

May 22, 1984

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

Dear Mr. Liu:

The Commission has issued the enclosed Amendment No. 100 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 June 10, 1982.

The amendment revises the DAEC Technical Specifications in response to the Commission request to the licensee, dated November 28, 1978, to limit operation of containment vent/purge systems on a yearly basis.

A copy of the related Safety Evaluation is also enclosed.

Sincerely,

Original signed by/

Mohan C. Thadani, Project Manager
Operating Reactors Branch #2
Division of Licensing

Enclosures:

1. Amendment No. 100 to License No. DPR-49
2. Safety Evaluation

cc w/enclosures:
See next page

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Mr. Lee Liu
Iowa Electric Light and Power Company
Duane Arnold Energy Center

cc:

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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. 100
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 June 10, 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:

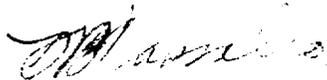
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(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 100, 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 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: May 22, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 100

FACILITY OPERATING LICENSE NO. DPR-49

DOCKET NO. 50-331

Revise the Appendix "A" Technical Specifications as noted below:

<u>Remove</u>	<u>Insert</u>
3.7-7	3.7-7
-	3.7-7a
3.7-14	3.7-14
3.7-14a	3.7-14a
6.11-11	6.11-11

The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change.

LIMITING CONDITIONS FOR OPERATION

SURVEILLANCE REQUIREMENT

3) Type C Tests

Type C tests shall be performed during each reactor shutdown for major refueling or other convenient interval but in no case at intervals greater than two years.

4) Additional Periodic Tests

Additional purge system isolation valve leakage integrity testing shall be performed at least once every three months in order to detect excessive leakage of the purge isolation valve resilient seats. The purge system isolation valves will be tested in three groups, by penetration: drywell purge exhaust group (CV-4302 and CV-4303), torus purge exhaust group (CV-4300 and CV-4301), and drywell/torus purge supply group (CV-4307, CV-4308 and CV-4306).

e. Seal Replacement

The T-ring inflatable seals for purge isolation valves CV-4300, CV-4301, CV-4302, CV-4303, CV-4306, CV-4307 and CV-4308 shall be replaced at intervals not to exceed four years.

The baseline for this requirement shall be established during the 1982 refueling outage.

f. Containment Modification

Any major modification, replacement of a component which is part of the primary reactor containment boundary, or resealing a seal-welded door, performed after the preoperational leakage rate test shall be followed by either a Type A, Type B, or Type C test, as applicable, for the area affected by the modification.

LIMITING CONDITIONS FOR OPERATIONSURVEILLANCE REQUIREMENT

The measured leakage from this test shall be included in the test report. The acceptance criteria as appropriate, shall be met. Minor modifications, replacements, or resealing of seal welded doors, performed directly prior to the conduct of a scheduled Type A test do not require a separate test.

g. Reporting

The preoperational and periodic tests shall be the subject of a summary technical report submitted to the Commission approximately three months after the conduct of each test. The report will be titled "Reactor Containment Integrated Leakage Rate Test."

The results of the periodic testing performed to satisfy the requirements of 4.7.A.2.d.4 shall be reported with the summary technical report prepared to provide the results of the testing performed in accordance with Section 4.7.A.2.d.3.

LIMITING CONDITIONS FOR OPERATION

must be taken out of power operation

7. Drywell-Suppression Chamber Differential Pressure

- a. Differential pressure between the drywell and suppression chamber shall be maintained at equal to or greater than 1.10 psid except as specified in (1) and (2) below:

(1) Within the 24-hour period subsequent to placing the reactor in the Run Mode following a shutdown, the differential shall be established. The differential may be decreased to less than 1.10 psid 24 hours prior a scheduled shutdown.

(2) This differential may be decreased to less than 1.10 psid for a maximum of four hours during required operability testing of the HPCI system pump, the RCIC system pump, the drywell-pressure suppression chamber vacuum breakers, the suppression chamber to reactor building vacuum breakers, and to perform leak rate testing required by specification 4.7.A.2.d.4, and to allow for inerting operations to satisfy specification 3.7.A.5 requirements.

- b. If the differential pressure of specification 3.7.A.7.a cannot be maintained, and the differential pressure cannot be restored within the subsequent six (6) hour period, an orderly shutdown shall be initiated and the reactor shall be in the Cold Shutdown condition within the following 24 hours.

SURVEILLANCE REQUIREMENT

functionally tested once per operating cycle in conjunction with specification 4.7.A.6.a. Should one of the two H₂ or O₂ analyzers serving the drywell or suppression pool be found inoperable, the remaining analyzer of the same type serving the same compartment shall be tested for operability once per week until the defective analyzer is made operable.

7. Drywell-Suppression Chamber Differential Pressure

- a. The pressure differential between the drywell and suppression chamber shall be recorded at least once each shift.

LIMITING CONDITIONS FOR OPERATION

SURVEILLANCE REQUIREMENT

8. If the specifications of 3.7.A.1 through 3.7.A.5 cannot be met, an orderly shutdown shall be initiated and the reactor shall be in a cold shutdown condition within 24 hours.
9. Purging
- The time which containment vent/purge valves (CV-4302, CV-4303, CV-4300, CV-4301 and CV-4307) can be open is limited to a maximum of 90 hours per calendar year, not including the 24 hour period prior to shutdown and the 24 hour period subsequent to placing the reactor in the y run mode following a shutdown as specified in 3.7.A.5.b. This restriction applies whenever primary containment integrity is required.
10. If Specification 3.7.A.9 cannot be met, prepare and submit a Special Report to the Commission pursuant to Specification 6.11.3 within the next 30 days outlining the cause of the limits being exceeded and the plans for limiting the time which these valves will be open.

- a. Reactor vessel base, weld and heat affected zone metal test specimens (Specification 4.6.A.2).
- b. I-131 dose equivalent exceeding 50% of equilibrium value (Specification 4.6.B.1.h).
- c. Inservice inspection (Specification 4.6.G).
- d. Reactor Containment Integrated Leakage Rate Test (Specification 4.7.A.2.f).
- e. Auxiliary Electrical System - Operation with inoperable components (Specification 3.8.B.4).
- f. Fire Protection Systems (Specifications 3.13.A.3, 3.13.B.2, 3.13.B.3, 3.13.C.3, and 3.13.D.3).
- g. Containment Vent/Purge valves (Specification 3.7.A.10).



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 100 TO 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

The staff position letter dated November 28, 1978, requested licensees to cease purging (or venting) of containment or limit purging (or venting) to an absolute minimum. Licensees who elected to purge (or vent) the containment were requested to demonstrate that the containment purge (or vent) system design met the criteria outlined in the Standard Review Plan (SRP) Section 6.2.4, Revision 1, and the associated staff Technical Position (BTP) CSB 6-4, Revision 1. The licensee, by letter dated March 15, 1982, responded to our request by providing information related to purge/vent system design and operation. Subsequently, by letter dated June 10, 1982, the licensee submitted a request for Technical Specification changes arising out of the resolution of issues related to staff Technical Position CSB 6-4.

2.0 Evaluation

The purging and venting operation at the Duane Arnold Energy Center (DAEC) is performed through redundant 18-inch butterfly-type isolation valves in both supply and exhaust headers of the drywell and suppression pool. The 18-inch valves are bypassed by 2-inch globe valves which are used to inert and deinert the containment with nitrogen.

By letter dated June 10, 1982, the licensee proposed the following changes to the DAEC Technical Specifications dealing with operation of the purge/vent system:

1. The operation of purge/vent systems will be restricted to 90 hours per year not including a 24-hour period prior to shutdown and a 24-hour period after placing the reactor in run mode;
2. Purge/vent system leakage integrity tests are to be conducted at intervals not to exceed once every three months; and
3. Purge/vent isolation valve seal is to be replaced at intervals not to exceed four years.

On March 29, 1984, we issued a Safety Evaluation for the containment purge/vent system design and operation practices for DAEC. In that Safety Evaluation we found the purge/vent system operating frequency (item 1) and leakage integrity testing frequency (item 2) to be acceptable. We have reviewed the frequency of purge valve seal replacement (item 3) and found that the frequency of replacement of the purge isolation valve seal is acceptable, since it meets our guidance provided in the sample Technical Specifications included in our letter dated November 24, 1981.

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) 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: R. Hall

Dated: May 22, 1984