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

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DcD-016

Docket Nos. 50-254
50-265

Mr. L. DelGeorge
Director of Nuclear Licensing
Commonwealth Edison Company
P. O. Box 767
Chicago, Illinois 60690

Dear Mr. DelGeorge:

The Commission has issued the enclosed Amendment Nos. 82 and 76 to Facility Operating Licenses Nos. DPR-29 and DPR-30 for Quad Cities Nuclear Power Station Units 1 and 2. These amendments consist of changes to the Technical Specifications in response to your application dated April 13, 1981, and supplement dated December 2, 1981.

The changes provide for primary containment integrated leak rate test requirements and schedules consistent with Appendix J to 10 CFR Part 50. The changes also provide for direct references to and use of Appendix J methodology and terminology.

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

Sincerely,

Original signed by
Roby Bevan, Project Manager
Operating Reactors Branch #2
Division of Licensing

Enclosures:
1. Amendment No. 82 to DPR-29
2. Amendment No. 76 to DPR-30
3. Safety Evaluation
4. Notice

cc: w/enclosures
See next page

Concur Acctd + FRN only

OFFICE	DL:ORB#2	DL:ORB#2	DL:ORB#2	DL:OR	OELD		
SURNAME	S.Norris	R.Bevan:pr	D.B.Vassallo	G. DeMas	Goddard		
DATE	10/21/82	10/21/82	10/21/82	10/22/82	10/29/82		

Mr. L. DelGeorge
Commonwealth Edison Company

cc:

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

COMMONWEALTH EDISON COMPANY
AND
IOWA ILLINOIS GAS AND ELECTRIC COMPANY

DOCKET NO. 50-254

QUAD CITIES STATION UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 82
License No. DPR-29

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by the Commonwealth Edison Company (the licensee) dated April 13, 1981, as supplemented December 2, 1981 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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 3.B of Facility License No. DPR-29 is hereby amended to read as follows:

   B. Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 82, 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 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: November 2, 1982

Attachment to License Amendment No. 82

To Facjlity Operating License DPR-29

Docket No. 50-254

Revise Appendix A Technical Specifications as follows:

Remove	Insert
3.7/4.7-2	3.7/4.7-2
3.7/4.7-3	3.7/4.7-3
3.7/4.7-4	3.7/4.7-4

power operation limit specified in Item 1 within 24 hours.

3) The reactor shall be scrammed from any operating condition if the pool temperature reaches 110°F. Power operation shall not be resumed until the pool temperature is reduced below the normal operation limit specified in Item 1.

4) During reactor isolation conditions, the reactor pressure vessel shall be depressurized to less than 150 psig at normal cool-down rates if the pool temperature reaches 120°F.

d. Maximum downcomer Submergence 3.54 ft.

e. Minimum downcomer Submergence 3.21 ft.

2. Primary containment integrity shall be maintained at all times when the reactor is critical or when the reactor water temperature is above 212°F and fuel is in the reactor vessel except while performing low power physics tests at atmospheric pressure at power levels not to exceed 5 MWt.

a. When primary containment integrity is required, primary containment leakage rates shall be limited to:

1) An overall integrated leakage rate of:

a) $\leq L_a$, 1.0 percent by weight of the containment air per 24 hours at P_a, 48 psig, or

2. The containment leakage rates shall be demonstrated at the following test schedule, and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR 50 using the methods and provisions of ANSI N45.4 (1972).

a. Three Type A tests (Overall Integrated Containment Leakage Rate) shall be conducted at 40 ± 10 month intervals during shutdown at either P_a, 48 psig, or at P_t, 25 psig during each 10-year service period. The third test of each set shall be conducted during the shutdown for the 10-year plant inservice inspection.

b) $\leq L_t$, 1.0 percent by weight of the containment air per 24 hours at a reduced pressure of P_t, 25 psig.

2) A combined leakage rate of $\leq 0.60\ L_a$ for all penetrations and valves, except for main steam isolation valves, subject to Type B and C tests when pressurized to P_a.

3) 11.5 scf per hour for any one main steam isolation valve when tested at 25 psig.

b. With the measured overall integrated containment leakage rate exceeding $0.75\ L_a$ or $0.75\ L_t$, as applicable, restore the overall integrated leakage rate(s) to $\leq 0.75\ L_a$ or $\leq 0.75\ L_t$, as applicable.

c. With the measured combined leakage rate for all penetrations and valves, except for main steam isolation valves, subject to Type B and C tests exceeding $0.60\ L_a$, restore the combined leakage rate for all penetrations and valves, except for main steam isolation valves, subject to Type B and C tests to $0.60\ L_a$.

d. Leakage shall be limited to a leakage rate of less then or equal to 3.75 percent of L_a for any one air lock when pressurized to 10 psig.

b. If any periodic Type A test fails to meet either $0.75\ L_a$ or $0.75\ L_t$, the test schedule for subsequent Type A tests shall be reviewed and approved by the commission. If two consecutive Type A tests fail to meet either $0.75\ L_a$ or $0.75\ L_t$, a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet either $0.75\ L_a$ or $0.75\ L_t$, at which time the above test schedule may be resumed.

c. The accuracy of each Type A test shall be verified by a supplemental test which:

1) Confirms the accuracy of the test by verifying that the difference between the supplemental data and the Type A test data is within $0.25\ L_a$ or $0.25\ L_t$.

2) Has a duration sufficient to establish accurately the change in leakage rate between the Type A test and the supplemental test.

3) Requires the quantity of gas injected into the containment or bled from the containment during the supplemental test to be equivalent to at least 25 percent of the total measured leakage at P_a, 48 psig, or P_t, 25 psig.

d. Type B and C tests shall be conducted at P_a, 48 psig, at intervals no greater than 24 months except for tests involving:

1) Air locks, which shall be tested at 10 psig at least once per 18 months, and

e. With the measured leakage rate exceeding 11.5 scf per hour for any one main steam isolation valve, restore the leakage rate to ≤ 11.5 scf per hour for any one main steam isolation valve prior to increasing the reactor coolant temperature above 212°F.

2) Main steam isolation valves, which shall be leak tested at least once per 18 months at a pressure of 25 psig.

3) Bolted double-gasketed seals which shall be tested at a pressure of 48 psig whenever the seal is closed after being opened and each operating cycle.

e. All test leakage rates shall be calculated using observed data converted to absolute values. Error analyses shall be performed to select a balanced integrated leakage measurements system.

f. Continuous Leak Rate Monitor

1) When the primary containment is inerted, the containment shall be continuously monitored for gross leakage by review of the inerting system makeup requirements.

2) This monitoring system may be taken out of service for the purpose of maintenance or testing but shall be returned to service as soon as practical.

3. Pressure Suppression Chamber-Reactor Building Vacuum Breakers

a. Except as specified in Specification 3.7.A.3.b below, two pressure sup-

3. Pressure Suppression Chamber-Reactor Building Vacuum Breakers

a. The pressure suppression chamber-reactor building vacuum

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

COMMONWEALTH EDISON COMPANY
AND
IOWA ILLINOIS GAS AND ELECTRIC COMPANY

DOCKET NO. 50-265

QUAD CITIES STATION UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 76
License No. DPR-30

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Commonwealth Edison Company (the licensee) dated April 13, 1981, as supplemented December 2, 1981 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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 3.B of Facility License No. DPR-30 is hereby amended to read as follows:

   B. Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 76, 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 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: November 2, 1982

Attachment to License Amendment No. 76

To Facility Operating License DPR-30

Docket No. 50-265

Revise Appendix A Technical Specifications as follows:

Remove	Insert
3.7/4.7-2	3.7/4.7-2
3.7/4.7-3	3.7/4.7-3
3.7/4.7-4	3.7/4.7-4

power operation limit specified in Item 1 within 24 hours.

3) The reactor shall be scrammed from any operating condition if the pool temperature reaches 110°F. Power operation shall not be resumed until the pool temperature is reduced below the normal operation limit specified in Item 1.

4) During reactor isolation conditions, the reactor pressure vessel shall be depressurized to less than 150 psig at normal cool-down rates if the pool temperature reaches 120°F.

d. Maximum downcomer Submergence 3.54 ft.

e. Minimum downcomer Submergence 3.21 ft.

2. Primary containment integrity shall be maintained at all times when the reactor is critical or when the reactor water temperature is above 212°F and fuel is in the reactor vessel except while performing low power physics tests at atmospheric pressure at power levels not to exceed 5 MWt.

a. When primary containment integrity is required, primary containment leakage rates shall be limited to:

1) An overall integrated leakage rate of:

a) $\leq L_a$, 1.0 percent by weight of the containment air per 24 hours at P_a, 48 psig, or

2. The containment leakage rates shall be demonstrated at the following test schedule, and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR 50 using the methods and provisions of ANSI N45.4 (1972).

a. Three Type A tests (Overall Integrated Containment Leakage Rate) shall be conducted at 40 ± 10 month intervals during shutdown at either P_a, 48 psig, or at P_t, 25 psig during each 10-year service period. The third test of each set shall be conducted during the shutdown for the 10-year plant inservice inspection.

b) $\leq L_t$, 1.0 percent by weight of the containment air per 24 hours at a reduced pressure of P_t, 25 psig.

2) A combined leakage rate of $\leq$ 0.60 L_a for all penetrations and valves, except for main steam isolation valves, subject to Type B and C tests when pressurized to P_a.

3) 11.5 scf per hour for any one main steam isolation valve when tested at 25 psig.

b. With the measured overall integrated containment leakage rate exceeding 0.75 L_a or 0.75 L_t, as applicable, restore the overall integrated leakage rate(s) to $\leq$ 0.75 L_a or $\leq$ 0.75 L_t, as applicable.

c. With the measured combined leakage rate for all penetrations and valves, except for main steam isolation valves, subject to Type B and C tests exceeding 0.60 L_a, restore the combined leakage rate for all penetrations and valves, except for main steam isolation valves, subject to Type B and C tests to 0.60 L_a.

d. Leakage shall be limited to a leakage rate of less then or equal to 3.75 percent of L_a for any one air lock when pressurized to 10 psig.

b. If any periodic Type A test fails to meet either 0.75 L_a or 0.75 L_t, the test schedule for subsequent Type A tests shall be reviewed and approved by the commission. If two consecutive Type A tests fail to meet either 0.75 L_a or 0.75 L_t, a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet either 0.75 L_a or 0.75 L_t, at which time the above test schedule may be resumed.

c. The accuracy of each Type A test shall be verified by a supplemental test which:

1) Confirms the accuracy of the test by verifying that the difference between the supplemental data and the Type A test data is within 0.25 L_a or 0.25 L_t.

2) Has a duration sufficient to establish accurately the change in leakage rate between the Type A test and the supplemental test.

3) Requires the quantity of gas injected into the containment or bled from the containment during the supplemental test to be equivalent to at least 25 percent of the total measured leakage at P_a, 48 psig, or P_t, 25 psig.

d. Type B and C tests shall be conducted at P_a, 48 psig, at intervals no greater than 24 months except for tests involving:

1) Air locks, which shall be tested at 10 psig at least once per 18 months, and -

e. With the measured leakage rate exceeding 11.5 scf per hour for any one main steam isolation valve, restore the leakage rate to ≤ 11.5 scf per hour for any one main steam isolation valve prior to increasing the reactor coolant temperature above 212°F.

2) Main steam isolation valves, which shall be leak tested at least once per 18 months at a pressure of 25 psig.

3) Bolted double-gasketed seals which shall be tested at a pressure of 48 psig whenever the seal is closed after being opened and each operating cycle.

e. All test leakage rates shall be calculated using observed data converted to absolute values. Error analyses shall be performed to select a balanced integrated leakage measurements system.

f. Continuous Leak Rate Monitor

1) When the primary containment is inerted, the containment shall be continuously monitored for gross leakage by review of the inerting system makeup requirements.

2) This monitoring system may be taken out of service for the purpose of maintenance or testing but shall be returned to service as soon as practical.

3. Pressure Suppression Chamber-Reactor Building Vacuum Breakers

a. Except as specified in Specification 3.7.A.3.b below, two pressure sup-

3. Pressure Suppression Chamber-Reactor Building Vacuum Breakers

a. The pressure suppression chamber-reactor building vacuum

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 82 TO FACILITY OPERATING LICENSE NO. DPR-29

AMENDMENT NO. 76 TO FACILITY OPERATING LICENSE NO. DPR-30

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

QUAD CITIES STATION UNIT NOS. 1 AND 2

DOCKET NOS. 50-254 AND 50-265

I. INTRODUCTION

By letter dated April 13, 1981 and supplement dated December 2, 1981 Commonwealth Edison Company (licensee) proposed changes to the Technical Specifications for Quad Cities Nuclear Power Station, Units 1 and 2 to: revise the primary containment integrated leak rate test requirements and schedules to conform with the requirements of Appendix J to 10 CFR Part 50; modify the associated Limiting Condition for Operation to include the definitions of the nomenclature used and identify specific leakage limitations as required by Appendix J; and modify the surveillance requirements to provide direct references to Appendix J methodology and terminology.

II. BACKGROUND

Beginning in August 1975, the NRC staff requested licensees to review their containment leakage testing programs and the associated Technical Specifications for compliance with the requirements of Appendix J. to 10 CFR Part 50. Recognizing at that time that there were already many operating plants and a number more in advanced stages of design or construction, we requested licensees to propose design modifications and Technical Specifications changes and, as necessary, request exemptions to attain conformance with the regulations. As part of that response, the licensee requested a number of exemptions to the provisions of Appendix J. Those requests are under review and are not addressed in this Safety Evaluation.

III EVALUATION

By letter dated April 13, 1981 and supplement dated December 2, 1981 the licensee proposed amending the Quad Cities Nuclear Power Station, Units 1 and 2 Technical Specifications (TS) to modify the primary containment integrated leakage testing requirements and schedules to conform with 10 CFR Part 50, Appendix J requirements. The proposed changes also provided for direct references and use of Appendix J methodology and terminology.

Specifically the proposed changes better define the Limiting Conditions for Operation (LCO) for primary containment (PC) leakage rates by specifying:

1) an overall integrated leakage rate for the PC,
2) a combined leakage rate for all penetrations and valves, except main steam isolation valves (MSIV),
3) an acceptable leakage rate for any one MSIV, and
4) an acceptable leakage rate for any one air lock.

The proposed LCOs also describe actions to be taken when the measured leakage rates are not within specifications. Finally the proposed changes delete the prescriptive surveillance requirements for demonstrating containment leakage rates, and replace these with the criteria specified in Appendix J of 10 CFR 50, using the methods and provisions of ANSI N45.4 (1972).

In reviewing the licensee's proposed changes submitted April 13 and December 2, 1981 we find that they are consistent with the BWR Standard Technical Specifications, NUREG-0123, Revision 3, which served as the basis in assessing the conformance of the licensee's proposed Technical Specification changes to Appendix J requirements. The Standard Technical Specifications, pages 3/4 6-2 through 3/4 6-4, pertaining to primary containment leakage testing requirements (and the associated Bases) are recognized by the staff as an acceptable implementation of the applicable requirements of Appendix J. Therefore, we conclude that the Technical Specification changes pertaining to containment integrated leakage testing meet the requirements of 10 CFR Part 50, Appendix J, and are acceptable.

IV ENVIRONMENTAL CONSIDERATIONS

We have determined that the amendments do 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 amendments involve 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 these amendments.

V CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve a significant increase in the probability or consequences of an accident previously evaluated, do not create the possibility of an accident of a type different from any evaluated previously, and do not involve a significant reduction in a margin of safety, the amendments do 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 the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Date: November 2, 1982

Principal Contributor: Roby Bevan

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NOS. 50-254 AND 50-265

COMMONWEALTH EDISON COMPANY

NOTICE OF ISSUANCE OF AMENDMENTS TO OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment Nos. 82 and 76 Facility Operating License Nos. DPR-29 and PDR-30, issued to Commonwealth Edison Company, and Iowa Illinois Gas and Electric Company which revised the Technical Specitifations for operation of the Quad Cities Nuclear Power Station, Units 1 and 2 located in Rock Island County, Illinois. The amendments are effective as of the date of issuance.

The changes to the Technical Specifications provide for primary containment integrated leak rate test requirements and schedules consistent with Appendix J to 10 CFR Part 50. The changes also provide for direct references and use of Appendix J methodology and terminology.

The application for the amendments 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 amendments. Prior public notice of these amendments was not required since the amendments do not involve a significant hazards consideration.

The Commission has determined that the issuance of these amendments 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 these amendments.

For further details with respect to this action, see (1) the application for amendments dated April 13, 1981 and letter dated December 2, 1981 (2) Amendment No. 82 to License No. DPR-29 and Amendment No. 76 to License No. DPR-30, 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 Moline Public Library 504-17th Street, Moline, Illinois. 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 2nd day of November 1982.

FOR THE NUCLEAR REGULATORY COMMISSION

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