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Docket No. 50-331

February 9, 1983

Mr. Duane Arnold
 Chairman of the Board and Chief
 Executive Officer
 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. 81 to Facility Operating License No. DPR-49 for the Duane Arnold Energy Center (DAEC). The amendment consists of changes to the Technical Specifications in response to your application dated December 6, 1982, as clarified through subsequent discussions between your personnel and the NRC staff.

The amendment revises the Technical Specifications to permit defueling and refueling while the torus is drained or has a reduced water volume.

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

Sincerely,

Frank Apicella, Project Manager
 Operating Reactors Branch #2
 Division of Licensing

Enclosures:

1. Amendment No. 81 to DPR-49
2. Safety Evaluation
3. Notice

cc w/enclosures:
 See next page

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Diff. Almotad concurs in para 3 of this amendment. I have no legal objection to the federal register notice of the remaining portions of the amendment WDP dated 2-3-83.

OFFICE	ORB#2:DL SNorris	ORB#2:DL FApicella/cb	C-ORB#2:DL DVassallo	AD-OR:DL GLathas	OELD W.D. Patton		
SURNAME							
DATE	1/28/83	1/28/83	1/28/83	2/8/83	2/3/83		

Mr. Duane Arnold
Iowa Electric Light & Power Company

cc:

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

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Des Moines, Iowa 50319

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

Iowa Electric Light & Power Company
ATTN: D. L. Mineck
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U.S. Environmental Protection Agency
Region VII Office
Regional Radiation Representative
324 East 11th Street
Kansas City, Missouri 64106

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

James G. Keppler
Regional Administrator, Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
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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. 81
License No. DPR-49

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Iowa Electric Light & Power Company, et al, dated December 6, 1982 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. 81, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. Within 90 days after the effective date of this amendment, or such later time as the Commission may specify, the Licensee shall satisfy any applicable requirement of P. L. 97-425 related to pursuing an agreement with the Secretary of Energy for the disposal of high-level radioactive waste and spent nuclear fuel.
4. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 9, 1983

ATTACHMENT TO LICENSE AMENDMENT NO. 81

FACILITY OPERATING LICENSE NO. DPR-49

DOCKET NO. 50-331

Revise the Appendix A Technical Specifications by removing pages 3.5-10, and 3.7-32 and inserting revised pages 3.5-10, 3.5-10a and 3.7-32. The revised area is identified by a vertical line.

LIMITING CONDITIONS FOR OPERATION**SURVEILLANCE REQUIREMENT**

that all of the low pressure core and containment cooling subsystems and the remaining diesel generator shall be operable. If this requirement cannot be met, an orderly shutdown shall be initiated and the reactor shall be placed in the Cold Shutdown Condition within 24 hours.

addition, the operable diesel generator shall be demonstrated to be operable immediately and daily thereafter.

2. Any combination of inoperable components in the core and containment cooling systems shall not defeat the capability of the remaining operable components to fulfill the cooling functions.

3. When irradiated fuel is in the reactor vessel and the reactor is in the Cold Shutdown Condition, both core spray systems, the LPCI and containment cooling subsystems may be inoperable, provided no work is being done which has the potential for draining the reactor vessel.

4. During a refueling outage, refueling operations may continue with the suppression pool volume below the minimum values specified in Specification 3.7.A.1 provided all of the following conditions are met:

- (a) The reactor head is removed, the cavity is flooded, the spent fuel pool gates are removed and spent fuel pool water level is maintained within the limits of Specification 3.9.C.

LIMITING CONDITIONS FOR OPERATIONSURVEILLANCE REQUIREMENT

- (b) At least one core spray subsystem is operable with suction aligned to the condensate storage tank(s).
- (c) The condensate storage tanks contain at least 75,000 gallons of water which is available to the core spray subsystem.
Condensate storage tank(s) level shall be recorded at least every 12 hours.

to downcomer submergence, this specification is adequate. The maximum temperature at the end of blowdown tested during the Humbolt Bay and Bodega Bay tests was 170°F and this is conservatively taken to be the limit for complete condensation of the reactor coolant, although condensation would occur for temperatures above 170°F.

Should it be necessary to drain the suppression chamber, this should only be done when there is no requirement for core standby cooling systems operability as explained in Basis 3.5.G or the requirements of Specification 3.5.G.4 are met.

Using a 50°F rise (Table 5.2-1, FSAR) in the suppression chamber water temperature and a minimum water volume of 58,900 ft³, the 170°F temperature which is used for complete condensation would be approached only if the suppression pool temperature is 120°F prior to the DBA-LOCA. Maintaining a pool temperature of 95°F will assure that the 170°F limit is not approached.

2. Inerting

Safety Guide No. 7 assumptions for metal-water reactions result in hydrogen concentrations in excess of the Safety



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 81 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

1.0 Introduction

By letter dated December 6, 1982 Iowa Electric Light and Power Company (the licensee) forwarded a proposed Technical Specification change that would permit defueling and refueling while the torus is drained or has a reduced water volume.

The justification for the change is schedular, i.e. the duration of the Duane Arnold Energy Center (DAEC) Cycle 7 refueling outage, scheduled to commence in early February 1983, is controlled by containment modifications that require the torus to be drained. The ability to defuel or refuel while the torus is drained or with a reduced water volume will save approximately 3 weeks of the critical path refueling outage duration.

2.0 Evaluation

During defueling or refueling operations, the licensee proposed to provide at least one core spray loop with the condensate storage tank as the water source. In addition, the licensee would provide controls to ensure that the upper pool level and the condensate storage tank water volume would have adequate water available during all fuel movement operations and also, stated that the proposed change is consistent with the Standard Technical Specifications for General Electric Boiling Water Reactors NUREG-0123 Rev. 3, Sections 3.5.2 and 3.5.3.

In our review of the proposed specifications, we evaluated the systems required, water level demands for shielding and heat dissipation, and design basis accident recovery requirements during refueling operations and found the proposed Technical Specifications to be consistent with Standard Technical Specifications for General Electric Boiling Water Reactors.

The BWR Standard Technical Specifications served as the basis in assessing the acceptability of the proposed change. The model Technical Specifications, Sections 3.5.2 and 3.5.3 pertaining to refueling operations is recognized by the staff as an acceptable implementation of the limiting conditions of operation for the emergency core cooling systems. Therefore, we find the proposed Technical Specification acceptable.

3.0 Environmental Considerations

We have determined that the amendment does not authorize 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 §51.5(d)(4), that an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

4.0 Conclusion

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 an accident previously evaluated, does not create the possibility of an accident of a type different from any evaluated previously, and does not involve a significant reduction in a margin of safety, 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: February 9, 1983

Principal Contributor: F. L. Apicella

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

The U.S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 81 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 (DAEC), located in Linn County Iowa. The amendment is effective as of its date of issuance.

The amendment revises the Technical Specifications to permit defueling and refueling while the torus is drained or has a reduced water volume.

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.

For further details with respect to this action, see (1) the application for amendment dated December 6, 1982, (2) Amendment No. 81 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, N. W., Washington, D.C. and at the Cedar Rapids Public Library, 426 Third Avenue, S.E., 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 9th day of February 1983.

FOR THE NUCLEAR REGULATORY COMMISSION



Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing