



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

April 1, 2010

Mr. Charles G. Pardee
President and Chief Nuclear Officer
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: DRESDEN NUCLEAR POWER STATION (DNPS), UNITS 2 AND 3, AND QUAD CITIES NUCLEAR POWER STATION (QCNPS), UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS RE: REACTOR COOLANT SYSTEM (RCS) LEAKAGE DETECTION INSTRUMENTATION AND CORE OPERATING LIMITS REPORT CHANGES (TAC NOS. ME1053 THRU ME1056)

Dear Mr. Pardee:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 234 to Renewed Facility Operating License No. DPR-19 and Amendment No. 227 to Renewed Facility Operating License No. DPR-25 for DNPS, Units 2 and 3, and Amendment No. 246 to Renewed Facility Operating License No. DPR-29 and Amendment No. 241 to Renewed Facility Operating License No. DPR-30 for QCNPS, Units 1 and 2, respectively. The amendments are in response to your application dated April 7, 2009, as supplemented by letter dated October 5, 2009.

The amendments delete a footnote from DNPS Technical Specification (TS) 3.4.5, "RCS Leakage Detection Instrumentation," that was incorporated as part of a limited duration emergency license amendment in August 2008, and is no longer applicable. The amendments also correct errors in the titles of analytical methods in DNPS and QCNPS TS 5.6.5, "Core Operating Limits Report (COLR)," paragraph b. The proposed changes delete historical analytical methods from DNPS and QCNPS TS 5.6.5.b that are no longer applicable, and renumber the remaining analytical methods.

Mr. C. Pardee

- 2 -

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

Sincerely,

A handwritten signature in black ink, appearing to read "Christopher Gratton". The signature is fluid and cursive, with the first name being more prominent.

Christopher Gratton, Senior Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-237, 50-249, 50-254, and 50-265

Enclosures:

1. Amendment No. 234 to DPR-19
2. Amendment No. 227 to DPR-25
3. Amendment No. 246 to DPR-29
4. Amendment No. 241 to DPR-30
5. Safety Evaluation

cc w/encls: Distribution via Listserv



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

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-237

DRESDEN NUCLEAR POWER STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 234
Renewed License No. DPR-19

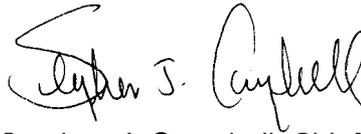
1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Exelon Generation Company, LLC (the licensee) dated April 7, 2009, as supplemented by letter dated October 5, 2009, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Renewed Facility Operating License No. DPR-19 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 234 , are hereby incorporated into the renewed operating 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 30 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Stephen J. Campbell, Chief
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications and Renewed Facility Operating License

Date of Issuance: April 1, 2010



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

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-249

DRESDEN NUCLEAR POWER STATION, UNIT 3

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 227
Renewed License No. DPR-25

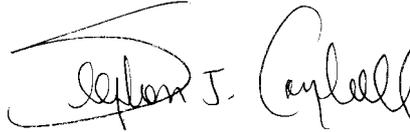
1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Exelon Generation Company, LLC (the licensee) dated April 7, 2009, as supplemented by letter dated October 5, 2009, complies with the standards and requirements of the Atomic Energy Act 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 Renewed Facility Operating License No. DPR-25 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 227 , are hereby incorporated into the renewed operating 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 30 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read "Stephen J. Campbell". The signature is written in a cursive style with a large, sweeping initial "S".

Stephen J. Campbell, Chief
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications and Renewed Facility Operating License

Date of Issuance: April 1, 2010

ATTACHMENT TO LICENSE AMENDMENT NOS. 234 AND 227

RENEWED FACILITY OPERATING LICENSE NOS. DPR-19 AND DPR-25

DOCKET NOS. 50-237 AND 50-249

Replace the following pages of the Renewed Facility Operating Licenses and Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by number and contain marginal lines indicating the areas of change.

Remove

License DPR-19

Page 3

Page 5

License DPR-25

Page 4

Page 6

TSs

3.4.5-1

3.4.5-2

5.6-3

5.6-4

5.6-5

Insert

License DPR-19

Page 3

Page 5

License DPR-25

Page 4

Page 6

TSs

3.4.5-1

3.4.5-2

5.6-3

5.6-4

- -

- (2) Exelon Generation Company, LLC, pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear materials as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Updated Final Safety Analysis Report, as supplemented and amended;
- (3) Exelon Generation Company, LLC, 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 material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (4) Exelon Generation Company, LLC, 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 material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
- (5) Exelon Generation Company, LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproduct special nuclear materials as may be produced by the operation of the facility.

C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2957 megawatts thermal (100 percent rated power) in accordance with the conditions specified herein.

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 234 , are hereby incorporated into this renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications.

(3) Operation in the coastdown mode is permitted to 40% power.

(7) Additional Conditions

The Additional Conditions contained in Appendix B, as revised through Amendment No. 191, are hereby incorporated into this renewed operating license. The licensee shall operate the facility in accordance with the Additional Conditions.

(8) Deleted

(9) Deleted

(10) Exelon Generation Company, LLC shall provide the Director of the Office of Nuclear Reactor Regulation a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Exelon Generation Company, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Exelon Generation Company, LLC's consolidated net utility plant, as recorded on Exelon Generation Company, LLC's books of account.

(11) Exelon Generation Company, LLC shall have decommissioning trust funds for Dresden, Unit 2, in the following minimum amount, when Dresden, Unit 2, is transferred to Exelon Generation Company, LLC:

Dresden, Unit 2	\$288,233,336
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(12) The decommissioning trust agreement for Dresden, Unit 2, at the time the transfer of the unit to Exelon Generation Company, LLC is effected and thereafter, is subject to the following:

(a) The decommissioning trust agreement must be in a form acceptable to the NRC.

(b) With respect to the decommissioning trust fund, investments in the securities or other obligations of Exelon Corporation or affiliates thereof, or their successors or assigns are prohibited. Except for investments tied to market indexes or other non-nuclear sector mutual funds, investments in any entity owning one or more nuclear power plants are prohibited.

f. Surveillance Requirement 4.9.A.10 - Diesel Storage Tank Cleaning
(Unit 3 and Unit 2/3 only)

Each of the above Surveillance Requirements shall be successfully demonstrated prior to entering into MODE 2 on the first plant startup following the fourteenth refueling outage (D3R14).

3. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations: 10 CFR Part 20, Section 30.34 of 10 CFR Part 30, Section 40.41 of 10 CFR Part 40, Sections 50.54 and 50.59 of 10 CFR Part 50, and Section 70.32 of 10 CFR Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

A. Maximum Power Level

The licensee is authorized to operate the facility at steady state power levels not in excess of 2957 megawatts (thermal), except that the licensee shall not operate the facility at power levels in excess of five (5) megawatts (thermal), until satisfactory completion of modifications and final testing of the station output transformer, the auto-depressurization interlock, and the feedwater system, as described in the licensee's telegrams; dated February 26, 1971, have been verified in writing by the Commission.

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 227, are hereby incorporated into this renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. Reports

The licensee shall make certain reports in accordance with the requirements of the Technical Specifications.

D. Records

The licensee shall keep facility operating records in accordance with the requirements of the Technical Specifications.

E. Restrictions

Operation in the coastdown mode is permitted to 40% power.

M. Deleted [Amdt. 85, 12-12-85]

N. By Amendment No. 144, the license is amended to allow, on a one time temporary basis, operation of Dresden, Unit 3, with the corner room structural steel members in the Low Pressure Coolant Injection Corner Rooms outside the Updated Final Safety Analysis Report (UFSAR) design parameters. Operation under these conditions is allowed up to and including the next scheduled refueling outage (D3R14).

The repairs to Dresden, Unit 3, corner room structural steel shall restore the steel design margins to the current UFSAR (updated through Revision 1A) design criteria. The design of the modifications to the Dresden, Unit 3, corner room structural steel members will be based on use of elastic section modulus and the structural steel stresses will be limited to 1.6 of the American Institute of Steel Construction (AISC allowables). The modifications to Dresden, Unit 3, corner room structural steel will be implemented during the upcoming D3R14 refueling outage.

During this interim period of operation, should vibratory ground motion exceeding the UFSAR Operating Basis Earthquake (OBE) design parameters, Dresden, Unit 3, will be shut down for inspection and will not start up without prior NRC approval.

O. Additional Conditions

The Additional Conditions contained in Appendix B, as revised through Amendment No. 185, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Additional Conditions.

P. Deleted

Q. Deleted

R. Exelon Generation Company, LLC shall provide the Director of the Office of Nuclear Reactor Regulation a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Exelon Generation Company, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Exelon Generation Company, LLC's consolidated net utility plant, as recorded on Exelon Generation Company, LLC's books of account.

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.5 RCS Leakage Detection Instrumentation

LC0 3.4.5 The following RCS leakage detection instrumentation shall be OPERABLE:

- a. Drywell floor drain sump monitoring system; and
- b. Primary containment atmospheric particulate sampling system.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Drywell floor drain sump monitoring system inoperable.	A.1 Restore drywell floor drain sump monitoring system to OPERABLE status.	24 hours
B. Primary containment atmospheric particulate sampling system inoperable.	B.1 Restore primary containment atmospheric particulate sampling system to OPERABLE status.	24 hours
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	12 hours
	<u>AND</u> C.2 Be in MODE 4.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.5.1	Perform primary containment atmospheric particulate sampling.	12 hours
SR 3.4.5.2	Perform a CHANNEL FUNCTIONAL TEST of drywell floor drain sump monitoring system instrumentation.	31 days
SR 3.4.5.3	Perform a CHANNEL CALIBRATION of drywell floor drain sump monitoring system instrumentation.	12 months

5.6 Reporting Requirements

5.6.5 CORE OPERATING LIMITS REPORT (COLR) (continued)

3. The LHGR for Specification 3.2.3.
 4. Control Rod Block Instrumentation Setpoint for the Rod Block Monitor–Upscale Function Allowable Value for Specification 3.3.2.1.
 5. The OPRM setpoints for the trip function for SR 3.3.1.3.3
- b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:
1. Commonwealth Edison Company Topical Report NFSR-0091, "Benchmark of CASMO/MICROBURN BWR Nuclear Design Methods."
 2. NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel."
 3. NEDO-32465-A, "Reactor Stability Detect and Suppress Solutions Licensing Basis Methodology for Reload Applications," August 1996.
 4. CENPD-300-P-A, "Reference Safety Report for Boiling Water Reactor Reload Fuel."
 5. WCAP-16081-P-A, "10x10 SVEA Fuel Critical Power Experiments and CPR Correlation: SVEA-96 Optima2."
 6. WCAP-15682-P-A, "Westinghouse BWR ECCS Evaluation Model: Supplement 2 to Code Description, Qualification and Application."
 7. WCAP-16078-P-A, "Westinghouse BWR ECCS Evaluation Model: Supplement 3 to Code Description, Qualification and Application to SVEA-96 Optima2 Fuel."
 8. WCAP-15836-P-A, "Fuel Rod Design Methods for Boiling Water Reactors - Supplement 1."

(continued)

5.6 Reporting Requirements

5.6.5 CORE OPERATING LIMITS REPORT (COLR) (continued)

- 9. WCAP-15942-P-A, "Fuel Assembly Mechanical Design Methodology for Boiling Water Reactors, Supplement 1 to CENPD-287."
- 10. CENPD-390-P-A, "The Advanced PHOENIX and POLCA Codes for Nuclear Design of Boiling Water Reactors."

The COLR will contain the complete identification for each of the TS referenced topical reports used to prepare the COLR (i.e., report number, title, revision, date, and any supplements).

- c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems (ECCS) limits, nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met.
- d. The COLR, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

5.6.6 Post Accident Monitoring (PAM) Instrumentation Report

When a report is required by Condition B or F of LCO 3.3.3.1, "Post Accident Monitoring (PAM) Instrumentation," a report shall be submitted within the following 14 days. The report shall outline the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status.



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

EXELON GENERATION COMPANY, LLC

AND

MIDAMERICAN ENERGY COMPANY

DOCKET NO. 50-254

QUAD CITIES NUCLEAR POWER STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 246
Renewed License No. DPR-29

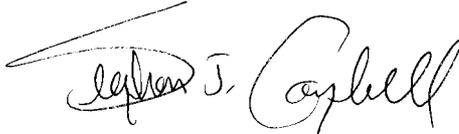
1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC, et al. (the licensee) dated April 7, 2009, as supplemented by letter dated October 5, 2009, complies with the standards and requirements of the Atomic Energy 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 Renewed Facility Operating License No. DPR-29 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 246 are hereby incorporated into the renewed operating 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 30 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read "Stephen J. Campbell". The signature is written in a cursive style with a long horizontal stroke at the beginning.

Stephen J. Campbell, Chief
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications and Renewed Facility Operating License

Date of Issuance: April 1, 2010



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

EXELON GENERATION COMPANY, LLC

AND

MIDAMERICAN ENERGY COMPANY

DOCKET NO. 50-265

QUAD CITIES NUCLEAR POWER STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 241
Renewed License No. DPR-30

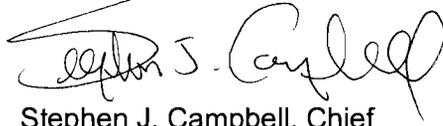
1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC, et al. (the licensee) dated April 7, 2009, as supplemented by letter dated October 5, 2009, complies with the standards and requirements of the Atomic Energy 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 Renewed Facility Operating License No. DPR-30 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 241 , are hereby incorporated into the renewed operating 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 30 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Stephen J. Campbell, Chief
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications and Renewed Facility Operating License

Date of Issuance: April 1, 2010

ATTACHMENT TO LICENSE AMENDMENT NOS. 246 AND 241

RENEWED FACILITY OPERATING LICENSES NOS. DPR-29 AND DPR-30

DOCKET NOS. 50-254 AND 50-265

Replace the following pages of the Renewed Facility Operating Licenses and Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by number and contain marginal lines indicating the areas of change.

Remove

License DPR-29

Page 4

Page 7

License DPR-30

Page 4

Page 7

TSs

5.6-3

5.6-4

5.6-5

Insert

License DPR-29

Page 4

Page 7

License DPR-30

Page 4

Page 7

TSs

5.6-3

5.6-4

- -

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 246 are hereby incorporated into this renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. The licensee shall maintain the commitments made in response to the March 14, 1983, NUREG-0737 Order, subject to the following provision:

The licensee may make changes to commitments made in response to the March 14, 1983, NUREG-0737 Oder without prior approval of the Commission as long as the change would be permitted without NRC approval, pursuant to the requirements of 10 CFR 50.59. Consistent with this regulation, if the change results in an Unreviewed Safety Question, a license amendment shall be submitted to the NRC staff for review and approval prior to implementation of the change.

D. Equalizer Valve Restriction

Three of the four valves in the equalizer piping between the recirculation loops shall be closed at all times during reactor operation with one bypass valve open to allow for thermal expansion of water.

E. The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822), and the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined sets of plans¹, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "Quad Cities Nuclear Power Station Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 2," submitted by letter dated May 17, 2006.

F. The licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report for the facility and as approved in the Safety Evaluation Reports dated July 27, 1979 with supplements dated November 5, 1980, and

¹ The Training and Qualification Plan and Safeguards Contingency Plan are Appendices to the Security Plan.

first surveillance interval that began on the date the surveillance was last performed prior to the implementation of Amendment No. 199.

For SRs that existed prior to this amendment whose intervals of performance are being extended, the first extended surveillance interval begins upon completion of the last surveillance performed prior to implementation of Amendment No. 199.

U. Deleted

V. The license is amended to authorize changing the UFSAR to allow credit for containment overpressure as detailed below, to assure adequate Net Positive Suction Head is available for low pressure Emergency Core Cooling System pumps following a design-basis accident.

From (sec)	To (sec)	Credit (psig)
Accident start	290	8.0
290	5,000	4.8
5,000	44,500	6.7
44,500	52,500	6.0
52,500	60,500	5.5
60,500	75,000	4.7
75,000	95,000	3.8
95,000	115,000	3.0
115,000	155,000	2.3
155,000	Accident end	1.8

W. Updated Final Safety Analysis Report

The Exelon Generation Company, LLC Updated Final Safety Analysis Report supplement, submitted pursuant to 10 CFR 54.21(d), describes certain future activities to be completed prior to the period of extended operation. The Exelon Generation Company, LLC shall complete these activities no later than December 14, 2012, and shall notify the NRC in writing when implementation of these activities is complete and can be verified by NRC inspection.

The Updated Final Safety Analysis Report supplement, as revised, shall be included in the next scheduled update to the Updated Final Safety Analysis Report required by 10 CFR 50.71(e)(4) following issuance of this renewed license. Until that update is complete, Exelon Generation Company, LLC may make changes to the programs and activities described in the supplement without prior Commission approval, provided that Exelon Generation Company,

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 241, are hereby incorporated into this renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. The license shall maintain the commitments made in response to the March 14, 1983, NUREG-0737 Order, subject to the following provision:

The licensee may make changes to commitments made in response to the March 14, 1983, NUREG-0737 Order without prior approval of the Commission as long as the change would be permitted without NRC approval, pursuant to the requirements of 10 CFR 50.59. Consistent with this regulation, if the change results in an Unreviewed Safety Question, a license amendment shall be submitted to the NRC staff for review and approval prior to implementation of the change.

D. Equalizer Valve Restriction

Three of the four valves in the equalizer piping between the recirculation loops shall be closed at all times during reactor operation with one bypass valve open to allow for thermal expansion of water.

E. The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822), and the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans¹, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "Quad Cities Nuclear Power Station Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 2," submitted by letter dated May 17, 2006.

F. The licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report for the facility and as approved in the Safety Evaluation Reports dated July 27, 1979 with supplements dated

¹ The Training and Qualification Plan and Safeguards Contingency Plan are Appendices to the Security Plan.

For SRs that existed prior to this amendment whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of Amendment No. 195.

For SRs that existed prior to this amendment that have modified acceptance criteria, the first performance is due at the end of the first surveillance interval that began on the date the surveillance was last performed prior to the implementation of Amendment No. 195.

For SRs that existed prior to this amendment whose intervals of performance are being extended, the first extended surveillance interval begins upon completion of the last surveillance performed prior to implementation of Amendment No. 195.

T. Deleted

U. The license is amended to authorize changing the UFSAR to allow credit for containment overpressure as detailed below, to assure adequate Net Positive Suction Head is available for low pressure Emergency Core Cooling System pumps following a design-basis accident.

From (sec)	To (sec)	Credit (psig)
Accident start	290	8.0
290	5,000	4.8
5,000	44,500	6.7
44,500	52,500	6.0
52,500	60,500	5.5
60,500	75,000	4.7
75,000	95,000	3.8
95,000	115,000	3.0
115,000	155,000	2.3
155,000	Accident end	1.8

V. Updated Final Safety Analysis Report

The Exelon Generation Company, LLC Updated Final Safety Analysis Report supplement, submitted pursuant to 10 CFR 54.21(d), describes certain future activities to be completed prior to the period of extended operation. The Exelon Generation Company, LLC shall complete these activities no later than December 14, 2012, and shall notify the NRC in

5.6 Reporting Requirements

5.6.5 CORE OPERATING LIMITS REPORT (COLR) (continued)

3. The LHGR for Specification 3.2.3.
 4. Control Rod Block Instrumentation Setpoint for the Rod Block Monitor-Upscale Function Allowable Value for Specification 3.3.2.1.
 5. The OPRM setpoints for the trip function for SR 3.3.1.3.3.
- b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:
1. NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel."
 2. Commonwealth Edison Topical Report NFSR-0091, "Benchmark of CASMO/MICROBURN BWR Nuclear Design Methods."
 3. NEDO-32465-A, "Reactor Stability Detect and Suppress Solutions Licensing Basis Methodology for Reload Applications," August 1996.
 4. CENPD-300-P-A, "Reference Safety Report for Boiling Water Reactor Reload Fuel."
 5. WCAP-16081-P-A, "10x10 SVEA Fuel Critical Power Experiments and CPR Correlation: SVEA-96 Optima2."
 6. WCAP-15682-P-A, "Westinghouse BWR ECCS Evaluation Model: Supplement 2 to Code Description, Qualification and Application."
 7. WCAP-16078-P-A, "Westinghouse BWR ECCS Evaluation Model: Supplement 3 to Code Description, Qualification and Application to SVEA-96 Optima2 Fuel."

(continued)

5.6 Reporting Requirements

5.6.5 CORE OPERATING LIMITS REPORT (COLR) (continued)

8. WCAP-15836-P-A, "Fuel Rod Design Methods for Boiling Water Reactors - Supplement 1."
9. WCAP-15942-P-A, "Fuel Assembly Mechanical Design Methodology for Boiling Water Reactors Supplement 1 to CENPD-287."
10. CENPD-390-P-A, "The Advanced PHOENIX and POLCA Codes for Nuclear Design of Boiling Water Reactors."

The COLR will contain the complete identification for each of the TS referenced topical reports used to prepare the COLR (i.e., report number, title, revision, date, and any supplements).

- c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems (ECCS) limits, nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met.
- d. The COLR, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

5.6.6 Post Accident Monitoring (PAM) Instrumentation Report

When a report is required by Condition B or F of LCO 3.3.3.1, "Post Accident Monitoring (PAM) Instrumentation," a report shall be submitted within the following 14 days. The report shall outline the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION RELATED
TO AMENDMENT NO.234 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-19,
AMENDMENT NO. 227 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-25,
AMENDMENT NO. 246 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-29
AND AMENDMENT NO.241 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-30

EXELON GENERATION COMPANY, LLC

AND

MIDAMERICAN ENERGY COMPANY

DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3, AND

QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2

DOCKET NOS. 50-237, 50-249, 50-254 AND 50-265

1.0 INTRODUCTION

By letter to the Nuclear Regulatory Commission (NRC, the Commission) dated April 7, 2009, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML090970914) as supplemented by letter dated October 5, 2009 (ADAMS Accession No. ML092790207), Exelon Generation Company, LLC, et al. (the licensee) requested changes to the technical specifications (TSs), facility operating licenses (FOLs), and surveillance requirements (SRs) for Dresden Nuclear Power Station, Units 2 and 3 (DNPS), and Quad Cities Nuclear Power Station, Units 1 and 2 (QCNPS). The proposed changes would delete a footnote from DNPS TS 3.4.5, "[Reactor Coolant System] RCS Leakage Detection Instrumentation," that was incorporated as part of a limited duration emergency license amendment in August 2008 and is no longer applicable. The amendments would also correct errors in the titles of analytical methods in DNPS and QCNPS TS 5.6.5, "Core Operating Limits Report (COLR)," paragraph b. Finally, the proposed changes would delete historical analytical methods from DNPS and QCNPS TS 5.6.5.b that are no longer applicable and renumber the remaining analytical methods.

The October 5, 2009, supplement contained clarifying information and did not change the NRC staff's initial proposed finding of no significant hazards consideration.

2.0 REGULATORY EVALUATION

QCNPS and DNPS were designed and construction was commenced prior to the codification of the current GDCs, thus the current GDCs are not part of the original design basis of the plant. Proposed GDC were issued for comment in July 1967, during the construction of DNPS and QCNPS, but were not adopted as regulatory requirements at the time the units were built. At the time of promulgation of Appendix A to 10 CFR Part 50 (which contain the GDC) in 1971, the Commission stressed that the GDC were not new requirements and were promulgated to more clearly articulate the licensing requirements and practices in effect at that time. By Staff Requirements Memorandum (SRM), SECY-92-223, issued on September 18, 1992, the Commission approved the staff proposal to not apply the GDC to plants with construction permits issued prior to May 21, 1971. While compliance with the intent of the GDC is important, each plant licensed before the GDC were formally adopted was evaluated on a plant specific basis, determined to be safe, and licensed by the Commission. Nevertheless, the proposed GDC issued in 1967 were used by the Atomic Energy Commission (AEC, predecessor to the NRC) as guidance in evaluating the original design of the DNPS Units 2 and 3 and QCNPS Units 1 and 2. The licensee documented a review in the FSAR for each unit indicating that, based on the applicant's understanding of the intent of the proposed GDC, these units fully satisfied the intent of the criteria.

The NRC staff considered the following regulatory requirements and guidance in its review of the license amendment request (LAR):

General Design Criterion (GDC) 30, "Quality of reactor coolant pressure boundary." Appendix A to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, GDC 30 requires a means of detecting and to the extent practical, identifying the location of the source of reactor coolant leakage.

Regulatory Guide (RG) 1.45, Revision 0, "Reactor Coolant Pressure Boundary Leakage Detection Systems." In Sections 5.2.5.10 and 5.2.5.7 of the DNPS and QCNPS Updated Final Safety Analysis Reports, respectively, the licensee documents its conformance with RG 1.45. RG 1.45 describes acceptable methods of detecting and to the extent practical, identifying the location of the source of reactor coolant leakage with regard to the selection of leakage detection systems for the reactor coolant pressure boundary. RG 1.45 states that plant TSs should include the limiting conditions for identified and unidentified reactor coolant system (RCS) leakage and address the availability of various types of instruments in order to ensure that leakage to the primary reactor containment from unidentified sources is collected and the flow rate monitored.

3.0 TECHNICAL EVALUATION

The technical review of the proposed LAR includes a review of proposed changes to DNPS Unit 3, TS 3.4.5, TS 5.6.5 for DNPS Units 2 and 3, and QCNPS Units 1 and 2, and renewed FOL changes for operating license numbers DPR-19, DPR-25, DPR-29 and DPR-30 for DNPS Units 2 and 3, and QCNPS Units 1 and 2, respectively, in accordance with the provisions of 10 CFR 50.90.

DNPS TS 3.4.5 Changes

On August 22, 2008 (ADAMS Accession No. ML082321018), the NRC staff issued an emergency license amendment that authorized the addition of a footnote to various sections of TS 3.4.5. The addition of the footnote was necessary to allow the safe operation of the reactor until the drywell floor drain sump (DWFDS) containment isolation valve could be repaired or replaced. NRC staff safety evaluation stipulated that the addition and use of footnote (a) to DNPS TS 3.4.5 was a limited duration condition, terminating at the first subsequent outage of sufficient duration to repair a failed DNPS Unit 3 component, or startup from the next DNPS Unit 3 refueling outage, whichever was sooner. The licensee repaired the failed component during D3R20 (November 2008), prior to startup.

The NRC staff acknowledges that the DWFDS containment isolation valve has been repaired and concludes that the footnotes are no longer necessary. The NRC staff finds that the proposed changes to delete footnote (a) text from TS pages 3.4.5-1 and 3.4.5-2, and the footnote (a) superscript from Limiting Condition for Operation (LCO) 3.4.5.a, TS 3.4.5 Condition A, TS 3.4.5 Required Action A.1, and SRs 3.4.5.2 and 3.4.5.3, are acceptable.

3.2 DNPS TS 5.6.5 Changes

- 3.2.1 The proposed change revises the document number in Item 13 of DNPS TS 5.6.5.b, from "224011" to "24011," and deletes the acronym "(GESTAR)" from the title. The NRC staff compared the proposed changes to the title of NEDE-24011, "General Electric Standard Application for Reactor Fuel," and concluded that the proposed changes more accurately describe the title of the applicable document, and are, therefore, acceptable.
- 3.2.2 The proposed change to Item 15 of DNPS TS 5.6.5.b deletes the term "BWR Owners' Group," from the title as documented in the TSs. The NRC staff compared the proposed change to the title of NEDO-32465, "Reference Stability Detect and Suppress Solutions Licensing Basis Methodology for Reload Applications," and concluded that the proposed change more accurately describes the title of the applicable document, and is, therefore, acceptable.
- 3.2.3 Item 21 of DNPS TS 5.6.5.b currently describes the title of WCAP-15942 as follows: "Fuel Assembly Mechanical Design Methodology for Boiling Water reactors, Supplement 1 to CENPD-P-A." The proposed change deletes the proprietary and approved nomenclature (i.e., "-P-A") for CENPD-287 in the WCAP-15942 topical report (TR) title. The NRC staff compared the proposed change to the actual title of WCAP-15942 and concluded that the proposed change more accurately describes the title of the applicable document, and is, therefore, acceptable.
- 3.2.4 The licensee proposed changes in DNPS TS 5.6.5.b to remove references to analytical methods associated with fuel types that are no longer used at DNPS, and renumbering the remaining analytical methods for consistency. The NRC staff reviewed the proposed revisions and found that the licensee removed obsolete references and renumbered the TS section appropriately. The NRC staff concludes that these changes are acceptable.

3.3 QCNPS TS 5.6.5 Changes

- 3.3.1 The proposed change to Item 17 of QCNPS TS 5.6.5.b deletes the term "BWR Owners' Group," from the title as documented in the TSs. The NRC staff compared the proposed change to the title of NEDO-32465, "Reference Stability Detect and Suppress Solutions Licensing Basis Methodology for Reload Applications," and concluded that the proposed change more accurately describes the title of the applicable document, and is, therefore, acceptable.
- 3.3.2 Item 23 of DNPS TS 5.6.5.b currently describes the title of WCAP-15942 as follows: "Fuel Assembly Mechanical Design Methodology for Boiling Water reactors, Supplement 1 to CENPD-P-A." The proposed change deletes the proprietary and approved nomenclature (i.e., "-P-A") for CENPD-287 in the WCAP-15942 TR title. The NRC staff compared the proposed change to the actual title of WCAP-15942 and concluded that the proposed change more accurately describes the title of the applicable document, and is, therefore, acceptable.
- 3.3.3 The licensee proposed changes in QCNPS TS 5.6.5.b to remove references to analytical methods associated with fuel types that are no longer used at QCNPS, and renumbering the remaining analytical methods for consistency. The NRC staff reviewed the proposed revisions and found that the licensee removed obsolete references and renumbered the TS section appropriately. The NRC staff concludes that these changes are acceptable.

3.4 DNPS Renewed FOLs DPR-19 and DPR-25

The licensee proposed to delete DPR-19 license condition C.(9), "Fuel Burnup," and DPR-25 license condition 3.Q, "Fuel Burnup," for Units 2 and 3 respectively, which limits maximum rod average burnup for any rod to 60 gigawatt-days per metric ton of uranium (GWD/MTU) until the completion of an NRC environmental assessment supporting an increased limit. In June 2004, the NRC staff published NUREG-1437, Supplement 17, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Regarding Dresden Nuclear Power Station, Units 2 and 3." This report documents the completion of the environmental assessment for DNPS to support a new limit of 62 GWD/MTU. Based on the issuance of NUREG-1437 Supplement 17, license conditions C.(9) for DNPS Unit 2, and 3.Q for DNPS Unit 3, are no longer required. The licensee will continue to use an NRC-approved analytical method supporting an extended maximum rod average burnup to 62 GWD/MTU. Therefore, the NRC staff finds that the proposed changes to delete the aforementioned license conditions are acceptable.

3.5 QCNPS Renewed FOLs DPR-29 and DPR-30

The licensee proposed to delete DPR-29 license condition 3.U, "Fuel Burnup," and DPR-30 license condition 3.T, "Fuel Burnup," for Units 1 and 2 respectively, which limits maximum rod average burnup for any rod to 60 GWD/MTU until the completion of an NRC environmental assessment supporting an increased limit. In June 2004, the NRC staff published NUREG-1437, Supplement 16, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Regarding Quad Cities Nuclear Power Station, Units 1 and 2." This report documents the completion of the environmental assessment for QCNPS to support a new limit

of 62 GWD/MTU. Based on the issuance of NUREG-1437 Supplement 16, license conditions 3.U for QCNPS Unit 1, and 3.T for QCNPS Unit 2, are no longer required. The licensee will continue to use an NRC-approved analytical method supporting an extended maximum rod average burnup to 62 GWD/MTU. Therefore, the NRC staff finds that the proposed changes to delete the aforementioned license conditions are acceptable.

4.0 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.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change the requirements with respect to the installation or use of a facility's components located within the restricted area as defined in 10 CFR Part 20. 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 (74 FR 31322; June 30, 2009). 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.

6.0 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: T. Huang, NRR
C. Gratton, NRR

Date: April 1, 2010

Mr. C. Pardee

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

Sincerely,

/RA/

Christopher Gratton, Senior Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-237, 50-249, 50-254, and 50-265

Enclosures:

1. Amendment No. 234 to DPR-19
2. Amendment No. 227 to DPR-25
3. Amendment No. 246 to DPR-29
4. Amendment No. 241 to DPR-30
5. Safety Evaluation

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NRR-058

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