REGULATORY OPERATIONS, REGION III

A. RO Inspection Report No. 050-305/72-16

Transmittal Date : December 4, 1972

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RO:HQ (5)
DR Central Files
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B. RO Inquiry Report No. _____

Transmittal Date : _____

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C. Incident Notification From: _____
(Licensee & Docket No. (or License No.)

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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

December 4, 1972

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 Messrs. Rohrbacher and Young of this office on November 7 - 9, 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 you and Messrs. Mathews, Ramsett, and Fitzpatrick of your staff.

Areas examined during the inspection included quality records and installation activities common to electrical and mechanical components, the serviceability of containment dome fan motors, the repair of defects in the residual heat removal pump casings, and the status of efforts to resolve previously identified enforcement and unresolved matters. Within these areas, the inspection consisted of selective examination of procedures and representative records, interviews with plant personnel, and observations by the inspectors.

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

The inspectors also examined actions you have taken with respect to the matters identified in your letter of April 12, 1972. We find that, while corrective action has been identified and steps have been taken to bring about resolution, several areas of corrective action are yet to be completed. We will continue to review the progress of corrective action relative to these matters during subsequent inspections.

With regard to questions raised during this inspection, we understand that you intend to: (1) continue to monitor efforts on the part of Westinghouse and others to assure that the repair, inspection, and testing of the residual heat removal pumps will meet all QA requirements, (2) assure that the method used to attach main steam safety valves to main steam headers will be adequate for the stresses involved, (3) continue a program to provide verification of valve wall thicknesses for valves related to nuclear safety, (4) conduct, or

have conducted by others, appropriate quality assurance audits to assure continued compliance with QA requirements, and (5) assure that the containment dome vent fan motors meet specific environmental requirements related to loss of coolant accident conditions. We will examine your action on these matters during our next routine 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 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 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 Report No. 050-305/72-16

bcc: RO Chief, RT&OB
RO Chief, RCB
RO:HQ (4)
Licensing (4)
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U. S. ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS

REGION III

RO Inspection Report No. 050-305/72-16

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 (W) - 560 Mwe

Type of Inspection: Routine, Unannounced

Dates of Inspection: November 7 - 9, 1972

Dates of Previous Inspection: October 16 - 18, 1972

Principal Inspector: J. w Sutton for R. A. Rohrbacher — 11-28-72 (Date)

Accompanying Inspector: Jw. Sutton for C. M. Young — 11-28-72 (Date)

Other Accompanying Personnel: None

Reviewed By: J. w Sutton for W. E. Vetter, Chief
Reactor Construction Branch — 11-28-72 (Date)

SUMMARY OF FINDINGS

Enforcement Action

A. Violations

No violations were identified.

B. Safety Matters

No safety items were identified.

Licensee Action on Previously Identified Enforcement Matters

A. Balance-of-Plant Wiring Found Common With Wiring for Both Safeguard Systems (RO Report No. 050-305/72-03)

The Pioneer Service and Engineering Company (PS&E) has finished a review of the wiring installed within the control room consoles and panels. Corrective work, resulting from this review, is about 90% complete. This matter remains open pending completion of the corrective work.

B. Lack of Separation of Wiring for the Reactor Trip Channels (RO Report No. 050-305/72-93)

Work to assure proper separation of the subject wiring is in progress and revised drawings are being prepared by PS&E. This matter remains open.

C. Solitary Manual Scram Switch Does Not Meet Single Failure Criterion (RO Report No. 050-305/72-03)

Design work to add a second manual reactor scram switch has been completed by PS&E. This matter remains open pending completion of installation.

Design Changes

No new design changes affecting nuclear safety were identified.

Unusual Occurrences

No unusual occurrences were identified.

Other Significant Findings

A. Current Findings

Construction Status

The licensee estimated that overall plant construction was 95% complete on November 1, 1972. Primary coolant piping was about 97% complete, and the installation of steam and feedwater piping was essentially complete. Piping system cleaning, flushing, and testing were in progress. About 75% of the electrical cables (all types) have been pulled and terminated.

A material storage building is being added to the Auxiliary Building. This addition will extend south from the Auxiliary Building for about 65 feet, and it will be in common with the western portion of the south wall of the Auxiliary Building for approximately 85 feet.

B. Unresolved Matters

QA Documentation for the Containment Dome Fans

Some QA documentation for the two containment dome fan assemblies is not in the site files. PS&E had reported, via NCR No. 733 dated August 21, 1972, that confirmation of certain environmental features (including radiation and corrosion resistance) were not in the QA package for these fans. Prior to this inspection, Wisconsin Public Service Corporation (WPS) had requested confirmation from PS&E that all electrical components within the containment structure meet applicable requirements. This matter will receive follow-up attention.

C. Status of Previously Reported Unresolved Matters

1. Ambiguous Instrument Calibration Records (RO Report No. 050-305/72-14)

During the previous inspection, it was observed that calibration records for Loop A steam generator level transmitters were ambiguous. The given range settings were not in agreement with each other even though the instruments are used for identical service. Additionally, neither record included the value of the necessary correction for temperature-pressure.

Subsequent to the previous inspection, WPS revised procedures for using and filing data related to instrument calibration. Presently, there is only one official controlled record for

calibration data and this is the instrument specification sheet master file. Moreover, WPS instrument and control personnel said that the source of the calibration data (range, zero correction, etc.) would be put on the calibration record sheet. This matter is now considered to have been resolved.

2. Casting Quality of the Residual Heat Removal Pumps (Inquiry Report No. 050-305/72-01 and RO Report No. 050-305/72-14)

WPS notified RO:III on August 31, 1972, in accordance with the requirements of 10 CFR Part 50.55(e), of potential difficulties relative to the RHR pumps. Later, but prior to the current inspection, WPS notified RO:III that both RHR pump casings were found to have rejectable defects.

The casings were cut out of the system and returned to the manufacturer for repair and reradiography. The repaired casings were determined to be acceptable by the manufacturer and were returned to the site. Westinghouse Electric Corporation (W) issued a QCR for both RHR pump casings after a review of the QA documentation which included the repair radiographs. One of the pump casing is being reinstalled at the present time. WPS stated that additional review of all QA documentation and quality requirements related to other components of the RHR pumps is scheduled to be discussed with the pump supplier on November 17, 1972. Inspection follow-up is planned.

3. Identification of Reactor Protection System Equipment (RO Report No. 050-305/72-11)

Reactor protective system instrument components within the containment structure have not been distinctively identified. The licensee stated that the required identification would be provided. This matter remains open pending completion of identification of reactor protective system instruments within the containment structure and other locations in the plant as required.

4. Separation of Redundant System Control Switches and Associated Wiring Within Panels (RO Report No. 050-305/72-03)

Wiring to redundant system switches and other electrical components is being rerouted to obtain maximum possible separation within the consoles and panels. Rerouting is about 85% complete. Most (about 50) of the metal barriers, located between redundant wiring or components not separated by at least six inches of air, have been installed. This matter remains open pending completion of the corrective action.

5. Lack of Fire Barriers and Seals (RO Report No. 050-305/72-03)

Design work is now complete for the installation of fire barriers between the control room consoles and the relay room (cable spreading room) located below the control room. Support brackets and framing for these fire barriers have been installed. The barriers will be installed later, since access in this area is needed at the present time.

A barrier has been designed to separate the controls for the redundant emergency diesel generator trains located on the control room console. Mounts for this barrier have been installed. A follow-up inspection covering both of these matters will be performed.

6. Identification of Safeguard and Reactor Protection System Wiring (RO Report No. 050-305/72-03)

Identification of the subject wiring is about 85% complete and is being accomplished in conjunction with rerouting and barrier installation. This matter remains open pending completion of corrective action.

7. Lack of Adequate Electrical Cable Support (RO Report No. 050-305/72-03)

The licensee stated that corrective action in the form of tray edge protectors (in lieu of additional cable supports) is planned but has not been initiated. This matter remains open pending completion of corrective action.

8. Inadequate Documentation to Establish Resolution of Noted Deficiencies (RO Report No. 050-305/72-03)

During a previous inspection records were not adequate to establish that deficiencies, found during L. K. Comstock Company (Comstock) electrical inspections and WPS audits, were corrected. During the current inspection, additional records were made available and were such that appropriate corrective action with respect to deficiencies is no longer questionable. This matter is considered to be resolved.

WPS records relating to instrumentation inspections and deficiencies were reviewed during the current inspection and were determined to be adequate.

9. Safety Valve to Steam Header Attachments (RO Report No. 050-305/72-07)

PS&E is continuing to evaluate methods for attaching safety valves to main steam line headers. Upon completion of this evaluation, instructions and drawings covering the new installation method will be issued. This matter remains open.

10. Potential Flooding of Both Diesel Generators and Associated 4160 Switch Gear (RO Report No. 050-305/72-04 and RO Report No. 050-305/72-07)

Corrective action is planned to prevent the loss of both emergency supplies in the event of rupture of one of the two 24-inch service water lines located in the area between the two diesel generator rooms. Leakage into the rooms is to be physically restricted. This matter remains open pending completion of the required work.

11. Reactor Trip Switch Gear Protection (RO Report No. 050-305/72-04)

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, is being reviewed. This matter remains unresolved pending completion of the review and/or required work.

12. Steam Generator Stress Analysis Report (RO Report Nos. 050-305/72-03 and 050-305/72-07)

The stress analysis report and the ASME Code Manufacturer's Data Report for design and shop fabrication were reviewed by the inspector, during a previous inspection, and found to be satisfactory. However, the Code Manufacturer's Data Report cannot be completed until the hydrostatic test has been completed. This matter remains open.

13. Valve Body Wall Thickness Verification (RO Report No. 050-305/72-14 - Reopened)

In response to one RO:III letter (dated September 13, 1972) concerned with Class I valve body wall thickness measurements, the licensee (in a letter dated October 10, 1972) provided RO:III with details of a program they are instituting to meet the verification requirements contained in the RO:III letter of June 29, 1972. This WPS program was discussed with the

licensee during the current inspection, and it appears to be responsive to the requirements of the June 29 letter. This matter remains open pending completion of the measurement program and review of the records.

Management Interview

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

Wisconsin Public Service Corporation (WPS)

E. W. James, Vice President - Power Generation and Engineering
E. R. Mathews, Manager - Power Engineering
L. O. Ramsett, Quality Assurance Supervisor
G. V. Fitzpatrick, Site Quality Control

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

1. The status of repaired RHR pump casings, as well as the quality status of other pump components were discussed. The licensee stated that W has issued a QCR for both RHR pump casings, after review of the QA documentation, including the repair radiographs, and that the pump casings are in the process of reinstallation at the present time. WPS further stated that representatives of WPS, Northern States Power Company (NSP) and the RHR pump supplier (for both WPS and NSP) and his representatives would meet on November 16, 1972, to further discuss pump component QA records. The purpose of this meeting is to discuss the total quality-quality documentation status of the pumps, i.e., not just pump casings.

2. The WPS program for valve wall thickness verification of Class I valves specified in the RO:III letter dated June 29, 1972, was discussed. The inspector stated that he had no further questions regarding either the WPS test program in terms of an ultrasonic measuring technique, or the scope of the valve measuring program. WPS stated that they were in agreement with a letter sent to Mr. Muntzing by the AIF, dated September 13, 1972, and that if any relief action results from this letter WPS would modify their program accordingly.

3. The inspector stated that he had reviewed the action taken by WPS personnel in regard to the ambiguous instrument calibration records, which were observed during the previous inspection, and that he had no further questions at this time.

4. The inspector said that he had reviewed the QA package for the containment dome fan assemblies and had determined that the specification for the fan motors included the required environmental features necessary for postulated accident and post accident conditions. However, some QA documentation relating to these features for the fan motors was missing. WPS stated, and the inspector agreed, that both WPS and PS&E were aware of this condition (NCR No. 730 dated August 21, 1972). The licensee added that corrective action was in progress.

5. The inspector stated that, during a review of records for electrical components, it was determined that no documentation was available to certify that the control rod drive power supplies were built in accordance with the specifications. The licensee's representative stated that such documentation was not required because the rod drive motor generators were not Class I components. The inspector questioned a lack of quality verification, even in the event that Class I equipment was not involved, in view of the fact that the motor generators are necessary for control of the reactor and loss of power would result in reactor scram. The licensee indicated that this matter would be reviewed further.

   Subsequent to the inspection, the licensee restated a position that the control rod drive motor generator sets were not identified in the application as Class I (QA Type I) components and that complete quality control documentation was, therefore, unnecessary. The inspector stated that he had no further questions at this time.

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)

E. E. Mitchell, Quality Control Engineer
P. T. Tronsdan, Quality Control Engineer
W. J. Proper, Quality Control Engineer
D. M. MacSwain, Instrument Supervisor

Pioneer Service and Engineering Company (PS&E)

J. P. Engelbrecht, Quality Control Engineer

L. K. Comstock Company (Comstock)

J. J. Reitz, Quality Control Supervisor

Phillips Getschow Company (P-G)

J. (NMI) Steidl, Quality Control Supervisor

Results of Inspection

1. Electrical Components

Follow-up Record Review

a. Installation Inspection

Field inspection check sheets and installation inspection records for the following components were reviewed. These records appeared to establish that the components were properly installed.

(1) 480-volt buses 1-51, 1-52, 1-61, and 1-62

(2) 480-volt transformers 1-51, 1-52, 1-61, and 1-62

b. Material Certifications

Material certification records, including pertinent material receiving reports and vendor test reports, were reviewed for

the following components, and all appeared to meet the applicable specifications.

(1) 480-volt buses 1-51, 1-52, 1-61, and 1-62

(2) 480-volt transformers 1-51, 1-52, 1-61, and 1-62

(3) 120-volt distribution buses I, II, III, and IV

(4) DC distribution panels BRA102, BRA104, BRB102, and BRB104

(5) Service water pump motor 1B2

2. Electrical Cable

Observation of Work

Control cables necessary for the operation of two valves (Nos. 8809A and 8809B) in the piping between the boric acid storage tanks and the suction of the safety injection pumps were selected for inspection. These control cables were routed between the following components: control room panels, relay racks, terminal cabinets, and motor control centers. Construction requirements were met in the following areas: location, routing, protection, separation, identification, and terminations.

3. Other Class I Components

a. Review of QC System

A review of QC and work procedures verified that crane testing and component lifting were included in storage and installation procedures for the reactor vessel, vessel internals, and other Class I components. Additional records confirmed that required tests were conducted as specified.

b. Follow-up Record Review

Certification of materials and installation inspection records were reviewed for the reactor coolant pumps and the containment spray pumps. The review indicated that the components were built and installed according to applicable specifications.

The QA file for the pressurizer was reviewed, including the PS&E audit records. No unresolved matters were identified during this review, and the records indicated that the pressurizer was built according to the applicable specifications.

Records relating to the installation of the boric acid tanks were reviewed, and these records indicated that the tanks were installed properly.

c. Observation of Work

The reactor coolant pumps, the containment spray pumps, the pressurizer, and the boric acid tanks were inspected in their installed locations. No deficiencies were observed.