

Docket Nos. 50-254
50-265

FEB 3 1977

Commonwealth Edison Company
ATTN: Mr. R. L. Bolger
Assistant Vice President
Post Office Box 767
Chicago, Illinois 60690

Gentlemen:

In response to your request dated September 17, 1975, the Commission has issued the enclosed Amendment Nos. 38, and 36 to Facility Operating License Nos. DPR-29 and DPR-30 for the Quad Cities Nuclear Power Station Unit Nos. 1 and 2, respectively.

The amendments revise the licenses and technical specifications relating to the receipt, possession and use of byproduct, source and special nuclear materials. That portion of your September 17, 1975 submittal concerning the storage of fuel from one reactor in another reactor's storage facility is still under review and is not included in these amendments.

Our current procedure for the licensing of byproduct, source and special nuclear materials included in reactor licenses is not to specify quantity limits. Therefore, we have issued these amendments consistent with that procedure. We have made several changes to your proposed amendments and technical specification changes to be consistent with our current guidance. These changes have been discussed with your staff.

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

Sincerely,

Original signed by

[Handwritten Signature]
Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

- Enclosures:
- 1. Amendment No. 38 to License No. DPR-29
- 2. Amendment No. 36 to License No. DPR-30
- 3. Safety Evaluation

OFFICE →	Notice	DOR:ORB #2 <i>[Signature]</i>	DOR:ORB #2 PO'Connor	OELD M. Mulhey	DOR:ORB #2 DLZiemann for
SURNAME →		RMDiggs			
DATE →		1/18/77	1/19/77	2/1/77	2/13/77

[Handwritten notes: "pwol" and "rec'd 2/3/77"]

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

February 3, 1977

Docket Nos. 50-254
50-265

Commonwealth Edison Company
ATTN: Mr. R. L. Bolger
Assistant Vice President
Post Office Box 767
Chicago, Illinois 60690

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Our current procedure for the licensing of byproduct, source and special nuclear materials included in reactor licenses is not to specify quantity limits. Therefore, we have issued these amendments consistent with that procedure. We have made several changes to your proposed amendments and technical specification changes to be consistent with our current guidance. These changes have been discussed with your staff.

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

Sincerely,

A handwritten signature in cursive script that reads "Richard D. Silber for".

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Enclosures:

1. Amendment No. 38 to
License No. DPR-29
2. Amendment No. 36 to
License No. DPR-30
3. Safety Evaluation
4. Notice

February 3, 1977

cc w/enclosures:

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President and Chairman
Iowa-Illinois Gas and
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Mr. Marcel De Jaegher, Chairman
Rock Island County Board of
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Rock Island, Illinois 61201

cc w/enclosures and copy of CECo
filing dated 9/17/75:
Department of Public Health
ATTN: Chief, Division of
Radiological Health
535 West Jefferson
Springfield, Illinois 62706



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

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-254

QUAD CITIES NUCLEAR POWER STATION UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 38
License No. DPR-29

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated September 17, 1975, 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;
 - E. The receipt, possession and use of the byproduct, source and special nuclear materials as authorized by this license, as amended, will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70, including Sections 30.33, 40.32, 70.23 and 70.31; and
 - F. 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 Facility Operating License No. DPR-29, as amended, is hereby further amended by replacing in their entirety Paragraphs 2.B, 2.C, 2.D and 3.B thereof with the following:

- "2.B. Pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear materials, not including plutonium, as reactor fuel, in accordance with the limitations for storage and amounts required for operation as described in the Final Safety Analysis Report, as supplemented and amended;
- C. Pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time up to 8 kilograms of plutonium for use in connection with operation of the facility;
- D. Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use at any time any byproduct, source and special nuclear materials as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts required;
- E. Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear materials without restriction to chemical or physical form, for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components;
- F. Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

3.B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 38, 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



Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 3, 1977

ATTACHMENT TO LICENSE AMENDMENT NO. 38

FACILITY OPERATING LICENSE NO. DPR-29

DOCKET NO. 50-254

Replace the existing pages of the Appendix A portion of the Technical Specifications listed below with attached revised pages bearing the same numbers, except as otherwise indicated. Changed areas on these pages are shown by a marginal line.

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QUAD-CITIES
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H. Miscellaneous Radioactive Materials
Sources

Source Leakage Test

Specification

Each sealed source containing radioactive material in excess of 100 microcuries of beta and/or gamma emitting material or 5 microcuries of alpha emitting material shall be free of ≥ 0.005 microcuries of removable contamination.

Each sealed source with removable contamination in excess of the above limit shall be immediately withdrawn from use and either decontaminated and repaired or disposed of in accordance with Commission Regulations.

A complete inventory of radioactive materials in the licensee's possession shall be maintained current at all times.

H. Miscellaneous Radioactive Materials
Sources

Each sealed source shall be tested for leakage and/or contamination by the licensee or by other persons specifically authorized by the Commission or an Agreement State. The test method shall have a detection sensitivity of at least 0.005 microcuries per test sample.

Each category of sealed sources shall be tested at the frequency described below:

1. Sources in use (excluding startup previously subjected to core flux) - At least once per six months for all sealed sources containing radioactive material:
 - a. With a half-life greater than 30 days (excluding Hydrogen 3), and
 - b. In any form other than gas.
2. Stored sources not in use - Each sealed source shall be tested prior to the use or transfer to another licensee unless tested within the previous six months. Sealed sources transferred without a certificate indicating the last test date shall be tested prior to being placed into use.
3. Startup sources - Each sealed startup source shall be tested within 31 days prior to being subjected to core flux and following repair or maintenance to the source.

A Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.6.C.3 if source leakage tests reveal the presence of ≥ 0.005 microcuries of removable contamination.

QUAD-CITIES

DPR-29

Specification 3.8.B.2a limits the release rate of radioiodines and radioactive material in particulate form with half-lives greater than eight days so that the corresponding annual thyroid dose via the most restrictive pathway is less than 1500 mrem.

For radioiodines and radioactive material in particulate form with half-lives greater than eight days, the most restrictive location is a dairy cow located 1694 meters in the south direction (vent stack D/Q = $2.5 \times 10^{-9} \text{ m}^{-2}$; chimney D/Q = $8.5 \times 10^{-10} \text{ m}^{-2}$) and the equations in specification 3.8.2a,b(1),c(1) are based on this assumption.

Specification 3.8.B.2b. (1), b. (2), c. (1) and c. (2) establishes upper offsite levels for the releases of radioiodines and radioactive material in particulate form with half-lives greater than eight days at twice the design objective annual quantity during any calendar quarter, or four times the design objective annual quantity during any period of 12 consecutive months. In addition to the limiting conditions for operation of Specifications 3.8.B.3.c. (1) and c. (2) the reporting requirements of 3.8.B.3.b provide that the cause shall be identified whenever the release of gaseous effluents exceeds one-half the design objective annual quantity during any calendar quarter and that the proposed program of action to reduce such release rates to the design objectives shall be described.

C. Mechanical Vacuum Pump

The purpose of isolating the mechanical vacuum line is to limit release of activity from the main condenser. During an accident, fission products would be transported from the reactor through the main steamline to the main condenser. The fission product radioactivity would be sensed by the main steamline radioactivity monitors which initiate isolation.

D. Liquid Effluents

Liquid effluent release rates will be controlled in terms of the concentration in the discharge bay. In the case of unidentified mixtures, such a concentration limit is based on the assumption that the entire content is made up of the most restrictive isotope in accordance with 10 CFR 20. Such a limit assures that even if a person obtained all of his daily water intake from such a source, the resultant dose would not exceed that specified in 10 CFR 20. Since no such use of the discharge bay is made and considerable natural dilution occurs prior to any location where such doses could occur, this assures that offsite doses from this source will be far less than the limits specified in 10 CFR 20. In addition to the two independent samples of each batch prior to discharge, a radiation monitor on the discharge line and a sampler in the discharge bay give further assurance that discharges are kept at or below the maximum limits at all times.

E. Radioactive Liquid Waste Storage

As discussed in the SAR, the radioactive waste tanks that are at or above grade are located such that their postulated catastrophic failure could cause release of their contained radioactivity to the Mississippi River. To assure that such a postulated release would not raise radioactivity levels in the River to values greater than 10 CFR 20 at the water intake at the city of Davenport, Iowa, a limit on the amount of radioactivity that tanks can contain is established.

H. Miscellaneous Radioactive Materials Sources

The objective of this specification is to assure that leakage from byproduct, source and special nuclear material sources does not exceed allowable limits. The limitations on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39(c) limits for plutonium.

**QUAD-CITIES
DPR-29**

6.5 PLANT OPERATING RECORDS

- A. records and/or logs relative to the following items shall be kept in a manner convenient for review and shall be retained for at least 5 years:**
1. records of normal plant operation, including power levels and periods of operation at each power level;
 2. records of principal maintenance and activities, including inspection and repair, regarding principal items of equipment pertaining to nuclear safety;
 3. records and reports of reportable and safety limit occurrences;
 4. records and periodic checks, inspection and/or calibrations performed to verify that the surveillance requirements (see Section 4 of these specifications) are being met (all equipment failing to meet surveillance requirements and the corrective action taken shall be recorded);
 5. records of changes made to the equipment or reviews of tests and experiments to comply with 10 CFR 50.59.
 6. records of radioactive shipments;
 7. records of physic tests and other tests pertaining to nuclear safety;
 8. records of changes to operating procedures;
 9. shift engineers' logs; and
 10. byproduct material inventory records and source leak test results.
- B. Records and/or logs relative to the following items shall be recorded in a manner convenient for review and shall be retained for the life of the plant:**
1. substitution or replacement of principal items of equipment pertaining to nuclear safety;
 2. changes made to the plant as it is described in the SAR;
 3. records of new and spent fuel inventory and assembly histories;
 4. updated, corrected, and as-built drawings of the plant;
 5. records of plant radiation and contamination surveys;
 6. records of offsite environmental monitoring surveys;
 7. records of radiation exposure for all plant personnel, including all contractors and visitors to the plant, in accordance with 10 CFR 20;
 8. records of radioactivity in liquid and gaseous wastes released to the environment;
 9. records of transient or operational cycling for those components that have been designed to operate safely for a limited number of transient or operational cycles;
 10. records of individual staff members indicating qualifications, experience, training, and retraining;
 11. inservice inspections of the reactor coolant system; and
 12. minutes of meetings and results of reviews and audits performed by the offsite and onsite review and audit functions.

**QUAD-CITIES
DPR-29**

TABLE 6.6-1

SPECIAL REPORTS

Area	Specification Reference	Submittal Date
a. Secondary containment leak rate test (2)	4.7.C	Upon completion of each test.
b. Summary status of fuel performance	1.1 Bases	After each refueling outage starting with second refueling outage.
c. Primary coolant leakage to drywell	4.6.D Bases	2 years (2)
d. Inservice inspection evaluation	Table 4.6-1	5 years (2)
e. Materials radiation surveillance specimens	4.6.B.2	After each specimen removal and completion of analyses.
f. Evaluation of EGC operation	3.3.F Bases	Upon completion of initial testing.
g. Radioactive Source Leak Testing (3)	3.8.H	Annual Report

Notes

1. Each integrated leak rate test of the secondary containment shall be the subject of a summary technical report. This report should include data on the wind speed, wind direction, outside and inside temperatures during the test, concurrent reactor building pressure, and emergency ventilation flow rate. The report shall also include analyses and interpretations of those data which demonstrate compliance with the specified leak rate limits.
2. The report shall be submitted within the period of time listed based on the commercial service date as the starting point.
3. This report is required only if the tests reveal the presence of 0.005 microcuries or more of removable contamination.



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

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-265

QUAD CITIES NUCLEAR POWER STATION UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 36
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 September 17, 1975, 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;
 - E. The receipt, possession and use of the byproduct, source and special nuclear materials as authorized by this license, as amended, will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70, including Sections 30.33, 40.32, 70.23 and 70.31; and
 - F. 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 Facility Operating License No. DPR-30, as amended, is hereby further amended by replacing in their entirety Paragraphs 2.B, 2.C, 2.D and 3.B thereof with the following:

- "2.B. Pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear materials, not including plutonium, as reactor fuel, in accordance with the limitations for storage and amounts required for operation as described in the Final Safety Analysis Report, as supplemented and amended;
- C. Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use at any time any byproduct, source and special nuclear materials as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts required;
- D. Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear materials without restriction to chemical or physical form, for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components;
- E. Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

3.B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 36, 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 O. Silber for*

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 3, 1977

ATTACHMENT TO LICENSE AMENDMENT NO. 36

FACILITY OPERATING LICENSE NO. DPR-30

DOCKET NO. 50-265

Replace the existing pages of the Appendix A portion of the Technical Specifications listed below with attached revised pages bearing the same numbers, except as otherwise indicated. Changed areas on these pages are shown by a marginal line.

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H. Miscellaneous Radioactive Materials
Sources

Source Leakage Test

Specification

Each sealed source containing radioactive material in excess of 100 microcuries of beta and/or gamma emitting material or 5 microcuries of alpha emitting material shall be free of ≥ 0.005 microcuries of removable contamination.

Each sealed source with removable contamination in excess of the above limit shall be immediately withdrawn from use and either decontaminated and repaired or disposed of in accordance with Commission Regulations.

A complete inventory of radioactive materials in the licensee's possession shall be maintained current at all times.

H. Miscellaneous Radioactive Materials
Sources

Each sealed source shall be tested for leakage and/or contamination by the licensee or by other persons specifically authorized by the Commission or an Agreement State. The test method shall have a detection sensitivity of at least 0.005 microcuries per test sample.

Each category of sealed sources shall be tested at the frequency described below:

1. Sources in use (excluding startup previously subjected to core flux) - At least once per six months for all sealed sources containing radioactive material:
 - a. With a half-life greater than 30 days (excluding Hydrogen 3), and
 - b. In any form other than gas.
2. Stored sources not in use - Each sealed source shall be tested prior to the use or transfer to another licensee unless tested within the previous six months. Sealed sources transferred without a certificate indicating the last test date shall be tested prior to being placed into use.
3. Startup sources - Each sealed startup source shall be tested within 31 days prior to being subjected to core flux and following repair or maintenance to the source.

A Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.6.C.3 if source leakage tests reveal the presence of ≥ 0.005 microcuries of removable contamination.

Specification 3.8.B.2a limits the release rate of radioiodines and radioactive material in particulate form with half-lives greater than eight days so that the corresponding annual thyroid dose via the most restrictive pathway is less than 1500 mrem.

For radioiodines and radioactive material in particulate form with half-lives greater than eight days, the most restrictive location is a dairy cow located 1694 meters in the south direction (vent stack $D/Q = 2.5 \times 10^{-9} \text{ m}^{-2}$; chimney $D/Q = 8.5 \times 10^{-10} \text{ m}^{-2}$) and the equations in specification 3.8.2a,b(1),c(1) are based on this assumption.

Specification 3.8.B.2b.(1),b.(2),c.(1) and c.(2) establishes upper offsite levels for the releases of radioiodines and radioactive material in particulate form with half-lives greater than eight days at twice the design objective annual quantity during any calendar quarter, or four times the design objective annual quantity during any period of 12 consecutive months. In addition to the limiting conditions for operation of Specifications 3.8.B.3.c.(1) and c.(2) the reporting requirements of 3.8.B.3.b provide that the cause shall be identified whenever the release of gaseous effluents exceeds one-half the design objective annual quantity during any calendar quarter and that the proposed program of action to reduce such release rates to the design objectives shall be described.

C. Mechanical Vacuum Pump

The purpose of isolating the mechanical vacuum line is to limit release of activity from the main condenser. During an accident, fission products would be transported from the reactor through the main steamline to the main condenser. The fission product radioactivity would be sensed by the main steamline radioactivity monitors which initiate isolation.

D. Liquid Effluents

Liquid effluent release rates will be controlled in terms of the concentration in the discharge bay. In the case of unidentified mixtures, such a concentration limit is based on the assumption that the entire content is made up of the most restrictive isotope in accordance with 10 CFR 20. Such a limit assures that even if a person obtained all of his daily water intake from such a source, the resultant dose would not exceed that specified in 10 CFR 20. Since no such use of the discharge bay is made and considerable natural dilution occurs prior to any location where such doses could occur, this assures that offsite doses from this source will be far less than the limits specified in 10 CFR 20. In addition to the two independent samples of each batch prior to discharge, a radiation monitor on the discharge line and a sampler in the discharge bay give further assurance that discharges are kept at or below the maximum limits at all times.

E. Radioactive Liquid Waste Storage

As discussed in the SAR, the radioactive waste tanks that are at or above grade are located such that their postulated catastrophic failure could cause release of their contained radioactivity to the Mississippi River. To assure that such a postulated release would not raise radioactivity levels in the River to values greater than 10 CFR 20 at the water intake at the city of Davenport, Iowa, a limit on the amount of radioactivity that tanks can contain is established.

H. Miscellaneous Radioactive Materials Sources

The objective of this specification is to assure that leakage from byproduct, source and special nuclear material sources does not exceed allowable limits. The limitations on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39(c) limits for plutonium.

6.5 PLANT OPERATING RECORDS

- A. records and/or logs relative to the following items shall be kept in a manner convenient for review and shall be retained for at least 5 years:
1. records of normal plant operation, including power levels and periods of operation at each power level;
 2. records of principal maintenance and activities, including inspection and repair, regarding principal items of equipment pertaining to nuclear safety;
 3. records and reports of reportable and safety limit occurrences;
 4. records and periodic checks, inspection and/or calibrations performed to verify that the surveillance requirements (see Section 4 of these specifications) are being met (all equipment failing to meet surveillance requirements and the corrective action taken shall be recorded);
 5. records of changes made to the equipment or reviews of tests and experiments to comply with 10 CFR 50.59.
 6. records of radioactive shipments;
 7. records of physic tests and other tests pertaining to nuclear safety;
 8. records of changes to operating procedures;
 9. shift engineers' logs; and
 10. byproduct material inventory records and source leak test results.
- B. Records and/or logs relative to the following items shall be recorded in a manner convenient for review and shall be retained for the life of the plant:
1. substitution or replacement of principal items of equipment pertaining to nuclear safety;
 2. changes made to the plant as it is described in the SAR;
 3. records of new and spent fuel inventory and assembly histories;
 4. updated, corrected, and as-built drawings of the plant;
 5. records of plant radiation and contamination surveys;
 6. records of offsite environmental monitoring surveys;
 7. records of radiation exposure for all plant personnel, including all contractors and visitors to the plant, in accordance with 10 CFR 20;
 8. records of radioactivity in liquid and gaseous wastes released to the environment;
 9. records of transient or operational cycling for those components that have been designed to operate safely for a limited number of transient or operational cycles;
 10. records of individual staff members indicating qualifications, experience, training, and retraining;
 11. inservice inspections of the reactor coolant system; and
 12. minutes of meetings and results of reviews and audits performed by the offsite and onsite review and audit functions.

QUAD-CITIES
DPR-30

TABLE 6.6-1

SPECIAL REPORTS

Area	Specification Reference	Submittal Date
a. Secondary containment leak rate test (2)	4.7.C	Upon completion of each test.
b. Summary status of fuel performance	1.1 Bases	After each refueling outage starting with second refueling outage.
c. Primary coolant leakage to drywell	4.6.D Bases	2 years (2)
d. Inservice inspection evaluation	Table 4.6-1	5 years (2)
e. Materials radiation surveillance specimens	4.6.B.2	After each specimen removal and completion of analyses.
f. Evaluation of EGC operation	3.3.F Bases	Upon completion of initial testing.
g. Radioactive Source Leak Testing (3)	3.8.H	Annual Report

Notes

1. Each integrated leak rate test of the secondary containment shall be the subject of a summary technical report. This report should include data on the wind speed, wind direction, outside and inside temperatures during the test, concurrent reactor building pressure, and emergency ventilation flow rate. The report shall also include analyses and interpretations of those data which demonstrate compliance with the specified leak rate limits.
2. The report shall be submitted within the period of time listed based on the commercial service date as the starting point.
3. This report is required only if the tests reveal the presence of 0.005 microcuries or more of removable contamination.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NOS. 38 AND 36 TO

FACILITY LICENSE NOS. DPR-29 AND DPR-30

COMMONWEALTH EDISON COMPANY

QUAD CITIES NUCLEAR POWER STATION UNIT NOS. 1 AND 2

DOCKET NOS. 50-254 AND 50-265

INTRODUCTION

By letter dated September 17, 1975, Commonwealth Edison Company (CECo) requested an amendment to Facility Operating Licenses DPR-29 and DPR-30 for the Quad Cities Nuclear Power Station Unit Nos. 1 and 2. The proposed changes involve revision of those parts of the facility operating licenses which relate to the receipt, possession and use of byproduct, source and special nuclear material.

In support of the proposed license amendments, the September 17, 1975 CECo letter: a. proposed technical specification changes which (1) provide for leakage testing of miscellaneous radioactive materials sources, (2) establish surveillance requirements for leakage tests, and (3) require retention of leakage test results, and b. updated the Radioactive Materials Safety information for the Quad Cities Nuclear Power Station. The updated information is contained in Quad Cities Station Special Report No. 17, "Radioactive Material Safety", dated June 1975.

Certain modifications to the proposed specifications and license provisions are required to meet regulatory requirements. These modifications have been discussed with and agreed to by the licensee's staff.

DISCUSSION

By letter dated January 24, 1975, we requested that nuclear power facility licensees provide: (1) proposed amendments to the conditions of existing facility operating licenses which relate to the receipt, possession and use of byproduct, source and special nuclear materials; (2) proposed technical specification changes which provide for leakage testing and the related surveillance and reporting requirements for miscellaneous radioactive material sources; and (3) FSAR revisions to include information described in Regulatory Guide 1.70.3, "Additional Information, Radioactive Materials Safety for Nuclear Power Plants", of February, 1974.

The objective of the request made in our letter of January 24, 1975, was to add flexibility to the operation of nuclear power plants by establishing a more generalized approach to the licensing of byproduct, source and special nuclear materials. This objective would reduce the number of licensing actions required as a result of changes in possession limits of related materials. To assure that adequate safeguards are maintained within the framework of this more generalized approach, provisions for more stringent control, accountability and leakage testing of byproduct, source and special nuclear materials were included.

CECo's letter of September 17, 1975, was submitted in response to our January 24, 1975 letter.

EVALUATION

Generalized License Provisions and Associated Technical Specification Changes

The proposed technical specification changes, the Final Safety Analysis Reports and Quad Cities Station Special Report No. 17 (June 1975) have been reviewed by the NRC staff with particular attention to the Radioactive Materials Safety program. We have evaluated the personnel qualifications, facilities, equipment and procedures for handling byproduct, source and special nuclear materials, as described in the Final Safety Analysis Report, and the licensee's September 17, 1975 submittal, and we conclude that they are consistent with the provisions of Regulatory Guide 1.70.3, February 1974 and therefore are acceptable.

Based on our review of the proposed changes to the technical specifications, as modified, we conclude that the changes provide reasonable assurance that the leakage from radioactive material sources would not exceed allowable limits. We further conclude that the proposed license amendments, as modified, the associated proposed technical specification changes, as modified, and the Final Safety Analysis Report are acceptable in that they:

- a. Comply with the guidance and intent of our letter of January 24, 1975, and present NRC staff requirements;
- b. Assure that the amount of reactor fuel which can be received, used and possessed is limited by the onsite fuel storage capacity and the requirements for reactor operation which have been approved previously by the NRC staff and which are described in the Final Safety Analysis Report for Quad Cities Station Unit Nos. 1 and 2;

- c. Provide reasonable assurance that byproduct, source and special nuclear materials would be stored, used and accounted for in a manner which meets the applicable radiation protection provisions of 10 CFR Parts 20, 30, 40 and 70.

ENVIRONMENTAL CONSIDERATION

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.

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 accidents previously considered and do not involve a significant decrease in a safety margin, 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 these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: February 3, 1977

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NOS. 50-254 AND 50-265

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

NOTICE OF ISSUANCE OF AMENDMENTS TO FACILITY
OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment Nos. 38 and 36 to Facility Operating License Nos. DPR-29 and DPR-30, issued to Commonwealth Edison Company (acting for itself and on behalf of the Iowa-Illinois Gas and Electric Company), which revised technical specifications for operation of the Quad Cities Station Unit Nos. 1 and 2 (the facilities) located in Rock Island County, Illinois. The amendments are effective as of their date of issuance.

The amendments revised those portions of the license and the appended technical specifications for the facilities relating to the receipt, possession and use of byproduct, source and special nuclear materials by quantitative limits (except plutonium fuel).

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 amendment dated September 17, 1975, (2) Amendment No. 38 to License No. DPR-29, (3) Amendment No. 36 to License No. DPR-30, and (4) the Commission's concurrently issued 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 Liberty Street, Moline, Illinois 60625. A single copy of items (2), (3) and (4) 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 third day of February, 1977.

FOR THE NUCLEAR REGULATORY COMMISSION



Richard D. Silver, Acting Chief
Operating Reactors Branch #2
Division of Operating Reactors