

July 12, 1991

Docket No. 50-331

DISTRIBUTION:

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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Wanda Jones	JCalvo AMendiola
ACRS(10)	DHagan JLieberman

Dear Mr. Liu:

SUBJECT: AMENDMENT NO. 171 TO FACILITY OPERATING LICENSE NO. DPR-49
(TAC NO. 80459)

The Commission has issued the enclosed Amendment No. 171 to Facility Operating License No. DPR-49 for the Duane Arnold Energy Center. This amendment consists of changes to the Technical Specifications (TS) in response to your application dated December 14, 1990.

The amendment revises TS Section 4.7.D.1.c by deleting the requirement for a weekly partial closure and reopening of the main steam isolation valves, and corrects an error in the first footnote of TS Table 3.7-3.

By letter dated May 23, 1991, you requested a Temporary Waiver of Compliance from the above TS. On May 24, 1991, we granted an oral waiver, confirmed by letter dated May 24, 1991. This amendment supersedes the temporary waiver of compliance and makes the TS change permanent.

A copy of the 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:

- Amendment No. 171 to License No. DPR-49
- Safety Evaluation

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cc w/enclosures: See next page

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PKreutzer	CShiraki/bj
7/3/91	7/5/91

D:PD3-3:DRPW
JHannon
7/5/91

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7/10/91

DOCUMENT NAME: 80459 AMD

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Enclosures:

1. Amendment No. 171 to License No. DPR-49
2. Safety Evaluation

cc w/enclosures: See next page

LA:PD3-3:DRPW	PM:PD3-3:DRPW
PKreutzer	CShiraki/bj-14
7/13/91	7/15/91

D:PD3-3:DRPW
JHannon
7/15/91

OGC-WF1
EHollon
7/11/91

DOCUMENT NAME: 80459 AMD

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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Board of Supervisors
Cedar Rapids, Iowa 52406

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U.S. Nuclear Regulatory Commission
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for Environmental Health
Iowa Department of Public Health
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. 171
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 December 14, 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:

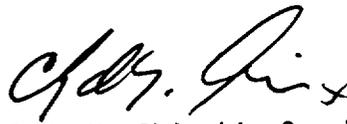
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(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 171, 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: July 12, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 171

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

~~3.7-18~~

3.7-19

3.7-26

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
2. If Specification 3.7.C.1 cannot be met:	maintain the remainder of the secondary containment at 1/4 inch of water negative pressure under calm wind conditions.
a. Suspend reactor building fuel cask and irradiated fuel movement, and	
b. Restore secondary containment integrity within one hour; or,	
c. Be in COLD SHUTDOWN within the following 24 hours.	
D. <u>Primary Containment Power Operated Isolation Valves</u>	D. <u>Primary Containment Power Operated Isolation Valves</u>
1. During reactor power operating conditions, all isolation valves listed in Table 3.7-3 and all instrument line flow check valves shall be OPERABLE except as specified in 3.7.D.2.	<p>1. The primary containment isolation valves surveillance shall be performed as follows:</p> <p>a. At least once per operating cycle the OPERABLE isolation valves that are power operated and automatically initiated shall be tested for simulated automatic initiation and closure times.</p> <p>b. At least once per quarter:</p> <p>1) All normally open power operated isolation valves (except for those exempted as noted in Table 3.7-3) shall be fully closed and reopened.</p> <p>2) With the reactor power less than 75%, trip main steam isolation valves individually and verify closure time.</p> <p>c. At least once per operating cycle the operability of the reactor coolant system instrument line flow check valves shall be verified.</p>
	*Intent Change Only (definition of operating cycle).

LIMITING CONDITION FOR OPERATION

SURVEILLANCE REQUIREMENT

2. With one or more of the primary containment isolation valves shown in Table 3.7-3 inoperable (except for those exempted as noted in Table 3.7-3), maintain at least one isolation valve OPERABLE* or ISOLATED** and within 4 hours either:
- a. Restore the inoperable valve(s) to OPERABLE status, or
 - b. Isolate each affected penetration by use of at least one automatic valve locked or electrically deactivated in the isolated position,** or
 - c. Isolate each affected penetration by use of at least one manual valve locked in the isolated position or blind flange.**
3. If Specification 3.7.D.1, and 3.7.D.2 cannot be met, an orderly shutdown shall be initiated and the reactor shall be in the Cold Shutdown condition within 24 hours.

*This valve may be locked or electrically deactivated as noted in Subsection 3.7.D.2.b.

**Isolation valves closed to satisfy these requirements may be reopened on an intermittent basis under administrative control.

TABLE 3.7-3 (Continued)
PRIMARY CONTAINMENT POWER OPERATED ISOLATION VALVES

Power Group (Note 1)	Operating Valve Identification	Number of Action on Operated Valves	Maximum Isolation		Initiating Signal
			Time (Seconds)	Normal Position	
5	RWCU Supply	2	20	0	GC
5	RWCU Return	1	10	0	GC
6	Steam to HPCI Turbine	2	13	0	GC
6***	HPCI Discharge to Feedwater	1	20	C	GC
6	Steam to RCIC Turbine	2	20	0	GC
6***	RCIC Discharge to Feedwater	1	15	C	GC
8	Condensate from HPCI	2	NA	0	GC
8**	Condensate from RCIC	2	NA	0	GC
3	*Containment Compressor Discharge	3	NA	0	GC
7	*Reactor Building Closed Cooling Water Supply/Return	2	20	0	GC
7	*Well Cooling Water Supply/Return	4	NA	0	GC
9	HPCI/RCIC Exhaust Vacuum Breaker	2	10	0	GC
3	Post-Accident Sampling Liquid Sample Return	2	NA	C	SC
3	Post-Accident Sampling Jet Pump Sample	4	NA	C	SC

*Due to plant operational limitations, these valves will be subject to the requirements of 4.7.D.1.a except for the MSIVs which will be subject to the requirements of 4.7.D.1.b.

**Low-Low Water Level Only

***These valves close only upon sensing closure of their respective turbine steam supply or turbine stop valve closure.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 171 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 December 14, 1990, Iowa Electric Light and Power Company, (IELP) the licensee, submitted a request for amendment to Facility Operating License No. DPR-49, to delete a requirement to exercise the Main Steam Line Isolation Valves (MSIVs) weekly by partial closure and reopening. Additionally, the first footnote on Table 3.7-3, "Primary Containment Power Operated Isolation Valves," would be revised to clarify the applicable testing for the MSIVs.

On May 23, 1991, IELP submitted a request for a Temporary Waiver of Compliance from the requirements for the weekly partial stroke testing of the MSIVs, pending staff approval of a permanent change to the Technical Specifications (TSs). The request was based in part on the licensee's concern that observed problems with stem galling of one MSIV could be exacerbated by the weekly partial stroke test. On May 24, 1991, the staff granted the requested waiver from TS Surveillance Requirement 4.7.D.1.C, effective until a permanent change to the TS is issued.

2.0 EVALUATION

Duane Arnold Technical Specification 4.7.D.1.c requires that the main steam line power-operated isolation valves be exercised at least once per week by partial closure and reopening. The licensee determined that the weekly exercise of the MSIVs was originally intended to demonstrate that the MSIV pilot valve is not binding by exercising a test pilot valve of the same design. Those solenoid operated pilot valves which were susceptible to binding were replaced, but the Technical Specifications (TS) had not been revised to remove the weekly exercise of the MSIVs.

Each quarter, reactor power is reduced to less than 75% and a fast full-stroke test of each MSIV is performed utilizing the main pilot valve per TS 4.7.D.1 b.(2) and ASME Code Section XI requirements for inservice testing. This quarterly surveillance tests the safety function of the valves to close and ensures

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that the stroke times are within the limits of operability for the valves. Any binding of the solenoid operated pilot valves or of the MSIVs should be identified during the quarterly surveillance.

NUREG-0737, Item II.K.3.16, provided recommendations to reduce the frequency of challenges to safety relief valves. One of the recommendations was to eliminate the weekly partial-stroke exercise of the MSIVs. Partial-stroke exercising can result in a transient if a test circuit malfunction causes the tested MSIV to fully close. Because the partial-stroke exercise tests are generally performed during full power operation, the resulting transient could involve reactor trips. This TS change is therefore consistent with the NUREG-0737 recommendation.

The first footnote of Table 3.7-3 specifies that primary containment power operated isolation valves in the main steam, containment compressor suction, containment compressor discharge, reactor building closed cooling water supply/return, and the well water supply/return systems were subject to the requirements of 4.7.D.1.a only, which requires primary containment isolation valves be tested once per operating cycle for simulated automatic initiation and closure times. This footnote was necessary to stipulate that, due to plant operational limitations, the specific valves would not be subject to quarterly closing and reopening as required by 4.7.D.1.b.(1) for all normally open power operated isolation valves. The clarification in the proposed Technical Specification change would stipulate that the MSIVs are subject to 4.7.D.1.b(2), which requires quarterly valve stroking and verification of closure time. The quarterly testing is more stringent than 4.7.D.1.a. A specific requirement is provided for the MSIVs because power reduction to less than 75% is necessary to perform the testing.

Because the proposed TS change is consistent with the inservice testing requirements of ASME Code Section XI, the proposed amendment deleting the weekly MSIV partial-stroke test and clarifying the Table 3.7-3 footnote is acceptable to the staff.

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. 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: P. Campbell, NRR

Date: July 12, 1991