CENTRAL FILES

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

JAN 7 1977

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

Docket No. 50-305

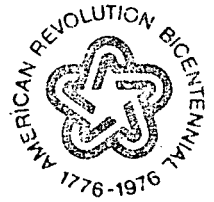
Gentlemen:

This refers to the inspection conducted by Mr. D. R. Hunter of this office on December 13-17, 1976, of activities at Kewaunee Nuclear Power Plant authorized by NRC Operating License No. DPR-43 and to the discussion of our findings with Mr. Luoma at the conclusion of the inspection.

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

During this inspection, certain of your activities appeared to be in noncompliance with NRC requirements, as described under Enforcement Items in the Summary of Findings section of the enclosed inspection report. The inspection showed that action had been taken to correct the identified noncompliance and to prevent recurrence. Consequently, no reply to this noncompliance is required and we have no further questions regarding this matter at this time.

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



application must include a full statement of the reasons for which the information is considered proprietary, and should be prepared so that proprietary information identified in the application is contained in an enclosure to the application.

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

Sincerely yours,

Gaston Fiorelli

Gaston Fiorelli, Chief
Reactor Operations and
Nuclear Support Branch

Enclosure:
IE Inspection Report
No. 050-305/76-16

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

UNITED STATES NUCLEAR REGULATORY COMMISION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report of Operations Inspection

IE Inspection Report No. 050-305/76-16

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

Kewaunee Nuclear Power Plant
Kewaunee, Wisconsin

License No. DPR-43
Category: C

Type of Licensee: PWR W 1650 MWt

Type of Inspection: Routine, Unannounced

Dates of Inspection: December 13-17, 1976

Principal Inspector: D. R. Hunter

1/6/77
(Date)

Accompanying Inspectors: None

Other Accompanying Personnel: None

Reviewed By: D. C. Boyd, Acting Chief
Reactor Projects Section 2

1-6-77
(Date)

SUMMARY OF FINDINGS

Inspection Summary

Inspection on November 13-17, 1976, (76-16): Review of operations, records, review and audits, training, retraining, item of noncompliance, and selected outstanding items. Two items of noncompliance were identified concerning failure to continuously record the steam generator blowdown activity and failure to adequately monitor core delta flux.

Enforcement Items

The following items were identified during the inspection:

Infractions

A. Contrary to Technical Specification 3.9.a.4, the steam generator blowdown radiation level was not continuously recorded. (Paragraph 3.a, Report Details)

B. Contrary to Technical Specification 3.10.b.10, valid manual monitoring of core axial flux difference was not provided when required. (Paragraph 3.b, Report Details)

Licensee Action on Previously Identified Enforcement Items

Corrective actions concerning the verification that vendors of safety related equipment are included on the licensee's approved vendor listing were reviewed and are considered adequate. (Paragraph 7, Report Details)

Other Significant Items

A. Systems and Components

Unresolved Item: The "B" safety injection accumulator level channels indicated greater than a 6% difference between the two channels. (Paragraph 2.h, Report Details)

B. Facility Items (Plans and Procedures)

1. The licensee is planning a refueling outage in February and March 1977.

2. The second of three shipments of new fuel assemblies was received and unloaded during the week of December 13, 1976.

C. Managerial Items

None.

D. Deviations

None.

E. Status of Previously Reported Unresolved Items

None.

Management Interview

The management interview was conducted on December 17, 1976, by Mr. Hunter with the following persons present:

C. R. Luoma, Plant Superintendent
R. W. Lange, Assistant Superintendent, Maintenance
M. L. Marchi, Nuclear Licensing and Systems Engineer

A. The inspector stated that the review of operations included a review of the containment spray system and revealed apparent inconsistencies in the locking of inline system valves, certain capped connections not shown on the valve lineup checksheets, and certain system testing techniques.

The licensee stated that the locking of inline valves, the system valve checklists, and the testing requirements and techniques would be reviewed and evaluated. (Paragraph 2.j. Report Details)

B. The inspector stated that the review of operations revealed that the safety injection system accumulator "B" level channels were greater than 6% apart, indicating questionable accuracy, since November 3, 1976. The inspector stated that this would be considered an unresolved item pending calibration of the accumulator channels.

The licensee stated that the accumulator levels would be calibrated at the first available opportunity and noted that the indicated level was within the Technical Specifications limits even though a channel deviation existed. (Paragraph 2.h, Report Details)

C. The inspector discussed the plant prestartup checklists. It was noted during the inspection that certain safety related valve lineup checklists had not been rerun since initial plant startup. The inspector expressed concern that the valve lineup checksheets

were not representative of the plant status after the completion of preoperational testing. The licensee acknowledged the inspector's statements and indicated that the area would be reviewed. (Paragraph 2.k, Report Details)

D. The inspector stated that a review of reportable occurrences revealed two items of noncompliance.

The removal from service of the recorder serving the steam generator blowdown radiation monitor system and not providing an alternate method to continuously record the blowdown activity resulted in an item of noncompliance pursuant to Technical Specification 3.9.a.4.

The failure of the computer resulting in the invalid monitoring of the core delta flux in accordance with Technical Specification 3.10.b.10 is considered an item of noncompliance.

The licensee acknowledged the inspector's statements and indicated that additional instructions had been issued for handling of the radiation monitor recorder and that computer modifications are being planned to reduce the probability of unalarmed computer failures. (Paragraph 3, Report Details)

E. The inspector stated that a review of the training and retraining program revealed no discrepancies. The inspector discussed certain areas of the program with the licensee, indicating possible areas needing increased effort. These areas included the remedial training program for licensed operators, onshift operator group training sessions, general plant proficiency training, and administrative tracking of certain licensed operators to insure the performance of licensed duties during each four-month period.

The licensee indicated that the areas would be reviewed and that the job descriptions being generated would assist in further developing the formal department training program for nonlicensed personnel. (Paragraph 4, Report Details)

F. The inspector stated that the review of the area of plant review and audit functions revealed no discrepancies.

The inspector discussed certain areas of the review and audit program with the licensee, including the resolution of open items in the audit program and the review of plant operations to detect potential safety hazards.

The licensee indicated that the open items in the audit program would be followed up and the review of operations was considered adequate and referred to the normal inplant programs utilized by plant management. The programs include the routine review of logs,

QA audits being performed and reviewed, maintenance reports issued, design change requests issued, and the daily scheduled morning meeting with plant management. (Paragraph 5, Report Details)

G. The inspector stated that the review of plant records revealed no apparent discrepancies.

The inspector discussed two areas concerning records management which appear to need additional effort by the licensee. These areas included the control of the QA files outside the QA vault and the apparent time delay between temporary changes made to the plant (drawings and specifications) and the updating of the documents.

The licensee indicated that the two areas would be reviewed. (Paragraph 6, Report Details)

REPORT DETAILS

1. Persons Contacted

C. R. Luoma, Plant Superintendent
R. W. Lange, Assistant Superintendent, Maintenance
C. R. Steinhardt, Assistant Superintdent, Operations
J. S. Richmond, Technical Supervisor
W. J. Truttmann, Operations Supervisor
K. H. Evers, Reactor Supervisor
D. M. MacSwain, Instrument and Control Supervisor
A. J. Ruege, Plant Performance Engineer
D. J. Ristau, Training Supervisor
R. F. Zube, Shift Supervisor
R. W. Sitzman, Maintenance Coordinator
D. E. Winberg, Maintenance Engineer
D. Berg, Quality Assurance Technician
M. Reinhart, Lead Radiation Protection
R. Hanson, Control Room Operator
E. Hoppe, Control Room Operator
D. Hersher, Auxiliary Operator
E. Larson, Nuclear Document Clerk
T. J. Moore, Administrative Assistant

2. Review of Operations

The inspector reviewed selected operations records and activities to determine that the plant was being operated in conformance with the approved procedures and Technical Specifications. The review included:

a. Shift Supervisor Log (October 14, 1976, through December 1, 1976)

No discrepancies were noted.

b. Control Room Operator Log (November 1, 1976, through December 1, 1976)

No discrepancies were noted.

c. Auxiliary Log Sheets (November 1976)

No discrepancies were noted.

d. Night Order Book

No discrepancies were noted.

e. Temporary Change Request Log

No discrepancies were noted.

f. System Tagout Log

No discrepancies were noted.

g. Primary and Secondary Chemistry

The review of the results of primary and secondary chemistry for October and November 1976 revealed no discrepancies.

h. Plant System Status

The review of the plant system status and off normal conditions with the shift supervisor and the control room operators revealed that that "B" safety injection accumulator level indications were in excess of the 6% allowable between the channels. Log review revealed that the channels had been noted to be outside the acceptance criteria on SP-125 (Shift Channel Checks) on November 3, 1976, and a maintenance order had been issued. The level detectors on the accumulator had not been calibrated due to the limited stay time in the containment.

The inspector verified that neither indicated levels were outside the Technical Specifications limits even though the level indications were apparently questionable. The licensee is involved in a review and evaluation of the transmitter shifts occuring during normal service.

Technical Specifications Section 3.3 requires that the accumulation contains greater than 1250 ft^3 of water and Technical Specification 4.1 requires surveillance of specific instrumentation channels to assure meeting of the Technical Specifications. This item will continued as an unresolved item pending further review and evaluation, and pending the recalibration of the "B" accumulator level channels as soon as entrance into the containment is considered feasible.

i. Shift Relief and Turnover and Shift Manning

No discrepancies were noted.

j. Containment Vessel Internal Spray System

The inspector reviewed the ICS System including:

(1) Normal Operation Procedures (N-ICS-23)

(2) Containment Spray-Emergency (E-ICS-23)

(3) Safety Injection Actuation (E-0-07)

(4) Steam Line Rupture (E-0-08)

(5) Loss of Coolant Accident (E-0-10)

(6) Containment Spray System Test (SP-095)

(7) Containment Spray Flow Test (SP-096)

Minor procedure inadequacies were reviewed with the Licensee representative and resolved during the inspection. No further questions are required of these matters at this time.

(8) Internal Spray Prestartup Checklist (N-ICS-23-CL)

The prestartup checklist review by the inspector revealed discrepancies between the vendor-supplied drawings and the checklist. The checklist did not include verifying the presence of caps on test, vent, drain, and sample connections; and the application of locks on in-line system valves, was not uniform. An example of this inconsistency was the locking "OPEN" of the ICS headers isolation valves (ICS 7A and 7B) and the failure to lock "OPEN" the ICS pumps suction valves (ICS-2A and 2B) nor the ICS system suction valve from the RWST (ICS-1). The apparent discrepancies will remain as an open item pending review and evaluation by the licensee.

(9) Containment Spray Pump Test (SP-100)

The review by the inspector of the containment spray pump monthly operational surveillance procedure revealed apparent inconsistencies between the testing requirements in the FSAR, Section 6.4, and the approved test procedure. These apparent discrepancies include:

Requirement to flow test the system via the test lines to test all components up to the isolation valves at the

containment; inspection of the pressure containing components for leakage during operational testing; separate testing of the isolation valves at the containment; and definitive acceptance criteria within the test to assure adequate documentation, evaluation, and satisfaction of the test requirements. Record review by the inspector verified that the containment spray pumps had demonstrated consistent discharge pressure indications during previous testing in accordance with the approved test procedures. The apparent discrepancies will remain as an open item pending review and evaluation by the licensee.

k. Plant Prestartup Checklist

The inspector's review of the completed prestartup checklists revealed that certain checklists had not been rerun since early plant startup after completion of plant preoperational testing. The inspector noted that the prestartup checklists (service water and auxiliary feedwater systems) were not indicative of the plant conditions at the cold shutdown conditions immediately prior to plant startup after a maintenance or refueling outage or at the end of the plant cooldown in preparation for refueling. The checklists were apparently indicative of a preoperational condition which is not likely to be repeated with nuclear fuel onsite. This item will be continued as an open item pending review and evaluation by the licensee.

3. Nonroutine Event Reports

The following reportable occurrences were reviewed by the inspector to assure adequate review, evaluation, corrective actions, and reporting.

a. RO 76-20, Failure to continuously record the steam generator blowdown radiation monitor.

The licensee reported[1/] that the multipoint recorder on the radiation monitoring system, including the the steam generator blowdown monitor, was removed from service for maintenance due to a failure in the chart drive mechanism. Plant personnel failed to provide an alternate method of recording the blowdown activity continuously during the extended recorder outage (2 months).

The failure to provide continuous recording of the steam generator blowdown activity in accordance with Technical Specification 3.9.a.4 is an item of noncompliance.

1/ Ltr, WPS to IE:III, dtd 11/24/76.

The review of the corrective actions taken by the licensee to provide an alternate method of continuously recording the blowdown activity is considered adequate to prevent recurrence and no further questions are required of this matter at this time.

b. RO 76-21, Failure to provide adequate manual monitoring of the core axial flux difference during periods of computer failure.

The licensee reported[2/] that a management evaluation of previous computer failures on June 1, July 27, August 3, and October 30, 1976, revealed that the manual monitoring of the core axial flux difference, utilizing the computer, was not valid due to the failure of the computer to update the axial flux difference being utilized by operations during the above periods of time.

The inspector verified that the corrective actions taken by the licensee will provide adequate monitoring of the core axial flux difference by cross-checking the computer against the board-mounted delta flux instrumentation and plotting the board-mounted delta flux indication. An operations data sheet is being utilized to record the data. The failure to provide valid manual axial flux difference monitoring in accordance with Technical Specification 3.10.b.10 is an item of noncompliance.

The corrective actions taken are considered adequate and no further questions are required of this matter at this time.

4. Training and Retraining

The plant training and retraining program was reviewed by the inspector to insure that the programs are being conducted in accordance with the Administrative Procedures and Regulatory requirements. The review included:

a. Operator Training Program Utilizing a Simulator.

b. Operator Requalification Program.

c. Administrative Control Directive 13.0.

d. Operational Quality Assurance Manual 13.0.

Selected specific areas reviewed included:

a. Training supervisor responsibilities and job description.

2/ Ltr, WPS to IE:III, dtd 11/29/76.

b. Formal training programs established.

c. Lecture schedules, attendance, and examination grades.

d. Requalification training annual examinations, operator evaluations, and operator remedial training.

e. Shift training and individual study.

f. Training records.

g. General plant training.

h. Proficiency Training - The review revealed the need to increase the effort in the area of technician, mechanical and electrical training. This item will be continued as an open item pending further review and evaluation by the licensee to provide an improved program based on the forthcoming job descriptions for plant personnel below the supervisor level.

i. The last Quality Assurance audit performed on the operations group on November 2, 1976, was reviewed by the inspector. Two open items concerning remedial training and onshift training had been closed and were considered adequate; but the inspector noted that both areas appeared weak and need more attention by the licensee. One item concerning Site Emergency Director training required by Section VII of the Emergency Plan remains open. The licensee is evaluating corrective action for this open item.

No discrepancies were noted.

5. Review and Audits

The plant review and audit functions were reviewed to insure conformance with the requirements of the Technical Specifications.

Areas reviewed included:

a. Selected Plant Operating Review Committee minutes during 1976.

b. Selected Quality Assurance audits performed during 1976. The reviewed revealed certain audit findings outstanding after an apparent adequate amount of time to complete corrective action. The inspector reviewed the areas with the appropriate licensee representatives. This area will be continued as an open item pending review and evaluation by the licensee.

No discrepancies were noted.

6. Records

The plant records program was reviewed by the inspector to ascertain that the program for the control, storage, retention and retrieval of records and documents is in conformance with approved procedures and Technical Specifications.

Areas reviewed included:

a. Selected maintenance records, design change records, and procedure revision records.

b. As-Built Drawings - The review revealed an apparent weak area in document control concerning the time delay between installation of temporary changes and the updating of the plant documents. The inspector reviewed the area with the licensee representatives. The item will be continued as an open item pending further review and evaluation by the licensee.

c. Quality Assurance Files - The review of the general files and Administrative Control Directive Section 9.2 revealed an inconsistent treatment of the QA vault file and remote (inoffice) QA files. The inspector reviewed the area with the licensee representatives. This item will be carried as an open item pending further review and evaluation by the licensee.

No discrepancies were noted.

7. Item of Noncompliance

The review of the corrective actions associated with a previously identified item of noncompliance[3/] concerning the failure to include a vendor of certain safety related materials on the licensee's approved vendor listing indicated that adequate corrective actions have been implemented by the licensee. The appropriate Administrative Control Directive (3.1) and Quality Assurance Directive (6.3) have been revised to prevent recurrence. No further questions are required of this matter at this time.

8. Headquarters Requested Item

The inspector reviewed the requirements in the Technical Specifications and administrative controls to assure that the spray additive tank sodium hydroxide concentration was being maintained within the limits of the licensee and the local tank temperature.

3/ IE IR No. 050-305/76-14.

The actual concentration in the tank was 32% as determined by the last tank sample. The licensee indicated that the caustic solution is received onsite at either 30% or 50% by weight concentration of sodium hydroxide and the adminstrative limit in the tank is approximately 35% maximum. No upper limit is stated in the Technical Specifications. The caustic tank is located in the auxiliary building area and subject to ambient building temperatures during normal operation.

The system status is considered adequate and requires no immediate action by the licensee. No further questions are required of this matter at this time.

9. Outstanding Items

The inspector reviewed selected outstanding items to verify adequate licensee actions as required.

a. Relay Failures - Westinghouse BF(ac) and BFD(dc) Relays[4/5/]

The licensee has completed a review of instrumentation surveillance procedures to ascertain the number of relays of each type which are tested during the monthly surveillance test procedures and the relays which are tested at the refueling outages. The identification and test review revealed:

(1) Reactor Protection System

82 BFD relays - 56 tested monthly by SP-062
26 tested at SD by SP-022

350 BF relays - 338 tested monthly by SP-062
12 tested at SD by SP-062

(2) Engineered Safeguards System

90 BFD relays - 26 tested monthly by SP-062
32 tested at SD by SP-062
22 relays remain to be evaluated

116 BD relays - 114 tested monthly by SP-062
2 relays remain to be evaluated

The licensee is completing the evaluation and will test selected numbers of relays at the next outage. The licensee's evaluation will determine that all relays are tested during the normal surveillance testing program. This item will remain open

4/ IEC 76-02, dtd 8/17/76.
5/ Ltr, WPS to IE:III, dtd 10/18/76.

pending completion of evaluation and testing by the licensee.

b. Nonsupervisory Job Description[6/]

The licensee has approximately 70% of the job descriptions submitted to the offsite management and will have the other job descriptions submitted by January 1977.

This item will remain open pending completion of the job descriptions.

6/ IE IR No. 050-305/76-12.