

October 25, 1989

Docket No. 50-305

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Mr. Ken H. Evers  
Manager - Nuclear Power  
Wisconsin Public Service Corporation  
Post Office Box 19002  
Green Bay, Wisconsin 54307-9002

Dear Mr. Evers:

SUBJECT: AMENDMENT NO.83 TO FACILITY OPERATING LICENSE NO. DPR-43  
(TAC NO. 73582)

The Commission has issued the enclosed Amendment No.83 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 June 12, 1989.

The amendment redefines the measure of fuel oil supply for the emergency diesel generators' (DG) day tanks from a quantity of time, to a quantity of volume. The amendment also clarifies the bases of the required storage capacity.

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,

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Anthony T. Gody, Jr., Project Manager  
Project Directorate III-3  
Division of Reactor Projects - III,  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation

Enclosures:

- Amendment No. 83 to License No. DPR-43
- Safety Evaluation

cc w/enclosures:  
See next page

Office: LA/PDIII-3  
Surname: *PKreutzer*  
Date: 10/3/89

*AT*  
Office: PM/PDIII-3  
Surname: TGody/tg  
Date: 10/2/89

*RWD*  
Office: PD/PDIII-3  
Surname: JHannon  
Date: 10/25/89

OGC-WF1  
*Barb*  
Date: 10/11/89

Office: BC/SELB<sub>NS</sub>  
Surname: FRosa *FR*  
Date: 10/3/89

*JW*  
Office: SC/SPLB  
Surname: JWermiel  
Date: 10/2/89

*JFol*  
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*CP-1*

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Mr. Ken H. Evers  
Wisconsin Public Service Corporation

Kewaunee Nuclear Power Plant

cc:  
David Baker, Esquire  
Foley and Lardner  
P. O. Box 2193  
Orlando, Florida 32082

Glen Kunesh, 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 PUBLIC SERVICE CORPORATION

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. 83  
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 June 12, 1989 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:

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(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No.83 , 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.

FOR THE NUCLEAR REGULATORY COMMISSION

*for*   
John N. Hannon, Director  
Project Directorate III-3  
Division of Reactor Projects - III,  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: October 25, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 83

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 3.7-1  
TS 3.7-3

INSERT

TS 3.7-1  
TS 3.7-3

### 3.7 AUXILIARY ELECTRICAL SYSTEMS

#### Applicability

Applies to the availability of electrical power for the operation of plant auxiliaries.

#### Objective

To define those conditions of electrical power availability necessary to provide 1) safe reactor operation and 2) continuing availability of engineered safety features.

#### Specification

- a. The reactor shall not be made critical unless all of the following requirements are satisfied:
  1. The Reserve Auxiliary Transformer is fully operational and energized to supply power to the 4160-V buses.
  2. A second external source of power is fully operational and energized to supply power to emergency buses 1-5 and 1-6.
  3. The 4160-V buses 1-5 and 1-6 are both energized.
  4. The 480-V buses 1-52 and 1-62 and their MCC's are both energized from their respective station service transformers.
  5. The 480-V buses 1-51 and 1-61 and their MCC's are both energized from their respective station service transformers.
  6. Both station batteries and both DC systems are operable, except during testing and surveillance as described in Specification 4.6.b.
  7. Both diesel generators are operable. The two underground storage tanks combine to supply at least 35,000 gallons of fuel oil for either diesel generator and the day tanks for each diesel generator contain at least 1,000 gallons of fuel oil.
  8. At least one pair of physically independent transmission lines serving the substation is operable. The three pairs of physically independent transmission lines are:
    - i) R-304 and Q-303
    - ii) F-84 and Y-51
    - iii) R-304 and Y-51

Plant auxiliary power is normally supplied by two separate external power sources which have multiple off-site network connections:(1) the Reserve Auxiliary Transformer from the 138-Kv portion of the plant substation, and a tertiary winding on the substation auto transformer. Either source is sufficient to supply all necessary accident and post-accident load requirements from any one of four available transmission lines.

Each diesel generator is connected to one 4160-V safety features bus and has sufficient capacity to start sequentially and operate the engineered safety features equipment supplied by that bus. The set of safety features equipment items supplied by each bus is, alone, sufficient to maintain adequate cooling of the fuel and to maintain containment pressure within the design value in the event of a loss-of-coolant accident.

Each diesel generator starts automatically upon low voltage on its associated bus, and both diesel generators start in the event of a safety injection signal. A minimum of seven days fuel supply for one diesel generator is maintained by requiring 36,000 gallons of fuel oil, thus assuring adequate time to restore offsite power or to replenish fuel. The diesel fuel oil storage capacity requirements are consistent with those specified in ANSI N195-1976/ANS-59.51 sections 5.2, 5.4 and 6.1.

The plant 125-V d-c power is normally supplied by two batteries each of which will have a battery charger in service to maintain full charge and to assure adequate power for starting the diesel generators and supplying other emergency loads. A third charger is available to supply either battery.

The arrangement of the auxiliary power sources and equipment and this Specification ensure that no single fault condition will deactivate more than one redundant set of safety features equipment items and will therefore not result in failure of the plant protection systems to respond adequately to a loss-of-coolant accident.

Reference: (1) FSAR Figure 8.2-2



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATING TO AMENDMENT NO. 83 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 June 12, 1989, Wisconsin Public Service Corporation (WPSC), the licensee, submitted a proposed amendment to Facility Operating License No. DPR-43, for the Kewaunee Nuclear Power Plant. The amendment would provide Technical Specification (TS) changes to redefine the measurement of fuel oil supply for the emergency diesel generators' (DG) storage tanks from a quantity of time, to a quantity of volume. The amendment would also clarify the bases of the new required storage capacity.

2.0 DISCUSSION

The proposed amendment changes two pages of the TS. Both changes to the TS reflect changing the measure of fuel oil in the fuel oil storage tanks for the emergency diesel generators to indicate gallons vice hours as the measurement.

Regulatory Guide 1.137(C)(1)(c) refers to ANSI Standard N195-1976 Section 5.4 for the methodology to calculate fuel oil storage requirements. Section 5.4 of ANSI N195-1976 also denotes a 7-day storage capacity as a conservative approach to storage capacity calculation. Section 6.1 of ANSI N195-1976 indicates that the acceptable conservative capacity for the emergency diesel generator fuel oil day tank be at least sufficient to supply fuel to the diesel generator for 60 minutes.

3.0 EVALUATION

Proposed change No. 1 modifies TS 3.7.a.7 on page TS 3.7-1. The first change increases the required volume of fuel stored in the underground tanks for the emergency diesel generators from 33,300 gallons to 35,000 gallons. This is a conservative change and is therefore acceptable. The second modification changes the measure of fuel in the day tanks from 8 hours to 1,000 gallons. ANSI standard N195-1976 states that a 60-minute supply should be available in the emergency diesel generator day tanks. A quantity of 1,000

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gallons in each day tank will provide approximately 4 hours of fuel to each diesel generator. Although the proposed change is a reduction of a previous commitment, it is well within the prescribed amounts and is therefore acceptable to the staff. The conservative methodology in ANSI N195-1976 Section 5.4 was used in conjunction with conservative assumptions for the calculations to ensure an adequate 7-day supply to a diesel generator. The licensee's methodology was reviewed and was found acceptable to the staff. The third change removes the clarification statement, "seven days supply for one diesel generator...", and moves it to the bases section of the TS. This change is administrative in nature and does not change any previous interpretation of the TS's and, therefore, is acceptable to the staff. All proposed changes to TS 3.7.a.7 are acceptable to the staff.

Proposed change No. 2 modifies the Bases Section of the TS on page TS 3.7-3. The first change moves the statement, "... seven days fuel supply for one diesel generator..." into the Bases Section and provides quantification of the actual amount of fuel required for 7 days (36,000 gallons). The quantity required for 7 days of operation specified was calculated using the conservative methodology stated above and therefore is acceptable to the staff. Additionally, as mentioned previously, the movement of the above clarification statement to the Bases Section is purely administrative and is also acceptable. The second change indicates that the bases for the diesel fuel oil storage requirements are consistent with those specified in ANSI Standard N195-1976. The staff has concluded, based on the above evaluation, that the proposed changes are acceptable.

#### 4.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or changes a surveillance requirement. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). 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; and (2) 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.

Principal Contributor: Anthony T. Gody, Jr.

Dated: October 25, 1989