Reactor Facilities
Br.

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

MAY 4 1976

Wisconsin Public Service Corporation Docket No. 50-305
ATTN: Mr. E. W. James, Senior Vice President
Power Generation and Engineering
P.O. Box 1200
Green Bay, Wisconsin 54305

Gentlemen:

This refers to the inspection conducted by Mr. D. C. Boyd of this office on April 7, 14 and 21, 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. Lucas 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.

No items of noncompliance with NRC requirements were identified within the scope of this inspection.

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.

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

Sincerely yours,

Gaston Fiorelli, Chief
Reactor Operations and
Nuclear Support Branch

Enclosure:
IE Inspection Report
No. 050-305/76-07

cc w/encl:
C. Lucma, Plant
Superintendent

bcc w/encl:
Central Files
J. H. Sniezek, Chief, LWRPB
PDR
Local PDR
NSIC
TIC
IE Mail and File Unit

UNITED STATES NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report of Operations Inspection
Resident Inspection Program

IE Inspection Report No. 050-305/76-07

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, Announced

Dates of Inspection: April 7, 14, and 21, 1976

Principal Inspector: for D. C. Boyd — 5/4/76 (Date)

Accompanying Inspectors: None

Other Accompanying Personnel: J. Wetmore, Licensing Project Manager (P. B.)

A. Schwencer, Chief, Plant Systems Branch

I. Pinkel, Fire Protection Consultant

Reviewed By: E. L. Jordan, Chief
Reactor Projects Section 2 — 5/4/76 (Date)

SUMMARY OF FINDINGS

Inspection Summary

Inspections on April 7, 14 and 21, (76-07): These announced inspections included: review of plant operating, administrative and emergency procedures and records as they pertain to plant fire protection; review of plant system and electrical drawings, electrical tray and electrical penetration drawings, tray loading and tray routing; a plant inspection tour of selected portions of the plant to observe fire prevention capabilities and to compare these against the commitments of the plant FSAR and the requirements of the facility Technical Specifications. No items of noncompliance were found.

Enforcement Items

None.

Licensee Action on Previously Identified Enforcement Items

None.

Other Significant Items

A. System and Components

None.

B. Facility Items (Plans and Procedures)

At the time of this inspection the plant was in preparation for startup following their first refueling outage which began on February 13, 1976.

C. Managerial Items

None.

D. Noncompliance Identified and Corrected by Licensee

None.

E. Deviations

None.

F. Status of Previously Reported Unresolved Items

None.

Management Interview

A management interview was conducted on April 21, 1976 with Messrs. Luoma, Plant Superintendent; and Lange, Assistant Superintendent, Maintenance.

Items discussed included the following:

A. Administrative controls, operating and emergency procedural fire protection measures.

B. Structural and system design fire protection measures.

C. General discussion of tour and inspection.

REPORT DETAILS

1. Persons Contacted

G. Jarvela, Health Physics Supervisor (Member of Fire Brigade)
R. Hirst, Maintenance Supervisor
J. Ruege, Plant Performance Engineer
O. Ristau, Training Supervisor (Fire Brigade Chief)
R. Lange, Assistant Superintendent, Maintenance

2. Work Control Procedures

During this inspection it was verified that work control procedures which define requirements for operations personnel approval and control of all construction, modifications and maintenance activities performed within the operating plant boundary or within the proximity of vital equipment have been developed as a part of the operating plant Administrative Procedures. Included in these procedures are the following:

Administrative Control Directives

4.2 Operating Procedures
5.2 Maintenance Procedures
5.4 Work Requests
5.6 Maintenance Planning and Scheduling
7.3 Instrument and Control Procedures
8.5 Design Change Request
8.7 Engineering Specifications
9.1 Plant Quality Assurance Organization
12.1 Plant Emergency Organization
12.2 Fire Emergency
13.2 Fire Brigade Training

Fire Protection Procedures

N-FP-08 Fire Protection System
N-FP-08 CL Fire Protection System Check List
E-FP-08 Emergency Operating Procedure-Fire
E-0-06 Control Room Inaccessability

3. Fire Prevention

Individual training and fire hazard awareness are the primary fire prevention means utilized at this plant. Craftsmen receive specific fire prevention training which includes the use of fire blankets, fire watch, assuring that fire extinguishers are immediately available, and fire brigade training. Members of the supervisory staff and operations personnel also receive this training. A recently adopted fire hazard awareness policy is to "flag," in the shift supervisor's log, all work activities in progress that have any fire potential. This assures continuity of this "fire potential awareness" from one shift to the next since reading of the log is a mandatory part of shift turnover.

As stated above, fire watch is provided by the personnel performing the work and by the routine patrol of all portions of the plant by the shift operations personnel and by members of the plant supervisory staff.

Communication capabilities to provide fire notification to the control room include approximately 30 automatically actuated control room annunciators and approximately 100 Gai-Tronic two-line communication units located strategically throughout the plant.

4. Quality Assurance Surveillance

The inspector verified that procedures exist which assure that periodic audits of work authorizations and modification requests are performed to verify that operating personnel are controlling and authorizing modifications and maintenance activities. The key procedures involved include the following:

ACD 5.4 - Maintenance Requests

This procedure identifies several levels of review and audit including: shift supervisor, operations superintendent, Quality Assurance representative, and maintenance or instrument superintendent.

ACD 8.5 - Design Change Request

This procedure makes it mandatory that all modifications be approved at the plant superintendent level, or higher, and that a safety analysis be provided and approved prior to implementation of the modification. Audit requirements are the same as for ACD 3.19, above.

In addition to the above, the site performance engineer audits portions of work activities. One area included in these audits is adherence to the company Safety Rule No. 515, "Welding and Cutting."

5. Design Change Controls

The inspector verified that administrative controls exist, and are adhered to, which assure that flammable materials are not used in any plant cable penetrations or fire stops.

Detailed penetration sealing, fire retardant application and fire stop specifications are provided for ten different types of penetrations. These specifications are provided by Pioneer Service and Engineering Company on drawings No. 23712 "A" and E 2639F. These specifications were reviewed by the inspector prior to the physical examination of the various electrical penetrations in the plant. Reference to these specifications and General Maintenance Procedure GMD-202 are made on the work authorization forms. During a previous audit, the inspector observed craftsmen using these specifications and materials while working on cable penetrations and fire stops.

Discussions with the assistant electrical/maintenance supervisor, plus a review of plant work request and modification files, indicate that disturbing these sealed electrical penetrations to pull in new cable or remove old cable is an infrequent occurrence. Formal procedures or instructions are not issued; however, according to the licensee, the craftsmen return the penetration to its original status by using the specifications identified above.

The licensee does not believe that individual penetration seal testing to insure that a total pressure seal exists is necessary for penetrations other than containment boundary penetrations. This position is based on the fact that the various plant ventilation control systems are designed with sufficient independence to permit sweeping of smoke from the various portions of the plant without the smoke being introduced into the control room. The separate control room ventilation system is designed with the capability to purge any smoke originating in the control room directly to atmosphere, or to operate in a recirculating, filtered mode. Thus, the licensee does not intend to perform individual penetration seal tests. They do intend to adhere to the penetration specifications

identified above, in providing a flame stop, flame retardant, fire barrier type penetration with reasonably tight smoke limiting seal. The inspector's review of these design specifications and the licensee's final Safety Analysis Report indicates that neither specify that a measurable pressure seal exists, but rather that a "fire barrier" exists. No open flame is used in the testing of seals or penetrations at this plant.

6. Tour of Facility

On April 7, 1976, a tour of all portions of the facility, with the exception of the area inside containment, was conducted. Personnel involved in the tour and discussions include the following:

Nuclear Regulatory Commission

J. Wetmore, Licensing Project Manager
A. Schwencer, Chief, Plant Systems Branch
I. Pinkel, Fire Protection Consultant (contracted)
D. Boyd, Resident Inspector

Wisconsin Public Service Corporation

J. Ruege, Plant Performance Engineer

The facility tour included the following areas:

Control Room
Cable Spreading and Relay Room
Safeguards Switch Gear Room
Diesel Generator Rooms
Turbine Building
Auxiliary Building
Diesel Fuel Storage
Nitrogen Storage
Transformer Areas
Flammable Materials Storage

During the tour, the inspector conducted portions of a periodically performed fire prevention inspection, which included the following items:

a. Plant Houskeeping - Found to be good. Combustible materials present, such as scaffolding, timbers, plywood sheets, etc., were separated into small quantities and located such that any fire would neither propagate nor pose a threat to the plant's electrical or process systems.

b. Observation of the status of cable trays for loading, physical separation, routing and fire protection.

c. Observation of fire stops, fire barriers, for completeness; i.e., masonite fire stop and coating, flame retardant flamemastic 71 material.

d. Observation of presence and location of fire detectors (smoke and temperature detectors).

e. Observation of "built-in" automatic or manual fire prevention systems such as:

Main Transformer Vault
Turbine Bearing areas
Turbine Electrio Hydraulic Oil System and Reservoir
Diesel Fuel Storage Area and Pump House
Diesel Generator Rooms
Records Storage Vault
Fire Hoses and Nozzles on Plant Loop
Hydrogen Detraining Tank and Seal Oil Unit

f. Observation of location and types of portable fire extinguishers located throughout the facility. Records establish that there are approximately 125 such units located at assigned positions in the plant. Records establish that these are checked and verified to be operable on a monthly basis. Additional checks, including cleaning, hydro testing and recharging are conducted annually.

g. Observation of availability of fire annunciation, alarms and other facility communications. The primary communications system used in the plant, in addition to regulatory telephone system, is a multi-channel Gai-Tronics paging and communications system. This network provides approximately 100 stations within the facility and is backed up from the emergency power bus. Fire sirens are located about the facility and part of periodic system checks and

fire drills is to assure that the sirens can be heard at all points in and about the plant. A central fire annunciator panel is located in the control room. Any annunciator actuation on this panel also annunciates on the main control room annunciator panel.

h. Observation of capability to contain spills of any flammable material areas inspected included the following:

Retention wall around electro hydraulic control oil system and reservoir. Includes deluge spray of retention area.

Retention sump below diesel day tanks in diesel generator rooms.

Isolation and deluge capability of diesel generator rooms.

Storage of flammable materials. A special storage room is provided for storage of flammable lubricants, cleaning agents and other flammable materials. This room is provided with fire detectors and deluge systems, and is coded for storage of flammable materials. Lubricants and cleaning agents are dispersed from this storage area in small, fire code approved containers.

The above inspections and observations were compared to the plant design commitments as identified in the facility FSAR, and against the facility requirements as stated in the facility Technical Specifications. No items of regulatory concern were identified.

A similar inspection was conducted by the NRC inspector in April of 1975[1/]. The four items identified for correction in that inspection have been verified as being corrected.

7. Emergency Procedures

The inspector verified that a plant emergency procedure to assure that alternate methods for accomplishing an orderly plant shutdown to stabilized hot shutdown condition exists.

Emergency Procedure EOP E-0-06, Control Room Inaccessibility, provides guidance for a controlled shutdown from outside of

1/ IE Inspection Rpt No. 050-305/75-07.

the control room, should this unlikely event occur. This capability was demonstrated in a startup and power ascension test.

The inspector also verified that the plant "Emergency Plan" addresses fire emergencies (Section 4.0). This procedure specifically identifies the fire brigade members (by title) and identifies their duties and responsibilities; and also specifies the conduct of all other plant personnel during fire emergency situations.

8. Plant Fire Drills

Plant fire drills are conducted semi-annually, usually during the fire insurance inspectors' visit (NML). Minutes of these drills are on file with the training director. Lessons learned from the fire drills are incorporated into the fire brigade training sessions.

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

CENTRAL FILES

JUN 7 1976

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:

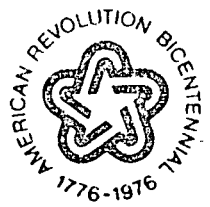
Thank you for your letter dated May 25, 1976, informing us of the steps you have taken to correct the noncompliance identified in our letter dated May 3, 1976. We will examine your corrective action during a future inspection.

Your cooperation with us is appreciated.

Sincerely yours,

James M. Allan, Chief
Fuel Facility and
Materials Safety Branch

bcc w/ltr dtd 5/25/76:
Central Files
PDR
Local PDR
NSIC
TIC
IE Mail and File Unit



WISCONSIN PUBLIC SERVICE CORPORATION

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

May 25, 1976

U. S. Nuclear Regulatory Commission
Office of Inspection & Enforcement
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

ATTN: Mr. James M. Allan, Chief
Fuel Facility and Materials Safety Branch

Gentlemen:

REF: Docket 50-305
Operating License DPR-43
Letter to Wisconsin Public Service Corporation
from Mr. James M. Allan dated May 3, 1976

This response is submitted in answer to a deficiency identified in IE Inspection Report No. 050-305/76-06. The only item requiring a response was Item B which was stated as follows:

> "Contrary to the requirement of Appendix B Environmental Technical Specification 4.1.1.b.1, the licensee did not perform a shiftwise inspection of the circulating water trash basket during one or more shifts on the following dates: February 23, 26, 27, 28 and March 6 and 10, 1976."

Response

At the time of the incident, the Control Room copy and other issued copies of Technical Specifications were in error. A change of the word "should" to "shall" was made by the NRC review of our proposed Technical Specification change. This change went undetected in the issuance of the subsequent Technical Specification Revision, and consequently, no provisions were made to insure an inspection of the fish basket. Since learning of the error in the distributed copies of Technical Specifications, a complete audit of all Technical Specification changes was made and

documented. Subsequently, to insure that a shiftwise inspection of the circulating water trash basket will be made, Surveillance Procedure SP 162 was revised and approved on April 27, 1976. This procedure details and provides documentation of the required trash basket inspection.

Very truly yours,

E. W. James
Senior Vice President
Power Supply & Engineering

EWJ:sna

cc - Mr. Dwane Boyd, Resident Insp - US NRC

Central files

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

MAY 3 1976

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:

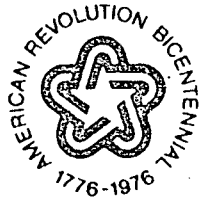
This refers to the inspection conducted by Mr. B. L. Jorgensen of this office on April 6-9, 1976, of activities at the Kewaunee Nuclear Power Plant authorized by NRC Operating License No. DPR-43, and to the discussion of our findings with Mr. Luoma and others of your staff at the conclusion of the inspection.

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.

This notice is sent to you pursuant to the provisions of Section 2.201 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations. Section 2.201 requires you to submit to this office within twenty days of your receipt of this notice a written statement or explanation in reply, including for each item of noncompliance: (1) corrective action taken and the results achieved; (2) corrective action to be taken to avoid further noncompliance; and (3) the date when full compliance will be achieved. Based on technical specification changes relating to noncompliance item A, no reply to this noncompliance is required and we have no further questions regarding this matter at this time.

Noncompliance identified through your management control system and corrected in a timely manner is described under



Other Significant Items in the Summary of Findings section of the attached inspection report. We have no further questions regarding these matters 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 notice, the enclosed inspection report, and your response to this notice 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 notice, 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,

James M. Allan

James M. Allan, Chief
Fuel Facility and
Materials Safety Branch

Enclosure:
IE Inspection Rpt
No. 050-305/76-06

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report of Environmental Protection Inspection

IE Inspection Report No. 050-305/76-06

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

Kewaunee Nuclear Plant
Kewaunee, Wisconsin

License No. DPR-43
Category: C

Type of Licensee: PWR (WE) 1650 MWt

Type of Inspection: Routine, Unannounced

Dates of Inspection: April 6-9, 1976

Principal Inspector: J. A. Pagliaro, for B. L. Jorgensen — 4/28/76 (Date)

Accompanying Inspectors: None

Other Accompanying Personnel: None

Reviewed by: Jesse A. Pagliaro — Jesse A. Pagliaro, Chief, Environmental and Special Projects Section — 4/28/76 (Date)

SUMMARY OF FINDINGS

Inspection Summary

Routine unannounced environmental protection inspection conducted on April 6-9, (76-06): reviewed and discussed environmental program management control functions including contract administration, program quality control and auditing, and reporting of program results; verified environmental monitoring program implementation in compliance with requirements; examined documentation pertaining to monitoring programs and nonradioactive effluent release rates and limits; reviewed non-compliances with environmental conditions which were identified and corrected by the licensee; followed up noncompliances and unresolved items from the previous environmental protection inspection; and reviewed licensee corrective actions with respect to other items identified in the previous inspection. Two items of noncompliance were noted relating to supplementary reporting of licensee identified noncompliances and to shiftwise examination of the circulating water trash basket.

Enforcement Items

Deficiencies

A. Contrary to the requirement of Appendix B Environmental Technical Specification Section 5.2.f, which was in effect in 1975, the licensee's routine semiannual operating report did not include a report of licensee-identified violations of the Environmental Technical Specifications. This item, which was identified by the inspector, constituted a recurrence of a noncompliance cited in the previous environmental protection inspection.[1/] (Paragraph 3.a, Report Details)

B. Contrary to the requirement of Appendix B Environmental Technical Specification 4.1.1.b.1, the licensee did not perform a shiftwise inspection of the circulating water trash basket during one or more shifts on the following dates: February 23, 26, 27, 28, and March 6 and 10, 1976. (Paragraph 5.b, Report Details)

Licensee Action on Previously Identified Enforcement Items

This inspection included a specific review of licensee actions taken to correct three items of noncompliance identified in a previous inspection.[2/] In two cases, the licensee's corrective actions have resulted in successful compliance with the pertinent requirements. With respect to the other item, a recurrent noncompliance has been identified. (See above and Paragraph 3.a, Report Details) A recent charge to the technical specifications has deleted the requirement against which the recurrent item is

1/ IE Inspection Report No. 050-305/75-01.
2/ Ibid.

cited. Therefore, the inspector has no further questions concerning any of the previously identified items, and they are considered closed.

Other Significant Items

A. Systems and Components

No significant items identified.

B. Facility Items (Plans and Procedures)

No significant items identified.

C. Managerial Items

No significant items identified.

D. Noncompliance Identified and Corrected by Licensee

1. On January 31, 1975, an operator error resulted in the unauthorized release of nonradiological waste from the waste neutralizing tank. Failure to determine the pH and solids concentrations in this waste was in noncompliance with Appendix B Technical Specifications Section 3.2.2. The licensee's corrective action, consisting of additional instructions to operating personnel, were reviewed during this inspection. These corrective actions have prevented a recurrence of this incident. The inspector has no further questions regarding this item at this time.

2. On April 5, 1975, the licensee failed to record intake and discharge temperatures every fifteen minutes during a power decrease of greater than 25%. This occurrence, which was caused by failure to reference the appropriate procedure during the load reduction, constituted an item of noncompliance with Appendix B Technical Specifications Section 3.1.3. The licensee's corrective action, comprised of a memo to Shift Supervisors and Control Operators, has resulted in subsequent compliance with the referenced requirement. The inspector has no further questions concerning this item at this time.

3. On April 25, 1975, an equipment failure resulted in overflow of the sulfuric acid day tank to the waste neutralizing tank while the waste neutralizing tank was being discharged. The pH of the discharge fell below 6.0, resulting in noncompliance with the requirements of Appendix B Technical Specification Section 2.2.2. The licensee's corrective action, consisting

of a design change to the sulfuric acid flow path, has eliminated the possibility of a recurrence of this incident. We have no further questions regarding this item at this time.

4. Contrary to Appendix A Technical Specification Section 4.10.a, the licensee failed to collect and analyze environmental samples in accordance with Table TS 4.10-1, in that weekly air particulate samples were not collected at the Green Bay Station for the weeks of August 6 and August 20, September 17, October 1, and October 15, 1975. The licensee has initiated corrective actions which were discussed with licensee representatives by the NRC inspector. The effectiveness of these corrective actions in preventing recurrences of this item will be examined at a subsequent inspection.

E. Deviations

None.

F. Status of Previously Reported Unresolved Items

A previously reported unresolved item[3/] relating to the limits of accuracy of the thermocouples used in monitoring circulating water intake and discharge temperatures was examined further during this inspection.

The licensee has established new surveillance procedures for the monthly functional checking of the temperature monitoring instruments, and for the annual calibration of these instruments against an acceptance criteria of plus or minus 1°F. The NRC inspector reviewed data relating to the initial monthly functional checks, and to the first annual full scale calibration. The inspector has no further questions regarding this matter at this time.

Management Interview

A management interview was conducted with Messrs. Luoma, Richmond, and Jarvela at the conclusion of the inspection on April 9, 1976. The following specific items were discussed with the licensee representatives.

A. The NRC inspector discussed his review of licensee management of environmental programs. (Paragraph 3, Report Details)

B. The NRC inspector discussed his review of the programs for control of quality in environmental analytical measurements. (Paragraph 4, Report Details)

3/ Ibid.

C. Environmental monitoring program implementation was discussed. This discussion included a review of licensee identified non-compliances and corrective actions. (Paragraph 5, Report Details)

D. The NRC inspector discussed the items of licensee noncompliance identified in this inspection. (Paragraphs 3.a and 5.b, Report Details)

E. Licensee actions responsive to an unresolved item, and to various open items identified at a previous inspection, were discussed. (Paragraphs 3.b, 3.c, 4.c and 5.c, Report Details)

REPORT DETAILS

1. Persons Contacted

C. Luoma, Plant Superintendent
C. Steinhardt, Assistant to the Superintendent - Operations
J. Richmond, Technical Supervisor
G. Jarvela, Health Physics Supervisor
D. MacSwain, Maintenance Supervisor
D. Berg, Quality Assurance Technician
D. Morgan, Radiation Technician
T. Meinz, Environmental Engineer (WPS)
E. Mitchell, Quality Control Assistant (WPS)

2. General

This inspection consisted of an examination of the licensee's conduct of radiological and non-radiological environmental monitoring programs, and of compliance with non-radiological effluent conditions and limits. Sampling techniques and procedures, sample collection equipment and locations, selected analytical techniques, and program documentation and results, were reviewed. Management control aspects including organizational structure, delegation of responsibilities and authorities, and administrative control were also examined. The program for control of quality in analytical activities, and the program for auditing conduct of program functions, were also reviewed. The licensee's technical specifications were used as the primary inspection criteria.

The division of responsibilities for conduct of the radiological and non-radiological portions of the environmental monitoring programs, remains as described in a previous inspection report.4/

Recent changes to the administrative portions of the licensed technical specifications have served to more clearly define the current division of responsibilities.

3. Management Controls

The licensee's administrative and procedural controls for implementation of the effluent and environmental monitoring programs, to assure compliance with the technical specifications, were examined. This examination included a review of assignment of the responsibilities and authorities for conduct of required activities within the

4/ RO Inspection Report No. 050-305/73-16.

licensee's organizational structure, and a review of the licensee's procedures to assure completion of requirements, identification and correction of deficiencies, and reporting of results.

a. Assignment of Responsibilities

The previous inspection[5/] noted that the responsibility for assuring compliance with Appendix B Technical Specifications, Section 5.2.f, had not been delegated. This inspection identified a recurrent item of noncompliance with Section 5.2.f, in that licensee-identified noncompliances with Appendix B Technical Specifications were not recorded in the routine semiannual report for the first half of 1975. Since change No. 10 to these license technical specifications has since deleted this special reporting requirement, no corrective action by the licensee is indicated. Other assignments of responsibilities were again found to be comprehensive and well understood by responsible licensee personnel.

b. Procedures

Licensee procedures for the conduct of environmental protection and environmental monitoring activities are discussed in a previous inspection report.[6/]

The licensee is currently in the process of revising certain of these procedures, to correspond to the new conditions of Change No. 10 to the license Technical Specifications. These items will be examined further during a subsequent inspection.

The licensee has prepared new procedures responsive to the unresolved item identified at the previous inspection[7/] relating to the limits of accuracy of the thermocouples utilized in monitoring circulating water intake and discharge temperatures.

These new procedures establish a monthly functional check of the temperature monitoring instruments, and an annual calibration of these instruments against an acceptance criteria of plus or minus 1°F. During this inspection, data from the monthly functional checks and from a calibration performed in December 1975, was reviewed. This establishment of thermocouple accuracy resolves the referenced item; the item is considered closed.

5/ IE Inspection Report No. 050-305/75-01.
6/ Ibid.
7/ Ibid.

c. Program Auditing

As indicated in the previous inspection[8/], this inspection included an examination of the reports of licensee audits on temperature and chemical effluent monitoring procedures. In addition, the licensee's report of an audit conducted on the contractor laboratory performing radiological and non-radiological environmental monitoring program analyses was reviewed. These activities satisfy the technical specification requirements for audits by the Nuclear Safety Review and Audit Committee (NSRAC) and the company internal procedure for auditing by the Quality Assurance Group.

The audit function is performed in accordance with prepared audit procedures and criteria are established to assure recognition of program deficiencies. In addition, a system is established for recording and reporting audit results to supervision, and for tracking and closing out audit recommendations for corrective action.

4. Programs for Quality Control of Analytical Measurements

The licensee's methodology and control of the sample collection, preparation and analytical functions were examined. This examination included a review of selected procedures for instrument calibration and maintenance. The installation and operability of selected monitoring stations were also examined.

a. Environmental Monitoring Programs

All sample collection and analytical functions for the nonradiological environmental monitoring program are conducted for the licensee by a contractor laboratory. With the exception of weekly or biweekly air particulate, charcoal, milk, and precipitation samples, the contractor laboratory also performs all sample collections for the radiological environmental program. The analytical activities pursuant to the radiological program are performed by the contractor. Quality assurance programs for both radiological and non-radiological analytical functions have been developed by the contractor laboratory, reviewed by licensee personnel, and approved for use in the licensee's program. The licensee receives and reviews data pertaining to quality assurance activities with routine contractor reports. During this inspection, the NRC inspector examined quality control program records and verified that the program has been operated in accordance with the stipulated type and number of required checks of measurements, and with the frequency for making these checks. The licensee's

8/ Ibid.

criteria for accepting measurement results have been utilized. In those cases where deficiencies have been identified, appropriate followup action is documented.

b. Non-radiological Effluent Release Rates and Limits

This inspection included a selective examination of licensee activities to assure quality in analysis of controlled effluent parameters, including thermal and chemical criteria. The licensee program for calibration and checking of temperature monitoring instruments is discussed in paragraph 3.b above. Quality control programs relating to chemical effluent monitoring and inventory remain as described in the previous inspection report.[9/] Detailed data indicating the conduct of calibrations and functional checks of laboratory instrumentation used in chemical effluent monitoring were not examined during this inspection. This item will be examined during a subsequent inspection.

c. Monitoring Station Installation and Operability

During this inspection, the NRC inspector accompanied a licensee representative on a weekly radiological air sample collection trip. The air sampling stations were all examined, and it was noted that the charcoal traps for I-131 monitoring had been remounted to assure vertical air flow. This action is responsive to the concern identified in the previous inspection report[10/] relating to the possibility of air channelling. A new piston type pump has been installed at all air monitoring locations with the exception of the onsite monitoring station. Each sampling station is equipped with a total flow meter, which eliminates the need for flow correction calculations based on vacuum gauge readings. In the case of the onsite station, which is still equipped with a diaphragm pump and a vacuum gauge, the vacuum gauge reading is not utilized nor is it necessary for determining total air flow.

5. Environmental Program Implementation

The results of the licensee's non-radiological effluent monitoring and radiological and non-radiological environmental monitoring programs for the second half of 1974 and for all of 1975 were selectively examined. In addition, implementation of monitoring requirements contained in change No. 10 to the technical specifications dated January 23, 1976, was reviewed. Finally, licensee corrective actions relating to noncompliances identified in a previous inspection

9/ Ibid.
10/ Ibid.

report,[11] and to noncompliances identified by the licensee in conduct of his management control function, were reviewed and discussed.

a. Temperature and Chemical Effluent Monitoring

No unusual results or trends were identified in the examination of selected temperature and chemical effluent monitoring records. With the exception of licensee-identified items, discussed immediately below, no omissions of required analyses or inventories were found. The review and closeout of licensee-identified items completes followup action by the IE:III environmental group as indicated with the earlier identification of these items in reports under the Resident Inspection Program.[12][13]

The inspector reviewed the circumstances of the March 14, 1975, report by the licensee, relating to an unauthorized release of non-radiological waste from the waste neutralizer tank. This occurrence was the result of waste neutralizing tank overflow due to operator error in failing to ascertain the availability of sufficient tank capacity prior to initiating a demineralizer regeneration. The licensee's corrective action, consisting of the issuance of further instructions relating to ascertaining the availability of tank capacity prior to demineralizer regenerations, was reviewed and discussed with licensee representatives. This action has prevented recurrence of incidents of this type. The item is considered closed.

The inspector reviewed the circumstances of the April 18, 1975, report by the licensee concerning a failure to record intake and discharge temperatures every fifteen minutes during a power decrease of 25% or greater, as required. This event resulted from failure to reference the appropriate plant operating procedure during the load reduction. A memo has been issued to shift supervisors and control operators relating to the importance of properly referencing and adhering to plant operating procedures. In addition, the technical staff has evaluated and designed an automated system which will record temperatures in accordance with specification requirements. The corrective actions have prevented recurrence of an item of this type. The item is considered closed.

11/ Ibid.
12/ IE Inspection Report No. 050-305/75-06.
13/ IE Inspection Report No. 050-305/75-08.

The inspector reviewed the circumstances of the May 2, 1975, report by the licensee concerning discharge of waste neutralizing tank contents with a pH less than the lower technical specification limit of 6.0. This event resulted from two concurrent equipment failures. Appropriate system modifications have been completed and recurrence prevented. This item is also considered closed.

b. Fish Impingement Monitoring

This inspection included a followup review of licensee activities and corrective actions relating to an item of noncompliance identified in the previous inspection[14/] concerning fish monitoring. The licensee was found to have maintained compliance with the pertinent sections of the technical specifications requiring collection and recording of number, size, and weight of fish captured in the circulating water trash basket. Recent technical specification changes have changed the requirement for fish quantification from a daily to a twice weekly requirement. However, change No. 10 dated January 23, 1976, also requires inspection of the basket on a shift-wise basis. At the time of this inspection, the licensee had not implemented adequate controls to assure compliance with the requirement to perform a trash basket examination every shift. Shift-wise examinations were not performed on one or more shifts February 23, 26, 27, 28, and March 6 and 10, 1976. This constitutes an item of noncompliance with the Appendix B Environmental Technical Specifications, Section 4.1.1.b.1.

c. Radiological Monitoring

The inspector found that normalized ambient gamma exposures as recorded by co-located systems of thermoluminescent dosimeters and ionization chambers continue to differ by a rather constant relationship. The licensee, in accordance with the statements made at a previous inspection,[15/] has contacted the contract laboratory concerning this disparity. A licensee representative stated that the ionization chambers are believed to record exposure across a larger energy range than that effectively monitored by the TLD system. At the present time, the licensee intends to maintain both types of ambient gamma monitoring.

No other unusual results or trends were identified in the data reviewed. The inspector noted that the licensee has experienced greater success in limiting environmental sampler inoperability to short down times when equipment failures result in the loss

14/ IE Inspection Report No. 050-305/75-01.
15/ Ibid.

of sampling. The licensee continues to maintain a complete air sampling station for replacement of defective equipment, and a supply of parts is maintained for equipment repair.

The inspector reviewed one item of noncompliance with radiological environmental monitoring requirements which was identified by the licensee. This item concerns failure to adhere to the requirements of Appendix A technical specification 4.10.a, in that the environmental sample collection schedule of Table TS 4.10-1 was not adhered to. Specifically, weekly air particulate samples from station K-16 located in Green Bay were not collected for the weeks of August 6, August 20, September 17, October 1, and October 15. The licensee has initiated corrective actions including procedural changes, which are expected to result in future successful compliance with the referenced specifications. However, a sufficient successful compliance history concerning this matter has not yet been established. Therefore, this item will be examined further during a subsequent inspection.

In followup to the previous inspection,[16/] the inspector noted that the Kewaunee FSAR has been amended so as to bring it into agreement with the technical specifications concerning the environmental monitoring requirements.

16/ Ibid.