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Docket No. 50-331

REGULATORY DOCKET FILE COPY

Mr. Duane Arnold, President
Iowa Electric Light & Power Company
Post Office Box 351
Cedar Rapids, Iowa 52406

Dear Mr. Arnold:

The Commission has issued the enclosed Amendment No. 61 to Facility License No. DPR-49 for the Duane Arnold Energy Center. This amendment consists of changes to the Technical Specifications and is in response to your application dated December 27, 1977 (IE-77-2317).

This amendment changes the Technical Specifications to (1) clarify the requirements for permanent retention of certain records, (2) add two snubbers to the list of snubbers for the recirculation system in the drywell, and (3) bring a note associated with the table on control rod block instrumentation into agreement with the table.

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

Sincerely,

Richard J. Clark for

Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Enclosures:
1. Amendment No. 61
2. Safety Evaluation
3. Notice

cc w/enclosures:
see next page

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Amendment + notice.

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FORM 318 (9-76) NRCM 0240

★ U.S. GOVERNMENT PRINTING OFFICE: 1976 - 263 - 769

Mr. Duane Arnold

cc:

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Harold F. Reis, Esquire
Lowenstein, Newman, Reis and Axelrad
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Cedar Rapids, Iowa 52406

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Cedar Rapids, Iowa 52406

Director, Technical Assessment Division
Office of Radiation Programs (AW-459)
US EPA
Crystal Mall #2
Arlington, Virginia 20460

U. S. Environmental Protection Agency
Region VII
ATTN: EIS COORDINATOR
1735 Baltimore Avenue
Kansas City, Missouri 64108

Cedar Rapids Public Library
426 Third Avenue, S. E.
Cedar Rapids, Iowa 52401

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. 51
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, Central Iowa Power Cooperative, and Corn Belt Power Cooperative (the licensees) dated December 27, 1977, 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. 51, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Richard J Clark for

Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 15, 1979

ATTACHMENT TO LICENSE AMENDMENT NO. 51

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 pages are identified by Amendment number and contain vertical lines indicating the area of change. Where there is an overleaf page, the overleaf page is provided for convenience; in these cases, the page that is being changed is underlined below.

Remove	Replace
3.2-17/3.2-18	3.2-17/3.2-18
3.6-44	3.6-44
6.10-3	6.10-3

NOTES FOR TABLE 3.2-C

1. For the startup and run positions of the Reactor Mode Selector Switch, there shall be two operable or tripped trip systems for each function. The SRM and IRM blocks need not be operable in "Run" mode, and the APRM [except for APRM Upscale (Not in Run Mode)] and RBM rod blocks need not be operable in "Startup" mode. If the first column cannot be met for one of the two trip systems, this condition may exist for up to seven days provided that during that time the operable system is functionally tested immediately and daily thereafter; if this condition lasts longer than seven days, the system shall be tripped. If the first column cannot be met for both trip systems, the systems shall be tripped.

2. W is the recirculation loop flow in percent of design. Trip level setting is in percent of rated power (1593 MWt). Refer to Limiting Safety System Settings for variation with peaking factors. Peaking factor is applicable only when it exceeds 2.61 (7 x 7 array) or 2.43 (8 x 8 array).

3. IRM downscale is bypassed when it is on its lowest range.

4. This function is bypassed when the count rate is >100 cps.

5. One of the four SRM inputs may be bypassed.

6. This SRM function is bypassed when the IRM range switches are on range 8 or above.

7. The trip is bypassed when the reactor power is $\leq$ 30%.

8. This function is bypassed when the mode switch is placed in Run.

DAEC-1
TABLE 4.6-4 (cont.)

Identification No.	System	Location	Vendor Dwg. No.
GBC-9-SS-43	Main Stm. Relief Valve Discharge	Drywell	6043
GBC-10-SS-24	" " "	Drywell	6024
GBC-10-SS-25	" " "	Drywell	6025
GBC-10-SS-39	" " "	Drywell	6039
GBC-10-SS-40 (2 ea.)	" " "	Drywell	6040
GBC-11-SS-26	" " "	Drywell	6026
GBC-11-SS-27	" " "	Drywell	6027
GBC-11-SS-32	" " "	Drywell	6032
GBC-11-SS-33	" " "	Drywell	6033
SSB-1-MS	Main Steam	Drywell	GE-BP 405 Rev 2
SSB-2-MS	Main Steam	Drywell	GE-BP 406 Rev 3
SSC-1-MS	Main Steam	Drywell	GE-BP 407 Rev 2
SSC-2-MS	Main Steam	Drywell	GE-BP 408 Rev 2
SSA-1-MS	Main Steam	Drywell	GE-BP 401 Rev 1
SSA-2-MS	Main Steam	Drywell	GE-BP 402 Rev 1
SSD-1-MS	Main Steam	Drywell	GE-BP 403 Rev 1
SSD-2-MS	Main Steam	Drywell	GE-BP 404 Rev 1
SSA-1	Recirc	Drywell	GE-BP 201 Rev 2
SSB-1	Recirc	Drywell	GE-BP 202 Rev 2
SSA-2	Recirc	Drywell	GE-BP 203 Rev 1
SSB-2	Recirc	Drywell	GE-BP 204 Rev 1
SSA-3	Recirc	Drywell	GE-BP 205 Rev 1
SSB-3	Recirc	Drywell	GE-BP 206 Rev 1
SSA-4	Recirc	Drywell	GE-BP 207 Rev 1
SSB-4	Recirc	Drywell	GE-BP 208 Rev 1
SSA-5	Recirc	Drywell	GE-BP 209 Rev 1
SSB-5	Recirc	Drywell	GE-BP 210 Rev 1
SSA-6	Recirc	Drywell	GE-BP 211 Rev 1
SSB-6	Recirc	Drywell	GE-BP 212 Rev 1
SSA-7	Recirc	Drywell	GE-BP 213 Rev 1
SSB-7	Recirc	Drywell	GE-BP 214 Rev 1
SSA-8	Recirc	Drywell	GE-BP 215 Rev 1
SSB-8	Recirc	Drywell	GE-BP 216 Rev 1
SSA-9	Recirc	Drywell	GE-BP 217 Rev 1
SSB-9	Recirc	Drywell	GE-BP 218 Rev 1
SSA-10 (2 ea.)	Recirc	Drywell	GE-BP 219 Rev 1
SSB-10 (2 ea.)	Recirc	Drywell	GE-BP 220 Rev 1
SSA-11	Recirc	Drywell	GE-BP 221 Rev 1
SSB-11	Recirc	Drywell	GE-BP 222 Rev 1

(2 ea.) - Indicates there are 2 snubbers with that number.

Modifications to this Table due to changes in high radiation areas should be submitted to the NRC as part of the next license amendment.

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.

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.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 51 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 27, 1977 (IE-77-2317) Iowa Electric Light and Power Company (the licensee) requested a change to the Technical Specifications (Appendix A) appended to Facility Operating License No. DPR-49 for the Duane Arnold Energy Center (DAEC). The proposed amendment would change the Technical Specifications to: (1) clarify the requirements for permanent retention of certain records, (2) add two snubbers to the list of snubbers for the recirculation system in the drywell, and (3) bring a note associated with the table on control rod block instrumentation into agreement with the table.

2.0 Discussion

2.1 Quality Assurance and Training Records

One of the proposed changes is to clarify what quality assurance and training records must be retained onsite. Section 6.10.2 of the DAEC Technical Specifications lists the "records which shall be retained for the duration of the Facility Operating License". Section 6.10.2.7 states that this shall include "records of training and qualification for members of the plant staff". The licensee proposes to change this to read: "Records of training and qualification for current members of the plant staff". Section 6.10.2.9 states that the material to be retained shall include "Records of Quality Assurance activities". The licensee proposes to change this to read: "Records of quality assurance activities required by the QA Manual".

2.2 Snubbers

Sections 3.6.H and 4.6.H of the DAEC Technical Specifications list the limiting conditions for operation (LCOs) and surveillance requirements, respectively, for shock suppressors (snubbers). Section 4.6.H.1 points out that "snubbers are categorized in two groups, 'accessible and inaccessible' based on their accessibility for inspection during reactor operation". These two groups are inspected independently according to a prescribed schedule. Section 3.6.H.5 of the Technical Specifications authorizes the licensee to add (but not remove) snubbers without prior Commission approval. Specifically, Section 3.6.H.5 states "Snubbers may be added to safety related systems without prior license amendment to Tables 4.6-3 or 4.6-4 provided that a revision to Table 4.6-3 or 4.6-4 is included with the next license amendment". In their submittal of December 27, 1977, the licensee proposed to revise Table 4.6-4, "Snubbers Inaccessible During Normal Operation" to add a second snubber at two locations (specifically, at locations SSA-10 and SSB-10) on the recirculation system in the drywell.

2.3 APRM Upscale (Not in Run Mode)

Section 3.2.C of the DAEC Technical Specifications lists the LCO requirements for Control Rod Block Actuation. The rod block logic circuits are energized whenever manual control rod movement is allowed. Each logic circuit receives input trip signals from a number of trip channels and each logic circuit can provide a separate rod block signal to inhibit rod withdrawal. In the event that an unsafe condition is being approached by the parameters being monitored, a trip of the permissive will occur and control rod movement will be prohibited or blocked. The rod block circuitry is effective in preventing rod withdrawal, if required, during both normal (notch) withdrawal and continuous withdrawal. The minimum instrument channels that must be operable in the control rod block system are listed in Table 3.2-C of the Technical Specifications. Of the 10 parameters being monitored, Table 3.2-C specifies that a minimum of 2 operable instrument channels must be available for the "APRM upscale (not in run mode)" trip system and that the trip level setting shall be "$\leq$12 indicated on scale" (i.e., equal to or less than 12% of the 1593 MWt rated power). There are 8 explanatory notes associated with the table. A sentence in note 1 states: "The SRM and IRM blocks need not be operable in 'Run' mode and the APRM and RBM rod blocks need not be operable in 'Startup' mode. While some of the

APRM instruments do not need to be operable in the startup mode (e.g., APRM Downscale), the sentence is not correct since Table 3.2-C requires the "APRM Upscale (Not in Run Mode)" instruments to be operable in the startup mode. To correct this, the licensee proposes to modify the sentence in Note 1 of Table 3.2-C to read: "The SRM and IRM blocks need not be operable in 'Run' mode and the APRM [except for APRM Upscale (Not In Run Mode)] and RBM rod blocks need not be operable in 'Startup' mode".

3.0 Evaluation

3.1 Quality Assurance and Training Records

The changes in wording in Sections 6.10.2.7 and 6.10.2.9 are to make the wording identical to that in NRC's, "Standard Technical Specifications for General Electric Boiling Water Reactors", NUREG-0123, Rev. 1 dated April 1, 1978. The Standard Technical Specifications have been developed over the years in conjunction with the standard review plans and are those we recommend for all BWRs. As noted above, the wording proposed by the licensee is identical to that in Section 6.10.2h and 6.10.2j of the Standard Technical Specification. We conclude that the changes in wording in the requirements for retention of training and qualification and quality assurance records are acceptable.

3.2 Snubbers

As discussed in 2.2 above, the licensee proposes to add "(2 ea.)" after snubbers SSA-10 and SSB-10 in Table 4.6-4 to indicate that there are now two snubbers with the same identification number installed at the subject location. Thus, the table will now list 24 rather than 22 snubbers on the two recirculation loops in the drywell and will bring Table 4.6-4 into conformance with the conditions in the facility. We conclude that the change to the table is acceptable.

3.3 APRM Upscale (Not in Run Mode)

As discussed in 2.3 above, the purpose of the proposed change is to bring note 1 in Table 3.2-C into agreement with the requirement in the Table. Two of the APRM Upscale (Not in Run Mode) instrument channels must be operable in the startup mode as specified in the table with the trip setpoint equal to or less than 12 indicated on scale (i.e., <12% rated thermal power which for DAEC is 1593 MWt). This setpoint (12%) is the same as that in Table 3.3.5-2, "Control Rod Withdrawal Block Instrumentation Setpoints" of the BWR Standard Technical

Specifications, NUREG-0123. The staff concludes that the requirement in Table 3.2-C of the DAEC Technical Specifications is needed and is correct and that note 1 to this table should be modified to bring it into agreement with the table.

4.0 Environmental Considerations

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

5.0 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 accidents previously considered and does not involve a significant decrease in a safety margin, 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: June 15, 1979

7590-01

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-331

IOWA ELECTRIC LIGHT AND POWER COMPANY, ET AL.

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 51 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, located in Linn County, Iowa. The amendment is effective as of its date of issuance.

The amendment will: (1) clarify the requirements for permanent retention of certain records, (2) add two more snubbers to the list of snubbers on the recirculation system in the drywell, and (3) bring a note associated with the table on control rod block instrumentation into agreement with the table.

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 Section 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 27, 1977, (2) Amendment No. 51 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 Operating Reactors.

Dated at Bethesda, Maryland this 15 day of June 1979.

FOR THE NUCLEAR REGULATORY COMMISSION

Richard J. Clark

Richard J. Clark, Acting Chief
Operating Reactors Branch #3
Division of Operating Reactors