

October 14, 2004

Mr. Christopher M. Crane, President
and Chief Nuclear Officer
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: LASALLE COUNTY STATION, UNITS 1 AND 2, ISSUANCE OF AMENDMENTS
(TAC NOS. MC0496 AND MC0497)

Dear Mr. Crane:

The U.S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 168 to Facility Operating License No. NPF-11 and Amendment No. 154 to Facility Operating License No. NPF-18 for the LaSalle County Station, Units 1 and 2, respectively. The amendments are in response to your application dated August 19, 2003 (ML032390070).

The amendments modify Technical Specification (TS) 5.5.13, "Primary Containment Leakage Rate Testing Program," to allow an exception to the testing guidance contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program." Specifically, the TS change will allow potential valve atmospheric leakage paths (e.g., valve stem packing) that are not exposed to test pressure during reverse-direction Type B or C tests (local leakage rate tests) to instead be tested during regularly scheduled Type A tests (integrated leakage rate tests). In addition, the amendments correct a formatting error that was inadvertently introduced to TS 5.5.13 in our letter dated November 19, 2003 (ML033010008).

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/

Douglas V. Pickett, Senior Project Manager, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-373 and 50-374

Enclosures: 1. Amendment No. 168 to NPF-11
2. Amendment No. 154 to NPF-18
3. Safety Evaluation

cc w/encls: See next page

October 14, 2004

Mr. Christopher M. Crane, President
and Chief Nuclear Officer
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: LASALLE COUNTY STATION, UNITS 1 AND 2, ISSUANCE OF AMENDMENTS
(TAC NOS. MC0496 AND MC0497)

Dear Mr. Crane:

The U.S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 168 to Facility Operating License No. NPF-11 and Amendment No. 154 to Facility Operating License No. NPF-18 for the LaSalle County Station, Units 1 and 2, respectively. The amendments are in response to your application dated August 19, 2003 (ML032390070).

The amendments modify Technical Specification (TS) 5.5.13, "Primary Containment Leakage Rate Testing Program," to allow an exception to the testing guidance contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program." Specifically, the TS change will allow potential valve atmospheric leakage paths (e.g., valve stem packing) that are not exposed to test pressure during reverse-direction Type B or C tests (local leakage rate tests) to instead be tested during regularly scheduled Type A tests (integrated leakage rate tests). In addition, the amendments correct a formatting error that was inadvertently introduced to TS 5.5.13 in our letter dated November 19, 2003 (ML033010008).

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/

Douglas V. Pickett, Senior Project Manager, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-373 and 50-374

Enclosures: 1. Amendment No. 168 to NPF-11
2. Amendment No. 154 to NPF-18
3. Safety Evaluation

cc w/encls: See next page

DISTRIBUTION:

PUBLIC	PDIII-2 R/F	WRuland	AMendiola
DPickett	PCoates	OGC	ACRS
GHill (4)	TBoyce	DHills, RIII	DLPM DPR

ADAMS Accession Number: ML042570023 (Package)

ADAMS Accession Number: ML042570011 (Amendment)

ADAMS Accession Number: ML042950262 (Technical Specification)

OFFICE	PM:LPD3-2	LA:LPD3-2	SC:SPSB	OGC	SC:LPD3-2
NAME	DPickett	PCoates	RDennig*	MHiggins**	GSuh
DATE	10/05/04	10/04/04	08/31/04	10/01/04	10/07/04

*See RDennig to AMendiola memorandum dated 8/31/04

**See previous concurrence

OFFICIAL RECORD COPY

LaSalle County Station Units 1 and 2

cc:

Site Vice President - LaSalle County Station
Exelon Generation Company, LLC
2601 North 21st Road
Marseilles, IL 61341-9757

LaSalle County Station Plant Manager
Exelon Generation Company, LLC
2601 North 21st Road
Marseilles, IL 61341-9757

Regulatory Assurance Manager - LaSalle
Exelon Generation Company, LLC
2601 North 21st Road
Marseilles, IL 61341-9757

U.S. Nuclear Regulatory Commission
LaSalle Resident Inspectors Office
2605 North 21st Road
Marseilles, IL 61341-9756

Phillip P. Steptoe, Esquire
Sidley and Austin
One First National Plaza
Chicago, IL 60603

Assistant Attorney General
100 W. Randolph St. Suite 12
Chicago, IL 60601

Chairman
LaSalle County Board
707 Etna Road
Ottawa, IL 61350

Attorney General
500 S. Second Street
Springfield, IL 62701

Chairman
Illinois Commerce Commission
527 E. Capitol Avenue, Leland Building
Springfield, IL 62706

Robert Cushing, Chief, Public Utilities Division
Illinois Attorney General's Office
100 W. Randolph Street
Chicago, IL 60601

Regional Administrator
U.S. NRC, Region III

801 Warrenville Road
Lisle, IL 60532-4351

Illinois Emergency Management
Agency
Division of Disaster Assistance &
Preparedness
110 East Adams Street
Springfield, IL 62701-1109

Document Control Desk - Licensing
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

Senior Vice President - Nuclear Services
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

Vice President of Operations - Mid-West
Boiling Water Reactors
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

Vice President - Licensing and Regulatory
Affairs
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

Director - Licensing and Regulatory Affairs
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

Associate General Counsel
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

Manager Licensing - Dresden, Quad Cities
and Clinton
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-373

LASALLE COUNTY STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 168
License No. NPF-11

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by the Exelon Generation Company, LLC (the licensee), dated August 19, 2003, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the 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 set forth in 10 CFR Chapter I;
 - 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 enclosure to this license amendment and paragraph 2.C.(2) of the Facility Operating License No. NPF-11 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 168, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

/RA/

Gene Y. Suh, Chief, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: October 14, 2004

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-374

LASALLE COUNTY STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 154
License No. NPF-18

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by the Exelon Generation Company, LLC (the licensee), dated August 19, 2003, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the 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 set forth in 10 CFR Chapter I;
 - 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 enclosure to this license amendment and paragraph 2.C.(2) of the Facility Operating License No. NPF-18 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 154, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

/RA/

Gene Y. Suh, Chief, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: October 14, 2004

ATTACHMENT TO LICENSE AMENDMENT NOS. 168 AND 154

FACILITY OPERATING LICENSE NOS. NPF-11 AND NPF-18

DOCKET NOS. 50-373 AND 50-374

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by amendment number and contain marginal lines indicating the area of change.

Remove Pages

5.5-12
5.5-13

Insert Pages

5.5-12
5.5-13

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 168 TO FACILITY OPERATING LICENSE NO. NPF-11
AND AMENDMENT NO. 154 TO FACILITY OPERATING LICENSE NO. NPF-18
EXELON GENERATION COMPANY, LLC
LASALLE COUNTY STATION, UNITS 1 AND 2
DOCKET NOS. 50-373 AND 50-374

1.0 INTRODUCTION

By application dated August 19, 2003 (ADAMS accession number ML032390070), Exelon Generation Company, LLC (the licensee), requested an exception for reverse-direction Appendix J local leakage rate testing at LaSalle County Station, Units 1 and 2 (LaSalle 1 and 2). Specifically, the licensee requested a Technical Specification (TS) change to allow potential valve atmospheric leakage paths (e.g., valve stem packing), that are not exposed to test pressure during reverse-direction Type B or C tests (local leakage rate tests), to instead be tested during regularly scheduled Type A tests (integrated leakage rate tests).

LaSalle 1 and 2 TS 5.5.13, "Primary Containment Leakage Rate Testing Program," currently states, in part:

This program shall establish the leakage rate testing of the primary containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix, J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Testing Program," dated September 1995 as modified by the following exceptions:

1. NEI 94-01 - 1995, Section 9.2.3: The first Unit 1 Type A test performed after June 14, 1994, Type A test shall be performed no later than June 13, 2009.
2. NEI 94-01 - 1995, Section 9.2.3: The first Unit 2 Type A test performed after December 8, 1993, Type A test shall be performed no later than December 7, 2008.

The licensee proposes to add the following additional exception:

The potential valve atmospheric leakage paths that are not exposed to reverse direction test pressure shall be tested during the regularly scheduled Type A test. The program shall contain the list of the potential valve atmospheric leakage paths, leakage rate

measurement method, and acceptance criteria. This exception shall be applicable only to valves that are not isolable from the primary containment free air space.

2.0 REGULATORY EVALUATION

The requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors," Option B, "Performance-Based Requirements," apply to LaSalle 1 and 2. LaSalle's TS 5.5.13, "Primary Containment Leakage Rate Testing Program," requires that leakage rate testing be performed as required by 10 CFR Part 50, Appendix J, Option B, as modified by approved exemptions, and in accordance with the guidelines contained in Regulatory Guide (RG) 1.163, dated September 1995, with certain listed exceptions. This RG endorses, with certain exceptions, Nuclear Energy Institute (NEI) report NEI 94-01, Revision 0, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," dated July 26, 1995.

Type A tests represent an overall (integrated) leakage rate test of the containment structure. Type B tests are tests of containment penetrations, such as electrical penetrations and air locks. Type C tests are tests of containment isolation valves (CIVs). Type C tests intervals are typically five years, and Type A test intervals are typically 10 years, although LaSalle 1 and 2 have one-time extensions to 15 years for their next Type A tests.

NEI 94-01, Section 8.0, "Testing Methodologies for Type A, B and C Tests," provides certain exceptions and clarifications to methods and techniques for a performance-based program. Section 8.0 states, in part, the following:

It should be noted that the Type B or C tests performed on those pathways must test all of its containment barriers. This includes bonnets, packing, flanged joints, threaded connections and compression fittings. If the Type B or C test pressurizes any of the pathway's containment barriers in the reverse direction, it must be shown that the test results are not affected in a non-conservative manner by the directionality.

Therefore, the licensee's proposed testing constitutes an exception from the guidelines of RG 1.163 and NEI 94-01.

3.0 TECHNICAL EVALUATION

In Licensee Event Report (LER) 97-014-00 dated May 9, 1997, the licensee notified the NRC that they had determined that 50 CIVs in LaSalle 1 and 2 (i.e., 25 on each unit) were not being tested consistent with the guidance contained in RG 1.163 and NEI 94-01. The CIV design resulted in the valve stem packing not being exposed to the test pressure during the reverse-direction Type B and C tests. The LER corrective actions included the testing of these CIVs prior to Unit 1 and 2 startups. The results of the testing revealed that 24 of the CIVs (i.e., 12 on each unit) could be tested with minimal changes to the test program. However, the remaining 26 CIVs are not isolable from the primary containment free air space (using installed equipment) and this resulted in difficult test configurations that are described below.

- The CIVs could be tested during a Type A test, or
- 24 of the CIVs (i.e., 12 on each unit) could be tested by enclosing the valve within a specially constructed clamping device. The enclosure would then be pressurized, thus exposing the stem packing to pressure. The remaining 2 valves could be tested from the suppression pool using diver support. These valves' piping terminates below the normal suppression pool water level. A diver could install an expandable plug into the opening of the pipe. Instrumentation tubing could then be attached to the plug and the piping pressurized back to the valve, thus exposing the stem packing to test pressure.

In June of 2003, the licensee revised the program for testing of the primary containment to perform the testing of these 26 CIVs' stem packing during the regularly scheduled Type A test. As a result of this revision, four missed leakage rate testing surveillances have occurred on both units. This change was made without the required prior NRC approval. The Unit 1 valves were tested during refueling outage L1R10 in January 2004 and the Unit 2 valves are scheduled for refueling outage L2R10 in February 2005. Though testing of these valves' stem packing can be performed using the difficult methods described above, the leakage rate testing of these valves' stem packing is better performed during a Type A test. While the normal Type A test interval is 10 years, the current, one-time Type A test interval for LaSalle 1 and 2 is 15 years. The next Type A tests will be performed no later than June 13, 2009, for Unit 1 and December 7, 2008, for Unit 2.

As described above, simple leakage rate testing of the stem packing for the 26 CIVs listed in Table 1 of the licensee's letter is not practical. The licensee evaluated modifications that would allow testing of the valves in the normal direction. These modifications would require the addition of test boundary valves, test connections, and/or valve stem packing modifications. These modifications would increase valve design complexity, provide additional potential leakage pathways, and increase loading on piping penetrating primary containment. The licensee concluded that these modifications were not practical. The licensee provided the following bases for this conclusion.

1. The valve stem packing of all 26 CIVs has been challenged for leakage during the performance of the Type A tests as these seals form part of the primary containment boundary. There has not been a Type A test failure at LaSalle 1 and 2 due to leaking stem packing from these valves.
2. The proposed change will continue to test all potential valve atmospheric leakage paths and does not modify the acceptance criteria of the Type A, B, or C tests.
3. This proposed change will be applicable only to valves that are not isolable from the primary containment free air space.
4. Installation and maintenance of safety-related components are controlled by safety-related work orders which have sufficient controls to ensure that the work is performed properly. Hence, the valve stem packing used in safety-related

components is expected to be installed correctly. In addition, post-maintenance testing will verify the operability of the valve prior to returning the valve to service.

5. Based on a licensee evaluation, simultaneous failure of the stem packing in all the valves is not credible. The amount of increased containment leakage through failure of the stem packing of a few valves would not be sufficient to exceed 10 CFR Part 100 offsite exposure limits.
6. Any leakage occurring through the subject valve stem packing would be into the reactor building (i.e., secondary containment). The secondary containment atmosphere would be treated by the standby gas treatment system prior to release to the environment.
7. Additionally, from a risk perspective, performing the testing of these valves' stem packing only during Type A testing is supported using the technical bases provided in NUREG-1493, "Performance-Based Containment Leak-Test Program." Past studies show that the overall reactor accident risks are not sensitive to variations in containment leakage rates because reactor accident risks are dominated by accident scenarios in which the containment fails or is bypassed. Such scenarios, even though they are of low probability, dominate the predicted accident risks due to their high consequences. Because containment leakage contributes less than 0.1% of overall accident risk, the overall impact is very small. The calculated risks are well below the NRC safety goal even at assumed containment leak rates several orders of magnitude above current requirements.
8. Finally, the testing of these 26 valve seats using the reverse-direction testing will continue to be performed on the frequencies established as part of the leakage rate testing program. In many cases during this test, the outboard isolation valve is an identical valve subjected to the same service conditions. In these cases, the packing of the outboard valve is exposed to pressure during the leak rate test.

In general, the staff agrees with the licensee's bases. The staff found the LaSalle license amendments for the one-time extension to 15 years of the Type A test interval (No. 148 for Unit 1, No. 162 for Unit 2), dated November 19, 2003 (ADAMS accession number ML033110002), to be acceptable largely due to the low risk attached to pre-existing containment leakage of even 100 times that allowed for the LaSalle containments. Given the very low risk significance and good testing history of the subject components along with the impracticality of the modifications needed to satisfy the guidelines, the staff finds the proposal acceptable.

Based on the foregoing evaluation, the staff finds the proposed change to TS 5.5.13 to be 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 a requirement with respect to the installation or use of a facility component 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 dated December 3, 2003 (68 FR 74266). 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: James Pulsipher, NRR/DSSA/SPSB

Date: October 14, 2004