July 6, 1990

Docket No. 50-331

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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:

SUBJECT: AMENDMENT NO. 166 TO FACILITY OPERATING LICENSE NO. DPR-49 (TAC NO. 75288)

The Commission has issued the enclosed Amendment No. 166 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 November 3, 1989, as supplemented by letter dated February 26, 1990.

The amendment revises Section 6.0, "Administrative Controls," by deleting the organization chart of Figure 6.2-1, in accordance with NRC Generic Letter 88-06. Requirements for the onsite and offsite organizations are incorporated into revised Section 6.2. Other administrative changes, including references to the updated standard for personnel qualification and training (ANSI/ANS-3.1-1978) were also incorporated.

In your February 26, 1990 letter, you requested that the implementation date for incorporating the proposed changes into DAEC procedures be extended to 2 years after date of issuance of the amendment. This would allow you to make these changes during the routine procedure revision process, rather than diverting resources for a large, dedicated revision effort with little benefit to plant safety. As these changes are administrative in nature and potentially affect a large number of procedures, we find the extended period for implementation acceptable and this is so noted in the amendment.

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

Sincerely,

/s/

James R. Hall, Project Manager
Project Directorate III-3
Division of Reactor Projects - III,
IV, V & Special Projects
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 166 to License No. DPR-49
2. Safety Evaluation

cc w/enclosures:
See next page

OFFICIAL RECORD COPY
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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. 166
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 November 3, 1989, as supplemented February 26, 1990 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.

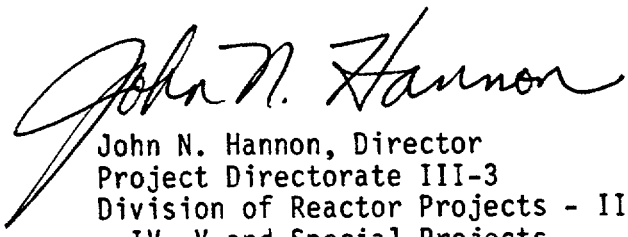
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-49 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 166, 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 and shall be implemented within 2 years of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



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: July 6, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 166

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
viii
6.1-1
6.2-1
6.2-2
6.2-4
6.3-1
6.4-1
6.5-1
6.9-1

PAGE NO.

5.0	Design Features	5.1-1
	5.1 Site	5.1-1
	5.2 Reactor	5.2-1
	5.3 Reactor Vessel	5.3-1
	5.4 Containment	5.4-1
	5.5 Spent and New Fuel Storage	5.5-1
6.0	Administrative Controls	6.1-1
	6.1 Management - Authority and Responsibility	6.1-1
	6.2 Organization	6.2-1
	6.3 Plant Staff Qualifications	6.3-1
	6.4 Retraining and Replacement Training	6.4-1
	6.5 Review and Audit	6.5-1
	6.6 Reportable Event	6.6-1
	6.7 Action to be Taken if a Safety Limit is Exceeded	6.7-1
	6.8 Plant Operating Procedures	6.8-1
	6.9 Radiological Procedures	6.9-1
	6.10 Records Retention	6.10-1
	6.11 Plant Reporting Requirements	6.11-1
	6.12 Deleted	
	6.13 Deleted	

FIGURE NUMBER TITLE

3.12-10 Flow-Dependent Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) Multiplier ($MAPFAC_F$)

3.12-11 Power-Dependent Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) Multiplier ($MAPFAC_P$)

3.12-12 Flow-Dependent Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) Multiplier ($MAPFAC_F$) for SLO

6.2-1 Deleted

6.0 ADMINISTRATIVE CONTROLS

6.1 MANAGEMENT - AUTHORITY AND RESPONSIBILITY

6.1.1 The Plant Superintendent-Nuclear has primary responsibility for the safe operation of the DAEC, and reports to the Manager-Nuclear Division.

6.1.2 The overall responsibility for the fire protection program for DAEC is assigned to the Manager-Nuclear Division. The DAEC Plant Superintendent-Nuclear is responsible for directing the operating plant fire protection program.

6.1.3 The Manager, Corporate Quality Assurance is responsible for implementation of the Quality Assurance Program at the DAEC.

6.2 ORGANIZATION

6.2.1 ONSITE AND OFFSITE ORGANIZATIONS

Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include positions for activities affecting the safety of the nuclear power plant.

a. Lines of authority, responsibility, and communication shall be established and defined from the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated, as appropriate in the form of organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements shall be documented in the Duane Arnold Energy Center Updated Final Safety Analysis Report and updated in accordance with 10 CFR 50.71(e).

b. The Plant Superintendent-Nuclear shall be responsible for overall unit safe operation and shall have control over those onsite activities necessary for safe operation and maintenance of the plant.

c. The Manager-Nuclear Division shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure nuclear safety.

d. The individuals who train the operating staff and those who carry out health physics and quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their independence from operating pressures.

6.2.2 PLANT STAFF ORGANIZATION

The following manning requirements shall be met:

1. All CORE ALTERATIONS shall be directly supervised by either a Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation.

2. At all times when there is fuel in the reactor:

   a. A senior reactor operator shall be on the plant site.

   b. A reactor operator shall be in the control room.

   c. Two reactor operators shall be in the control room during startup, scheduled shutdown, and during recovery from trips caused by transients or emergencies.

   d. Minimum operating shift crew compositions shall conform to those shown in Table 6.2-1.

   e. At least one member of each operating shift crew shall be qualified to implement radiation protection procedures.

   f. A fire brigade of five members shall be maintained on site at all times. This excludes two members of the shift crew.

Figure 6.2-1 DELETED

6.3 PLANT STAFF QUALIFICATIONS

6.3.1 The qualifications of individual members on the plant staff will meet or exceed qualifications referenced for comparable positions in ANSI/ANS 3.1-1978.

6.3.2 The Radiation Protection Supervisor shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975.

6.3.3 The Shift Technical Advisor shall have a Bachelor's Degree or equivalent in a scientific or engineering discipline with specific training in plant design, and response and analysis of the plant for transients and accidents (effective 1/1/81).

6.3.4 Either the Plant Superintendent-Nuclear or one of his designated principal alternates shall have the experience and training normally required for a Senior Reactor Operator's license examination. (ANSI/ANS 3.1-1978)

6.3.5 The Operations Supervisor shall hold a Senior Reactors Operator's license. (ANSI/ANS 3.1-1978)

6.4 RETRAINING AND REPLACEMENT TRAINING

6.4.1 A training program shall be established to maintain the overall proficiency of the operating organization. This program shall consist of both retraining and replacement training elements and shall meet or exceed the minimum provisions outlined in ANSI/ANS 3.1-1978.

6.4.2 A training program for the fire brigade shall be maintained under the direction of the Manager, Training and shall meet or exceed the requirements of Section 27 of the NFPA Code, except for fire brigade training sessions which shall be held at least quarterly.

6.5 REVIEW AND AUDIT

6.5.1 Operations Committee

6.5.1.1 Function

The Operations Committee shall function to advise the Plant Superintendent - Nuclear on all matters related to nuclear safety.

6.5.1.2 Composition

The Operations Committee shall be composed of selected Assistant Plant Superintendents, Superintendents, Supervisors and personnel from the following departments: Operations, Maintenance, Reactor Performance, Radiation Protection, Quality Control, and Technical Support. |

The Assistant Plant Superintendent-Operations and Maintenance shall act as the Chairman. One or more of the members shall be designated as Vice Chairman. |

6.5.1.3 Alternates

All alternate members shall be appointed in writing by the Plant Superintendent-Nuclear to serve on a permanent basis; however, no more than three alternates shall participate as voting members in Operations Committee activities at any one time.

6.9 RADIOLOGICAL PROCEDURES

6.9.1 Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

6.9.2 HIGH RADIATION AREA

In lieu of the "control device" or "alarm signal" required by paragraph 20.203(c)(2) of 10 CFR 20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr but less than 1000 mrem/hr shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit.* Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

a. A radiation monitoring device which continuously indicates the radiation dose rate in the area.

b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made knowledgeable of them.

c. A health physics qualified individual (i.e., qualified in radiation protection procedures) with a radiation dose rate monitoring device who is responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the facility Health Physics Supervisor in the Radiation Work Permit.

6.9.3 In addition to the requirements of 6.9.2, areas accessible to personnel with radiation levels such that a major portion of the body could receive in one hour dose greater than 1000 mrem shall be provided with locked doors to prevent unauthorized entry, and the keys shall be maintained under the administrative control of the Operations Shift Supervisor on duty and/or health physics supervision. Doors shall remained locked except during

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 166TO FACILITY OPERATING 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 letters dated November 3, 1989 and February 26, 1990, Iowa Electric Light and Power Company (the licensee) proposed changes to the Duane Arnold Energy Center (DAEC) Technical Specifications (TS), Section 6.0, "Administrative Controls." The proposed changes would remove Figure 6.2.1, "DAEC Nuclear Plant Staffing," and replace it with revised narrative descriptions of the onsite and offsite organizations' functional requirements and plant staff qualifications in Sections 6.2 and 6.3. Guidance for these proposed changes to the TS was provided in NRC Generic Letter 88-06, dated March 22, 1988. Other minor administrative changes were also proposed.

2.0 BACKGROUND

Consistent with the guidance provided in the Standard Technical Specifications, Specifications 6.2.1 and 6.2.2 of the administrative control requirements have referenced offsite and unit (onsite) organization charts that are provided as figures to these sections. On a plant-specific basis, these organization charts have been provided by applicants and included in the TS issued with the operating license. Subsequent restructuring of either the offsite or unit organizations, following the issuance of an operating license, has required licensees to submit a license amendment for NRC approval to reflect the desired changes in these organizations. As a consequence, organizational changes have necessitated the need to request an amendment to the operating license.

Because of these limitations on organizational structure, the nuclear industry has highlighted this as an area for improvement in the TS. The Shearon Harris licensee proposed changes to remove organization charts from its TS under the lead-plant concept that included the endorsement of the proposed changes by the Westinghouse Owners Group. In its review of the Shearon Harris proposal, the staff concluded that most of the essential elements of offsite and onsite organization charts are captured by other

regulatory requirements, notably, Appendix B to 10 CFR Part 50. However, there were aspects of the organizational structure that are important to ensure that the administrative control requirements of 10 CFR 50.36 would be met and that would not be retained with the removal of the organization charts. The applicable regulatory requirements are those administrative controls that are necessary to ensure safe operation of the facility. Therefore, those aspects of organization charts for Shearon Harris that were essential for conformance with regulatory requirements were added (1) to Specification 6.2.1 to define functional requirements for the offsite and onsite organizations, and (2) to Specification 6.2.2 to define qualification requirements of the unit staff.

By letter dated January 27, 1988, the staff issued Amendment No. 3 to Facility Operating License NFP-63 for the Shearon Harris Nuclear Power Plant that incorporated these changes to their TS. Subsequently the staff developed guidance on an acceptable format for license amendment requests to remove the organization charts from TS. Generic Letter 88-06 provided this guidance to all power reactors.

3.0 EVALUATION

The licensee's proposed changes to the DAEC TSs are in accordance with the guidance provided in NRC Generic Letter (GL) 88-06, as addressed below.

Specification 6.2.1 has been revised to delete reference to Figure 6.2-1, "DAEC Nuclear Plant Staffing," which has been removed from the TS. Consistent with requirements to document the onsite and offsite organizational relationships, the NRC staff has confirmed that the appropriate organizational charts having an equivalent level of detail are contained in Chapters 13.1 and 17.2 of the DAEC Updated Final Safety Analysis Report (UFSAR).

Functional requirements for the onsite and offsite organizations are defined and included in revised Specification 6.2.1. The wording of this revised specification is consistent with the guidance of GL 88-06. The revised specification notes that implementation of these requirements is documented in the DAEC UFSAR, which will be updated annually in accordance with 10 CFR 50.71(e).

Section 6.3, "Plant Staff Qualifications," has been revised to update the referenced standard for personnel qualifications to ANSI/ANS-3.1-1978. Specifications 6.3.4 and 6.3.5 have been added to require that: (1) the Plant Superintendent-Nuclear or one of his principal alternates shall have the experience and training normally required for a Senior Reactor Operator's license examination (ANSI/ANS-3.1-1978) and, (2) the Operations Supervisor shall hold a Senior Reactor Operator's license (ANSI/ANS-3.1-1978). Therefore, these requirements identified on the deleted organizational chart will be retained. Specification 6.2.2.2.d refers to Table 6.2-1, "Minimum Shift Crew Personnel and License Requirements," which will retain in the TS the license requirements for all

shift crew members that were also specified in the deleted organizational chart. The position of Assistant Operations Supervisor is being converted to a plant staff position. As this new position will not have line supervisory responsibility for the operations staff, it will not require an active senior reactor operator's license. The new position will be covered by the applicable requirements of ANSI/ANS-3.1-1978. Therefore, the license requirements for individual plant staff previously specified in Figure 6.2-1 will be retained through the addition of new Specifications 6.3.4 and 6.3.5, are currently contained in Table 6.2-1, or will be eliminated due to the conversion of the Assistant Operations Supervisor's position to a new plant staff position.

On the basis of its review of the above items, the staff concludes that the licensee's proposed changes are consistent with the NRC guidance of GL 88-06 for removing organizational charts from the TSs. Accordingly, the staff finds the proposed changes to be acceptable.

Additional administrative changes were also proposed and are addressed below.

Specification 6.1.3 has been revised to state that the Manager, Corporate Quality Assurance, is responsible for implementation of the Quality Assurance Program at the DAEC, as opposed to the onsite Quality Control Supervisor, who reports to the Manager, Corporate Quality Assurance. This change is merely a clarification of the actual management oversight of this function and does not change the responsibilities of either individual. This change is therefore acceptable to the staff. For clarification, the NRC staff has determined that the requirements for the position of Manager, Corporate Quality Assurance, are specified in ANSI/ANS-3.1-1978, section 3.2.1 or equivalent, and the requirements for the position of Quality Control Supervisor are specified in section 4.4.5 of that standard.

Specification 6.4.2 has been revised to indicate that a training program for the fire brigade shall be maintained under the direction of the Manager, Training, instead of the Plant Superintendent-Nuclear. The Plant Superintendent-Nuclear retains the responsibility for directing the operating plant fire protection program (TS 6.1.2). This change more appropriately assigns the training responsibility to the Manager, Training, and provides sufficient organizational separation to be independent of operational pressures, as discussed in GL 88-06. Therefore, the staff finds this change acceptable.

Specification 6.4.1 has been revised to reference the training requirements of updated standard ANSI/ANS-3.1-1978, for consistency with other changes and the DAEC Quality Assurance Manual. Specification 6.5.1.2 has been revised to correct the titles of the Plant Performance Department to Reactor Performance Department, and Assistant Plant Superintendent-Operations to Assistant Plant Superintendent-Operations and Maintenance. Specification 6.9.3 has been revised to correct the title of Shift Supervisor Engineer to the current Operations Shift Supervisor. These changes are primarily

editorial and will assure consistency with current plant documentation and terminology. Therefore, the staff finds these changes acceptable.

4.0 ENVIRONMENTAL CONSIDERATIONS

This amendment relates to changes in recordkeeping, reporting, or administrative procedures or requirements. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the 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 the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: James R. Hall

Dated: July 6, 1990