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June 8, 1981

Docket No. 50-331

Mr. Duane Arnold, President
Iowa Electric Light and Power Company
P. O. Box 351
Cedar Rapids, Iowa 52406

Dear Mr. Arnold:

The Commission has issued the enclosed Amendment No. 70 to Facility Operating License No. DPR-49 for the Duane Arnold Energy Center. This amendment consists of changes to the Technical Specifications in response to your application dated May 24, 1981, as supplemented June 2, 1981, and subsequent discussions between the NRC staff and your staff.

These changes to the Technical Specifications involve revisions to reflect changes in the surveillance requirements associated with the river water supply system.

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

Sincerely,

ORIGINAL SIGNED BY

Thomas A. Ippolito, Chief
Operating Reactors Branch #2
Division of Licensing

Enclosures:

1. Amendment No. 70 to DPR-49
2. Safety Evaluation
3. Notice of Issuance

cc w/enclosures:
See next page



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*Legal review of Amst
+ Fed reg. notice*

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Docket file



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

June 8, 1981

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cc w/enclosures:
See next page

Mr. Duane Arnold
Iowa Electric Light & Power Company

cc:

Mr. Robert Lowenstein, Esquire
Harold F. Reis, Esquire
Lowenstein, Newman, Reis and Axelrad
1025 Connecticut Avenue, N. W.
Washington, D. C. 20036

Office for Planning and Programming
523 East 12th Street
Des Moines, Iowa 50319

Chairman, Linn County
Board of Supervisors
Cedar Rapids, Iowa 52406

Iowa Electric Light & Power Company
ATTN: D. L. Mineck
P. O. Box 351
Cedar Rapids, Iowa 52406

U.S. Environmental Protection Agency
Region VII Office
ATTN: EIS COORDINATOR
324 East 11th Street
Kansas City, Missouri 64106

Cedar Rapids Public Library
428 Third Avenue, S.E.
Cedar Rapids, Iowa 52401

U.S. Nuclear Regulatory Commission
Resident Inspector's Office
Rural Route #1
Palo, Iowa 52324



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

IOWA ELECTRIC LIGHT AND POWER COMPANY
CENTRAL IOWA POWER COOPERATIVE
CORN BELT POWER COOPERATIVE

DOCKET NO. 50-331

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 70
License No. DPR-49

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Iowa Electric Light and Power Company, Central Iowa Power Cooperative, and Corn Belt Power Cooperative (the licensee) dated May 24, as supplemented June 2, 1981, 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-49 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 70, 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


Thomas A. Ippolito, Chief
Operating Reactors Branch #2
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 8, 1981

ATTACHMENT TO LICENSE AMENDMENT NO. 70

FACILITY OPERATING LICENSE NO. DPR-49

DOCKET NO. 50-331

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. The revised page is identified by Amendment Number and contains a vertical line indicating the area of change.

Remove

3.5-12

Replace

3.5-12

LIMITING CONDITIONS FOR OPERATION

J. River Water Supply System

1. Except as specified in 3.5.J.2 below, at least one pump in each river water supply system loop shall be operable whenever irradiated fuel is in the reactor vessel and reactor coolant temperature is greater than 212°F.

2. From and after the date that one river water supply system loop is made or found to be inoperable for any reason, reactor operation must be limited to seven days unless operability of that subsystem is restored within this period. During such seven days all active components of the other river water supply loop shall be operable.

3. If the requirements of 3.5.J.2 cannot be met, an orderly shutdown shall be initiated and the reactor shall be in a Cold Shutdown condition within 24 hours.

SURVEILLANCE REQUIREMENT

J. River Water Supply System

1. River Water Supply System Testing:

a.	<u>Item</u> Simulated auto- matic actuation Test.	<u>Frequency</u> each refueling outage.
b.	Pump and motor operated valve operability.	Once/3months
c.	Flow Rate Test Each river water supply system pump shall deli- ver at least 6000 gpm at TDH of 46 ft. or more.	After major pump maintenance and monthly. Daily when river elevation is less than 727 feet.
d.	Operating Pump Flow Rate Demonstration Each Operating River Water Supply System Pump shall deli- ver at least 6000 gpm.	Daily

2. When one river water supply system loop becomes inoperable, the operable loop and the diesel-generators required for operation of such components shall be demonstrated to be operable immediately and daily thereafter.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 70 TO LICENSE NO. DPR-49

IOWA ELECTRIC LIGHT AND POWER COMPANY
CENTRAL IOWA POWER COOPERATIVE
CORN BELT POWER COOPERATIVE

DOCKET NO. 50-331

DUANE ARNOLD ENERGY CENTER

Introduction

The Duane Arnold Energy Center (DAEC) river water supply system consists of two river water supply pumps, each of 6000 gpm capacity, in each of two loops. This system supplies river water for the residual heat removal service water system (RHRSWS) and emergency service water system (ESWS) via the wet-pit sump of the RHRSW & ESW systems.

The RHRSWS supplies cooling water for heat removal from the Residual Heat Removal (RHR) heat exchangers and a source of water if post accident flooding of the core or primary containment is needed. The ESWS provides a supply of cooling water to essential safeguards equipment. Two one-half size RHR service water pumps supply each of the two RHRSWS trains, and one full size ESW pump supplies each of the two ESWS trains. One ESW pump (rated at 1200 gpm) and two RHRSW pumps (each rated at 2400 gpm) are required to supply to at least one train of the ESWS and RHRSW systems (respectively) in event of either a design basis accident or loss of offsite AC power. The combined total flow requirements of the RHRSWS and ESWS is thus 6000 gpm. This flow must be provided by the river water supply system to the RHRSWS and ESWS wet-pit sump. This minimum flow requirement can be satisfied by one of the four service water supply pumps, which are each rated at 6000 gpm.

Evaluation

Minimum river level at DAEC is 724' 9". The maximum elevation to which the water must be pumped is 769' 8", for a minimum Total Dynamic Head (TDH) requirement of slightly less than 45 feet. From this point, the water flows downhill about 18' 8" through pipes to the discharge level in the ESWS and RHRSWS wet-pit sump at elevation 751' 0". Total system discharge losses from the river water supply pump discharge to the discharge into the wet-pit sump have been measured to be no more than 18 feet at 6000 gpm. Total system losses from the river water supply pump discharge to the pit discharge are therefore less than the head available due to the elevation difference between these two points. Consequently, the TDH

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required to deliver the required flow to the wet-pit sump is slightly less than 45 feet.

The licensee has proposed changing the DAEC Technical Specifications to modify the surveillance requirements pertaining to the river water supply system to 1) increase the frequency of routine flow rate tests, 2) add additional flow rate tests when river elevation drops below a certain predesignated level, and 3) provide for daily demonstrations of operating pump flow rates. In addition, the licensee has proposed changing the requirement for a demonstration of pump manufacturer's nameplate data of a pump TDH of 57 feet to a demonstration of pump TDH of 46 feet, to more clearly reflect the requirements of the system.

We have reviewed the proposed revisions to the Technical Specifications and find them acceptable. Based on our review of the information provided by the licensee, we have concluded that the Technical Specification requirement to demonstrate a river water supply pump TDH of 57 feet is based only on manufacturer's nameplate data and does not represent system requirements. We have also concluded that the TDH requirement proposed by the licensee is adequate to meet these requirements and that the increased surveillance requirements proposed provide additional assurance that adequate river water supply for the ESWS and RHRSWS is available.

Environmental Considerations

We have determined that the amendment does not involve 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 Section 5.1.5(d)(4) that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of the amendment.

Conclusions

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 accidents previously considered and does not involve a significant decrease in a safety margin, 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 the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: June 8, 1981

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-331IOWA ELECTRIC LIGHT AND POWER COMPANY, ET AL.NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 70 to Facility Operating License No. DPR-49 issued to Iowa Electric Light and Power Company, Central Iowa Power Cooperative, and Corn Belt Power Cooperative, which revises the Technical Specifications for operation of the Duane Arnold Energy Center, located in Linn County, Iowa. The amendment is effective as of its date of issuance.

The amendment modifies the Technical Specifications to reflect changes in the surveillance requirements associated with the river water supply system.

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 the amendment does not involve a significant hazards consideration.

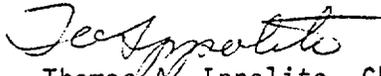
The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR 51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance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

-2-

For further details with respect to this action, see (1) the application for amendment dated May 24, 1981, as supplemented June 2, 1981, (2) Amendment No. 70 to License No. DPR-49, 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, NW., Washington, D. C. and at the Cedar Rapids Public Library, 428 Third Avenue, SE., Cedar Rapids, Iowa 52401. 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 8th day of June 1981.

FOR THE NUCLEAR REGULATORY COMMISSION



Thomas A. Ippolito, Chief
Operating Reactors Branch #2
Division of Licensing