July 3, 1986

Docket No. 50-305

Mr. D. C. Hintz
Manager, Nuclear Power
Wisconsin Public Service Corporation
Post Office Box 19002
Green Bay, Wisconsin 54307-9002

Dear Mr. Hintz:

The Commission has issued the enclosed Amendment No. 67 to Facility Operating License No. DPR-43 for the Kewaunee Nuclear Power Plant. The amendment consists of changes to the Technical Specifications in response to your application transmitted by letter dated September 24, 1985 and as revised October 9, 1985.

The amendment removes a limiting condition for operation upon completion of the rerouting of the Kewaunee offsite power source transmission lines and completes our TAC No. 59804.

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

Sincerely,

/S/

Morton B. Fairtile, Project Manager
Project Directorate #1
Division of PWR Licensing-A

Enclosures:
1. Amendment No. 67 to DPR-43
2. Safety Evaluation

cc: w/enclosures
See next page

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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 POWER PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 67
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 September 24, 1985 and as revised October 9, 1985, 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 Chaper 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 Appendices A and B, as revised through Amendment No. 67 , 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 the rerouted transmission lines are declared operable.

FOR THE NUCLEAR REGULATORY COMMISSION

Morton B. Fairtile

Morton B. Fairtile, Project Manager
Project Directorate #1
Division of PWR Licensing-A

Attachment:
Changes to the Technical
Specifications

Date of Issuance: July 3, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 67

TO 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 the captioned amendment number and contain marginal lines indicating the area of change.

REMOVE	INSERT
3.7-1	3.7-1
3.7-2	3.7-2

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, and a fuel supply of 33,300 gallons is available in the underground storage tank and an 8-hour supply will be in the diesel fuel oil day tanks (seven days supply for one diesel generator at full load).
   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

b. During power operation or recovery from inadvertent trip, any of the following conditions of inoperability may exist during the time intervals specified. If operability is not restored within the time specified, then within 1 hour action shall be initiated to achieve hot standby within the next 6 hours.

1. Either Auxiliary Transformer may be out of service for a period not exceeding 7 days provided the other Auxiliary Transformer and both diesel generators are operable.
2. ONE diesel generator may be inoperable for a period not exceeding 7 days provided the other diesel generator is tested daily to ensure operability and the engineered safety features associated with this diesel generator are operable.
3. ONE battery may be inoperable for a period not exceeding 24 hours provided the other battery and two battery chargers remain operable with one charger carrying the d-c supply system.
4. If the conditions in TS 3.7.a.8 cannot be met, power operation may continue for up to 7 days provided at least two transmission lines serving the substation are operable.
5. Three off site power supply transmission lines may be out of service for a period of 7 days provided reactor power is reduced to 50% of rated power and the two diesel generators shall be tested daily for operability.
6. One 4160V or 480V Engineered Safety Features bus may be out of service for 24 hours provided the redundant bus and its loads remain operable.

c. When its normal or emergency power source is inoperable, a system, train or component may be considered operable for the purpose of satisfying the requirements of its applicable limiting condition for operation, provided:

1. Its corresponding normal or emergency power source is operable; and
2. Its redundant system, train or component is operable.

Basis

The intent of this specification is to provide assurance that at least one external source and one standby source of electrical power is always available to accomplish safe shutdown and containment isolation and to operate required engineered safety features equipment following an accident.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 67 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 September 24, 1985, the Wisconsin Public Service Corporation, et. al. (the licensees) submitted a proposed Amendment No. 69 with revisions to Facility Operating License No. 1 DPR-43 for the Kewaunee Nuclear Power Plant (KNPP). The proposed Technical Specification (TS) changes were submitted concurrent with a proposed offsite power transmission line routing modification to increase offsite power reliability and operational flexibility. On October 9, 1985, the licensees submitted a change to the proposed amendment making minor wording changes to the proposed TS to clarify wording and provide consistency with a previous amendment.

Evaluation

The KNPP TS require that two physically independent offsite power sources be operable to serve the KNPP substation in accordance with General Design Criteria 17 of 10 CFR Part 50, Appendix A. The KNPP substation is presently fed by four offsite sources; however, one of the four power lines (Q-303, 345 KV) passes above two of the other offsite power lines (F-84, 138 KV and Y-51, 138 KV). It can then be postulated, that a single failure of Q-303 at this point could affect all three lines leaving only one offsite power line R-304 (345 KV), the North Appleton Line, operational. The possibility of losing three of the four lines in one accident has required a TS limiting condition of operation (LCO), 3.7.b.4, which limits the time that the North Appleton Line can be out-of-service to seven days when two other lines are in service.

In order to increase the reliability of offsite power to KNPP, the licensees have proposed rerouting one of the four lines (F-84) so that the possibility of one line causing failure in three lines is eliminated. The new route of line F-84 passes under line Q-303 at a different crossing than line Y-51, see Figures 1 and 2 for existing and proposed routing changes. The routing change will make three, two line combinations, physically independent:

a. R-304 and Q-303
b. R-304 and Y-51
c. F-84 and Y-51

Thus, any one of these combinations will meet the requirements of General Design Criterion 17 which requires two physically independent offsite transmission lines designed and located so as to minimize, to the extent practical, the likelihood of their simultaneous failure under postulated accident conditions.

The physical independence of the F-84 and Y-51 pair in the proposed reroute is based upon the assumption that a catastrophic failure of line Q-303 will not be extended past Deadend Tower No. 10 and, therefore, would only affect one of the two lines. The licensees state that their assumption is based upon service data for deadend towers in their systems. They have not experienced a structural or insulator type failure that has been extended through a 345 KV deadend tower in 545 tower years. Indicating a failure rate of less than 0.00183/yr for this type of tower and this probability is compared to all U.S. nuclear plant power outages of less that 30 minutes which have a probability of 0.044/yr.

Upon completion of this rerouting, the licensees propose that TS LCO 3.7.a.8 be modified to specify the three pairs of lines above that which still have one line operable following any postulated single line failure. Since the North Appleton Line would no longer be the only line physically independent from the other three lines, TS action statement 3.7.b.4 will be changed to remove the North Appleton Line and require shutdown within seven days if the conditions of TS 3.7.a.8 cannot be met.

The staff has reviewed the above rerouting proposal and agree that the offsite power reliability for the KNPP would be enhanced by eliminating the crossing which could result in a Q-303 line failure removing two other lines from service. The staff also reviewed proposed LCO (3.7.a.8) which requires one pair of lines be operable and specifies the three pairs of offsite lines that are physically independent and the action statement (3.7.b.4) which will eliminate the reference to the North Appleton Line as the only physically independent line. The staff finds these changes to be acceptable.

Environmental Consideration

This amendment involves changes to the installation or use of a facility offsite power line located outside the restricted area as defined in 10 CFR Part 20. 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 occupations 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.

Conclusion

We have 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 the proposed TS changes, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: K. Ridgway
J. Neisler

Dated: July 3, 1986

Figure 1
Existing Configuration of Offsite Power Supplies to KNPP Substation

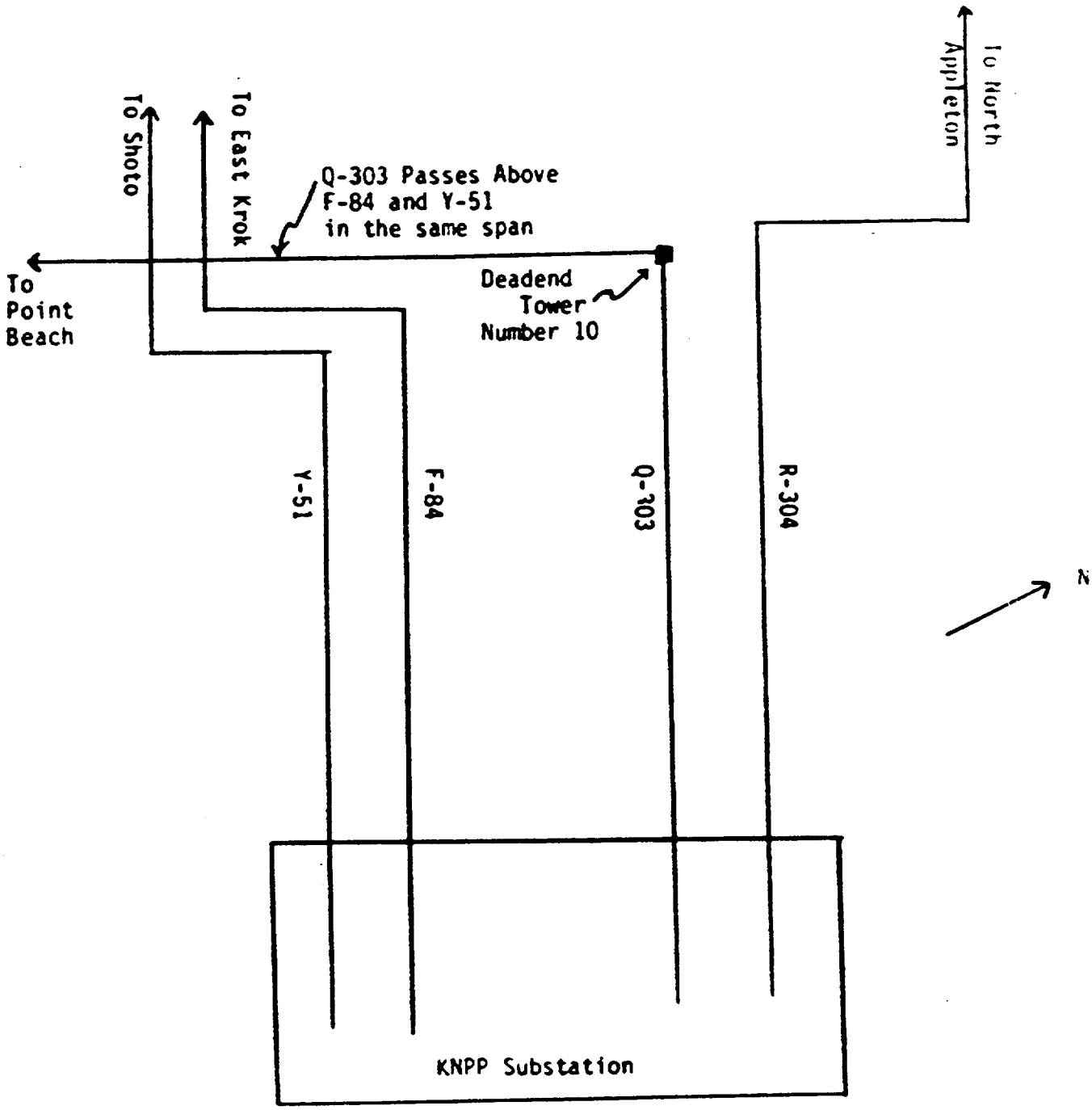
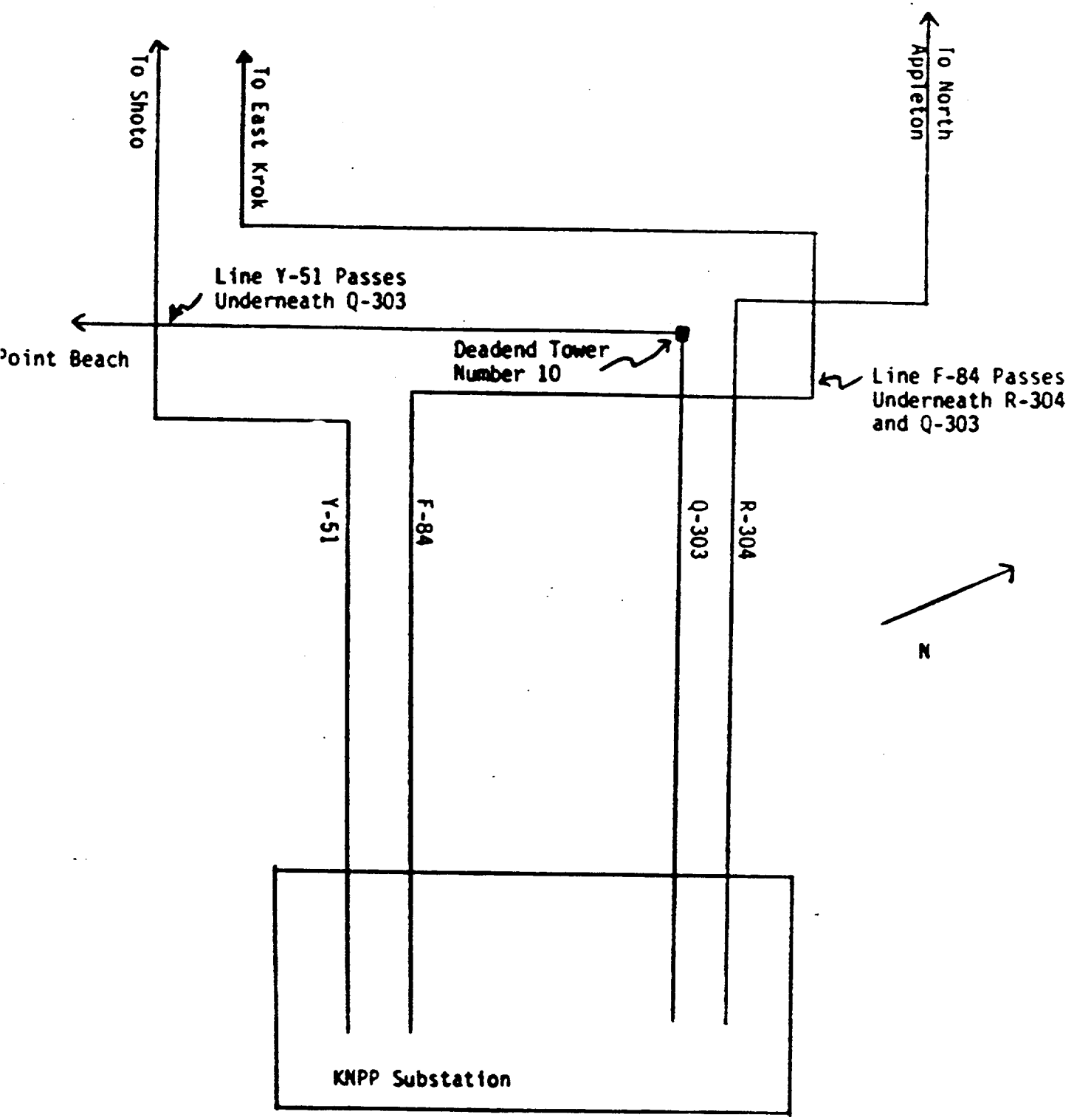


Figure 2
Proposed Reroute of Line F-84 to
Enhance Reliability of Offsite Power
to KNPP Substation



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