two of 53 planned metal barriers have been installed. The barriers are being located between redundant wiring or components not separated by at least six inches of air. This item remains open.

B. Lack of Fire Barriers and Seals (RO Report No. 305/72-03)

Design work is in progress to install fire barriers between the control room consoles and the relay room (cable spreading room) below the control room.

A 10-inch wide metal barrier will be used to separate the controls for the redundant emergency diesel generator trains located on the control room console. Followup inspection is planned.

C. Identification of Safeguard and Reactor Protective System Wiring (RO Report No. 305/72-03)

Identification of the subject wiring is about 50% complete and is being accomplished in conjunction with rerouting and barrier installation. This item remains open.

D. Lack of Adequate Electrical Cable Support (RO Report No. 305/72-03)

The licensee stated that material needed to correct the situation is on order. This item remains unresolved.

E. Inadequate Documentation to Establish Resolution of Noted Deficiencies (RO Report No. 305/72-03)

During a previous inspection, records were not adequate to establish that deficiencies found during L. K. Comstock electrical inspections and Wisconsin Public Service Company (WPS) audits were corrected. Although documentation now appears adequate for those items noted during the current inspection, this item remains open pending review of additional records.

F. Safety Valve to Steam Header Attachments (RO Report No. 305/72-07)

A letter from PS&E to WPS, explaining safety valve installation modifications planned to prevent stress damage, was reviewed. Modifications are in progress. This item remains open pending completion of work.

G. Process Piping Penetration Mismatch (RO Report No. 305/72-07)

Material certification reports, covering the material used for piping mismatch final closures, were reviewed. These reports included Charpy impact information not previously available for review. This matter is considered to be resolved.

H. Independent Audits of Wisconsin Public Service (WPS) QA Program (RO Report No. 305/72-07)

An independent audit by the Nuclear Safety Review and Audit Committee of WPS is scheduled for completion during July 1972. Audit results will be reviewed during a future inspection. (Paragraph 10, Section II)

I. Audits of Site Contractor QA Conformance (RO Report No. 305/72-07)

Audit reports were available at the site to verify that site contractors were conforming to the specified QC requirements. This item is considered resolved. (Paragraph 11, Section II)

J. Potential Flooding of Both Diesel Generators and Associated 4160 Volt Switch Gear (RO Report No. 305/72-04 and 07)

Corrective action is planned to prevent the loss of both emergency supplies in the event that one of the two 24-inch service water

lines fails in the area between the two diesel generator rooms. Leakage into the rooms is to be physically restricted. An analysis indicates that sufficient time will be available to initiate any required operator action.

This item is discussed in Amendment 17 (p. 8.2 - 17) of the Kewaunee FSAR. The inspector had no further questions at this time, but this item remains open pending completion of work.

K. Reactor Trip Switch Gear Protection (RO Report No. 305/72-04)

A 16-inch high pressure feedwater line is located in the same room as the reactor trip switch gear. Operability of the reactor trip breakers following a postulated failure of this line has been reviewed at the site by Directorate of Licensing (L) personnel. Proposed protection from pipe whip or jet impingement is discussed in Amendment 17 (p. 7.2-41) of the Kewaunee FSAR. This item remains unresolved pending completion of required work.

L. Reactor Pressure Vessel Stress Analysis Report (RO Report No. 305/72-03 and 07)

The stress analysis report for the reactor pressure vessel has been approved by Combustion Engineering (CE), Westinghouse Electric Corporation (Westinghouse) and the insurance inspector. This report is at the site and will be reviewed during a subsequent inspection.

M. Steam Generator Stress Analysis Report (RO Report No. 305/72-03 and 07)

The stress analysis report has been received at the site and reviewed briefly by the inspector. Subsequent to this inspection, WPS informed RO:III that the ASME Code Manufacturer's Data Report for design and shop fabrication has been received. However, the code stamp cannot be affixed to the vessel until the hydrostatic test has been successfully completed. This item remains open.

N. Pressurized Data Report (RO Report No. 305/72-03 and 07)

Subsequent to the current inspection, WPS informed RO:III that the ASME Code Manufacturer's Data Report was received, and that it was complete and approved. This report will be reviewed during a future inspection.

O. Steam Generator Quality Control Releases (RO Report No. 305/71-06, Section II.8)

The inspector reviewed revised Quality Control Releases (QCR's) No. 25-1 and No. 26-1 relating to steam generators 1A and 1B. These QCR's served to resolve questions identified in Engineering Appraisal Notices issued during fabrication. This item is considered closed.

Design Changes

A. Control Rod Penetrations

Rod penetrations in the reactor pressure vessel head and upper internals are being modified to expedite the use of four additional control rod drives at a later date. Four existing spare penetrations will be used for this change.

B. Safety Injection System Piping Modifications

Modifications to the Safety Injection System piping have been discussed with L personnel, approved by Westinghouse and reviewed by WPS. This design change relocates the routing and discharge point for the high head safety injection system.

Unusual Occurrences: None

Persons Contacted

The following people were contacted during the inspection:

Wisconsin Public Service Corporation (WPS)

L. O. Ramsett, Quality Assurance Supervisor
G. V. Fitzpatrick, Quality Control Assistant
E. E. Mitchell, Quality Control Engineer
P. T. Trondsan, Quality Control Engineer
W. J. Proper, Quality Control Engineer
D. M. MacSwain, Instrument Supervisor
K. M. Uffelman, Structural Engineer
E. R. Mathews, Manager, Power Engineering
R. C. Straub, Manager, Nuclear Development

Phillips-Getschow (P-G)

A. T. Marconi, Welding Supervisor
J. (NMI) Steidl, Quality Control Supervisor
K. (NMI) Burda, Quality Control Inspector
V. J. LeGreve, Assistant Quality Control Supervisor
J. A. Hite, Quality Assurance Manager

Pioneer Service & Engineering Company (PS&E)

J. P. Engelbrecht, Quality Control Engineer
L. K. Coleman, Electrical Field Engineer
W. K. Tarney, I & C Field Engineer
B. A. Eltzroth, I & C Engineer

Westinghouse Electric Corporation (Westinghouse)

P. D. Miller, I & C Engineer
R. W. Schulz, Project Engineer (Site)

Management Interview

Personnel in Attendance:

Wisconsin Public Service Corporation (WPS)

E. R. Mathews, Manager, Power Engineering
R. C. Straub, Manager, Nuclear Development
L. O. Ramsett, Quality Assurance Supervisor
G. V. Fitzpatrick, Quality Control Assistant

Items Discussed

A. Safety Injection System Piping Modification

Work is in progress on this modification which will inject the output of the high head system into the reactor vessel upper plenum through the low head lines. The licensee stated that this modification was proposed by Westinghouse and had been discussed with L.

B. Safety Valve to Steam Header Attachment

WPS said that a letter justifying modifications to prevent damage due to potential stress in the attachment areas was received from

PS&E, and that WPS had approved this change. This work is partially completed, and the inspector stated that he would inspect the installation after completion of the work.

C. Solitary Manual Scram Switch

Design work to add a second manual scram switch is in progress. The licensee said that details of this change will be included in Amendment No. 19 to the Kewaunee FSAR. The inspector said that this item remains open pending completion of work.

D. Potential Flooding of Both Diesel Generators and Associated 4160V Switch Gear

WPS said that this item was discussed with Directorate of Licensing (L) personnel and included in Amendment No. 17 (p. 8.2-17) to the Kewaunee FSAR. Corrective action is planned to prevent loss of both emergency supplies in the event one of the two 24-inch service water lines fails in the area between the two diesel generator rooms. The inspector stated that he had no further questions at this time but would review the completed work.

E. Reactor Trip Switch Gear Protection

Operability of the reactor trip breakers, following a postulated failure of a nearby high pressure feedwater line, has been reviewed at the site by L. Proposed protection is discussed in Amendment No. 17 (p. 7.2-41). The inspector stated that this item will remain open pending completion of work.

F. Control Rod Penetrations

Rod penetrations in the reactor pressure vessel head and upper internals are being modified by Westinghouse so that four control rod drives may be added in the future. Mr. Straub (WPS) stated that he would inform RO:III during the next inspection how this change will be handled regarding inclusion in the Kewaunee FSAR.

G. Independent Audits of WPS QA Program

In response to the inspector's question, Mr. Ramsett (WPS) replied that an audit of the Kewaunee QA Program is scheduled for completion by the end of July 1972. (Paragraph 10, Section II)

H. Audits of Site Contractor QA Conformance

The inspector stated he had reviewed audit reports of the site contractors conformance to QA requirements and had no further questions. (Paragraph 11, Section II)

I. Reactor Pressure Vessel Stress Analysis Report

In response to the inspector's question on this subject Mr. Ramsett (WPS) stated that the report had been approved by Combustion Engineering, Westinghouse and the insurance inspector. The inspector indicated that this report would be reviewed during a subsequent inspection.

J. Steam Generator Stress Analysis Report

The inspector was informed that this report had been received at the site. The inspector mentioned that he had reviewed it briefly during the current inspection and had no questions at this time.

K. Pressurizer Data Report

In response to the inspector's question, Mr. Ramsett (WPS) stated he would check on the status of this report. Subsequent to the inspection, Mr. Ramsett informed RO:III that the completed and approved data report had been received at the site.

L. Installation of, and Failure to Identify, Nonconforming Instruments

The licensee stated that this matter would be corrected immediately. The inspector said that this apparent noncompliance would be brought to the attention of corporate management by enclosure to the RO:III letter summarizing the results of the current inspection. (Paragraph 3, Section III)

M. Identification of Reactor Protection System Equipment

The licensee stated that this matter would be reviewed and necessary corrective action would be taken. (Paragraph 4, Section III)

N. Lack of Adequate Electrical Cable Support

During a previous inspection, several control cables were noted to exit directly from cable trays in station battery room 1B. No protective bumpers were installed on the tray edge nor were the cables clamped or otherwise protected. Cables leaving other tray sections in the same area, however, were properly supported. The licensee mentioned that the cable tray exit routing for the subject cables would be changed, and material to make this change has been ordered.

O. Service Water Pump and Motor Damage

The inspector was informed during a previous inspection that Service Water Pump No. 1B2, and associated motor, had been damaged during construction testing. This equipment had been returned to the site after repair, but the motor had again been returned to the vendor because of excessive vibration. Testing is being delayed pending return of this motor. The licensee commented that he is aware of this situation and that proper QA procedures are being followed.

P. Reradiograph of Reactor Coolant Piping Weld

On a previous inspection, film defects were noted on a radiograph of a primary coolant piping weld (RC No. 18). Although the weld and original radiograph were within code standards, the weld was reradiographed to prevent any future question regarding interpretation of the radiograph. The inspector stated that the second radiograph was reviewed and that he had no further questions.

SECTION II

Additional Subjects Inspected, Not Identified in Section I, Where No Deficiencies or Unresolved Items Were Found

1. General

The licensee estimated that overall plant construction was 91% complete on June 1, 1972. Fuel loading is scheduled for April 1, 1973. Based on the fuel loading date, the ACRS committee meeting has been scheduled for August 1972. The spent fuel pool has been completed and filled with water. Most of the primary coolant piping is in place. A significant amount of instrument and electrical work remains to be done. This work includes corrective action relating to cable and wire separation.

2. Reactor Coolant Piping

a. Review of QC System

(1) Installation of Hangers and Snubbers

b. Followup Record Review

(1) Installation of Hangers and Snubbers

(2) Reradiograph of weld RC No. 18 (Reference RO Report No. 305/72-07)

3. Main Steam Piping (Outside Containment)

a. Review of QC System

(1) Installation of Hangers and Snubbers

b. Followup Record Review

(1) Installation of Hangers and Snubbers

4. Service Water Piping

a. Review of QC System

(1) Installation of Hangers and Snubbers

b. Followup Record Review - Welding

(1) QC Inspectors Record of Visual Observation

(2) Heat Treat Records

(3) NDT Records

(4) Repair Records

(5) Material Control

(6) Welder Qualification Records

(7) Qualified Welders List

c. Followup Record Review - Piping

(1) Installation of Hangers and Snubbers

(2) Material Certifications

(3) Receipt Installation

(4) Installation Records - Including NDT

(5) Hydrostatic Test Records

d. Observation of Work

(1) Installation

(2) Installation NDT

5. Control Rod Penetrations

(The reactor pressure vessel head and upper internals are being modified according to instructions provided by Westinghouse.)

a. Followup Record Review

(1) Quality release forms were reviewed for the following components (4 of each) which have been transferred from Northern States Power Company (Prairie Island): thermal sleeve, funnel latching mechanism (not yet on site), and dowels.

This documentation included:

(a) Material Certifications

(b) Visual Inspections

(c) Dimensional Checks

(d) Cleanliness

(e) Packaging

(f) Installation Procedures - including cleanliness, welding, NDT and hydrostatic tests of individual drive tubes

6. Electrical and Instrument Components

a. Followup Record Review

(1) Audit Reports of Instrument Suppliers

7. Structures - Spent Fuel Pools and Canal Liners

a. Followup Record Review

(1) QC Inspectors Review

(2) NDT Records

(3) Repair Records

(4) Material Control Records

(5) Welder Qualification Records

(6) Qualified Welders List

(7) Receipt Records

(8) Installation Records

b. Followup Observation of Work

(1) Use of Weld Procedure

(2) Identification of Weld, Welder and Weld Inspector

(3) Control of Weld Materials

8. Structures - Steam Generator Support 1A

a. Followup Record Review

(1) Physical and Chemical Characteristics

(2) Materials NDT

(3) Weld Records

(4) Installation Specifications

(5) Field QA Audit Reports

(6) Field QC Inspection Reports

Details of Subjects Discussed in Section I

9. Seismic Requirements of Relay Rack

Although Auxiliary Relay Rack RR-143 (Train A) revealed considerable resonance at various frequencies during seismic tests, it did meet requirements for the rack alone. However, there is some concern about its adequacy when mounted in a cabinet. That is, cabinet resonance could aggravate the above condition. WPS will investigate this condition and determine whether additional analysis and/or testing is required. This item will be reviewed during a subsequent inspection.

10. Independent Audits of WPS QA Program

WPS has established a Nuclear Safety Review and Audit Committee as a requirement of their Technical Specifications. The committee consists of seven members as follows:

(a) Three members from the Operations Department
(b) One member from the QA group
(c) One member from the Nuclear Fuels Group
(d) Two members from WPS consulting organizations

Mr. Ramsett said the subject audit is scheduled for completion during July 1972. Results of the audit are to be given to the President and Senior Vice President, Power and Engineering, as well as to others.

Mr. Ramsett further stated that, due to the small size of the utility, corporate management was kept informed of quality aspects of the project by informal reports and personal contacts. He also said these reports were not documented and that independent audits of the WPS QA program had not been performed.

11. Audits of Site Contractor QA Conformance

The inspector stated that previous questions relative to this matter were resolved during the current inspection as a result of extended review of site contractor audit activity documentation. Eleven QA audit reports were reviewed. The inspector also noted from QC inspection plans that the licensee intends to review the QA commitments of each contract for all site contractors.

SECTION III

Prepared by D. W. Hayes

Additional Subjects Inspected, Not Identified in Section I, Where No Deficiencies or Unresolved Items Were Found

1. General

Although the majority of transmitters and other rack mounted instruments have been installed within the containment structure, less than 5% of the sensing lines and instrument cabling for these instruments have been completely installed. Part of the delay is attributable to the PS&E review of the cable installation design for conformance with the separation criteria.

2. Instrumentation

a. Followup Record Review

(1) Identification and certification records were reviewed for the following instrumentation: steam generator level (Loops A and B), pressurizer pressure, pressurizer level and station test equipment. (Total of 103 instruments and 43 logic relays)

b. Followup Observation of Work

(1) Installation Technique

(2) Protection

(3) Quarantine of Nonconforming Components (Reviewed for the same instrumentation listed under a. (1) above.

Details of Subjects Discussed in Section I

3. During the review of instrument installation activities and nonconformance reports, the inspector noted that six instrument controllers had been installed in relay racks even though deficiencies identified during an inspection dated September 10, 1971, had not been resolved. Moreover, the instruments were not tagged or otherwise identified as

being in nonconformance. Pertinent information in regard to the instruments is tabulated below.

Instrument	Serial No.	Cabinet	Nonconformance Report No.
LC 112C	2170566	RR 120	208
TC 418	2170580	RR 120	209
PC 628	2170588	RR 102	242
PC 629	2170589	RR 118	255
PC 430C	2171357	RR 105	300
PC 430B	2171356	RR 105	301

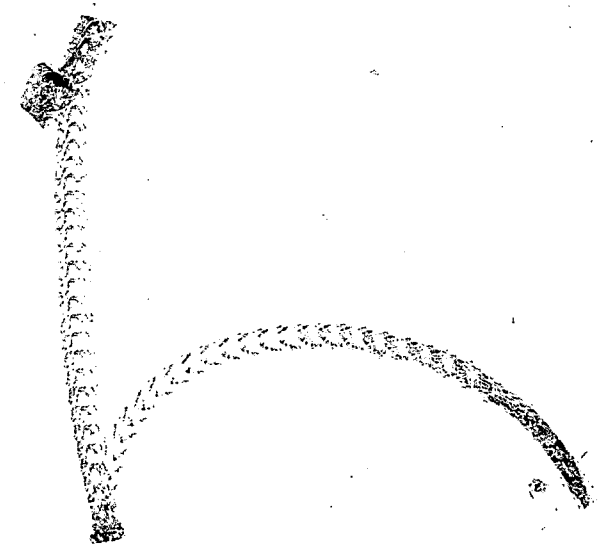
The licensee was informed that this activity was in noncompliance with 10 CFR 50, Appendix B, Criterion XV, as well as nonconformance with WPS Quality Control Procedure No. 560.

4. Reactor protective system components (instruments) located within the containment structure have not been distinctly identified as required by IEEE Standard 279 (4.22) referenced in the Kewaunee FSAR. The components, including steam generator and pressurizer level transmitters and pressurizer pressure transmitters, are presently identified with a five digit number assigned by PS&E. The numbers are embossed on a short piece of plastic tape. The present identification system does not distinguish the component as being part of the protective system nor does it distinguish between redundant portions of the protective system.

RECEIVED

1971 JUL 31 AM 10 48

U.S. ATOMIC ENERGY COMM.
DIVISION OF COMPLIANCE



DR Central Files

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

TELEPHONE
(312) 858-2660

July 17, 1972

Wisconsin Public Service Corporation
ATTN: Mr. E. W. James, 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 Messrs. Rohrbacher, Jones, Hayes, and Erb of this office on June 5 - 7, 1972, of construction activities at the Kewaunee site authorized by AEC Construction Permit No. CPPR-50 and to the discussion of our findings at the conclusion of the inspection with Messrs. Mathews, Straub, Ramsett, and Fitzpatrick of your staff.

Areas examined during the inspection included safety injection system piping modifications, changes in the method for securing safety valves to main steam line headers, potential flooding of the diesel generators and associated 4160-V switch gear, reactor trip switch gear protection, provisions for future addition of control rod drives, the scope of quality assurance audits, procurement of stress analysis reports for the reactor pressure vessel and steam generators, quality documentation relative to Class I instruments, efforts to fully identify reactor protection system equipment, installation of electrical cable, a review of radiographic film common to reactor coolant piping welds, installation of the main steam piping, installation of control rod drive mechanisms, and a review of quality documentation and installation of other Class I structures. Within these areas, the inspection consisted of selective examination of procedures and representative records, interviews with plant personnel, and observations by the inspectors.

The inspectors also examined actions you have taken with respect to the items identified in your letter of April 12, 1972, relating to matters previously brought to your attention. We have no further questions with respect to Items 1 and 3 of your April 12 letter. However, concerning Item 2 of the April 12 letter, the specified corrective action had not been accomplished at the time of this inspection due to delay in the development of revised drawings, and we will examine this matter further during a subsequent inspection.

During this inspection, it was found that one of your activities appears to be in noncompliance with AEC requirements and in nonconformance with site quality control procedures. The item and reference to the pertinent requirements are listed in the enclosure to this letter. Please provide us within 30 days, in writing, with your comments concerning this item, any steps which have been or will be taken to correct it, any steps that have been or will be taken to prevent recurrence, and the date all corrective action or preventive measures were or will be completed. Your reply should emphasize, in particular, any appropriate changes that have been or will be made to improve the effectiveness of your quality assurance program to prevent recurrence.

With regard to questions raised during this inspection, we understand that you intend to: (1) include information concerned with the modification of reactor scram switch circuitry in Amendment No. 19 to the FSAR, (2) amend the FSAR to reflect a design change involving provision for the future addition of control rods, (3) complete an audit, currently in progress, of the Kewaunee Quality Assurance Program by the end of July 1972, (4) provide for distinct identification of a number of reactor protection system instruments, and (5) provide additional support and protection for electrical cable in the station battery room No. 1B. We will examine your actions on these matters during our next routine inspection.

Should you have questions concerning this inspection, we will be glad to discuss them with you.

Sincerely yours,

Boyce H. Grier
Regional Director

Enclosure:
Description of Noncompliance Item

cc: E. R. Mathews, Manager
Power Engineering
R. C. Straub, Manager
Nuclear Department
L. O. Ramsett, Quality
Assurance Supervisor

bcc: J. B. Henderson, RO
H. D. Thornburg, RO
R. H. Engelken, RO
G. W. Reinmuth, RO
J. G. Keppler, RO
P. A. Morris, RO
A. Giambusso, L
RO Files
DR Central Files
PDR
Local PDR
NSIC
DTIE

ENCLOSURE

Docket No. 50-305

One of your activities appears to be in noncompliance with 10 CFR Part 50, Appendix B, and in nonconformance with site quality control procedures, as identified below:

Part 50, Appendix B, Criterion XV, states, in part, that: "Measures shall be established to control materials, parts, or components which do not conform to requirements in order to prevent their inadvertent use or installation. These measures shall include procedures for identification . . ." In addition, the Kewaunee Quality Control Procedure No. QCIP-560 requires that nonconforming components shall be so identified.

Contrary to the above, Class I instrument controllers LC112C, TC418, PC629, PC628, PC430B, and PC430C were being installed in relay racks even though quality deficiencies identified and discussed during an earlier regulatory inspection had not been resolved, and these instruments were not tagged or otherwise identified as being in nonconformance.

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

TELEPHONE
(312) 858-2860

July 21, 1972

J. B. Henderson, Chief, Reactor Construction Branch
Directorate of Regulatory Operations, Headquarters

WISCONSIN PUBLIC SERVICE CORPORATION (KEWAUNEE)
DOCKET NO. 50-305

The attached report of a routine inspection at the subject facility construction site on June 5-7, 1972, is transmitted for information.

One item of noncompliance was discussed with the licensee at the conclusion of the inspection and is to be called to the attention of corporate management by enclosure to the letter summarizing the results of the inspection.

C E Jones for
W. E. Vetter, Chief
Reactor Construction Branch

Attachment:
RO Rpt No. 050-305/72-11 by
R. A. Rohrbacher, C. E. Jones,
D. W. Hayes, and C. M. Erb

cc: J. G. Keppler, RO
R. B. Minogue, RS (3)
R. S. Boyd, L (2)
R. C. DeYoung, L (2)
D. J. Skovholt, L (3)
H. R. Denton, L (2)
P. A. Morris, RO
R. H. Engelken, RO
H. D. Thornburg, RO
G. W. Reinmuth, RO
RO Files
DR Central Files

U. S. ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS

REGION III

RO Inspection Report No. 050-305/72-11

Subject: Wisconsin Public Service Corporation
Kewaunee
Kewaunee, Wisconsin

License No. CPPR-50
Priority: N/A
Category: B

Type of Licensee: PWR (Westinghouse) - 560 Mwe

Type of Inspection: Routine, Announced

Dates of Inspection: June 5-7, 1972

Dates of Previous Inspection: June 3-4, 1972

Principal Inspector: R. A. Rohrbacher — 7-20-72 (Date)

Accompanying Inspectors: C. E. Jones — 7-20-72 (Date)

D. W. Hayes — 7-21-72 (Date)

C. M. Erb — 7/20/72 (Date)

Other Accompanying Personnel: None

Reviewed By: W. E. Vetter, Chief
Reactor Construction Branch — 7-21-72 (Date)

Proprietary Information: None

Unresolved Items

A. Identification of Reactor Protection System Equipment

Reactor protective system components within the containment structure have not been distinctively identified. (Paragraph 4, Section III)

B. Relay Rack Seismic Requirements

It is not clear that the seismic requirements of a Class I relay rack containing instrument controllers would be met after installation of the rack in its cabinet. This item remains open pending further investigation by the licensee. (Paragraph 9, Section II)

Status of Previously Reported Unresolved Items

A. Separation of Redundant System Control Switches and Associated Wiring Within Panels (RO Report No. 305/72-03)

Wiring to redundant system switches and other electrical components is being rerouted to obtain maximum possible separation within the consoles and panels. Two of 53 planned metal barriers have been installed. The barriers are being located between redundant wiring or components not separated by at least six inches of air. This item remains open.

B. Lack of Fire Barriers and Seals (RO Report No. 305/72-03)

Design work is in progress to install fire barriers between the control room consoles and the relay room (cable spreading room) below the control room.

A 10-inch wide metal barrier will be used to separate the controls for the redundant emergency diesel generator trains located on the control room console. Followup inspection is planned.

C. Identification of Safeguard and Reactor Protective System Wiring (RO Report No. 305/72-03)

Identification of the subject wiring is about 50% complete and is being accomplished in conjunction with rerouting and barrier installation. This item remains open.

D. Lack of Adequate Electrical Cable Support (RO Report No. 305/72-03)

The licensee stated that material needed to correct the situation is on order. This item remains unresolved.

E. Inadequate Documentation to Establish Resolution of Noted Deficiencies (RO Report No. 305/72-03)

During a previous inspection, records were not adequate to establish that deficiencies found during L. K. Comstock electrical inspections and Wisconsin Public Service Company (WPS) audits were corrected. Although documentation now appears adequate for those items noted during the current inspection, this item remains open pending review of additional records.

F. Safety Valve to Steam Header Attachments (RO Report No. 305/72-07)

A letter from PS&E to WPS, explaining safety valve installation modifications planned to prevent stress damage, was reviewed. Modifications are in progress. This item remains open pending completion of work.

G. Process Piping Penetration Mismatch (RO Report No. 305/72-07)

Material certification reports, covering the material used for piping mismatch final closures, were reviewed. These reports included Charpy impact information not previously available for review. This matter is considered to be resolved.

H. Independent Audits of Wisconsin Public Service (WPS) QA Program (RO Report No. 305/72-07)

An independent audit by the Nuclear Safety Review and Audit Committee of WPS is scheduled for completion during July 1972. Audit results will be reviewed during a future inspection. (Paragraph 10, Section II)

I. Audits of Site Contractor QA Conformance (RO Report No. 305/72-07)

Audit reports were available at the site to verify that site contractors were conforming to the specified QC requirements. This item is considered resolved. (Paragraph 11, Section II)

J. Potential Flooding of Both Diesel Generators and Associated 4160 Volt Switch Gear (RO Report No. 305/72-04 and 07)

Corrective action is planned to prevent the loss of both emergency supplies in the event that one of the two 24-inch service water

lines fails in the area between the two diesel generator rooms. Leakage into the rooms is to be physically restricted. An analysis indicates that sufficient time will be available to initiate any required operator action.

This item is discussed in Amendment 17 (p. 8.2 - 17) of the Kewaunee FSAR. The inspector had no further questions at this time, but this item remains open pending completion of work.

K. Reactor Trip Switch Gear Protection (RO Report No. 305/72-04)

A 16-inch high pressure feedwater line is located in the same room as the reactor trip switch gear. Operability of the reactor trip breakers following a postulated failure of this line has been reviewed at the site by Directorate of Licensing (L) personnel. Proposed protection from pipe whip or jet impingement is discussed in Amendment 17 (p. 7.2-41) of the Kewaunee FSAR. This item remains unresolved pending completion of required work.

L. Reactor Pressure Vessel Stress Analysis Report (RO Report No. 305/72-03 and 07)

The stress analysis report for the reactor pressure vessel has been approved by Combustion Engineering (CE), Westinghouse Electric Corporation (Westinghouse) and the insurance inspector. This report is at the site and will be reviewed during a subsequent inspection.

M. Steam Generator Stress Analysis Report (RO Report No. 305/72-03 and 07)

The stress analysis report has been received at the site and reviewed briefly by the inspector. Subsequent to this inspection, WPS informed RO:III that the ASME Code Manufacturer's Data Report for design and shop fabrication has been received. However, the code stamp cannot be affixed to the vessel until the hydrostatic test has been successfully completed. This item remains open.

N. Pressurized Data Report (RO Report No. 305/72-03 and 07)

Subsequent to the current inspection, WPS informed RO:III that the ASME Code Manufacturer's Data Report was received, and that it was complete and approved. This report will be reviewed during a future inspection.

O. Steam Generator Quality Control Releases (RO Report No. 305/71-06, Section II.8)

The inspector reviewed revised Quality Control Releases (QCR's) No. 25-1 and No. 26-1 relating to steam generators 1A and 1B. These QCR's served to resolve questions identified in Engineering Appraisal Notices issued during fabrication. This item is considered closed.

Design Changes

A. Control Rod Penetrations

Rod penetrations in the reactor pressure vessel head and upper internals are being modified to expedite the use of four additional control rod drives at a later date. Four existing spare penetrations will be used for this change.

B. Safety Injection System Piping Modifications

Modifications to the Safety Injection System piping have been discussed with L personnel, approved by Westinghouse and reviewed by WPS. This design change relocates the routing and discharge point for the high head safety injection system.

Unusual Occurrences: None

Persons Contacted

The following people were contacted during the inspection:

Wisconsin Public Service Corporation (WPS)

L. O. Ramsett, Quality Assurance Supervisor
G. V. Fitzpatrick, Quality Control Assistant
E. E. Mitchell, Quality Control Engineer
P. T. Trondsan, Quality Control Engineer
W. J. Proper, Quality Control Engineer
D. M. MacSwain, Instrument Supervisor
K. M. Uffelman, Structural Engineer
E. R. Mathews, Manager, Power Engineering
R. C. Straub, Manager, Nuclear Development

Phillips-Getschow (P-G)

A. T. Marconi, Welding Supervisor
J. (NMI) Steidl, Quality Control Supervisor
K. (NMI) Burda, Quality Control Inspector
V. J. LeGreve, Assistant Quality Control Supervisor
J. A. Hite, Quality Assurance Manager

Pioneer Service & Engineering Company (PS&E)

J. P. Engelbrecht, Quality Control Engineer
L. K. Coleman, Electrical Field Engineer
W. K. Tarney, I & C Field Engineer
B. A. Eltzroth, I & C Engineer

Westinghouse Electric Corporation (Westinghouse)

P. D. Miller, I & C Engineer
R. W. Schulz, Project Engineer (Site)

Management Interview

Personnel in Attendance:

Wisconsin Public Service Corporation (WPS)

E. R. Mathews, Manager, Power Engineering
R. C. Straub, Manager, Nuclear Development
L. O. Ramsett, Quality Assurance Supervisor
G. V. Fitzpatrick, Quality Control Assistant

Items Discussed

A. Safety Injection System Piping Modification

Work is in progress on this modification which will inject the output of the high head system into the reactor vessel upper plenum through the low head lines. The licensee stated that this modification was proposed by Westinghouse and had been discussed with L.

B. Safety Valve to Steam Header Attachment

WPS said that a letter justifying modifications to prevent damage due to potential stress in the attachment areas was received from

PS&E, and that WPS had approved this change. This work is partially completed, and the inspector stated that he would inspect the installation after completion of the work.

C. Solitary Manual Scram Switch

Design work to add a second manual scram switch is in progress. The licensee said that details of this change will be included in Amendment No. 19 to the Kewaunee FSAR. The inspector said that this item remains open pending completion of work.

D. Potential Flooding of Both Diesel Generators and Associated 4160V Switch Gear

WPS said that this item was discussed with Directorate of Licensing (L) personnel and included in Amendment No. 17 (p. 8.2-17) to the Kewaunee FSAR. Corrective action is planned to prevent loss of both emergency supplies in the event one of the two 24-inch service water lines fails in the area between the two diesel generator rooms. The inspector stated that he had no further questions at this time but would review the completed work.

E. Reactor Trip Switch Gear Protection

Operability of the reactor trip breakers, following a postulated failure of a nearby high pressure feedwater line, has been reviewed at the site by L. Proposed protection is discussed in Amendment No. 17 (p. 7.2-41). The inspector stated that this item will remain open pending completion of work.

F. Control Rod Penetrations

Rod penetrations in the reactor pressure vessel head and upper internals are being modified by Westinghouse so that four control rod drives may be added in the future. Mr. Straub (WPS) stated that he would inform RO:III during the next inspection how this change will be handled regarding inclusion in the Kewaunee FSAR.

G. Independent Audits of WPS QA Program

In response to the inspector's question, Mr. Ramsett (WPS) replied that an audit of the Kewaunee QA Program is scheduled for completion by the end of July 1972. (Paragraph 10, Section II)

H. Audits of Site Contractor QA Conformance

The inspector stated he had reviewed audit reports of the site contractors conformance to QA requirements and had no further questions. (Paragraph 11, Section II)

I. Reactor Pressure Vessel Stress Analysis Report

In response to the inspector's question on this subject Mr. Ramsett (WPS) stated that the report had been approved by Combustion Engineering, Westinghouse and the insurance inspector. The inspector indicated that this report would be reviewed during a subsequent inspection.

J. Steam Generator Stress Analysis Report

The inspector was informed that this report had been received at the site. The inspector mentioned that he had reviewed it briefly during the current inspection and had no questions at this time.

K. Pressurizer Data Report

In response to the inspector's question, Mr. Ramsett (WPS) stated he would check on the status of this report. Subsequent to the inspection, Mr. Ramsett informed RO:III that the completed and approved data report had been received at the site.

L. Installation of, and Failure to Identify, Nonconforming Instruments

The licensee stated that this matter would be corrected immediately. The inspector said that this apparent noncompliance would be brought to the attention of corporate management by enclosure to the RO:III letter summarizing the results of the current inspection. (Paragraph 3, Section III)

M. Identification of Reactor Protection System Equipment

The licensee stated that this matter would be reviewed and necessary corrective action would be taken. (Paragraph 4, Section III)

N. Lack of Adequate Electrical Cable Support

During a previous inspection, several control cables were noted to exit directly from cable trays in station battery room 1B. No protective bumpers were installed on the tray edge nor were the cables clamped or otherwise protected. Cables leaving other tray sections in the same area, however, were properly supported. The licensee mentioned that the cable tray exit routing for the subject cables would be changed, and material to make this change has been ordered.

O. Service Water Pump and Motor Damage

The inspector was informed during a previous inspection that Service Water Pump No. 1B2, and associated motor, had been damaged during construction testing. This equipment had been returned to the site after repair, but the motor had again been returned to the vendor because of excessive vibration. Testing is being delayed pending return of this motor. The licensee commented that he is aware of this situation and that proper QA procedures are being followed.

P. Reradiograph of Reactor Coolant Piping Weld

On a previous inspection, film defects were noted on a radiograph of a primary coolant piping weld (RC No. 18). Although the weld and original radiograph were within code standards, the weld was reradiographed to prevent any future question regarding interpretation of the radiograph. The inspector stated that the second radiograph was reviewed and that he had no further questions.

SECTION II

Additional Subjects Inspected, Not Identified in Section I, Where No Deficiencies or Unresolved Items Were Found

1. General

The licensee estimated that overall plant construction was 91% complete on June 1, 1972. Fuel loading is scheduled for April 1, 1973. Based on the fuel loading date, the ACRS committee meeting has been scheduled for August 1972. The spent fuel pool has been completed and filled with water. Most of the primary coolant piping is in place. A significant amount of instrument and electrical work remains to be done. This work includes corrective action relating to cable and wire separation.

2. Reactor Coolant Piping

a. Review of QC System

(1) Installation of Hangers and Snubbers

b. Followup Record Review

(1) Installation of Hangers and Snubbers

(2) Reradiograph of weld RC No. 18 (Reference RO Report No. 305/72-07)

3. Main Steam Piping (Outside Containment)

a. Review of QC System

(1) Installation of Hangers and Snubbers

b. Followup Record Review

(1) Installation of Hangers and Snubbers

4. Service Water Piping

a. Review of QC System

(1) Installation of Hangers and Snubbers

b. Followup Record Review - Welding

(1) QC Inspectors Record of Visual Observation

(2) Heat Treat Records

(3) NDT Records

(4) Repair Records

(5) Material Control

(6) Welder Qualification Records

(7) Qualified Welders List

c. Followup Record Review - Piping

(1) Installation of Hangers and Snubbers

(2) Material Certifications

(3) Receipt Installation

(4) Installation Records - Including NDT

(5) Hydrostatic Test Records

d. Observation of Work

(1) Installation

(2) Installation NDT

5. Control Rod Penetrations

(The reactor pressure vessel head and upper internals are being modified according to instructions provided by Westinghouse.)

a. Followup Record Review

(1) Quality release forms were reviewed for the following components (4 of each) which have been transferred from Northern States Power Company (Prairie Island): thermal sleeve, funnel latching mechanism (not yet on site), and dowels.

This documentation included:

(a) Material Certifications

(b) Visual Inspections

(c) Dimensional Checks

(d) Cleanliness

(e) Packaging

(f) Installation Procedures - including cleanliness, welding, NDT and hydrostatic tests of individual drive tubes

6. Electrical and Instrument Components

a. Followup Record Review

(1) Audit Reports of Instrument Suppliers

7. Structures - Spent Fuel Pools and Canal Liners

a. Followup Record Review

(1) QC Inspectors Review

(2) NDT Records

(3) Repair Records

(4) Material Control Records

(5) Welder Qualification Records

(6) Qualified Welders List

(7) Receipt Records

(8) Installation Records

b. Followup Observation of Work

(1) Use of Weld Procedure

(2) Identification of Weld, Welder and Weld Inspector

(3) Control of Weld Materials

8. Structures - Steam Generator Support 1A

a. Followup Record Review

(1) Physical and Chemical Characteristics

(2) Materials NDT

(3) Weld Records

(4) Installation Specifications

(5) Field QA Audit Reports

(6) Field QC Inspection Reports

Details of Subjects Discussed in Section I

9. Seismic Requirements of Relay Rack

Although Auxiliary Relay Rack RR-143 (Train A) revealed considerable resonance at various frequencies during seismic tests, it did meet requirements for the rack alone. However, there is some concern about its adequacy when mounted in a cabinet. That is, cabinet resonance could aggravate the above condition. WPS will investigate this condition and determine whether additional analysis and/or testing is required. This item will be reviewed during a subsequent inspection.

10. Independent Audits of WPS QA Program

WPS has established a Nuclear Safety Review and Audit Committee as a requirement of their Technical Specifications. The committee consists of seven members as follows:

(a) Three members from the Operations Department
(b) One member from the QA group
(c) One member from the Nuclear Fuels Group
(d) Two members from WPS consulting organizations

Mr. Ramsett said the subject audit is scheduled for completion during July 1972. Results of the audit are to be given to the President and Senior Vice President, Power and Engineering, as well as to others.

Mr. Ramsett further stated that, due to the small size of the utility, corporate management was kept informed of quality aspects of the project by informal reports and personal contacts. He also said these reports were not documented and that independent audits of the WPS QA program had not been performed.

11. Audits of Site Contractor QA Conformance

The inspector stated that previous questions relative to this matter were resolved during the current inspection as a result of extended review of site contractor audit activity documentation. Eleven QA audit reports were reviewed. The inspector also noted from QC inspection plans that the licensee intends to review the QA commitments of each contract for all site contractors.

SECTION III

Prepared by D. W. Hayes

Additional Subjects Inspected, Not Identified in Section I, Where No Deficiencies or Unresolved Items Were Found

1. General

Although the majority of transmitters and other rack mounted instruments have been installed within the containment structure, less than 5% of the sensing lines and instrument cabling for these instruments have been completely installed. Part of the delay is attributable to the PS&E review of the cable installation design for conformance with the separation criteria.

2. Instrumentation

a. Followup Record Review

(1) Identification and certification records were reviewed for the following instrumentation: steam generator level (Loops A and B), pressurizer pressure, pressurizer level and station test equipment. (Total of 103 instruments and 43 logic relays)

b. Followup Observation of Work

(1) Installation Technique

(2) Protection

(3) Quarantine of Nonconforming Components
(Reviewed for the same instrumentation listed under a. (1) above.

Details of Subjects Discussed in Section I

3. During the review of instrument installation activities and nonconformance reports, the inspector noted that six instrument controllers had been installed in relay racks even though deficiencies identified during an inspection dated September 10, 1971, had not been resolved. Moreover, the instruments were not tagged or otherwise identified as

being in nonconformance. Pertinent information in regard to the instruments is tabulated below.

Instrument	Serial No.	Cabinet	Nonconformance Report No.
LC 112C	2170566	RR 120	208
TC 418	2170580	RR 120	209
PC 628	2170588	RR 102	242
PC 629	2170589	RR 118	255
PC 430C	2171357	RR 105	300
PC 430B	2171356	RR 105	301

The licensee was informed that this activity was in noncompliance with 10 CFR 50, Appendix B, Criterion XV, as well as nonconformance with WPS Quality Control Procedure No. 560.

4. Reactor protective system components (instruments) located within the containment structure have not been distinctly identified as required by IEEE Standard 279 (4.22) referenced in the Kewaunee FSAR. The components, including steam generator and pressurizer level transmitters and pressurizer pressure transmitters, are presently identified with a five digit number assigned by PS&E. The numbers are embossed on a short piece of plastic tape. The present identification system does not distinguish the component as being part of the protective system nor does it distinguish between redundant portions of the protective system.

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

TELEPHONE
(312) 858-2660

June 29, 1972

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

Docket No. 50-305

Gentlemen:

Information obtained during inspections conducted by the Directorate of Regulatory Operations, has disclosed that a number of facilities have been equipped with valves with wall thicknesses below the minimum requirements specified by the applicable codes, standards and procurement specifications. In other instances, licensees have not been able to document whether or not their valves met minimum wall thickness requirements. Our survey of this subject has disclosed that the matter is not limited to any class of licensee or valve supplier.

In light of the above information, you are requested to verify, through manufacturing records or other suitable means, that valves important to nuclear safety installed or to be installed at your facility meet the minimum wall thickness requirements of the specified codes or standards. To the extent that verification records are currently available, you are requested to promptly accumulate those records at the plant site, and to advise this office within thirty (30) days of the date of this letter, of what records are available and when our inspector may examine them at the plant site.

In the event that records are not currently available, you are requested to advise this office within thirty (30) days, of your plans and schedules for demonstrating by suitable alternate means, that valves important to nuclear safety installed or to be installed at your facility are acceptable with respect to wall thickness. Records of conformance shall be maintained current with inspections performed.

JUL 10 1972

The valves which require demonstration of acceptable wall thickness are the following:

Each valve within the reactor coolant pressure boundary, as defined in subsection 50.55(a) (Codes and Standards) of 10 CFR 50, where the valve is:

(a) over 1-inch nominal pipe size for pressurized water reactors;

(b) over 1¼-inch nominal pipe size in water lines for boiling water reactors;

(c) over 2½-inch nominal pipe size in steam lines for boiling water reactors.

The following techniques are considered to be a sufficient demonstration of acceptable wall thickness. Alternate techniques may be offered, but there is no assurance that they will be found acceptable:

(1) Documented direct physical measurement of actual wall thickness, with comparison to specified minimum wall thickness.

(2) Documented results of ultrasonic measurement of wall thickness, with comparison to specified minimum wall thickness, and documentation that the ultrasonic measurement technique is demonstrated to have a maximum error in repeatability and accuracy, of not more than 2% of the wall thickness.

(3) Wall thicknesses, verified by either of the above techniques, to be not less than 90% of specified minimum wall thickness will be acceptable, provided that the documented mechanical characteristics of the material exceed the specification minimum by an amount sufficient to compensate for the measured reduction in wall thickness.

(4) "Specified Minimum Wall Thickness" as used above, means the wall thickness required by the relevant codes and standards (e.g., ASA B31.1 (1955); USAS B31.1.0 (1967); USAS B16.5; MSS-SP-66) in effect on the date of the purchase order.

(5) Certain of your valves may have, for procurement convenience, been ordered to ratings higher than actually required by service conditions. In such instances, you may, if you wish, provide for our review, an engineering justification for accepting valves which do not conform to procurement specifications, but do in your opinion, satisfy service requirements. Such justification should be promptly transmitted to this office, in ten (10) copies.

(6) In certain instances, you may wish to repair valves found to have wall thickness below the specified minimum. In such instances you are requested to provide this office for our review, the proposed repair procedure, including a description of techniques to be used to verify the acceptability of the repaired components. Such a proposed procedure should also be submitted in ten (10) copies.

Acceptable documentation of conformance with the above requirements must be completed within three (3) years of the date of this letter.

Very truly yours,

Boyce H. Grier
Regional Director

bcc: RO Files
DR Central Files
PDR
Local PDR