May 30, 1995

Mr. D. L. Farrar
Manager, Nuclear Regulatory Services
Commonwealth Edison Company
Executive Towers West III
1400 Opus Place, Suite 500
Downers Grove, IL 60515

SUBJECT: ISSUANCE OF AMENDMENTS (TAC NOS. M92033 AND M92034)

Dear Mr. Farrar:

The U.S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 153 to Facility Operating License No. DPR-29 and Amendment No. 149 to Facility Operating License No. DPR-30 for the Quad Cities Nuclear Power Station, Units 1 and 2, respectively. The amendments are in response to your application dated April 10, 1995.

The amendments would change the Technical Specifications by (1) revising the low pressure value at which the High Pressure Coolant Injection (HPCI) and Reactor Core Isolation Cooling (RCIC) systems can be tested to 150 psig, and (2) testing these systems against a system head corresponding to reactor vessel pressure when steam is supplied to the turbines at 920 psig to 1005 psig for high pressure testing and 150 psig to 325 psig for low pressure testing.

A copy of the related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Original signed by:

Robert M. Pulsifer, Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Docket Nos. 50-254 and 50-265

Enclosures: 1. Amendment No. 153 to DPR-29
2. Amendment No. 149 to DPR-30
3. Safety Evaluation

cc w/encl: see next page

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cc:

Mr. Stephen E. Shelton
Vice President
Iowa-Illinois Gas and
Electric Company
P. O. Box 4350
Davenport, Iowa 52808

Michael I. Miller, Esquire
Sidley and Austin
One First National Plaza
Chicago, Illinois 60603

Mr. L. William Pearce
Station Manager
Quad Cities Nuclear Power Station
22710 206th Avenue North
Cordova, Illinois 61242

U.S. Nuclear Regulatory Commission
Quad Cities Resident Inspectors Office
22712 206th Avenue North
Cordova, Illinois 61242

Chairman
Rock Island County Board
of Supervisors
1504 3rd Avenue
Rock Island County Office Bldg.
Rock Island, Illinois 61201

Illinois Department of Nuclear Safety
Office of Nuclear Facility Safety
1035 Outer Park Drive
Springfield, Illinois 62704

Regional Administrator
U.S. NRC, Region III
801 Warrenville Road
Lisle, Illinois 60532-4351

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

DOCKET NO. 50-254

QUAD CITIES NUCLEAR POWER STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 153
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 April 10, 1995, 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 3.B. of Facility Operating License No. DPR-29 is hereby amended to read as follows:

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B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 153, 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 and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert M. Pulsifer, Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 30, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 153

FACILITY OPERATING LICENSE NO. DPR-29

DOCKET NO. 50-254

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the attached pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change.

REMOVE	INSERT
3.5/4.5-5	3.5/4.5-5
3.5/4.5-6	3.5/4.5-6
3.5/4.5-7	3.5/4.5-7
3.5/4.5-8	3.5/4.5-8
3.5/4.5-23	3.5/4.5-23
3.5/4.5-24	3.5/4.5-24

4. Containment cooling spray loops are required to be operable when the reactor water temperature is greater than 212°F and prior to reactor startup from a cold condition. Continued reactor operation is permitted provided that a maximum of one drywell spray loop may be inoperable for 30 days when the reactor water temperature is greater than 212°F.

5. If the requirements of 3.5.B cannot be met, an orderly shutdown shall be initiated, and the reactor shall be in a cold shutdown condition within 24 hours.

C. HPCI Subsystem

1. The HPCI subsystem shall be operable whenever the reactor pressure is greater than 150 psig and fuel is in the reactor vessel.

2. During startup following a refuel outage or an outage in which work was performed that directly affects HPCI system operability, if the testing requirements of 4.5.C.3.a cannot be met, continued reactor startup is not permitted. The HPCI subsystem shall be declared inoperable, and the provisions of Specification 3.5.C.4 shall be implemented.

3. Except for the limitation of 3.5.C.2, if the HPCI subsystem is made or found to be inoperable, continued reactor operation is permissible only during the succeeding 14 days unless such subsystem is sooner made operable, provided that during such 14 days the automatic pressure relief subsystems, the core spray subsystems, LPCI mode of the RHR system and the RCIC system are operable. Otherwise, the provision of Specification 3.5.C.4 shall be implemented.

2. During each 5-year period, an air test shall be performed on the drywell spray headers and nozzles and a water spray test performed on the torus spray header and nozzles.

C. HPCI Subsystem

Surveillance of HPCI subsystem shall be performed as specified below with the following limitations. For item 4.5.C.3, the plant is allowed 12 hours in which to successfully complete the test once reactor vessel pressure is adequate to perform each test. In addition the testing required by item 4.5.C.3.a shall be completed prior to exceeding 325 psig reactor vessel pressure. If HPCI is made inoperable to perform overspeed testing, 24 hours is allowed to complete the tests before exceeding 325 psig.

	Item	Frequency
1.	Valve Position	Every 31 days
2.	Flow Rate Test- HPCI pump shall deliver at least 5000 gpm against a system head corresponding to reactor vessel pressure when steam is being supplied to the turbine at 920 to 1005 psig.	Every 92 days

3. Flow Rate Test - HPCI pump shall deliver at least 5000 gpm against a system head corresponding to reactor vessel pressure: a. when steam is being supplied to the turbine at 150 to 325 psig, and b. when steam is being supplied to the turbine at 920 to 1005 psig.	During startup following a refuel outage or an outage in which work was performed that directly affects HPCI system operability.
4. Simulated Automatic Actuation Test	Each refueling outage
5. Logic System Functional Test	Each refueling outage.

4. If the requirements of Specification 3.5.C.1, 3.5.C.2 or 3.5.C.3 cannot be met, an orderly shutdown shall be initiated, and the reactor pressure shall be reduced to <150 psig within 24 hours.

D. Automatic Pressure Relief Subsystems

1. The automatic pressure relief subsystem shall be operable whenever the reactor pressure is greater than 90 psig, irradiated fuel is in the reactor vessel and prior to reactor startup from a cold condition.

2. From and after the date that two of the five relief valves of the automatic pressure relief subsystem are made or found to be inoperable when the reactor is pressurized above 90 psig with irradiated fuel in the reactor vessel, reactor operation is permissible only during the succeeding 7 days unless repairs are made and provided that during such time the HPCI subsystem is operable.

D. Automatic Pressure Relief Subsystems

Surveillance of the automatic pressure relief subsystem shall be performed as follows:

1. The following surveillance shall be carried out on a six-month surveillance interval:

   a. With the reactor at pressure each relief valve shall be manually opened. Relief valve opening shall be verified by a compensating turbine bypass valve or control valve closure.

2. A logic system functional test shall be performed each refueling outage.

3. If the requirements of Specification 3.5.D cannot be met, an orderly shutdown shall be initiated and the reactor pressure shall be reduced to 90 psig within 24 hours.

3. A simulated automatic initiation which opens all pilot valves shall be performed each refueling outage.

4. When it is determined that two valves of the automatic pressure relief subsystem are inoperable, the HPCI shall be demonstrated to be operable immediately.

E. Reactor Core Isolation Cooling System

1. The RCIC system will be operable whenever the reactor pressure is greater than 150 psig and fuel is in the reactor vessel.

2. During startup following a refuel outage or an outage in which work was performed that directly affects the RCIC system operability, if the testing requirements of 4.5.E.3.a cannot be met, continued reactor startup is not permitted. The RCIC system shall be declared inoperable, and the provisions of Specification 3.5.E.4 shall be implemented.

E. Reactor Core Isolation Cooling System

Surveillance of the RCIC system shall be performed as specified below with the following limitations. For item 4.5.E.3, the plant is allowed 12 hours in which to successfully complete the test once reactor vessel pressure is adequate to perform each test. In addition, the testing required by item 4.5.E.3.a shall be completed prior to exceeding 325 psig reactor vessel pressure. If RCIC is made inoperable to perform overspeed testing, 24 hours is allowed to complete the tests before exceeding 325 psig.

Item	Frequency
1. Valve Position	Every 31 days
2. Flow Rate Test - RCIC pump shall deliver at least 400 gpm against a system head corresponding to reactor vessel pressure when steam is being supplied to the turbine at 920 to 1005 psig.	Every 92 days

3. Except for the limitations of 3.5.E.2, if the RCIC system is made or found to be inoperable, continued reactor operation is permissible only during the succeeding 14 days unless such system is sooner made operable, provided that during such 14 days the HPCI system is operable. Otherwise, the provisions of Specification 3.5.E.4 shall be implemented.

4. If the requirements of Specification 3.5.E.1, 3.5.E.2, or 3.5.E.3 cannot be met, an orderly shutdown shall be initiated and the reactor pressure shall be reduced to <150 psig within 24 hours.

F. Minimum Core and Containment Cooling System Availability

1. Any combination of inoperable components in the core and containment cooling systems shall not defeat the capability of the remaining operable components to fulfill the core and containment cooling functions.

2. When irradiated fuel is in the reactor vessel and the reactor is in the cold shutdown condition, all low-pressure core and containment cooling systems may be inoperable provided no work is being done which has the potential for draining the reactor vessel.

3.	Flow Rate Test - RCIC pump shall deliver at least 400 gpm against a system head corresponding to reactor vessel pressure: a. when steam is being supplied to the turbine at 150 to 325 psig, and b. when steam is being supplied to the turbine at 920 to 1005 psig.	During startup following a refuel outage or an outage in which work was performed that directly affects RCIC system operability.
4.	Simulated Automatic Actuation Test	Each refueling outage
5.	Logic System Functional Test	Each refueling outage

F. Minimum Core and Containment Cooling System Availability

Surveillance requirements to assure that minimum core and containment cooling systems are available have been specified in Specification 4.2.B.

4.5 SURVEILLANCE REQUIREMENTS BASES

The testing interval for the core and containment cooling systems is based on a quantitative reliability analysis, judgment, and practicality. The core cooling systems have not been designed to be fully testable during operation. For example, the core spray final admission valves do not open until reactor pressure has fallen to 350 psig. Thus, during operation, even if high drywell pressure were simulated, the final valves would not open. In the case of the HPCI, automatic initiation during power operation would result in pumping cold water into the reactor vessel which is not desirable.

With a system, subsystem, loop or equipment out of service, overall core and containment cooling reliability is maintained by verifying the operability of the remaining systems, subsystems, loops or equipment. The verification of operability, as used in this context, for the remaining cooling systems means to administratively check by examining logs or other information to verify that the remaining systems are not out of service for maintenance or other reasons. It does not mean to perform the surveillance requirements needed to demonstrate the operability of the remaining systems. However, if a failure, design deficiency, etc., causes the out-of-service period, then the verification of operability should be thorough enough to assure that a similar problem does not exist on the remaining systems. For example, if an out-of-service period is caused by failure of a pump to deliver rated capacity due to a design deficiency, the other pumps of this type might be subjected to a flow rate test.

The surveillance requirements bases in this paragraph apply to all core and containment cooling systems except HPCI and RCIC. The systems can be automatically actuated during a refueling outage and this will be done. To increase the availability of the individual components of the core and containment cooling systems, the components which make up the system, i.e., instrumentation, pumps, valve operators, etc., are tested more frequently. The instrumentation is functionally tested each month. Likewise the pumps and motor-operated valves are also tested each month to assure their operability. The combination of a yearly simulated automatic actuation test and monthly tests of the pumps and valve operators is deemed to be adequate testing of these systems.

The surveillance requirements bases described in this paragraph apply only to the HPCI and RCIC systems. Following a refueling outage or an outage in which work was performed that directly affects system operability, the HPCI and RCIC pumps are flow rate tested against a system head corresponding to reactor vessel pressure, corrected for injection line losses, when steam is being supplied to the turbine at 150 to 325 psig, and again when steam is being supplied to the turbine at 920 to 1005 psig (rated reactor steam pressure). This combination of testing provides adequate assurance of pump performance throughout the range of reactor pressure at which it is required to operate. The low pressure limit is selected to allow testing at a point of stable plant operation and also to provide overlap with low pressure ECC systems. A time limit is provided in which to perform the required tests during startup. This time limit is considered adequate to allow stable plant conditions to be achieved and the required tests to be performed. Flow rate testing of the HPCI and RCIC pumps is also conducted every 92 days against a system head corresponding to reactor vessel

pressure, corrected for injection line losses, when steam is being supplied to the turbine at 920 to 1005 psig (rated reactor steam pressure), to demonstrate system operability in accordance with the LCO provisions and to meet inservice testing requirements for the HPCI system. Applicable valves are tested in accordance with the provisions of the inservice testing program. In addition, monthly checks are made on the position of each manual, power operated or automatic valve installed in the direct flowpath of the suction or discharge of the pump or turbine that is not locked, sealed, or otherwise secured in position. At each refueling outage, a logic system functional test and a simulated automatic actuation test is performed on the HPCI and RCIC systems. The tests and checks described above are considered adequate to assure system operability.

The verification of the main steam relief valve operability during manual actuation surveillance testing must be made independent of temperatures indicated by thermocouples downstream of the relief valves. It has been found that a temperature increase may result with the valve still closed. This is due to steam being vented through the pilot valves during the surveillance test. By first opening a turbine bypass valve, and then observing its closure response during relief valve actuation, positive verification can be made for the relief valve opening and passing steam flow. Closure response of the turbine control valves during relief valve manual actuation would likewise serve as an adequate verification for the relief valve opening. This test method may be performed over a wide range of reactor pressures greater than 150 psig. Valve operation below 150 psig is limited by the spring tension exhibited by the relief valves.

The surveillance requirements to ensure that the discharge piping of the core spray, LPCI mode of the RHR, HPCI, and RCIC systems is filled provides for a visual observation that water flows from a high point vent. This ensures that the line is in a full condition.

Instrumentation has been provided on core spray and LPCI mode of RHR to monitor the pressure of water in the discharge piping between the monthly intervals at which the lines are vented and alarm the control room if the pressure is inadequate. This instrumentation will be calibrated on the same frequency as the safety system instrumentation and the alarm system tested monthly. This testing ensures that, during the interval between the monthly venting checks, the status of the discharge piping is monitored on a continuous basis. An alarm point of 40 psig for the low pressure of the fill system has been chosen because, due to elevations of piping within the plant, 39 psig is required to keep the lines full. The shutoff head of the fill system pumps is less than 90 psig and therefore will not defeat the low-pressure cooling pump discharge pressure interlock of 100 psig as shown in Table 3.2-2. A margin of 10 psig is provided by the high pressure alarm point of 90 psig.

HPCI and RCIC systems normally take a suction from the Contaminated Condensate Storage Tanks (CCSTs). The level in the CCST's is maintained at or above

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

DOCKET NO. 50-265

QUAD CITIES NUCLEAR POWER STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 149
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 10, 1995, 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 3.B. of Facility Operating 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. 149 , 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 and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert M. Pulsifer, Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 30, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 149

FACILITY OPERATING LICENSE NO. DPR-30

DOCKET NO. 50-265

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the attached pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change.

REMOVE	INSERT
3.5/4.5-4a	3.5/4.5-4a
3.5/4.5-6	3.5/4.5-6
3.5/4.5-15	3.5/4.5-15

C. HPCI Subsystem

1. The HPCI subsystem shall be operable whenever the reactor pressure is greater than 150 psig and fuel is in the reactor vessel.

2. During startup following a refuel outage or an outage in which work was performed that directly affects HPCI system operability, if the testing requirements of 4.5.C.3.a cannot be met, continued reactor startup is not permitted. The HPCI subsystem shall be declared inoperable, and the provisions of Specification 3.5.C.4 shall be implemented.

3. Except for the limitations of 3.5.C.2, if the HPCI subsystem is made or found to be inoperable, continued reactor operation is permissible only during the succeeding 14 days unless such subsystem is sooner made operable, provided that during such 14 days the automatic pressure relief subsystem, the core spray subsystems, LPCI mode of the RHR system, and the RCIC system are operable. Otherwise, the provisions of Specification 3.5.C.4 shall be implemented.

4. If the requirements of Specification 3.5.C.1, 3.5.C.2 or 3.5.C.3 cannot be met, an orderly shutdown shall be initiated, and the reactor pressure shall be reduced to <150 psig within 24 hours.

C. HPCI Subsystem

Surveillance of the HPCI subsystem shall be performed as specified below with the following limitations. For item 4.5.C.3. the plant is allowed 12 hours in which to successfully complete the test once reactor pressure is adequate to perform each test. In addition, the testing required by item 4.5.C.3.a shall be completed prior to exceeding 325 psig reactor vessel pressure. If HPCI is made inoperable to perform overspeed testing, 24 hours is allowed to complete the tests before exceeding 325 psig.

	Item	Frequency
1.	Valve Position	Every 31 days
2.	Flow Rate Test - HPCI pump shall deliver at least 5000 gpm against a system head corresponding to reactor vessel pressure when steam is being supplied to the turbine at 920 to 1005 psig.	Every 92 days
3.	Flow Rate Test - HPCI pump shall deliver at least 5000 gpm against a system head corresponding to reactor vessel pressure: a. When steam is being supplied to the turbine at 150 to 325 psig, and b. When steam is being supplied to the turbine at 920 to 1005 psig.	During startup following a refueling outage or an outage in which work was performed that directly affects HPCI system operability.
4.	Simulated Automatic Actuation Test	Each refueling outage
5.	Logic System Functional Test	Each refueling outage

E. Reactor Core Isolation Cooling System

1. The RCIC system will be operable whenever the reactor pressure is greater than 150 psig and fuel is in the reactor vessel.

2. During startup following a refuel outage or an outage in which work was performed that directly affects RCIC system operability, if the testing requirements of 4.5.E.3.a cannot be met, continued reactor startup is not permitted. The RCIC system shall be declared inoperable, and the provisions of Specification 3.5.E.4 shall be implemented.

3. Except for the limitations of 3.5.E.2, if the RCIC system is made or found to be inoperable, continued reactor operation is permitted only during the succeeding 14 days unless such system is sooner made operable, provided that during such 14 days the HPCI system is operable. Otherwise, the provisions of Specification 3.5.E.4 shall be implemented.

4. If the requirements of Specification 3.5.E.1, 3.5.E.2 or 3.5.E.3 cannot be met, an orderly shutdown shall be initiated and the reactor pressure shall be reduced to <150 psig within 24 hours.

E. Reactor Core Isolation Cooling System

Surveillance of the RCIC system shall be performed as specified below with the following limitations. For item 4.5.E.3. the plant is allowed 12 hours in which to successfully complete the test once reactor vessel pressure is adequate to perform each test. In addition, the testing required by item 4.5.E.3.a shall be completed prior to exceeding 325 psig reactor vessel pressure. If RCIC is made inoperable to perform overspeed testing, 24 hours is allowed to complete the tests before exceeding 325 psig.

	Item	Frequency
1.	Valve Position	Every 31 days
2.	Flow Rate Test - RCIC pump shall deliver at least 400 gpm against a system head corresponding to reactor vessel pressure when steam is being supplied to the turbine at 920 to 1005 psig.	Every 92 days
3.	Flow Rate Test - RCIC pump shall deliver at least 400 gpm against a system head corresponding to reactor vessel pressure: a. When steam is being supplied to the turbine at 150 to 325 psig, and b. When steam is being supplied to the turbine at 920 to 1005 psig.	During startup following a refuel outage or an outage in which work was performed that directly affects RCIC system operability.
4.	Simulated Automatic Actuation Test	Each refueling outage
5.	Logic System Functional Test	Each refueling outage

4.5 SURVEILLANCE REQUIREMENTS BASES

The testing interval for the core and containment cooling systems is based on a quantitative reliability analysis, judgment, and practicality. The core cooling systems have not been designed to be fully testable during operation. For example, the core spray final admission valves do not open until reactor pressure has fallen to 350 psig. Thus, during operation, even if high drywell pressure were simulated, the final valves would not open. In the case of the HPCI, automatic initiation during power operation would result in pumping cold water into the reactor vessel, which is not desirable.

With a system, subsystem, loop or equipment out of service, overall core and containment cooling reliability is maintained by verifying the operability of the remaining systems, subsystems, loops, or equipment. The verification of operability, as used in this context for the remaining cooling systems means to administratively check by examining logs or other information to verify that the remaining systems are not out of service for maintenance or other reasons. It does not mean to perform the surveillance requirements needed to demonstrate the operability of the remaining systems. However, if a failure, design deficiency, etc., causes the out-of-service period, then the verification of operability should be thorough enough to assure that a similar problem does not exist on the remaining systems. For example, if an out-of-service period is caused by failure of a pump to deliver rated capacity due to a design deficiency, the other pumps of this type might be subjected to a flow rate test.

The surveillance requirements bases in this paragraph apply to all core and containment cooling systems except HPCI and RCIC. The systems can be automatically actuated during a refueling outage and this will be done. To increase the availability of the individual components of the core and containment cooling systems, the components which make up the system, i.e., instrumentation, pumps, valve operators, etc., are tested more frequently. The instrumentation is functionally tested each month. Likewise the pumps and motor-operated valves are also tested each month to assure their operability. The combination of a yearly simulated automatic actuation test and monthly tests of the pumps and valve operators is deemed to be adequate testing of these systems.

The surveillance requirements bases described in this paragraph apply only to the HPCI and RCIC systems. Following a refueling outage or an outage in which work was performed that directly affects system operability, the HPCI and RCIC pumps are flow rate tested against a system head corresponding to reactor vessel pressure, corrected for injection line losses, when steam is being supplied to the turbine at 150 to 325 psig, and again when steam is being supplied to the turbine at 920 to 1005 psig (rated reactor steam pressure). This combination of testing provides adequate assurance of pump performance throughout the range of reactor pressures at which it is required to operate. The low pressure limit is selected to allow testing at a point of stable plant operation and also to provide overlap with low pressure ECC systems. A time limit is provided in which to perform the required tests during startup. This time limit is considered adequate to allow stable plant conditions to be achieved and the required tests to be performed. Flow rate testing of the HPCI and RCIC pumps is also conducted every 92 days against a system head corresponding to reactor vessel pressure, corrected for injection line losses, when steam is being supplied to the turbine at 920 to 1005 psig (rated reactor steam pressure), to demonstrate system operability in accordance with the LCO provisions and to meet inservice testing requirements for the HPCI system. Applicable valves are tested in accordance with the provisions of the inservice testing program. In addition, monthly checks are made on the position of each manual, power operated or automatic valve installed in the direct flowpath of the suction or discharge of the pump or turbine that is not locked, sealed, or otherwise secured in position. At each refueling outage, a logic system functional test and a simulated automatic actuation test is performed on the HPCI and RCIC systems. The tests and checks described above are considered adequate to assure system operability.

The verification of the main steam relief valve operability during manual actuation surveillance testing must be made independent of temperatures indicated by thermocouples downstream of the relief valves. It has been found that a temperature increase may result with the valve still closed. This is due to steam being vented through the pilot valves during the surveillance test. By

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 153 TO FACILITY OPERATING LICENSE NO. DPR-29

AND AMENDMENT NO. 149 TO FACILITY OPERATING LICENSE NO. DPR-30

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2

DOCKET NOS. 50-254 AND 50-265

1.0 INTRODUCTION

By letter dated April 10, 1995, Commonwealth Edison Company (ComEd, the licensee), proposed changes to revise the High Pressure Coolant Injection (HPCI) and Reactor Core Isolation Cooling (RCIC) flow rate test surveillances to be more consistent with the BWR Standard Technical Specifications (STS) guidelines in format and nomenclature. The proposal also revises the low pressure value at which these systems are tested following a refueling outage or an outage in which work was performed that directly affected system operability to a value consistent with the operability requirements of the systems.

2.0 EVALUATION

Quad Cities Technical Specifications (TS) (sections 3.5.C.1 for HPCI and 3.5.E.1 for RCIC) currently require the HPCI and RCIC systems to be operable whenever the reactor pressure is greater than 150 psig and fuel is in the reactor vessel. However, the current TS (4.5.C.3 and 4.5.E.3 for HPCI and RCIC, respectively) also require that the test be accomplished at a system head corresponding to a reactor pressure of 300 psig or greater when steam is being supplied to the turbine at 250 to 325 psig.

The current TS also require that rated flow must be delivered when system head corresponds to reactor pressure of 1150 psig or greater and when steam is supplied to the turbine at 920 to 1005 psig. The BWR STS (NUREG 1433) guidelines do not include a specific value of pressure, but state that the rated flow shall be delivered against a system head corresponding to reactor vessel pressure. Commonwealth Edison Company has identified that this value of 1150 psig is greater than the rated reactor pressure of 1000 psig and that this testing has been associated with accelerated wear on the HPCI and RCIC mechanical components.

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This amendment change will eliminate the stated value for reactor vessel pressure of ≥ 300 psig for low reactor vessel pressure testing and ≥ 1150 psig for high reactor vessel pressure testing and, thus, will be consistent with the STS guidelines where the flow rate test shall deliver the rated flow against a system head corresponding to reactor vessel pressure. This amendment would also assure the testing of these turbines in the full range in which they are to be operable by lowering the pressure requirement for the steam being supplied to the turbines from 250 psig to 150 psig.

Both of these changes would still assure that the HPCI and RCIC systems deliver a flow rate of 5000 gpm and 400 gpm, respectively, when tested against a system head corresponding to reactor vessel pressure, when steam is supplied to the turbines at 920 psig to 1005 psig for the high pressure test and 150 psig to 325 psig for the low pressure test.

The 12-hour time limit to perform the test after a refueling outage or an outage in which work was performed that directly affects the system operability was retained from the current TS.

Editorial changes were made on page 3.5/4.5-23 for DPR-29 and page 3.5/4.5-15 for DPR-30 to make them consistent.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Illinois State official was notified of the proposed issuance of the amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change surveillance requirements. The NRC staff has determined that the amendments involve 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 amendments involve no significant hazards consideration, and there has been no public comment on such finding (60 FR 21009). Accordingly, the amendments meet 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 amendments.

5.0 CONCLUSION

The Commission 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Robert M. Pulsifer

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