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. 050-305/73-25

Transmittal Date : December 27, 1973

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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.)

Transmittal Date : _____

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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

DEC 27 1973

Wisconsin Public Service Corporation
ATTN: Mr. E. W. James
Senior Vice President
Power Generation and Engineering
Post Office Box 1200
Green Bay, Wisconsin 55305

Docket No. 50-305

Gentlemen:

This refers to the inspection conducted by Mr. C. M. Erb of this office on November 7-8, 1973, of construction activities at the Kewaunee site authorized by AEC Construction Permit CPPR-50 and to the discussion of our findings with Messrs. Mathews, Ramsett, and Fitzpatrick of your staff at the conclusion of the inspection.

A copy of our report of this inspection is enclosed and identifies the areas examined during the inspection. Within these areas, the inspection consisted of selective examination of procedures and representative records, interviews with plant personnel, and observations by the inspector.

During this inspection, it was determined that one of your activities appears to be in violation of AEC requirements. The activity and reference to the pertinent requirements are listed under Enforcement Action in the Summary of Findings Section of the enclosed inspection report. Prior to the conclusion of this inspection, the inspector determined that corrective actions had been taken with respect to this apparent violation and that measures have been taken to assure that a similar, future violation will be avoided. Consequently, no reply to this letter is required, and we have no further questions regarding these matters at this time. The specific, corrective actions and other measures taken are identified in paragraph 1 of the Report Details Section of the report.

We wish to confirm our understanding during this inspection, that you intend to: (1) complete any electrical rework designed to minimize hazards to safety related equipment from lightning strikes, and (2) complete a replacement switch program in the 5-kv switchgear and check results with a cycling test prior to power operations. We will examine your actions regarding these matters during our next inspection.

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 this report contains any information that you or your contractors believe to be proprietary, it is necessary that you make a written application to this office, within twenty days of your receipt of this letter, to withhold such information from public disclosure. Any such application must include a full statement of the reasons for which it is claimed that the information is proprietary, and should be prepared so the proprietary information identified in the application is contained in a separate part of the document. Unless we receive an application to withhold information or are otherwise contacted within the specified time period, the written material identified in this paragraph will be placed in the Public Document Room.

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

Sincerely yours,

James G. Keppler
Regional Director

Enclosure:
RO Inspection Rpt No. 050-305/73-25

bcc: RO Chief, FS&EB
RO:HQ (4)
Licensing (4)
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RO Files
PDR
Local PDR
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. 050-305/73-25

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: Announced

Dates of Inspection: November 7-8, 1973

Dates of Previous Inspection: September 27-28, 1973 (Construction)

Principal Inspector: C. M. Erb RC Knop for 12-19-73 (Date)

Accompanying Inspectors: None

Other Accompanying Personnel: None

Reviewed By: R. C. Knop, Senior Reactor Inspector RC Knop 12-19-73 (Date)
Reactor Construction Branch

SUMMARY OF FINDINGS

Enforcement Action

A. Violations

10 CFR Part 50, Appendix B, Criterion V, states that: "Activities affecting quality shall be prescribed by documented instructions . . . . and shall be accomplished in accordance with these instructions . . . .".

Pioneer Service and Engineering Company (PS&E) Specification for Field Welding Number SS-S-934 requires that the root pass weld, each 5/16" thickness thereafter, and the final pass weld receive a Magnetic Particle (MP) test inspection. (Report Details, Paragraph 1)

Contrary to the above, only the final pass welds of thirty pipe whip restraints received a MP inspection.

B. Safety Matters

None identified.

Licensee Action on Previously Identified Enforcement Matters

No open enforcement matters.

Unusual Occurrences

None to report.

Other Significant Findings

A. Current Findings

1. Personnel

On November 2, 1973, there were 309 contractor personnel at work on the Kewaunee site. Phillips Getschow (P-G) piping contractor, employed 170 men, and L. K. Comstock Company (Comstock) electrical contractor, employed 70 men.

2. Work Status

There were 16 nonconformance reports still open from the licensee's record. The last, open nonconformance at Comstock was closed out during this inspection. All Class I cables were pulled, but 30 balance-of-plant cables remained to be pulled. Some impingement barrier work remained to be performed by P-G in the auxiliary building. (Report Details, Paragraph 2)

B. Unresolved Matters

Refueling Pool Leaks

Repairs are being made to the pool in the areas of support embedments for the reactor pressure vessel internals. This matter is open until repairs are complete and a satisfactory leak test has been performed. (Report Details, Paragraph 3)

C. Status of Previously Reported Unresolved Matters

1. Fire Barriers and Seals (RO Inspection Report No. 050-305/73-17)

The inspector observed that the fire barriers had been installed below the cabinets in the control room. Spraying of the flamastic floc material, on the underside of some of these barriers, remained to be done and will be checked on a subsequent inspection.

2. Main Steam Isolation Valves (RO Inspection Report No. 050-305/73-17)

These valves have been assembled and inspected by the Schutte & Koerting (S&K) representative. The licensee stated that these valve internals will be examined after any spurious closure (steam flow above 50%) and will be replaced at approximately the first fuel reload by valves of a different design. The inspector examined the installed valves and verified that required measurements for baseline valve distortion data had been made. This matter is closed.

3. Suppression of Lightning Strike Effects (RO Inspection Report No. 050-305/73-21)

Corrective action for this problem involves the removal of Zener diodes for switchgear circuits and certain suppression measures for the annunciator circuits. This action has not been completed, and the corrective measures will be examined during a future inspection.

4. ASCO Solenoid Valves

Replacement of 39 solenoid valves was completed to eliminate a problem with the valve seats. Of these valves, 12 were safety related. The inspector reviewed documentation and verified that the nonconformance had been closed on this item.

A report for the requirements of 10 CFR Part 50.55(e) was made by the licensee on November 1, 1973. This letter from the licensee did not indicate that malfunction of a vacuum breaker, due to a defective Asco valve, had occurred. This matter will be closed when a correction is made to the written report dated November 1, 1973.

5. Safety Injection Pump Impellers and Shafts (RO Inspection Report No. 050-305/73-21)

The subject items have been returned to Bingham Pump Company (Bingham) for modification to eliminate potential seizures, due to impeller movement relative to the shaft. This matter is open until the modified parts have been installed and test results are available.

6. Relays Associated With Diesel Generator Bus Loading Circuits (RO Inspection Report No. 050-305/73-21)

The noble metal type contacts for the subject relays have been installed, and preoperational tests indicate satisfactory operation. The inspector examined the replacement contacts, after installation, and verified identification of the safety related contacts. This matter is closed.

7. Pipe Whip Restraints Welds (RO Inspection Report No. 050-305/73-21)

Some "T" welds for pipe whip restraints supports that were designed for full penetration, required that additional welding be performed. This welding was done and, in addition, a UT inspection was performed on all field welds, because a magnetic particle inspection had been inadvertently omitted by P-G, the field fabricator. The QC records were examined and found to be satisfactory. This matter is closed. (Report Details, Paragraph 1)

8. Impingement Protection - High Energy Fluid Lines (RO Inspection Report No. 050-305/73-17)

This work has been completed in conformance to amended FSAR, and an immediate effort will be made to set the affected snubbers and hangers in the cold condition. Amendment No. 32 to the FSAR describes the bases for this program. Documentation on materials and welding was reviewed by the inspector. This matter is closed.

9. Switchgear - 5-kv (Inspection Report No. 050-305/73-21)

This equipment contains 47 switches, of which 22 are safety related. These switches will be replaced, since there may be fatigue damage due to previous misalignment of the actuating rod, which is now properly aligned. The replacement switch installation will be supervised by McGraw Edison personnel.

Damage to some insulated conductors was found, due to pulling the switchgear mechanism in and out of the cubicles. All damaged wires will be replaced and an improved harness method used to assure no further rubbing of wires. The inspector examined the switchgear cubicles, and the proposed repair appears to be adequate. This matter is open.

10. Base-Line Inspection - Reactor Pressure Vessel and Piping Welds

This UT inspection has been completed, but the final report has not been given to the licensee. This matter is open, until all results of the inspection have been received and evaluated by the licensee.

Management Interview

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

Wisconsin Public Service Corporation (WPS)

E. R. Mathews, Assistant Vice President - Power Engineering
L. O. Ramsett, Supervisor - Quality Assurance
G. V. Fitzpatrick, Site Quality Engineer

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

1. The inspector stated that he had understood, during a previous inspection, that the corrective action for the lightning strike problem would be completed by November 15, 1973. However, the licensee said that he did not know the status of action being taken by PS&E. The inspector stated that this problem required solution prior to power operation. The licensee's representative stated that immediate action would be taken to implement corrective action, including any action required by the licensee switchyard personnel.

2. The inspector noted that modifications to the drying equipment inside the steam generators were underway. The licensee stated that Hennes Company was performing the work under supervision of W Tampa personnel. (Report Details, Paragraph 2)

3. The inspector stated that he wished to examine the final report on the UT base-line inspection of the reactor pressure vessel and other piping. The licensee said that a final report had not been received, but that it had been promised for the early part of December 1973.

4. The inspector stated that he had examined the rework operation in the refueling pool. The licensee stated they were confident that excessive water leakage would be corrected by this work. (Report Details, Paragraph 3)

5. The inspector stated that he had reviewed the corrective actions, relative to the failure to perform the required MP inspection of the pipe whip restraints welds and stated that there were no further questions.

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)

P. T. Trondson, Quality Assurance Engineer - Electrical

Westinghouse Electric Corporation (W)

R. W. Schulz, Site Manager

Phillips Getschow Company (P-G)

J. (NMI) Steidl, Manager - Quality Assurance

Results of Inspection

1. Pipe Whip Restraint Weld NDT Review

On October 4, 1973, the licensee reported to RO:III that after installation of 30 restraints, it was found that the magnetic particle inspection requirements, outlined by the architect-engineer in specification No. S-934, had not been followed in their entirety.

The required magnetic particle (MP) inspection of the finished weld had been performed, but a required root MP inspection and intermediate MP inspection had not been done. The licensee performed a complete analyses of all the welds. Additional welding was performed in some cases to insure full penetration welds. Certain welds were ultrasonically tested to assure the required quality.

The licensee has issued instructions requiring a review by the quality assurance organization of drawings and specification issued by the architect-engineer to assure that quality requirements are not missed.

The inspector reviewed documentation indicating that the corrective action had been completed and stated that there were no further questions.

2. Modification of Drying Equipment in the Steam Generators

The inspector determined that provisions to maintain cleanliness and protect the tube bundle had been implemented. The modification consisted of installing a smaller orifice in the top of each swirl cylinder and the addition of baffle plates.

Since access to the generator was through a mechanically attached manhole cover, no rehydrotest of the generators is required.

3. Repairs to the Refueling Pool Floor

This repair involved grinding into the floor plate around the base of the holddown bolts, followed by welding in order to seal any opening between these bolts and the floor plate.

The two support pedestals for the upper and lower reactor internals each has four bolts pads, with each pad accepting four floor attachment bolts. There were 32 seal welds to be made around these floor attachment bolts.

The repair operation was also performed in the fuel transfer canal. The above repair was performed by a Hennes Company welder to a qualified weld procedure, No. IA88-0, and penetrant inspected to LPT-1-NP, followed by a vacuum box leak test.

4. Nonconforming and Incomplete Items

The licensee's records identified 16 nonconforming items. The following are considered to be significant matters and should be corrected prior to power ascension.

a. NCR 1098 - Repairs, fuel transfer mechanism, and to refueling cavity to reduce water leakage.

b. 5-kv Switchgear - Replacement of safety related switches and rework of wire bundles where insulation was damaged.

c. Steam Dump Valves - SD21-1 to SD21-6, inclusive, and SD21-007 to SD21-012. Twelve valves supplied by Copes Vulcan in the steam dump system require rework.

d. Added Requirements, Due to Lightning Strike - Certain added suppression measures may be required, as a result of the lightning strike of August 19, 1973.