

Docket No. 50-331

SEP 20 1974

Iowa Electric Light & Power Company
ATTN: Mr. Duane Arnold, President
Security Building
P. O. Box 351
Cedar Rapids, Iowa 52406

Gentlemen:

The Commission has issued the enclosed Amendment No. 5 to Facility Operating License No. DPR-49 for the Duane Arnold Energy Center. This amendment includes Change No. 6 to the Technical Specifications, Appendix A, and is in response to your request of September 17, 1974.

The amendment involves a change in the total developed head requirements of the Residual Heat Removal Service Water Pumps.

Copies of the related Safety Evaluation and the Federal Register Notice are also enclosed.

Sincerely,

Original Signed

Karl R. Goller, Assistant Director
for Operating Reactors
Directorate of Licensing

Enclosures:

1. Amendment No. 5
2. Safety Evaluation
3. Federal Register Notice

cc: See next page

bcc: HJMcAlduff
JRBuchanan
TBAbernathy
ARosenthal
NHGoodrich

OFFICE	ORB#3	ORB#3	ORB#3	OGC	L:AD/ORA
SURNAME	Gowsley:kmf	SATeets	for GLeary		KRGoller
DATE	9/20/74	9/20/74	9/20/74	9/17/74	9/23/74

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SEP 20 1974

Mr. Duane Arnold

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cc: w/enclosure

Jack R. Newman, Esquire
Harold F. Reis, Esquire
Newman, Reis, & Axelrad
1025 Connecticut Avenue, N. W.
Washington, D. C. 20036

Mr. Dudley Henderson
Chairman, Linn County
Board of Supervisors
Cedar Rapids, Iowa 52406

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

Reference Service
Cedar Rapids Public Library
426 3rd Avenue, S. E.
Cedar Rapids, Iowa 52041

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IOWA ELECTRIC LIGHT & POWER COMPANY

CENTRAL IOWA POWER COOPERATIVE

CORN BELT POWER COOPERATIVE

DOCKET NO. 50-331

DUANE ARNOLD ENERGY CENTER

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 5
License No. DPR-49

1. The Atomic Energy Commission (the Commission) having found that:
 - A. The application for amendment by Iowa Electric Light & Power Company, Central Iowa Power Cooperative, and Corn Belt Power Cooperative (the licensees) dated September 17, 1974, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended, 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. Prior public notice of this amendment is not required since the amendment does not involve a significant hazards consideration.
2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility License No. DPR-49 is hereby amended to read as follows:

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"(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications, as revised by issued changes thereto through Change No. 6."

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

FOR THE ATOMIC ENERGY COMMISSION

Original Signed

Karl R. Goller, Assistant Director
for Operating Reactors
Directorate of Licensing

Attachment:
Change No. 6 to the
Technical Specifications

Date of Issuance: SEP 20 1974

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ATTACHMENT TO LICENSE AMENDMENT NO. 3
CHANGE NO. 6 TO TECHNICAL SPECIFICATIONS
FACILITY OPERATING LICENSE NO. DPR-49

Replace pages 3.5-5 and 3.5-6 with the attached pages (revision
contained in page 3.5-5).

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LIMITING CONDITIONS FOR OPERATION SURVEILLANCE REQUIREMENTS

	<u>Item</u>	<u>Frequency</u>
	b) Flow Rate Test-Each RHR service water pump shall deliver at least 2400 gpm at a TDH of 610 ft. or more.	after major pump maintenance and every 3 months
2.	From and after the date that one of the RHR Service Water subsystem pumps is made or found to be inoperable for any reason, reactor operation must be limited to thirty days unless operability of that pump is restored within this period. During such thirty days all other active components of the RHR Service Water subsystem are operable.	2. When it is determined that one RHR Service Water pump is inoperable, the remaining components of that subsystem and the other subsystems shall be demonstrated to be operable immediately and daily thereafter.
3.	From and after the date that one RHR Service Water Subsystem is made or found to be inoperable for any reason, reactor operation is limited to seven days unless operability of that subsystem is restored within this period. During such seven days all active components of the other RHR Service Water subsystem and its associated diesel-generators required for operation of such components (if no external source of power were available), shall be operable.	3. When on RHR Service Water subsystem becomes inoperable, the operable subsystem and the diesel-generators required for operation of such components shall be demonstrated to be operable immediately and daily thereafter.

LIMITING CONDITIONS FOR OPERATION SURVEILLANCE REQUIREMENT

D. HPCI Subsystem

1. The HPCI Subsystem shall be operable whenever there is irradiated fuel in the reactor vessel, reactor pressure is greater than 150 psig, and prior to reactor startup from a Cold Condition, except as specified in 3.5.D.2 and 3.5.D.3 below.

D. HPCI Subsystem

1. HPCI Subsystem testing shall be performed as follows:

	<u>Item</u>	<u>Frequency</u>
a.	Simulated Automatic Actuation Test	Once/operating cycle
b.	Pump Operability	Once/month
c.	Motor Operated valve Operability	Once/month
d.	Flow Rate at 1020 psig Reactor Vessel Pressure	Once/3 months
e.	Flow Rate test (Recirculate to condensate storage tank) at 150 psig Reactor Vessel Pressure	Once/operating cycle

The HPCI pump shall deliver at least 3000 gpm for a system head corresponding to a reactor pressure of 1020 to 150 psig.

SAFETY EVALUATION BY THE DIRECTORATE OF LICENSING

SUPPORTING AMENDMENT NO. 5 TO LICENSE NO. DPR-49

(CHANGE NO. 6 TO TECHNICAL SPECIFICATIONS)

IOWA ELECTRIC LIGHT AND POWER COMPANY

DUANE ARNOLD ENERGY CENTER

DOCKET NO. 50-331

Introduction

By letter dated September 17, 1974, Iowa Electric Light and Power Company (the licensee) requested a change to the Technical Specifications (Appendix A to Operating License DPR-49) for the Duane Arnold Energy Center (DAEC). The proposed change involves a change in the pump developed head requirements of the Residual Heat Removal (RHR) Service Water Pumps. Specifically the licensee proposes that the required minimum head to deliver 2400 gpm be reduced from 674 feet to 610 feet for each pump.

Discussion

The Technical Specifications (Specification 4.5.C.1.b) for the DAEC require that each RHR Service Water Pump deliver at least 2400 gpm at a total developed head (TDH) of 674 feet. This requirement is based on the purchase specification, which was established in a conservative manner to assure a wide margin above the actual requirement. The licensee's analysis shows that the actual head requirement to assure adequate positive pressure of the service water over the reactor water side (the safety related requirement which is the most limiting condition) in the heat exchanger is 565 feet or about 16 percent less than the current Technical Specification requirement.

The licensee has provided pressure-flow data for the four RHR Service Water pumps which show that the current performance of the pumps is within about three percent of the performance measured during the preoperational tests. Both increases and decreases in performance within this three percent range were measured which indicate uncertainties in measurements rather than any significant performance degradation.

The current Technical Specification head vs flow requirement is within about one percent of the values measured during the preoperational tests. One pump was recently measured to deliver 2400 gpm at a head lower than currently required (674 feet) by about 2.5 percent but well above the safety related limit of 565 feet.

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Evaluation

In reviewing the licensee's proposed change we conclude that it is not the Regulatory staff's intent that the required pump head be maintained precisely on the measured pump performance curve for the required flow. However, we do believe that a significant margin be maintained over the safety related limit to provide for uncertainties in measurements and to provide for potential pump degradation which could occur between surveillance checks and from continued pump operation.

We find that the licensee's proposed reduction in required pressure head to 610 feet is desirable for operating flexibility and that the margin above the safety related limit (about eight per cent) is consistent with staff requirements for uncertainties in pump performance measurements and for potential pump degradation.

Conclusion

We have concluded, based on the reasons discussed above, that the authorization of this change does not involve a significant hazards consideration. We also conclude that 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 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.

Original Signed

Gerald F. Owsley
Operating Reactors Branch #3
Directorate of Licensing

Original Signed

George Lear, Chief
Operating Reactors Branch #3
Directorate of Licensing

Dated: SEP 20 1974

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UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NO. 50-331

IOWA ELECTRIC LIGHT & POWER COMPANY,
CENTRAL IOWA POWER COOPERATIVE

and
CORN BELT POWER COOPERATIVE

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

Notice is hereby given that the U. S. Atomic Energy Commission (the Commission) has issued Amendment No. 5 to Facility Operating License No. DPR-49 issued to Iowa Electric Light & Power Company, Central Iowa Power Cooperative and Corn Belt Power Cooperative which revised Technical Specifications for operation of the Duane Arnold Energy Center, located in Linn County, near Palo, Iowa. The amendment is effective as of its date of issuance.

The amendment permits a change in the total developed head requirements of the Residual Heat Removal Service Water Pumps.

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.

For further details with respect to this action, see (1) the application for amendment dated September 17, 1974, (2) Amendment No. 5 to License No. DPR-49, with any attachments, and (3) the Commission's

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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 Reference Service, Cedar Rapids Public Library, 426 Third Avenue, S. E., Cedar Rapids, Iowa.

A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Atomic Energy Commission, Washington, D. C. 20545, Attention: Deputy Director for Reactor Projects, Directorate of Licensing - Regulation.

Dated at Bethesda, Maryland, this 20th day of September

FOR THE ATOMIC ENERGY COMMISSION

Original Signed

George Lear, Chief
Operating Reactors Branch #3
Directorate of Licensing

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