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APR 29 1983

Docket No. 50-305

Mr. C. W. Giesler
 Vice President - Nuclear Power
 Wisconsin Public Service Corporation
 Post Office Box 1200
 Green Bay, Wisconsin 54305

Dear Mr. Giesler:

The Commission has issued the enclosed Amendment No. 49 to Facility Operating License No. DPR-43 for Kewaunee Nuclear Power Plant. The amendment consists of changes to the Technical Specifications in response to your application transmitted by letter dated December 20, 1982.

The amendment changes the Technical Specifications related to reactor coolant system leakage, condensate storage tank supply and Auxiliary Feedwater Pump testing. Our review is continuing on other portions of the amendment request. During our review it was found necessary to change the condensate storage tank supply. We have discussed this change with your staff and they have agreed. The change has been included in the Technical Specifications.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

ORIGINAL SIGNED

Marshall Grotenhuis, Project Manager
 Operating Reactors Branch #1
 Division of Licensing

Enclosures:

1. Amendment No. 49 to DPR-43
2. Safety Evaluation
3. Notice of Issuance

cc w/enclosures:
 See next page

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*Concurrence, as follows (add)
 only as to Fed Reg
 NOTICE AND Amendment*

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DATE	04/29/83	04/29/83	04/29/83	04/29/83	04/28/83		

Mr. C. W. Giesler
Wisconsin Public Service Corporation

cc: Steven E. Keane, Esquire
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Town of Carlton
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Mr. Donald L. Quistroff, Chairman
Kewaunee County Board
Kewaunee County Courthouse
Kewaunee, Wisconsin 54216

Chairman
Public Service Commission of Wisconsin
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Madison, Wisconsin 53702

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Regional Radiation Representative
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

WISCONSIN PUBLIC SERVICE CORPORATION
WISCONSIN POWER AND LIGHT COMPANY
MADISON GAS AND ELECTRIC COMPANY

DOCKET NO. 50-305

KEWAUNEE NUCLEAR PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 49
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 licensee) dated December 20, 1982, 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.

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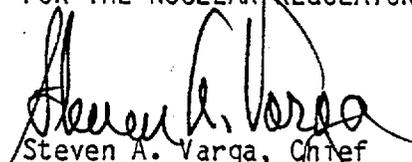
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-43 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 49, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 29, 1983

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 49 TO FACILITY OPERATING LICENSE NO. DPR-43

DOCKET NO. 50-305

Revise Appendix A as follows:

<u>Remove Pages</u>	<u>Insert Pages</u>
3.1-11	3.1-11
3.1-13	3.1-13
3.4-1	3.4-1
3.4-2	3.4-2
4.8-1	4.8-1

d. LEAKAGE OF REACTOR COOLANT

Specification

1. Any reactor coolant system leakage indication in excess of 1 gpm shall be the subject of an investigation and evaluation initiated within 4 hours of the indication. Any indicated leak shall be considered to be a real leak until it is determined that no unsafe condition exists. If the Reactor Coolant System leakage exceeds 1 gpm and the source of leakage is not identified within 12 hours, the reactor shall be placed in the hot shutdown condition utilizing normal operating procedures. If the source of leakage exceeds 1 gpm and is not identified within 48 hours, the reactor shall be placed in the cold shutdown condition utilizing normal operating procedures.
2. Reactor Coolant-to-secondary leakage through the steam generator tubes shall be limited to 500 gallons per day through any one steam generator. With tube leakage greater than the above limit reduce the leakage rate within 4 hours or be in cold shutdown within the next 36 hours.
3. If the sources of leakage other than that in 3.1.d.2 have been identified and it is evaluated that continued operation is safe, operation of the reactor with a total Reactor Coolant System leakage rate not exceeding 10 gpm shall be permitted. If leakage exceeds 10 gpm, the reactor shall be placed in the hot shutdown condition within 12 hours utilizing normal operating procedures. If the leakage exceeds 10 gpm for 24 hours, the reactor shall be placed in the cold shutdown condition utilizing normal operating procedures.
4. If any reactor coolant leakage exists through a non-isolable fault in a reactor coolant system component (exterior wall of the reactor vessel, piping, valve body, relief valve leaks, pressurizer, steam generator head, or pump seal leakoff), the reactor shall be shut down; and cooldown to the cold shutdown condition shall be initiated within 24 hours of detection.

allowable Reactor Coolant System leak rate of 10 gpm has been established. This explained leak rate of 10 gpm is within the capacity of one charging pump as well as being equal to the capacity of the Steam Generator Blowdown Treatment System.

The provision pertaining to a non-isolable fault in a reactor coolant system component is not intended to cover steam generator tube leaks, valve bonnets, packings, instrument fittings, or similar primary system boundaries not indicative of major component exterior wall leakage.

If leakage is to the containment, it may be identified by one or more of the following methods:

- A. The containment air particulate monitor is sensitive to low leak rates. The rates of reactor coolant leakage to which the instrument is sensitive is dependent upon the presence of corrosion product activity.
- B. The containment radiogas monitor is less sensitive and is used as a backup to the air particulate monitor. The sensitivity range of the instrument is approximately 2 gpm to greater than 10 gpm.
- C. Humidity detection provides a backup to A. and B. The sensitivity range of the instrumentation is from approximately 2 gpm to 10 gpm.
- D. A leakage detection system is provided which determines leakage losses from all water and steam systems within the containment. This system collects and measures moisture condensed from the containment atmosphere by fan coils of the Containment Air Cooling System and thus provides a dependable and accurate means of measuring integrated total leakage, including leaks from the cooling coils themselves which are part of the containment boundary. The fan-coil units drain to the containment sump, and all leakage collected by the containment sump will be pumped to the waste holdup tank. Pump running time will be monitored in the control room to indicate the quantity of leakage accumulated.

If leakage is to another closed system, it will be detected by the area and process radiation monitors and/or inventory control.

References:

3.4 STEAM AND POWER CONVERSION SYSTEM

Applicability

Applies to the operating status of the Steam and Power Conversion System.

Objective

To assure minimum conditions of steam-relieving capacity and auxiliary feedwater supply necessary to assure the capability of removing decay heat from the reactor, and to limit the concentrations of water activity that might be released by steam relief to the atmosphere.

Specification

- a. The reactor shall not be heated above 350°F unless the following conditions are satisfied.
 1. Rated relief capacity of TEN steam system safety valves is available, except during testing.
 2. Three auxiliary feedwater pumps are operable.
 3. System piping and valves directly associated with the above components are operable.
 4. A minimum of 30,000 gallons of water is available in the condensate storage tanks and the Service Water System is capable of delivering an unlimited supply from Lake Michigan.
 5. The iodine-131 activity on the secondary side of the steam generators does not exceed 1.0 $\mu\text{Ci/cc}$.
- b. If, when the reactor is above 350°F, any of the conditions of Specification 3.4.a cannot be met within 48 hours, and except for the conditions of 3.4.c, the reactor shall be shutdown and cooled below 350°F using normal operating procedures.

Basis

A reactor shutdown from power requires removal of core decay heat. Decay heat removal requirements are normally satisfied by the steam bypass to the condenser and by continued feedwater flow to the steam generators. Normal feedwater flow to the steam generators is provided by operation of the turbine-cycle feedwater system.

The ten main steam safety valves have a total combined rated capability of 7,765,000 lbs/hr. The maximum full-power steam flow is 7,449,000 lbs/hr. therefore, the ten main steam safety valves will be able to relieve the total steam flow if necessary.

In the unlikely event of complete loss of electrical power to the plant, continued capability of decay heat removal would be assured by the availability of either the steam-driven auxiliary feedwater pump or one of the two motor-driven auxiliary feedwater pumps, and by steam discharge to the atmosphere through the main steam safety valves. Each motor-driven pump is normally aligned with one steam generator: the discharge of the turbine-driven pump, which starts automatically, is manually valved as necessary to backup either or both motor-driven pumps, or to replace the standby function of either motor-driven pump when it is out of service. Any single auxiliary feedwater pump can supply sufficient feedwater for removal of decay heat from the reactor.

The specified minimum water supply in the condensate storage tanks is sufficient for ninety minutes of hot shutdown plus a suitable margin to prevent loss of net positive suction head prior to switching suction to the service water system. Unlimited replenishment of the condensate storage supply is available from Lake Michigan through the Service Water System.

The secondary coolant activity is based on a postulated release of the contents of one steam generator to the atmosphere. This could happen, for example, as a result of a steam break accident combined with failure of a steam line isolation valve. The limiting dose for this case results from iodine-131

Applicability

Applies to periodic testing requirements of the turbine-driven and motor-driven auxiliary feedwater pumps.

Objective

To verify the operability of the auxiliary feedwater equipment and its ability to respond properly when required.

Specification

- a. The operability of individual auxiliary feedwater pumps as required by Specification 3.4.a.2 shall be demonstrated at least monthly during power operation and within one week after the plant is returned to power operation, if the test was not performed during plant shutdown.
- b. The valves on the discharge side of the turbine-driven pump that direct flow to either steam generator shall be tested by operator action whenever the turbine-driven pump is tested.
- c. The service water supply valves to the auxiliary feedwater pump suctions shall be tested by operator action following the auxiliary feedwater pump tests.
- d. These tests shall be considered satisfactory if control board indication or visual observation of the equipment demonstrate that all components have operated properly.

Basis

Monthly testing of the auxiliary feedwater pumps will verify their operability. The discharge valves of the two motor-operated pumps are normally open, as are the suction valves from the condensate storage tanks and the two valves on a cross tie line that directs the turbine driven pump discharge to either or both steam generators. The only valve required to function upon initiation of



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 49 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

Introduction

On December 20, 1982, the Wisconsin Public Service Corporation (the licensee) submitted proposed Amendment No. 51 which contained several miscellaneous changes to the Technical Specifications for the Kewaunee Nuclear Power Plant. Three areas have been reviewed and are included in this amendment.

The Reactor Coolant System leakage was changed to meet the suggestions made in the NRC letter dated October 21, 1982. The condensate storage tank limit was reduced from 75,000 gallons to 10,000 gallons. Our review indicated that the 10,000 gallon limit did not meet certain requirements. We discussed this with the licensee staff and they agreed that the limit should be reduced from 75,000 gallons to 30,000 gallons. We have incorporated this change. A clarification of the surveillance requirements for the Auxiliary Feedwater pumps has also been included.

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Evaluation

1. Reactor Coolant System Leakage

In response to the October 21, 1982 letter from S. A. Varga to C. W. Giesler the licensee has revised specifications 3.1.d.3 and 3.1.d.4 to reduce the total allowable reactor coolant system leakage rate, excluding leakage to the steam generators, from 25 gpm to 10 gpm. We have reviewed the proposed changes and since they are consistent with the Westinghouse Standard Technical Specifications and responsive to the October 21, 1982 letter, we conclude they are acceptable.

2. Steam and Power Conversion System

The licensee has proposed to revise specification 3.4.a.4 to reduce the minimum volume of water required to be stored in the condensate storage tanks from 75,000 gallons to 10,000 gallons. The reason for the requested change is to avoid recurring licensee event reports caused by falling below the 75,000 gallon minimum during plant startups. The proposed basis for the change is that the service water system is the safety-grade seismic Category I supply to the auxiliary feedwater system (AFW), not the condensate storage tank, and 10,000 gallons would allow sufficient time for operator action to switch AFW pump suction to the service water system.

We agree with the basis for reducing the minimum required volume of water but we do not agree with the reduction to 10,000 gallons. Post TMI-2 generic short and long term recommendations GS-5 and GL-3 identified in NUREG-0611, require that the AFW system be capable of operation for at least 2 hours following a complete loss of all alternating-current (a-c) power sources. In order to meet these recommendations, at least two hours of water (approximately 30,000 gallons) should always be available in the condensate storage tanks. We, therefore, conclude that the proposed reduction in the required volume of water in the condensate storage tanks is acceptable provided the minimum volume is specified to be at least 30,000 gallons.

3. Auxiliary Feedwater System

The licensee has proposed to revise the surveillance requirements for the AFW pumps to reflect the potential misunderstanding that the existing specifications require the AFW pumps to be periodically tested when the plant is shutdown. The proposed specification is that the AFW pumps be tested monthly during power operation and within one week after the plant is returned to power operation, if the test was not performed during plant shutdown. We have reviewed the

Licensee's proposed Technical Specification for testing the AFW pumps and conclude it meets the intent of the Westinghouse Standard Technical Specifications with respect to the AFW pumps not having to be tested on a monthly basis while the plant is shutdown. We, therefore, conclude that the proposed change to specification 4.8.a regarding AFW pump monthly tests is acceptable.

Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of an accident of a type different from any evaluated previously, and does not involve a significant reduction in a margin of safety, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: April 29, 1983

Principal Contributors

W. LeFave

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-305WISCONSIN PUBLIC SERVICE CORPORATIONWISCONSIN POWER AND LIGHT COMPANYMADISON GAS AND ELECTRIC COMPANYNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 49 to Facility Operating License No. DPR-43, issued to Wisconsin Public Service Corporation, Wisconsin Power and Light Company, and Madison Gas and Electric Company (the licensees), which revised Technical Specifications for operation of the Kewaunee Nuclear Plant (the facility) located in Kewaunee, Wisconsin. The amendment is effective as of the date of issuance.

The amendment changes the Technical Specifications related to reactor coolant system leakage, condensate storage tank supply and auxiliary feedwater pump testing.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since this amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

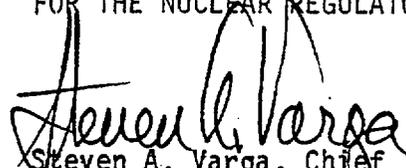
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For further details with respect to this action, see (1) the application for amendment dated December 20, 1982, (2) Amendment No. 49 to License No. DPR-43 and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. and at the Kewaunee Public Library, 822 Juneau Street, Kewaunee, Wisconsin 54216. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 29th day of April, 1983.

FOR THE NUCLEAR REGULATORY COMMISSION


Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing