

April 21, 1993

Docket No. 50-305

Mr. C. A. Schrock
Manager - Nuclear Engineering
Wisconsin Public Service Corporation
Post Office Box 19002
Green Bay, Wisconsin 54307-9002

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Dear Mr. Schrock:

SUBJECT: AMENDMENT NO. 99 TO FACILITY OPERATING LICENSE NO. DPR-43
(TAC NO. M84551)

The Commission has issued the enclosed Amendment No. 99 to Facility Operating License No. DPR-43 for the Kewaunee Nuclear Power Plant. This amendment revises the Technical Specifications in response to your application dated August 31, 1992, which superseded in toto your application dated November 20, 1991, and in part your application dated June 28, 1991.

The amendment revises Technical Specification (TS) Section 6.13, "High Radiation Area," so that the specification more closely resembles the Westinghouse Standard Technical Specifications (NUREG-0452). In addition, TS 6.4, "Training," and TS 6.5, "Review and Audit," are revised to account for recent organization changes at Kewaunee. Finally, TS 6, "Administrative Controls," is revised due to administrative and format changes.

A copy of the Safety Evaluation is also enclosed. Notice of issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,
Original signed by Allen G. Hansen

Allen G. Hansen, Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 99 to License No. DPR-43
2. Safety Evaluation

cc w/enclosures:

See next page

PD3-3:LA PDIII-3:PM PDIII-3:PD
 PKreutzer AHansen JHannon
 3/24/93 3/30/93 3/31/93
 DOCUMENT NAME: KEW84551.AMD

RPEB:BC
 GZech
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

April 21, 1993

Docket No. 50-305

Mr. C. A. Schrock
Manager - Nuclear Engineering
Wisconsin Public Service
Corporation
Post Office Box 19002
Green Bay, Wisconsin 54037-9002

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SUBJECT: AMENDMENT NO. 99 TO FACILITY OPERATING LICENSE NO. DPR-43
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Sincerely,

A handwritten signature in black ink, appearing to read "Allen G. Hansen".

Allen G. Hansen, Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 99 to
License No. DPR-43
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. C. A. Schrock
Wisconsin Public Service Corporation

Kewaunee Nuclear Power Plant

cc:

Foley & Lardner
Attention: Mr. Bradley D. Jackson
One South Pinckney Street
P.O. Box 1497
Madison, Wisconsin 53701-1497

Chairman
Town of Carlton
Route 1
Kewaunee, Wisconsin 54216

Mr. Harold Reckelberg, Chairman
Kewaunee County Board
Kewaunee County Courthouse
Kewaunee, Wisconsin 54216

Chairman
Public Service Commission of Wisconsin
Hill Farms State Office Building
Madison, Wisconsin 53702

Attorney General
114 East, State Capitol
Madison, Wisconsin 53702

U.S. Nuclear Regulatory Commission
Resident Inspectors Office
Route #1, Box 999
Kewaunee, Wisconsin 54216

Regional Administrator - Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Mr. Robert S. Cullen
Chief Engineer
Wisconsin Public Service Commission
P.O. Box 7854
Madison, Wisconsin 53707



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

WISCONSIN POWER AND LIGHT COMPANY

MADISON GAS AND ELECTRIC COMPANY

DOCKET NO. 50-305

KEWAUNEE NUCLEAR POWER PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 99
License No. DPR-43

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Wisconsin Public Service Corporation, Wisconsin Power and Light Company, and Madison Gas and Electric Company (the licensees) dated August 31, 1992, which superseded in toto the application dated November 20, 1991, and in part the application dated June 28, 1991, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-43 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 99, are hereby incorporated in the license. The licensees shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance, and is to be implemented within 30 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Allen G. Hansen, Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of issuance: April 21, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 99

FACILITY OPERATING LICENSE NO. DPR-43

DOCKET NO. 50-305

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by amendment number and contain marginal lines indicating the area of change.

REMOVE

TS iii and TS iv
(2 pages)

TS 6-1 through TS 6-26
(28 pages)

INSERT

TS iii and TS iv
(2 pages)

TS 6.1-1 through TS 6.19-1
(32 pages)

<u>Section</u>	<u>Title</u>	<u>Page</u>
4.5	Emergency Core Cooling System and Containment Air Cooling System Tests	4.5-1
4.5.a	System Tests	4.5-1
4.5.a.1	Safety Injection System	4.5-1
4.5.a.2	Containment Vessel Internal Spray System	4.5-2
4.5.a.3	Containment Fan Coil Units	4.5-2
4.5.b	Component Tests	4.5-2
4.5.b.1	Pumps	4.5-2
4.5.b.2	Valves	4.5-3
4.6	Periodic Testing of Emergency Power System	4.6-1
4.6.a	Diesel Generators	4.6-1
4.6.b	Station Batteries	4.6-2
4.7	Main Steam Isolation Valves	4.7-1
4.8	Auxiliary Feedwater System	4.8-1
4.9	Reactivity Anomalies	4.9-1
4.10	Deleted	
4.11	Deleted	
4.12	Spent Fuel Pool Sweep System	4.12-1
4.13	Radioactive Materials Sources	4.13-1
4.14	Testing and Surveillance of Shock Suppressors (Snubbers)	4.14-1
4.15	Deleted	
4.16	Reactor Coolant Vent System Tests	4.16-1
4.17	Control Room Postaccident Recirculation System	4.17-1
5.0	Design Features	5.1-1
5.1	Site	5.1-1
5.2	Containment	5.2-1
5.2.a	Containment System	5.2-1
5.2.b	Reactor Containment Vessel	5.2-2
5.2.c	Shield Building	5.2-2
5.2.d	Shield Building Ventilation System	5.2-2
5.2.e	Auxiliary Building Special Ventilation Zone and Special Ventilation System	5.2-3
5.3	Reactor	5.3-1
5.3.a	Reactor Core	5.3-1
5.3.b	Reactor Coolant System	5.3-2
5.4	Fuel Storage	5.4-1
6.0	Administrative Controls	6.1-1
6.1	Responsibility	6.1-1
6.2	Organization	6.2-1
6.2.a	Off-Site Staff	6.2-1
6.2.b	Facility Staff	6.2-1
6.2.c	Organizational Changes	6.2-2
6.3	Plant Staff Qualifications	6.3-1
6.4	Training	6.4-1
6.5	Review and Audit	6.5-1
6.5.a	Plant Operations Review Committee (PORC)	6.5-1
6.5.a.1	Function	6.5-1
6.5.a.2	Composition	6.5-1
6.5.a.3	Alternates	6.5-1
6.5.a.4	Meeting Frequency	6.5-1
6.5.a.5	Quorum	6.5-1
6.5.a.6	Responsibilities	6.5-1

<u>Section</u>	<u>Title</u>	<u>Page</u>
	6.5.a.7 Authority	6.5-2
	6.5.a.8 Records	6.5-2
6.5.b	Corporate Support Staff	6.5-3
	6.5.b.1 Function	6.5-3
	6.5.b.2 Organization	6.5-3
	6.5.b.3 Activities	6.5-3
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	6.5.c.1 Function	6.5-4
	6.5.c.2 Composition	6.5-4
	6.5.c.3 Alternates	6.5-5
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6.6	Reportable Events	6.6-1
6.7	Safety Limit Violation	6.7-1
6.8	Procedures	6.8-1
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	6.9.a Routine Reports	6.9-1
	6.9.a.1 Startup Report	6.9-1
	6.9.a.2 Annual Reporting Requirements	6.9-1
	6.9.a.3 Monthly Operating Report	6.9-2
	6.9.b Unique Reporting Requirements	6.9-2
	6.9.b.1 Annual Radiological Environmental Monitoring Report	6.9-2
	6.9.b.2 Semiannual Radiological Effluent Release Report	6.9-3
	6.9.b.3 Special Reports	6.9-5
6.10	Record Retention	6.10-1
6.11	Radiation Protection Program	6.11-1
6.12	System Integrity	6.12-1
6.13	High Radiation Area	6.13-1
6.14	Post-Accident Sampling and Monitoring	6.14-1
6.15	Secondary Water Chemistry	6.15-1
6.16	Radiological Effluents	6.16-1
6.17	Process Control Program (PCP)	6.17-1
6.18	Offsite Dose Calculation Manual (ODCM)	6.18-1
6.19	Major Changes to Radioactive Liquid, Gaseous and Solid Waste Treatment Systems	6.19-1

6.0 ADMINISTRATIVE CONTROLS

6.1 RESPONSIBILITY

The Manager - Kewaunee Plant has overall on-site responsibility for plant operation. In the absence of the Manager - Kewaunee Plant, the succession to this responsibility shall be in the following order:

- a. Assistant Manager-Plant Operations
- b. Assistant Manager-Plant Maintenance
- c. Superintendent-Plant Operations
- d. Superintendent - Plant Instrument and Control
- e. Shift Supervisor

6.2 ORGANIZATION

a. Off-Site Staff

The off-site organization for plant management and technical support shall be as described in the Operational Quality Assurance Program Description.

b. Facility Staff

The plant organization shall be as described in the Operational Quality Assurance Program Description.

1. Each on-duty shift complement shall consist of at least:
 - A. One Shift Supervisor (SRO)
 - B. Two licensed Reactor Operators
 - C. One Auxiliary Operator
 - D. One Equipment Operator
 - E. One Radiation Technologist
2. While above COLD SHUTDOWN, the on-duty shift complement shall consist of the personnel required by TS 6.2.b.1 and an additional SRO.
3. In the event that one of the shift members becomes incapacitated due to illness or injury or the Radiation Technologist has to accompany an injured person to the hospital, reactor operations may continue with the reduced complement until a replacement arrives. In all but severe weather conditions, a replacement is required within two hours.
4. At least one licensed operator shall be in the control room when fuel is in the reactor.
5. Two licensed operators, one of which shall be an SRO, shall be present in the control room when the unit is in an operational MODE other than COLD SHUTDOWN or REFUELING.
6. REFUELING OPERATIONS shall be directed by a licensed SRO assigned to the REFUELING OPERATION who has no other concurrent responsibilities during the REFUELING OPERATION.
7. When the reactor is above the COLD SHUTDOWN condition, a qualified Shift Technical Advisor shall be within 10 minutes of the control room.

c. Organizational Changes

Changes not affecting safety may be made to the off-site and facility staff organizations. Such changes that are described in the Technical Specifications shall be reported to the Commission in the form of an application for license amendment within 60 days of the implementation of the change.

6.3 PLANT STAFF QUALIFICATIONS

- a. Qualification of each member of the Plant Staff shall meet or exceed the minimum acceptable levels of ANSI N18.1-1971 for comparable positions, except for the Superintendent-Plant Radiation Protection who shall meet or exceed the recommendation of Regulatory Guide 1.8, Revision 1-R, September 1975, or their equivalent as further clarified in Attachment 1 to the Safety Evaluation Report enclosed with Amendment No. 46 to Facility Operating License DPR-43.
- b. The Shift Technical Advisor shall have a bachelor's degree or equivalent in a scientific or engineering discipline with specific training in the design of the Kewaunee Plant and plant transient and accident analysis.

6.4 TRAINING

A retraining and replacement training program for the Plant Staff shall be maintained under the direction of the Manager - Nuclear Plant Support Services and shall meet or exceed the requirements and recommendations of Section 5.5 of ANSI-N18.1-1971 and 10 CFR Part 55.

6.5 REVIEW AND AUDIT

a. Plant Operations Review Committee (PORC)

1. Function

The PORC shall function to advise the Manager - Kewaunee Plant on matters related to nuclear safety.

2. Composition

The PORC shall be composed of, but not necessarily limited to:

Chairman: Manager - Kewaunee Plant

Required Members: Assistant Manager-Plant Operations
Assistant Manager-Plant Maintenance
Superintendent-Plant Operations
Superintendent-Plant Instrument and Control
Plant Reactor Supervisor
Superintendent-Plant Quality Programs
Superintendent - Plant Radiation Protection

3. Alternates

Alternate members shall be appointed in writing by the PORC Chairman to serve on a temporary basis; however, no more than two alternates for required members shall participate in PORC meetings at any one time.

4. Meeting Frequency

The PORC shall meet at least once per calendar month and as convened by the Chairman.

5. Quorum

A quorum of the PORC shall consist of the chairman (or his designated alternate as stated in TS 6.1) and a majority of the required members including temporary alternates.

6. Responsibilities

The PORC shall be responsible for:

- A. Review of operating, maintenance and other procedures including emergency operating procedures which affect nuclear safety as determined by the Manager - Kewaunee Plant. Changes to those procedures are made in accordance with the provisions of TS 6.8.a.

- B. Review of all proposed tests and experiments that affect nuclear safety.
- C. Review of all proposed changes to the Technical Specifications.
- D. Review of all proposed changes or modifications to plant systems or equipment that affect nuclear safety.
- E. Review of all proposed changes to the Security Plan, Emergency Plan, Fire Plan, and their respective implementing procedures.
- F. Review all reports covering the investigation of all violations of the Technical Specifications and the recommendations to prevent recurrence.
- G. Review plant operations to detect potential safety hazards.
- H. Performance of special reviews and investigations and prepare reports thereon as requested by the Chairman of the Nuclear Safety Review and Audit Committee.
- I. Review of all REPORTABLE EVENTS
- J. Review of changes to the PROCESS CONTROL PROGRAM, the OFF-SITE DOSE CALCULATION MANUAL, and the RADIOLOGICAL ENVIRONMENTAL MONITORING MANUAL.

7. Authority

The PORC shall:

- A. Recommend to the Manager - Kewaunee Plant approval or disapproval of items considered under TS 6.5.a.6.A through TS 6.5.a.6.E.
- B. Make determinations with regard to whether or not each item considered under TS 6.5.a.6 constitutes an unreviewed safety question.
- C. Provide immediate notification in the form of draft meeting minutes to the Senior Vice President - Nuclear Power and the Chairman-Nuclear Safety Review and Audit Committee of disagreement between the PORC and the Manager - Kewaunee Plant. The Manager - Kewaunee Plant shall have responsibility for resolution of such disagreements.

8. Records

Minutes shall be kept of all meetings of the PORC and copies shall be sent to the Senior Vice President - Nuclear Power and the Chairman - Nuclear Safety Review and Audit Committee.

b. Corporate Support Staff (CSS)

1. Function

The CSS shall function to provide engineering, technical and quality assurance activities in support of the Kewaunee Plant Staff.

2. Organization

The CSS consists of the following groups:

- A. Nuclear Licensing and Systems
- B. Nuclear Projects
- C. Corporate Health Physics
- D. Nuclear Project Management (Design Change)
- E. Engineering Support
- F. Engineering Control
- G. Emergency Preparedness
- H. Power Plant Design and Construction
- I. Fuel Services
- J. Administrative Staff
- K. Quality Assurance

- L. Substation and Transmission
- M. Safety System Engineering

3. Activities

- A. Review and report all violations of the Technical Specifications, codes, regulations, and statutes.
- B. Review all activities associated with nuclear safety for technical adequacy and compliance with internal procedures or instructions.
- C. Review and report significant operating abnormalities or deviations from normal and expected performance of plant equipment that affect nuclear safety.
- D. Review and report all events which are required by regulations or Technical Specifications to be reported to the NRC (Plant personnel will provide the initial reporting to the NRC of those events requiring 24 hour notification).
- E. Investigate any indication of an unanticipated deficiency in some aspect of design or operation of safety-related structures, systems or components.

F. Review and/or prepare safety evaluations of all plant design changes.

G. Audits as required by the Quality Assurance Program and as outlined in TS 6.5.c.8.

c. Nuclear Safety Review and Audit Committee (NSRAC)

1. Function

The NSRAC shall function to provide independent review and audit of designated activities in the areas of:

- A. Nuclear Power Plant Operations
- B. Nuclear Engineering
- C. Chemistry and Radio-Chemistry
- D. Metallurgy
- E. Instrumentation
- F. Radiological Safety
- G. Mechanical and Electrical Engineering
- H. Quality Assurance Practices
- I. Other appropriate fields as determined by the Committee, to be associated with the unique characteristics of the nuclear power plant.

2. Composition

The NSRAC shall be composed of, but not necessarily limited to:

- A. At least three technically qualified persons who are not members of the plant staff.
- B. One member from the supervisory staff of the plant.
- C. At least two qualified non-company affiliated technical consultants.
- D. In-house staff management advisors as required.

The Committee membership and its Chairman and Vice Chairman shall be appointed by the Senior Company Officer to whom the NSRAC reports. Each member of the NSRAC shall have an academic degree in an engineering or physical science field; and in addition, shall have a minimum of five years technical experience, of which a minimum shall be in one or more areas given in TS 6.5.c.1.

3. Alternates

Alternate members shall be appointed by the NSRAC Chairman, upon approval by the Senior Vice President - Nuclear Power, to serve on a temporary basis; however, no more than two alternates shall participate in NSRAC activities at any one time.

4. Consultants

Consultants may be utilized as determined by the Chairman - NSRAC to provide expert advice to the NSRAC.

5. Meeting Frequency

The NSRAC shall meet at least once every six months.

6. Quorum

A quorum of the NSRAC shall consist of the Chairman or Vice Chairman and four members including alternates. No more than a minority of the quorum shall have line responsibility for operation of the plant.

7. Review

The NSRAC shall review:

- A. Safety evaluations for 1) changes to procedures, equipment or systems and 2) tests or experiments completed under the provision of 10 CFR 50.59, to verify that such actions did not constitute an unreviewed safety question.
- B. Proposed changes to procedures, equipment or systems which involve an unreviewed safety question as defined in 10 CFR 50.59.
- C. Proposed tests or experiments which involve an unreviewed safety question as defined in 10 CFR 50.59.
- D. Proposed changes in Technical Specifications or licenses.
- E. Reports covering violations of applicable statutes, codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures or instructions having nuclear safety significance.
- F. Reports covering significant operating abnormalities or deviations from normal and expected performance of plant equipment that affect nuclear safety.
- G. Reports covering all REPORTABLE EVENTS.

- H. Reports covering any indication of an unanticipated deficiency in some aspect of design or operation of safety-related structures, systems, or components.
- I. Reports and meeting minutes of the PORC.

8. Audits

Audits of plant activities shall be performed under the cognizance of the NSRAC. These audits shall include:

- A. Conformance of plant operation to the provisions contained within the Technical Specifications and applicable license conditions at least annually.
- B. Performance, training, and qualifications of the entire plant staff at least annually.
- C. Results of all actions taken to correct deficiencies occurring in plant equipment, structures, systems, or method of operation that affect nuclear safety at least semiannually.
- D. Performance of all activities required by the Quality Assurance Program to meet the criteria of Appendix "B", 10 CFR Part 50, at least once every two years.
- E. The Plant Fire Protection Program, implementing procedures and the independent fire protection and loss prevention program at least once every 24 months.
- F. Any other area of plant operation considered appropriate by the NSRAC or the Senior Company Officer to whom the NSRAC reports.
- G. The Radiological Environmental Monitoring Program and the results thereof at least annually.
- H. The OFF-SITE DOSE CALCULATION MANUAL and implementing procedures at least once every two years.
- I. The PROCESS CONTROL PROGRAM and implementing procedures for processing and packaging of radioactive wastes at least once every two years.

9. Authority

The NSRAC shall report to a Senior Company Officer and shall advise the Officer on those areas of responsibility specified in TS 6.5.c.7 and TS 6.5.c.8.

10. Records

Records of NSRAC activities shall be prepared, approved and distributed as follows:

- A. Minutes of each NSRAC meeting forwarded to the Senior Company Officer to whom the NSRAC reports within 14 days following each meeting.
- B. Reports of reviews required by TS 6.5.c.7.E through TS 6.5.c.7.H, forwarded to the Senior Company Officer to whom the NSRAC reports within 14 days following completion of the review.
- C. Reports of audits performed by NSRAC shall be forwarded to the Senior Company Officer to whom the NSRAC reports and to the management positions responsible for the areas audited within 30 days after completion of the audit.

6.6 REPORTABLE EVENTS

The following actions shall be taken for REPORTABLE EVENTS:

- a. The Commission shall be notified and a report submitted pursuant to the requirements of 10 CFR 50.73, and
- b. Each Reportable Event shall be reviewed by PORC, and the results of this review shall be submitted to NSRAC and the Senior Vice President - Nuclear Power.

6.7 SAFETY LIMIT VIOLATION

The following actions shall be taken in the event a safety limit is violated: |

- a. The reactor shall be shut down and operation shall not be resumed until authorized by the Commission. |
- b. The Report shall be prepared in accordance with TS 6.6. |

6.8 PROCEDURES

- a. Written procedures and administrative policies shall be established, implemented and maintained that meet the requirements and recommendations of Section 5.2.2, 5.2.5, 5.2.15 and 5.3 of ANSI N18.7-1976.
- b. Changes to procedures are made in accordance with the provisions of ANSI N18.7-1976 Section 5.2.2 except that temporary changes which clearly do not change the intent of the procedure shall, as a minimum, be approved by two individuals knowledgeable in the area affected one of which holds an active SRO license at Kewaunee.
- c. Procedures are reviewed in accordance with the provisions of ANSI N18.7-1976, Section 5.2.15, except for procedures that are performed at a frequency interval of greater than every two years. Procedures performed at a frequency interval greater than every two years shall, instead, be reviewed prior to use or within the previous two years.

6.9 REPORTING REQUIREMENTS

In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following identified reports shall be submitted to the Director of the appropriate Regional Office of Inspection and Enforcement unless otherwise noted.

a. Routine Reports

1. Startup Report

A summary report of plant startup and power escalation testing shall be submitted following (1) receipt of an operating license, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier, and (4) modifications that may have significantly altered the nuclear, thermal, or hydraulic performance of the plant. The report shall address each of the tests identified in the USAR and shall in general include a description of the measured values of the operating conditions or characteristics obtained during the test program and a comparison of these values with design predictions and specifications. Any corrective actions that were required to obtain satisfactory operation shall also be described. Any additional specific details required in license conditions based on other commitments shall be included in this report.

Startup reports shall be submitted within (1) 90 days following completion of the startup test program, (2) 90 days following resumption or commencement of commercial power operation, or (3) 9 months following initial criticality, whichever is earliest. If the Startup Report does not cover all three events (i.e., initial criticality, completion of startup test program, and resumption or commencement of commercial power operation), supplementary reports shall be submitted at least every three months until all three events have been completed.

2. Annual Reporting Requirements

Routine operating reports covering the operation of the unit during the previous calendar year shall be submitted prior to March 1 of each year. Items reported in this category include:

- A. Report of facility changes, tests or experiments required pursuant to 10 CFR 50.59(b).

B. A tabulation on an annual basis of the number of station, utility, and other personnel (including contractors) receiving exposures > 100 mrem/yr and their associated man rem exposure according to work and job functions,⁽¹⁾ e.g., reactor operations and surveillance, in-service inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and REFUELING. The dose assignment to various duty functions may be estimates based on pocket dosimeter, TLD, or film badge measurements. Small exposures totaling < 20% of the individual total dose need not be accounted for. In the aggregate, at least 80% of the total whole body dose received from external sources shall be assigned to specific major work functions.

C. Challenges to and failures of the pressurizer power operated relief valves and safety valves.⁽²⁾

3. Monthly Operating Report

Routine reports of operating statistics and shutdown experience shall be submitted on a monthly basis to the Document Control Desk, U.S. Nuclear Regulatory Commission, Washington, D.C., 20555, with a copy to the appropriate Regional Office, to be submitted by the fifteenth of each month following the calendar month covered by the report.

b. Unique Reporting Requirements

1. Annual Radiological Environmental Monitoring Report

A. Routine Radiological Environmental Monitoring Reports covering the operation of the unit during the previous calendar year shall be submitted prior to May 1 of each year.

(1) The Annual Radiological Environmental Monitoring Reports shall include summaries, interpretations, and an analysis of trends of the results of the radiological environmental surveillance activities for the report period, including a comparison with preoperational studies, with operational controls as appropriate, and with previous environmental surveillance reports, and an assessment of the observed impacts of the plant operation on the environment. The reports shall also include the results of land use censuses required by TS 7.7.2.

⁽¹⁾This tabulation supplements the requirements of Section 20.407 of 10 CFR Part 20.

⁽²⁾Letter from E. R. Mathews (WPSC) to D. G. Eisenhut (U.S. NRC) dated January 5, 1981.

- (2) The Annual Radiological Environmental Monitoring Reports shall include the results of analysis of radiological environmental samples and of environmental radiation measurements taken during the period pursuant to the locations specified in the Table and Figures in the RADIOLOGICAL ENVIRONMENTAL MONITORING MANUAL, as well as summarized and tabulated results of these analyses and measurements in the format of the table in the Radiological Assessment Branch Technical Position, Revision 1, November 1979. In the event that some individual results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted as soon as possible in a supplementary report when applicable.
- (3) The reports shall also include the following: a summary description of the Radiological Environmental Monitoring Program; legible maps covering all sampling locations keyed to a table giving distances and directions from the centerline of one reactor; the results of licensee participation in the Interlaboratory Comparison Program, required by TS 7.7.3; discussion of all deviations from the sampling schedule of Table 7.3; and discussion of all analyses in which the LLD required by Table 8.5 was not achievable.

2. Semiannual Radioactive Effluent Release Report

- A. Routine Radioactive Effluent Release Reports covering the operation of the unit during the previous 6 months of operation shall be submitted within 60 days after January 1 and July 1 of each year.

- (1) Radioactive Effluent

The Radioactive Effluent Release Reports shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit following the format of Regulatory Guide 1.21, "Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants," Revision 1, June 1974.

(2) Radiation Dose Assessment

The Radioactive Effluent Release Report to be submitted within 60 days after January 1 of each year shall include an annual summary of hourly meteorological data collected over the previous year. This annual summary may be either in the form of an hour-by-hour listing on magnetic tape of wind speed, wind direction, atmospheric stability, and precipitation (if measured), or in the form of joint frequency distributions of wind speed, wind direction, and atmospheric stability.⁽³⁾ This same report shall include an assessment of the radiation doses due to the radioactive liquid and gaseous effluents released from the unit during the previous calendar year. The assumptions used in making these assessments, i.e., specific activity, exposure time and location, shall be included in these reports. The assessment of radiation doses shall be performed based on the calculational guidance, as presented in the OFF-SITE DOSE CALCULATION MANUAL (ODCM).

The Radioactive Effluent Release Report to be submitted 60 days after January 1 of each year shall also include an assessment of radiation doses to the likely most exposed MEMBER(S) OF THE PUBLIC from reactor releases and other nearby uranium fuel cycle sources, including doses from primary effluent pathways and direct radiation, the previous calendar year to show conformance with 40 CFR Part 190, Environmental Radiation Protection Standards for Nuclear Power Operation.

(3) Solid Waste Shipped

The Radioactive Effluent Release Reports shall include the following information for each class of solid waste (as defined by 10 CFR Part 61) shipped off-site during the report period:

- a) Container volume,
- b) Total curie quantity (specify whether determined by measurement or estimate),
- c) Principal radionuclides (specify whether determined by measurement or estimate),

⁽³⁾In lieu of submission with the second half year Radioactive Effluent Release Report, the licensee has the option of retaining this summary of required meteorological data on site in a file that shall be provided to the NRC upon request.

- d) Source of waste and processing employed (e.g., dewatered spent resin, compacted dry waste, evaporator bottoms),
- e) Type of container (e.g., LSA, Type A, Type B, Large Quantity), and
- f) SOLIDIFICATION agent or absorbent (e.g., cement, urea formaldehyde).

(4) Unplanned Release

The Radioactive Effluent Release Reports shall include a list and description of unplanned releases from the site to UNRESTRICTED AREAS of radioactive materials in gaseous and liquid effluents made during the reporting period.

(5) PCP and ODCM Changes

The Radioactive Effluent Release Reports shall include any changes made during the reporting period to the PROCESS CONTROL PROGRAM (PCP) and to the OFF-SITE DOSE CALCULATION MANUAL (ODCM).

3. Special Reports

A. Special reports may be required covering inspections, test and maintenance activities. These special reports are determined on an individual basis for each unit and their preparation and submittal are designated in the Technical Specifications.

- (1) Special reports shall be submitted to the Director of the NRC Regional Office listed in Appendix D, 10 CFR Part 20, with a copy to the Director, Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 within the time period specified for each report.

6.10 RECORD RETENTION

- a. The following records shall be retained for at least five years:
 1. Records and logs of plant operation, including power levels and periods of operation at each power level.
 2. Records and logs of principal maintenance activities, inspections, repair and replacement of principal items of equipment pertaining to nuclear safety.
 3. Reports of all REPORTABLE EVENTS.
 4. Records of periodic checks, inspections, and calibrations required by these Technical Specifications.
 5. Records of nuclear safety-related tests or experiments.
 6. Records of radioactive shipments.
 7. Records of changes to operating procedures.
 8. Records of sealed source leak tests and results.
 9. Records of annual physical inventory of all source material of record.
 10. Records of Quality Assurance activities required by the Operational Quality Assurance Program (OQAP) except where it is determined that the records should be maintained for a longer period of time.
- b. The following records shall be retained for the duration of the Plant Operating License.
 1. Records of a complete set of as-built drawings for the plant as originally licensed and all print changes showing modifications made to the plant.
 2. Records of new and spent fuel inventory, fuel transfers, and assembly burnup histories.
 3. Records of plant radiation and contamination surveys.
 4. Records of radiation exposure of all plant personnel, and others who enter radiation control areas.
 5. Records of radioactivity in liquid and gaseous wastes released to the environment.

6. Records of transient or operational cycles for these facility components. |
7. Records of training and qualification for current members of the plant staff. |
8. Records of in-service inspections performed pursuant to these Technical Specifications. |
9. Records of meetings of the NSRAC and PORC. |
10. Records for Environmental Qualification. |

6.11 RADIATION PROTECTION PROGRAM

a. Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

b. Iodine Monitoring

The licensee shall implement a program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

1. Training of personnel,
2. Procedures for monitoring, and
3. Provisions for maintenance of sampling and analysis equipment.

6.12 SYSTEM INTEGRITY

The licensee shall implement a program to reduce leakage from systems outside containment that would or could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. This program shall include the following:

- a. Provisions establishing preventive maintenance and periodic visual inspection requirements, and
- b. Integrated leak test requirements for each system at a frequency not to exceed REFUELING cycle intervals.

6.13 HIGH RADIATION AREA

- a. In lieu of the "control device" or "alarm signal" required by Paragraph 20.203(c)(2) of 10 CFR Part 20, each high radiation area in which the intensity of radiation is > 100 mrem/hr, but < 1000 mrem/hr, shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit (RWP)⁽¹⁾. Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following.
1. A radiation monitoring device which continuously indicates the radiation dose rate in the area.
 2. A radiation monitoring device which continuously integrates the radiation dose in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made knowledgeable of them.
 3. A health physics qualified individual (i.e., qualified in radiation protection procedures) with a radiation dose rate monitoring device who is responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the facility Health Physicist in the RWP.

⁽¹⁾Health Physics personnel or personnel escorted by Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they are otherwise following plant radiation protection procedures for entry into high radiation areas.

- b. In addition to the requirements of 6.13.a., areas accessible to personnel with radiation levels such that a major portion of the body could receive in 1 hour a dose > 1000 mrem shall be provided with locked doors to prevent unauthorized entry, and the keys shall be maintained under the administrative control of the Shift Supervisor on duty and/or health physics supervision. Doors shall remain locked except during periods of access by personnel under an approved RWP which shall specify the dose rate levels in the immediate work area and the maximum allowable stay time for individuals in that area. For individual areas accessible to personnel with radiation levels such that a major portion of the body could receive in 1 hour a dose > 1000 mrem⁽²⁾ that are located within large areas, such as PWR containment, where no enclosure exists for purposes of locking, and no enclosure can be reasonably constructed around the individual areas, then that area shall be roped off, conspicuously posted and a flashing light shall be activated as a warning device. In lieu of the stay time specification of the RWP, direct or remote (such as use of closed circuit TV cameras) continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities within the area.

⁽²⁾Measurement made at 30 centimeters from source of radioactivity.

6.14 POST-ACCIDENT SAMPLING AND MONITORING

The licensee shall implement a program which will ensure the capability to monitor containment radiation levels, to obtain and analyze reactor coolant and containment atmosphere samples, and to monitor the plant gaseous effluent under accident conditions. The program shall be defined in nuclear administrative directives and will include the following:

- a. Responsibilities for program implementation.
- b. Delineation of instrumentation required.
- c. Provisions for preventive maintenance and periodic surveillance of instrumentation.
- d. Pre-planned procedures and back-up instrumentation to be used if one or more monitoring instruments become inoperable.
- e. Administrative procedures for returning inoperable instruments to OPERABLE status as soon as practicable.

6.15 SECONDARY WATER CHEMISTRY

The licensee shall implement a secondary water chemistry monitoring program. The intent of this program will be to control corrosion thereby inhibiting steam generator tube degradation. The secondary water chemistry program shall act as a guide for the chemistry group in their routine as well as non-routine activities.

6.16 RADIOLOGICAL EFFLUENTS

Written procedures shall be established, implemented and maintained covering the activities referenced below:

- a. PROCESS CONTROL PROGRAM implementation. |
- b. OFF-SITE DOSE CALCULATION MANUAL implementation. |
- c. Quality Assurance Program for effluent and environmental monitoring.

6.17 PROCESS CONTROL PROGRAM (PCP)

- a. The PCP shall be approved by the Commission prior to implementation.
- b. Licensee initiated changes to the PCP:
 - 1. Shall be submitted to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the change(s) was made. This submittal shall contain:
 - A. Sufficiently detailed information to support the rationale for the change without benefit of additional or supplemental information;
 - B. A determination that the change did not reduce the overall conformance of the solidified waste product to existing criteria for solid wastes; and
 - C. Documentation of the fact that the change has been reviewed and found acceptable by the PORC.
 - 2. Shall become effective upon review and acceptance by the PORC.

6.18 OFF-SITE DOSE CALCULATION MANUAL (ODCM)

- a. The ODCM shall be approved by the Commission prior to implementation. |
- b. Licensee initiated changes to the ODCM: |
 1. Shall be submitted to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the change(s) was made effective. This submittal shall contain: |
 - A. Sufficiently detailed information to support the rationale for the change without benefit of additional or supplemental information. Information submitted should consist of a package of those pages of the ODCM to be changed with each page numbered and provided with an approval and date box, together with appropriate analyses or evaluations justifying the change(s); |
 - B. A determination that the change will not reduce the accuracy or reliability of dose calculations or setpoint determinations; and |
 - C. Documentation of the fact that the change has been reviewed and found acceptable by the PORC. |
 2. Shall become effective upon review and acceptance by the PORC. |

6.19 MAJOR CHANGES TO RADIOACTIVE LIQUID, GASEOUS AND SOLID WASTE TREATMENT SYSTEMS⁽¹⁾

Licensee initiated major changes to the radioactive waste systems (liquid, gaseous and solid):

- a. Shall be reported to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the evaluation was reviewed by the PORC. The discussion of each change shall contain:
 1. A summary of the evaluation that led to the determination that the change could be made in accordance with 10 CFR 50.59.
 2. Sufficient information to support the reason for the change without benefit of additional or supplemental information;
 3. A description of the equipment, components and processes involved and the interfaces with other plant systems;
 4. An evaluation of the change, which shows the predicted releases of radioactive materials in liquid and gaseous effluents and/or quantity of solid waste that differ from those previously predicted in the license application and amendments thereto;
 5. An evaluation of the change, which shows the expected maximum exposures to individuals in the UNRESTRICTED AREA and to the general population that differ from those previously estimated in the license application and amendments thereto;
 6. A comparison of the predicted releases of radioactive materials, in liquid and gaseous effluents and in solid waste, to the actual releases for the period prior to when the changes are to be made;
 7. An estimate of the exposure to plant operating personnel as a result of the change; and
 8. Documentation of the fact that the change was reviewed and found acceptable by the PORC.
- b. Shall become effective upon review and acceptance by the PORC.

⁽¹⁾Licensees may choose to submit the information called for in this TS as part of the annual USAR update.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATING TO AMENDMENT NO. 99 TO FACILITY OPERATING LICENSE NO. DPR-43

WISCONSIN PUBLIC SERVICE CORPORATION

WISCONSIN POWER AND LIGHT COMPANY

MADISON GAS AND ELECTRIC COMPANY

KEWAUNEE NUCLEAR POWER PLANT

DOCKET NO. 50-305

1.0 INTRODUCTION

By letter dated August 31, 1992, which superseded in toto an application dated November 20, 1991, and in part an application dated June 28, 1991, the Wisconsin Public Service Corporation (WPSC), the licensee, submitted a request for revision to the Kewaunee Nuclear Power Plant (KNPP) Technical Specifications (TS). The amendment would revise TS Section 6.13, "High Radiation Area," so that the specification more closely resembles the Westinghouse Standard Technical Specifications (NUREG-0452). In addition, TS 6.4, "Training," and TS 6.5, "Review and Audit," would be revised to account for recent organization changes at Kewaunee. Finally, TS 6, "Administrative Controls," would be revised due to administrative and format changes.

2.0 EVALUATION

TS Section 6.1, "Responsibility"

The list of successors to the Plant Manager (in his/her absence) is being modified. Since the new successor, the Superintendent - Plant Instrument and Control, meets the requirements of ANSI N18.1-1971, this proposed change is acceptable.

TS Section 6.2.c (formerly TS 6.2.3), "Organizational Changes"

The proposed change adds the phrase "that are described in the Technical Specifications." This change clarifies, and does not alter, the intent of the TS. Therefore, it is acceptable.

TS Section 6.4, "Training"

The proposed change replaces the "Training Supervisor" with the "Manager - Nuclear Plant Support Services." This change reflects the new organization at Kewaunee, and does not alter the licensee's commitments. Therefore, it is acceptable.

TS Section 6.5, "Review and Audit"

The proposed amendment changes the required members of the Plant Operating Review Committee (PORC). In addition, the number of required PORC members is reduced from eight to seven. Finally, changes are proposed to clarify which members are required and what constitutes a quorum. These changes are all consistent with the staff positions regarding membership size and diversity, and are, therefore, acceptable.

The proposed amendment also changes the members of the Corporate Support Staff. These changes do not reduce the licensee's commitments and are consistent with current staff guidance. Therefore, they are acceptable.

TS Section 6.13, "High Radiation Area"

The staff has evaluated the proposed changes to Section 6.13 of the Kewaunee TSs. These changes are being proposed to make Kewaunee's TS 6.13 resemble TS 6.13 of NUREG-0452, "Standard Technical Specifications for Westinghouse Pressurized Water Reactors."

The first proposed change defines the distance from the source of radioactivity at which the field is measured. While the Westinghouse STS requires that the field be measured at a distance of 45 centimeters, the proposed specification stipulates a distance of 30 centimeters. Since a distance of 30 centimeters is used in conjunction with the definition of a High Radiation Area in the revised 10 CFR Part 20 (which stipulates the use of 30 centimeters), the proposed change is acceptable.

The second proposed change concerns the applicability of Radiation Work Permit (RWP) requirements. The current version of the Kewaunee TSs state that all personnel (emphasis added) entering high radiation areas must first be issued an RWP. The proposed change states that individuals qualified in radiation protection procedures (for example, a Health Physics Technician) or personnel continuously escorted by such individuals may be exempt from the RWP issuance requirement during performance of their assigned duties. This exemption applies to work in high radiation areas with exposure rates ≤ 1000 mrem/hr, provided the individual is otherwise following plant radiation protection procedures for entry into such high radiation areas. This exemption from the use of an RWP is in accordance with the wording of the Westinghouse STS for Section 6.13 and is, therefore, acceptable.

The third proposed change concerns administrative control responsibilities over high radiation areas greater than 1000 mrem/hr. The current version of the Kewaunee TSs states that these areas are to be maintained under the administrative control of the Shift Supervisor on duty. The proposed change states that all high radiation areas greater than 1000 mrem/hr shall be under the administrative control of radiation protection supervision in addition to the on-duty shift supervisor. This proposed change not only adds another level of administrative control over high radiation areas greater than 1000 mrem/hr, but it puts administrative control of these areas under health

physics supervision. In addition, this proposed change is consistent with the wording in the Westinghouse STS. Therefore, the staff finds it acceptable.

The current version of the Kewaunee TSs contains no criteria for controlling access to accessible areas having radiation levels greater than 1000 mrem/hr where no enclosure exists for locking and no enclosure can be reasonably constructed around individual areas. To control access to such areas, the fourth proposed change to the TSs states that these areas be barricaded and conspicuously posted, and a flashing light be activated as a warning device. These control criteria are identical to those described in the Westinghouse STS. Therefore, the staff finds this proposed change to be acceptable.

TS Section 6. "Administrative Controls"

Additional proposed changes to TS 6 reflect organizational restructuring in addition to reformatting and minor editorial corrections. Since these changes are administrative, the staff finds them acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Wisconsin State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

This amendment involves changes to recordkeeping, reporting, or administrative procedures or requirements. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

5.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Charles S. Hinson

Date: April 21, 1993