

March 2, 1992

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

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Dear Mr. Liu:

SUBJECT: AMENDMENT NO. 179 TO FACILITY OPERATING LICENSE NO. DPR-49
(TAC NO. M81404)

The Commission has issued the enclosed Amendment No. 179 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 August 30, 1991.

The amendment revises the Technical Specifications to require a Service Discharge Test each operating cycle and a Performance Discharge Test in lieu of the Service Discharge Test once every 5 years.

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,

Original signed by/
Clyde Y. Shiraki, Sr. Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 179 to License No. DPR-49
2. Safety Evaluation

cc w/enclosures:
See next page

LA:PDIII-3:DRPW
PKreutzer
2/18/92

PM:PDIII-3:DRPW
CShiraki/bj
2/12/92 3/2/92

OD:PDIII-3:DRPW
for JHannon
2/13/92

OGC-WF
2/18/92

DOCUMENT NAME: a:DA81404

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

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Chairman of the Board and
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Iowa Electric Light and Power Company
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Sincerely,

A handwritten signature in cursive script, appearing to read "Clyde Y. Shiraki, Sr.".

Clyde Y. Shiraki, Sr. Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 179 to License No. DPR-49
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. Lee Liu
Iowa Electric Light and Power Company

Duane Arnold Energy Center

cc:
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Kathleen H. Shea, Esquire
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Chairman, Linn County
Board of Supervisors
Cedar Rapids, Iowa 52406

Iowa Electric Light and Power Company
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U.S. Nuclear Regulatory Commission
Resident Inspector's Office
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Regional Administrator, Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Mr. Stephen N. Brown
Utilities Division
Iowa Department of Commerce
Lucas Office Building, 5th Floor
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. 179
License No. DPR-49

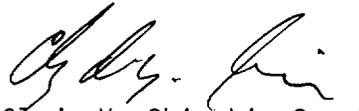
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Iowa Electric Light and Power Company, et al., dated August 30, 1991, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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.179, 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 30 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Clyde Y. Shiraki, Sr. Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of issuance: March 2, 1992

ATTACHMENT TO LICENSE AMENDMENT NO. 179

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

3.8-3

3.8-13

LIMITING CONDITION FOR OPERATION

SURVEILLANCE REQUIREMENT

B. Operation with Inoperable Components

Whenever the reactor is in Run Mode or Startup Mode with the reactor not in the Cold Condition, the requirements of 3.8.A shall be met except:

1. Diesel-Generators

From and after the date that one of the diesel-generators or its associated buses are made or found to be inoperable for any reason and the remaining diesel-generator is operable, the requirements of Specification 3.5.G.1 shall be satisfied.

2. Batteries

- a. From and after the date that ventilation is lost in the battery room, portable ventilation equipment shall be provided.

- b. Every three months the measurements shall be made of voltage of each cell to nearest 0.01 Volt, specific gravity of each cell, and temperature of every fifth cell. These measurements shall be logged.
- c. Once each operating cycle, the stated batteries shall be subjected to a Service Discharge Test (load profile). The specific gravity and voltage of each cell shall be determined after the discharge and logged.
- d. Once every five years, the stated batteries shall be subjected to a Performance Discharge Test (capacity). This test will be performed in lieu of the Service Test requirement of 4.8.A.2.c above.

B. Surveillance with Inoperable Components

1. Diesel-Generators

When it is determined that one of the diesel-generators is inoperable the requirements of Specification 4.5.G.1 shall be satisfied.

2. Batteries

- a. From and after the date that ventilation is lost in the battery room, samples of the battery room atmosphere shall be taken daily for hydrogen concentration determination.

DAEC-1

maintained. During the monthly test for quality of the diesel fuel oil, a viscosity test and water and sediment test will be performed as described in ASTM D975-77 (reference LDR-80-111). The quality of the diesel fuel oil will be acceptable if the results of the tests are within the limiting requirements for diesel fuel oils shown on Table 1 of ASTM D975-77.

Although the station batteries will deteriorate with time, utility experience indicates there is almost no possibility of precipitous failure. The type of surveillance described in this specification is that which has been demonstrated over the years to provide an indication of a cell becoming irregular or unserviceable long before it becomes a failure.

The Service Discharge Test provides adequate indication of the batteries' ability to satisfy the design requirements (battery duty cycle) of the associated dc system. This test will be performed using simulated or actual loads at the rates and for the durations specified in the design load profile.

The Performance Discharge Test provides adequate indication and assurance that the batteries have the specified ampere hour capacity. The rate of discharge during this test shall be in accordance with the manufacturer's discharge characteristic curves. The results of these tests will be logged and compared with the manufacturer's recommendations of acceptability.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 179 TO 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 letter dated August 30, 1991, Iowa Electric Light and Power Company (IELP), requested a revision to the Technical Specifications of the Duane Arnold Energy Center (DAEC) to change the surveillance requirements of the station batteries. The proposed amendment would revise the Technical Specifications to require a Service Discharge Test each operating cycle and a Performance Discharge Test in lieu of the Service Discharge Test once every 5 years.

2.0 EVALUATION

Section 4.8.A.2.c of the Technical Specifications (TS) requires the safety-related batteries to be tested with a rated load discharge test every operating cycle. IELP correctly interpreted this requirement to mean a Performance Discharge Test as defined in IEEE Std 450-1975, which consists of applying the battery's rated load for a specified discharge period to detect any change in the capacity of the battery. IEEE Std 450-1975 recommends that this Performance Discharge Test be performed once every 5 years.

IEEE Std 450-1975 also recommends performing a Service Discharge Test, which is a test of the battery's ability to satisfy the design requirements of the DC system, every 18 months.

The proposed change to Section 4.8.A.2.c. requires the Service Discharge Test once per operating cycle. The change also adds paragraph 4.8.A.2.d. which requires the Performance Discharge Test once every 5 years and requires it to be performed in lieu of the Service Discharge Test of Section 4.8.A.2.c.

The proposed change does not address the annual Performance Discharge Tests of battery capacity that IEEE Std 450-1975 says should be given to any battery that shows signs of degradation or has reached 85 percent of the service life expected

for the application. However, in a telephone conference call on December 23, 1991, the licensee indicated that this requirement was part of their procedure, and would be done.

The staff has reviewed the proposed changes to the Technical Specifications. The Service Discharge Test provides adequate indication of the ability of the battery to meet the design requirements of the associated DC system and the Performance Discharge Test provides assurance and indication of the battery ampere hour capacity. These two proposed tests represent improvement in the ability to detect a degraded cell and the reduction in the frequency of the Performance Discharge Test from once each operating cycle to once every 5 years will effectively increase the battery life. The staff therefore finds the proposed changes to the Technical Specifications to be acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Iowa State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 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 or changes a surveillance requirement. 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 the amendment involves no significant hazards consideration and there has been no public comment on such finding (56 FR 49922). Accordingly, the 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 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) 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: S. N. Saba

Date: March 2, 1992