July 9, 1986

Docket No. 50-331

Mr. Lee Liu
Chairman of the Board and
Chief Executive Officer
Iowa Electric Light and Power Company
Post Office Box 351
Cedar Rapids, Iowa 52406

Dear Mr. Liu:

The Commission has issued the enclosed Amendment No. 133 to Facility Operating License No. DPR-49 for the Duane Arnold Energy Center (DAEC). This amendment consists of changes to the Technical Specifications in response to your application dated January 9, 1986.

The amendment revises the DAEC Technical Specifications to (a) conform to the Commission's rule 10 CFR 50.49 related to environmental qualification of safety related electrical equipment, (b) achieve consistency throughout the Technical Specifications, (c) correct errors caused by previous amendments, and (d) correct typographical errors.

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's Bi-Weekly Federal Register Notice.

Sincerely,

Original signed by/

Mohan C. Thadani, Project Manager
BWR Project Directorate #2
Division of BWR Licensing

Enclosures:
1. Amendment No. 133 to
License No. DPR-49
2. Safety Evaluation

cc w/enclosures:
See next page

DISTRIBUTION

Docket File	SNorris	BGrimes	OPA
NRC PDR	MThadani	TBarnhart (4)	RDiggs
Local PDR	OELD	WJones	Gray File
ORB#2 Reading	LJHarmon	Extra - 5	EButcher
HThompson	ELJordan	ACRS (10)	JPartlow
RBernero	DMuller		

DBL:PD#2	DBL:PD#2*	OELD*	DBL:PD#2
SNorris:	MThadani	SHLewis	DMuller
7/7/86	6/18/86	6/24/86	7/9/86

*See previous white for concurrences

cc:
Jack Newman, Esquire
Kathleen H. Shea, Esquire
Newman and Holtzinger
1615 L Street, 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 and Power Company
ATTN: D. L. Mineck
Post Office Box 351
Cedar Rapids, Iowa 52406

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

Regional Administrator, Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Mr. Thomas Houvenagle
Regulatory Engineer
Iowa Commerce Commission
Lucas State Office Building
Des Moines, Iowa 50319

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

DUANE ARNOLD ENERGY CENTER

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 133
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, et al, dated January 9, 1986, 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. 133 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Daniel R. Muller, Director
BWR Project Directorate #2
Division of BWR Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: July 9, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 133

FACILITY OPERATING LICENSE NO. DPR-49

DOCKET NO. 50-331

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised areas are indicated by marginal lines.

Pages

iv
1.1-4
3.2-8
3.5-17
3.7-13
3.8-10
6.10-3
6.11-15 (deleted)
6.13-1 (deleted)

SAFETY LIMIT	LIMITING SAFETY SYSTEM SETTING	
	E. Scram - main steam line isolation valve	≤ 10 percent valve closure
	F. Main steam isolation valve closure nuclear system low pressure	≥ 850 psig
	G. Core spray & LPCI actuation - reactor low level	≥ 363 inches above vessel zero (+18.5 inches water indicated level)
	H. HPCI & RCIC actuation - reactor low water level	≥ 464 inches above vessel zero (+119.5 inches indicated level)
	I. Main steam isolation valve closure- reactor low water level	≥ 363 inches above vessel zero (+18.5 inches indicated level.)
	J. Main steam isolation valve closure- loss of main condenser vacuum	≤ 10 inches Hg vacuum

TABLE 3.2-B

INSTRUMENTATION THAT INITIATES OR CONTROLS THE CORE AND CONTAINMENT COOLING SYSTEMS

Minimum No. of Operable Instrument Channels Per Trip System (1)	Trip Function	Trip Level Setting	Number of Instrument Channels Provided by Design	Remarks
2	Reactor Low-Low Water Level	$\geq$ + 119.5 in. indicated level (4)	4 HPCI & RCIC Instrument Channels 4 LPCI loop select Instrument Channels	Initiates HPCI & RCIC Initiates LPCI loop select logic
2	Reactor Low-Low-Low Water Level	$\geq$ + 18.5 in. indicated level (4)	4 Core Spray & RHR Instrument Channels 4 ADS Instrument Channels	1. In conjunction with Low Reactor Pressure initiates operation of Core Spray and LPCI valves. Starts pumps if not already started from 2 psig drywell signal. 2. In conjunction with confirmatory low level, 120 second time delay and LPCI or Core Spray pump interlock initiates Auto Blowdown (ADS) 3. Initiates starting of Diesel Generator 4. Closes group 7 isolation valves
2	Reactor High Water Level	$\leq$ + 211 in. indicated level (4)	2 Instrument Channels	Trips HPCI and RCIC turbines

1 LPCI pump must be available to fulfill the containment spray function. The 7 day repair period is set on this basis.

B&C Containment Spray and RHR Service Water

The containment spray subsystem for DAEC consists of 2 loops each with 2 LPCI pumps and 2 RHR service water pumps per loop. The design of these systems is predicted upon use of 1 LPCI, and 2 RHR service water pumps for heat removal after a design basis event. Thus, there are ample spares for margin above the design conditions. Loss of margin should be avoided and the equipment maintained in a state of operability so a 30-day out-of-service time is chosen for this equipment. If one loop is out-of-service, or one pump in each loop is out-of-service, reactor operation is permitted for seven days with daily testing of the operable loop(s) after testing the appropriate diesel generator(s).

With components or subsystems out-of-service, overall core and containment cooling reliability is maintained by demonstrating the operability of the remaining cooling equipment. The degree of operability to be demonstrated depends on the nature of the reason for the out-of-service equipment. For routine out-of-service periods caused by preventative

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
6. Containment Atmosphere Dilution	6. Containment Atmosphere Dilution
a. Whenever the reactor is in power operation, the Post-LOCA Containment Atmosphere Dilution System must be operable and capable of supplying nitrogen to the containment for atmosphere dilution if required by post-LOCA conditions. If this specification cannot be met, the system must be restored to an operable condition within 7 days or the reactor must be taken out of power operation.	a. The post-LOCA containment atmosphere dilution system shall be functionally tested once per operating cycle.
b. Whenever the reactor is in power operation, the post-LOCA Containment Atmosphere Dilution System shall contain a minimum of 50,000 scf of N_2 as determined by pressure and temperature measurements. If this specification cannot be met, the minimum volume will be restored within 7 days or the reactor must be taken out of power operation, except that for the period from February 25, 1975 to February 26, 1975, the minimum volume will be restored within 9 days or the reactor must be taken out of power operation.	b. The volume in the N_2 storage bank shall be recorded weekly.
c. Whenever the reactor is in power operation, there shall be at least one CAD system H_2 and O_2 analyzer serving the drywell and the suppression chamber. If this specification cannot be met, the reactor must be taken out of power operation.	c. The CAD system H_2 and O_2 analyzers shall be tested for operability using standard bottled H_2 and O_2 once per month and shall be calibrated once per 6 months. The atmosphere analyzing system shall be

The 250 volt d-c system provides power for the HPCI system. If the battery is taken out of service, the HPCI system would be inoperable and the requirements of Specification 3.5.D for this condition must be satisfied.

The 24 volt d-c system provides power for source range monitoring, intermediate range monitoring, and liquid process radiation monitoring. The two neutron monitoring functions are required for safety, however, the design is fail-safe in that loss of 24 volt d-c power would cause the associated trip to function (UFSAR Section 8.3.2).

The battery room is ventilated to prevent accumulation of hydrogen gas exceeding 4 percent concentration. On loss of battery room ventilation, the use of portable ventilation equipment and daily sampling provides assurance that potentially hazardous quantities of hydrogen gas will not accumulate.

7. Records of training and qualification for current members of the plant staff.

8. Records of in-service inspections performed pursuant to these Technical Specifications.

9. Records of Quality Assurance activities required by the QA Manual with the exception of the records included in Section 6.10.1.

10. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.

11. Records of meetings of the Operations Committee and the Safety Committee.

12. Records of the service lives of all safety-related hydraulic and mechanical snubbers including the date at which the service life commences and associated installation and maintenance records.

13. Records of results of analyses required by the radiological environmental monitoring program.

THIS PAGE DELETED

THIS PAGE DELETED

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 133 TO LICENSE NO. DPR-49

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

DUANE ARNOLD ENERGY CENTER

DOCKET NO. 50-331

1.0 INTRODUCTION

By a letter dated January 9, 1986, the Iowa Electric Light and Power Company (the licensee) requested changes to the Technical Specifications for the Duane Arnold Energy Center (DAEC). The licensee proposed to revise the Technical Specifications to (a) conform to the Commission's rule 10 CFR 50.49 related to environmental qualification of safety related electrical equipment, (b) achieve consistency throughout the Technical Specifications, (c) correct some errors caused by previous amendments due to incorporation of Technical Specification pages which were not up to date, and (d) correct some typographical errors.

2.0 EVALUATION

The licensee has provided the following justification for the changes to various sections of the DAEC Technical Specifications:

1) page iv of the Table of Contents, item 6.13 is changed to read "Deleted" because Section 6.13 on environmental qualification is being deleted by this proposed Technical Specification change.

2) On page 1.1-4, these headings are changed to read correctly "Safety Limit" and "Limit Safety System Setting". This language was inadvertently changed in a previous amendment.

3) In Table 3.2-B on page 3.2-8, Remark 2, the wording is changed to reflect the wording of Amendment 110. Amendment 123 inadvertently deleted the statements approved in Amendment No. 110.

4) On page 3.5-17, spelling error is corrected in first and second sentences of last paragraph (operabililty - operability).

5) On page 3.7-13, the words "must be taken out of power operation" have been added to the end of paragraph 6.c. These words were inadvertently removed by Amendment 114.

6) On page 3.8-10, the word "for" is added to clarify the meaning of the second sentence of the first paragraph.

7) On page 6.10-3, Section 6.10.2.9 is changed to remove the ambiguity between the lifetime record retention requirements of Section 6.10.2.9 and the five-year record retention requirements of Section 6.10.1.

   On page 6.10-3, Section 6.10.2.12, regarding record retention for environmental qualification, is deleted because it has been superseded by 10 CFR 50.49, and subsequent sections are renumbered.

8) Page 6.11-15 which contains the notes to Table 6.11-2 is deleted, because the Table 6.11-2 was deleted by Amendment 105.

9) Page 6.13-1, Section 6.13 on environmental qualification of safety-related electrical equipment, is deleted because it has been superseded by the Commission rule 10 CFR 50.49.

Our review of the licensee's request shows that the changes (1), (6) and (7) are being made for clarification only and are acceptable. The changes (2), (3), (5) and (8) are being made because previous Technical Specification Amendments inadvertently incorporated Technical Specification pages which had since been amended by other amendments. The changes (2), (3), (5) and (8) are, therefore, acceptable. The change (4) is made to correct a spelling error and is acceptable. The last change (9) deletes equipment qualification requirements for safety-related electrical equipment. These requirements have been superseded by 10 CFR 50.49. Because the licensee now complies with 50.49, a separate Technical Specification in this area is no longer necessary. Therefore, change number (9) is acceptable.

3.0 ENVIRONMENTAL CONSIDERATIONS

This amendment changes a requirement with respect to installation or use of a facility component located within 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 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.

4.0 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 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: M. Thadani

Dated: July 9, 1986