May 13, 1998

Mr. Oliver D. Kingsley, President
Nuclear Generation Group
Commonwealth Edison Company
Executive Towers West III
1400 Opus Place, Suite 500
Downers Grove, IL 60515

SUBJECT: ISSUANCE OF AMENDMENTS (TAC NOS. M99726 AND M99727)

Dear Mr. Kingsley:

The U.S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 126 to Facility Operating License No. NPF-11 and Amendment No. 111 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 September 26, 1997, as supplemented on April 7, 1998, and May 1, 1998.

The amendments revise the Technical Specifications to upgrade the ventilation filter testing program to the latest industry standards and specify that the auxiliary electric equipment room is required to be habitable during design basis accidents. Revisions related to drywell and suppression chamber purge and the editorial changes requested in the September 26, 1997, application were approved and issued under Amendment Nos. 125 and 110 dated April 27, 1998.

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,
ORIG. SIGNED BY R. ASSA
For Donna M. Skay, Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Docket Nos. 50-373, 50-374

Enclosures: 1. Amendment No. 126 to NPF-11
2. Amendment No. 111 to NPF-18
3. Safety Evaluation

cc w/encl: See next page

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Docket File	PUBLIC	PDIII-2 r/f	E. Adensam, EGA1
S. Richards	C. Moore	D. Skay	OGC, O15B18
G. Hill (4), T5C3	W. Beckner, O13H15	ACRS, T2E26	D. Hills, RIII

DOCUMENT NAME: G:\CMNTSP\LASALLE\LA99726.AMD2 *SEE PREVIOUS PAGE FOR CONCURRENCE

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DATE	05/13/98	05/12/98	04/30/98	05/1/98	05/11/98	05/13/98

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

May 13, 1998

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for

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

Docket Nos. 50-373, 50-374

Enclosures: 1. Amendment No. 126 to NPF-11
2. Amendment No. 111 to NPF-18
3. Safety Evaluation

cc w/encl: See next page

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The amendments revise the Technical Specifications to upgrade the ventilation filter testing program to the latest industry standards and specify that the auxiliary electric equipment room is required to be habitable during design basis accidents.

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,

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

Docket Nos. 50-373, 50-374

Enclosures: 1. Amendment No. to NPF-11
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cc w/encl: see next page

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DOCUMENT NAME: G:\CMNTSP\LASALLE\LA99726.AMD * Safety evaluation provided

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

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-373

LASALLE COUNTY STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 126
License No. NPF-11

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

   A. The application for amendment filed by the Commonwealth Edison Company (the licensee), dated September 26, 1997, as supplemented on April 7, 1998, and May 1, 1998, 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. 126 , 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 prior to restart from L1F35.

FOR THE NUCLEAR REGULATORY COMMISSION

FOR

Donna M. Skay, 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 13, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 126

FACILITY OPERATING LICENSE NO. NPF-11

DOCKET NO. 50-373

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

REMOVE	INSERT
3/4 7-4	3/4 7-4
3/4 7-5	3/4 7-5
3/4 7-6	3/4 7-6
B 3/4 7-1	B 3/4 7-1
6-20a	6-20a
6-20b	6-20b

PLANT SYSTEMS

3/4.7.2 CONTROL ROOM AND AUXILIARY ELECTRIC EQUIPMENT ROOM EMERGENCY FILTRATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.2 Two independent control room and auxiliary electric equipment room emergency filtration system trains shall be OPERABLE.#

APPLICABILITY: All OPERATIONAL CONDITIONS and *.

ACTION:

a. With one emergency filtration system train inoperable, restore the inoperable train to OPERABLE status within 7 days or:

   1. In OPERATIONAL CONDITIONS 1, 2, 3, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

   2. In OPERATIONAL CONDITION 4, 5 or *, initiate and maintain operation of the OPERABLE emergency filtration system in the pressurization mode of operation.

b. With both emergency filtration system trains inoperable, in OPERATIONAL CONDITION 4, 5 or *, suspend CORE ALTERATIONS, handling of irradiated fuel in the secondary containment and operations with a potential for draining the reactor vessel.

c. The provisions of Specification 3.0.3 are not applicable in Operational Condition *.

SURVEILLANCE REQUIREMENTS

4.7.2 Each control room and auxiliary electric equipment room emergency filtration system train shall be demonstrated OPERABLE:

a. At least once per 31 days on a STAGGERED TEST BASIS:

   1. Operate each Control Room and Auxiliary Electric Equipment Room Emergency Filter System for greater than or equal to 10 continuous hours with the heaters operating, and

   2. Manually initiating flow through the control room and auxiliary electric equipment room recirculation filters for at least 10 hours.

*When irradiated fuel is being handled in the secondary containment.
#The normal or emergency power source may be inoperable in OPERATIONAL CONDITION 4, 5 or *.

SURVEILLANCE REQUIREMENTS (Continued)

b. Perform required control room and auxiliary electric equipment room filter testing in accordance with, and at the frequency specified by, the Ventilation Filter Testing Program.

c. Deleted.

d. At least once per 18 months by:

1. Deleted.

SURVEILLANCE REQUIREMENTS (Continued)

2. Verifying that on each of the below pressurization mode actuation test signals, the emergency train automatically switches to the pressurization mode of operation. Manually initiate flow through the control room and auxiliary electric equipment room recirculation filters line and then verify that the control room and auxiliary electric equipment rooms are maintained at a positive pressure of greater than or equal to 1/8 inch W.G. relative to the adjacent areas during emergency train operation at a flow rate less than or equal to 4000 cfm:

   a) Outside air smoke detection, and

   b) Air intake radiation monitors.

3. Deleted.

e. Deleted.

f. Deleted.

BASES

3/4.7.1 CORE STANDBY COOLING SYSTEM - EQUIPMENT COOLING WATER SYSTEMS

The OPERABILITY of the core standby cooling system - equipment cooling water systems and the ultimate heat sink ensure that sufficient cooling capacity is available for continued operation of safety-related equipment during normal and accident conditions. The redundant cooling capacity of these systems, assuming a single failure, is consistent with the assumptions used in the accident conditions within acceptable limits.

3/4.7.2 CONTROL ROOM AND AUXILIARY ELECTRIC EQUIPMENT ROOM EMERGENCY FILTRATION SYSTEM

The OPERABILITY of the control room and auxiliary electric equipment room emergency filtration system, which includes the control room and auxiliary electric equipment room recirculation filters, ensures that the rooms will remain habitable for operations personnel during and following all design basis accident conditions. The OPERABILITY of this system in conjunction with room design provisions is based on limiting the radiation exposure to personnel occupying the rooms to 5 rem or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criteria 19 of Appendix "A", 10 CFR Part 50. Continuous operation of the system with the heaters operating for 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters.

3/4.7.3 REACTOR CORE ISOLATION COOLING SYSTEM

The reactor core isolation cooling (RCIC) system is provided to assure adequate core cooling in the event of reactor isolation from its primary heat sink and the loss of feedwater flow to the reactor vessel without requiring actuation of any of the Emergency Core Cooling System equipment. The RCIC system is conservatively required to be OPERABLE whenever reactor pressure exceeds 150 psig even though the LPCI mode of the the residual heat removal (RHR) system provides adequate core cooling up to 350 psig.

The RCIC system specifications are applicable during OPERATIONAL CONDITIONS 1, 2 and 3 when reactor vessel pressure exceeds 150 psig because RCIC is the primary non-ECCS source of core cooling when the reactor is pressurized.

With the RCIC system inoperable, adequate core cooling is assured by the OPERABILITY of the HPCS system and justifies the specified 14 day out-of-service period.

The surveillance requirements provide adequate assurance that RCICS will be OPERABLE when required. Although all active components are testable and full flow can be demonstrated by recirculation during reactor operation, a complete functional test requires reactor shutdown. Initial startup test program data may be used to determine equivalent turbine/pump capabilities between test flow path and the vessel injection flow path. The pump discharge piping is maintained full to prevent water hammer damage and to start cooling at the earliest possible moment. The low pressure setpoint allowable value for the discharge line "keep-filled" alarm is based on the head of water between the centerline of the pump discharge and the system high point vent.

PLANT OPERATING PROCEDURES AND PROGRAMS (Continued)

7. Primary Containment Leakage Rate Testing Program

A program shall be established to implement 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.

The peak calculated primary containment internal pressure for the design basis loss of coolant accident, P_a, is 39.6 psig.

The maximum allowable primary containment leakage rate, L_a, at P_a, is 0.635% of primary containment air weight per day.

Leakage rate acceptance criteria are:

a. Primary containment overall leakage rate acceptance criterion is $\leq 1.0\ L_a$. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $\leq 0.60\ L_a$ for the combined Type B and Type C tests, and $\leq 0.75\ L_a$ for Type A tests.

b. Air lock testing acceptance criteria are:

1) Overall air lock leakage rate is $\leq 0.05\ L_a$ when tested at $\geq P_a$.

2) For each door, the seal leakage rate is $\leq$ 5 scf per hour when the gap between the door seals is pressurized to $\geq$ 10 psig.

The provisions of specification 4.0.2 do not apply to the test frequencies specified in the Primary Containment Leakage Rate Testing Program.

The provisions of specification 4.0.3 are applicable to the Primary Containment Leakage Rate Testing Program.

8. Ventilation Filter Testing Program (VFTP)

A program shall be established to implement the following required testing of Engineered Safety Feature (ESF) filter ventilation systems at the frequencies specified in Regulatory Guide 1.52, Revision 2, dated March 1978, and in accordance with ASME N510-1989.

The provisions of Specifications 4.0.2 and 4.0.3 are applicable to the VFTP test frequencies.

a. Demonstrate for each of the ESF systems that an inplace test of the high efficiency particulate air (HEPA) filters shows a penetration and system bypass <0.05% when tested in accordance with ASME N510-1989, at the system flowrate specified below:

ESF Ventilation System	Flowrate (cfm)
SBGT System	$\geq$ 3600 and $\leq$ 4400
CREF System	$\geq$ 3600 and $\leq$ 4400

PLANT OPERATING PROCEDURES AND PROGRAMS (Continued)

b. Demonstrate for each of the ESF system filter units that an inplace test of the charcoal adsorber shows a penetration and system bypass less than the value specified below, when tested in accordance with ASME N510-1989, at the system flowrate specified below:

ESF Ventilation System	Penetration and System Bypass	Flowrate (cfm)
SBGT System	0.05 %	≥ 3600 and ≤ 4400
CREF System	0.05 %	≥ 3600 and ≤ 4400
CRRF System	2.0 %	≥ 18000 and ≤ 28900
AEERRF System	2.0 %	≥ 14000 and ≤ 22800

c. Demonstrate for each of the ESF systems that a laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Guide 1.52, Revision 2, shows the methyl iodide penetration less than the value specified below when tested in accordance with ASTM D3803-1989 at a temperature of 30°C, a relative humidity of 70 % and a face velocity as specified below.

ESF Ventilation System	Penetration	Face Velocity (fpm)
SBGT System	0.5 %	40
CREF System	2.5 %	40
CRRF System	15.0 %	80
AEERRF System	15.0 %	80

d. Demonstrate for each of the ESF systems that the pressure drop across the combined moisture separator, heater, prefilter, HEPA filters and the charcoal adsorbers is less than the value specified below when tested at the system flowrate specified below:

ESF Ventilation System	Delta P (inches wg)	Flowrate (cfm)
SBGT System	8	≥ 3600 and ≤ 4400
CREF System	8	≥ 3600 and ≤ 4400
CRRF System	3.0	≥ 18000 and ≤ 28900
AEERRF System	3.0	≥ 14000 and ≤ 22800

e. Demonstrate that the heaters for each of the ESF systems dissipate the electrical power specified below when tested in accordance with ASME N510-1989. These readings shall include appropriate corrections for variations from 480 Volts at the bus.

ESF Ventilation System	Wattage (kw)
SBGT System	≥ 21 and ≤ 25
CREF System	≥ 18 and ≤ 22

6.3 ACTION TO BE TAKEN IN THE EVENT OF A REPORTABLE EVENT IN PLANT OPERATION

The following actions shall be taken for REPORTABLE EVENTS:

a. The Commission shall be notified and a Licensee Event Report submitted pursuant to the requirements of Section 50.73 to 10 CFR Part 50, and

b. Each REPORTABLE EVENT shall be reviewed by the Onsite Review and Investigative Function.

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

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-374

LASALLE COUNTY STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 111
License No. NPF-18

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

   A. The application for amendment filed by the Commonwealth Edison Company (the licensee), dated September 26, 1997, as supplemented on April 7, 1998, and May 1, 1998, 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. 111, 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 prior to restart of LaSalle, Unit 2, from the current outage.

FOR THE NUCLEAR REGULATORY COMMISSION

FOR

Donna M. Skay, 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 13, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 111

FACILITY OPERATING LICENSE NO. NPF-18

DOCKET NO. 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 a vertical line indicating the area of change.

REMOVE	INSERT
3/4 7-4	3/4 7-4
3/4 7-5	3/4 7-5
3/4 7-6	3/4 7-6
B 3/4 7-1	B 3/4 7-1
6-20b	6-20b
---	6-20c

PLANT SYSTEMS

3/4.7.2 CONTROL ROOM AND AUXILIARY ELECTRIC EQUIPMENT ROOM EMERGENCY FILTRATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.2 Two independent control room and auxiliary electric equipment room emergency filtration system trains shall be OPERABLE.#

APPLICABILITY: All OPERATIONAL CONDITIONS and *.

ACTION:

a. With one emergency filtration system train inoperable, restore the inoperable train to OPERABLE status within 7 days or:

   1. In OPERATIONAL CONDITIONS 1, 2, 3, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

   2. In OPERATIONAL CONDITION 4, 5 or *, initiate and maintain operation of the OPERABLE emergency filtration system in the pressurization mode of operation.

b. With both emergency filtration system trains inoperable, in OPERATIONAL CONDITION 4, 5 or *, suspend CORE ALTERATIONS, handling of irradiated fuel in the secondary containment and operations with a potential for draining the reactor vessel.

c. The provisions of Specification 3.0.3 are not applicable in Operational Condition *.

SURVEILLANCE REQUIREMENTS

4.7.2 Each control room and auxiliary electric equipment room emergency filtration system train shall be demonstrated OPERABLE:

a. At least once per 31 days on a STAGGERED TEST BASIS:

   1. Operate each Control Room and Auxiliary Electric Equipment Room Emergency Filter System for greater than or equal to 10 continuous hours with the heaters operating, and

   2. Manually initiating flow through the control room and auxiliary electric equipment room recirculation filters for at least 10 hours.

*When irradiated fuel is being handled in the secondary containment.
#The normal or emergency power source may be inoperable in OPERATIONAL CONDITION 4, 5 or *.

SURVEILLANCE REQUIREMENTS (Continued)

b. Perform required control room and auxiliary electric equipment room filter testing in accordance with, and at the frequency specified by, the Ventilation Filter Testing Program.

c. Deleted.

d. At least once per 18 months by:

1. Deleted.

SURVEILLANCE REQUIREMENTS (Continued)

2. Verifying that on each of the below pressurization mode actuation test signals, the emergency train automatically switches to the pressurization mode of operation. Manually initiate flow through the control room and auxiliary electric equipment room recirculation filters and then verify that the control room and auxiliary electric equipment rooms are maintained at a positive pressure of greater than or equal to 1/8 inch W.G. relative to the adjacent areas during emergency train operation at a flow rate less than or equal to 4000 cfm:

   a) Outside air smoke detection, and

   b) Air intake radiation monitors.

3. Deleted.

e. Deleted.

f. Deleted.

3/4.7.1 CORE STANDBY COOLING SYSTEM - EQUIPMENT COOLING WATER SYSTEMS

The OPERABILITY of the core standby cooling system - equipment cooling water systems and the ultimate heat sink ensure that sufficient cooling capacity is available for continued operation of safety-related equipment during normal and accident conditions. The redundant cooling capacity of these systems, assuming a single failure, is consistent with the assumptions used in the accident conditions within acceptable limits.

3/4.7.2 CONTROL ROOM AND AUXILIARY ELECTRIC EQUIPMENT ROOM EMERGENCY FILTRATION SYSTEM

The OPERABILITY of the control room and auxiliary electric equipment room emergency filtration system, which includes the control room and auxiliary electric equipment room recirculation filters, ensures that the rooms will remain habitable for operations personnel during and following all design basis accident conditions. The OPERABILITY of this system in conjunction with room design provisions is based on limiting the radiation exposure to personnel occupying the rooms to 5 rem or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criteria 19 of Appendix "A", 10 CFR Part 50. Continuous operation of the system with the heaters operating for 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters.

3/4.7.3 REACTOR CORE ISOLATION COOLING SYSTEM

The reactor core isolation cooling (RCIC) system is provided to assure adequate core cooling in the event of reactor isolation from its primary heat sink and the loss of feedwater flow to the reactor vessel without requiring actuation of any of the Emergency Core Cooling System equipment. The RCIC system is conservatively required to be OPERABLE whenever reactor pressure exceeds 150 psig even though the LPCI mode of the residual heat removal (RHR) system provides adequate core cooling up to 350 psig.

The RCIC system specifications are applicable during OPERATIONAL CONDITIONS 1, 2 and 3 when reactor vessel pressure exceeds 150 psig because RCIC is the primary non-ECCS source of core cooling when the reactor is pressurized.

With the RCIC system inoperable, adequate core cooling is assured by the OPERABILITY of the HPCS system and justifies the specified 14 day out-of-service period.

The surveillance requirements provide adequate assurance that RCICS will be OPERABLE when required. Although all active components are testable and full flow can be demonstrated by recirculation during reactor operation, a complete functional test requires reactor shutdown. Initial startup test program data may be used to determine equivalent turbine/pump capabilities between test flow path and the vessel injection flow path. The pump discharge piping is maintained full to prevent water hammer damage and to start cooling at the earliest possible moment. The low pressure setpoint allowable value for the discharge line "keep-filled" alarm is based on the head of water between the centerline of the pump discharge and the system high point vent.

PLANT OPERATING PROCEDURES AND PROGRAMS (Continued)

a. Demonstrate for each of the ESF systems that an inplace test of the high efficiency particulate air (HEPA) filters shows a penetration and system bypass < 0.05 % when tested in accordance with ASME N510-1989, at the system flowrate specified below:

ESF Ventilation System	Flowrate (cfm)
SBGT System	≥ 3600 and ≤ 4400
CREF System	≥ 3600 and ≤ 4400

b. Demonstrate for each of the ESF system filter units that an inplace test of the charcoal adsorber shows a penetration and system bypass less than the value specified below, when tested in accordance with ASME N510-1989, at the system flowrate specified below:

ESF Ventilation System	Penetration and System Bypass	Flowrate (cfm)
SBGT System	0.05 %	≥ 3600 and ≤ 4400
CREF System	0.05 %	≥ 3600 and ≤ 4400
CRRF System	2.0 %	≥ 18000 and ≤ 28900
AEERRF System	2.0 %	≥ 14000 and ≤ 22800

c. Demonstrate for each of the ESF systems that a laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Guide 1.52, Revision 2, shows the methyl iodide penetration less than the value specified below when tested in accordance with ASTM D3803-1989 at a temperature of 30°C, a relative humidity of 70 % and a face velocity as specified below.

ESF Ventilation System	Penetration	Face Velocity (fpm)
SBGT System	0.5 %	40
CREF System	2.5 %	40
CRRF System	15.0 %	80
AEERRF System	15.0 %	80

d. Demonstrate for each of the ESF systems that the pressure drop across the combined moisture separator, heater, prefilter, HEPA filters and the charcoal adsorbers is less than the value specified below when tested at the system flowrate specified below:

ESF Ventilation System	Delta P (inches wg)	Flowrate (cfm)
SBGT System	8	≥ 3600 and ≤ 4400
CREF System	8	≥ 3600 and ≤ 4400
CRRF System	3.0	≥ 18000 and ≤ 28900
AEERRF System	3.0	≥ 14000 and ≤ 22800

PLANT OPERATING PROCEDURES AND PROGRAMS (Continued)

e. Demonstrate that the heaters for each of the ESF systems dissipate the electrical power specified below when tested in accordance with ASME N510-1989. These readings shall include appropriate corrections for variations from 480 Volts at the bus.

ESF Ventilation System	Wattage (kw)
SBGT System	≥ 21 and ≤ 25
CREF System	≥ 18 and ≤ 22

6.3 ACTION TO BE TAKEN IN THE EVENT OF A REPORTABLE EVENT IN PLANT OPERATION

The following actions shall be taken for REPORTABLE EVENTS:

a. The Commission shall be notified and a Licensee Event Report submitted pursuant to the requirements of Section 50.73 to 10 CFR Part 50, and

b. Each REPORTABLE EVENT shall be reviewed by the Onsite Review and Investigative Function.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 126 TO FACILITY OPERATING LICENSE NO. NPF-11 AND

AMENDMENT NO. 111 TO FACILITY OPERATING LICENSE NO. NPF-18

COMMONWEALTH EDISON COMPANY

LASALLE COUNTY STATION, UNITS 1 AND 2

DOCKET NOS. 50-373 AND 50-374

1.0 INTRODUCTION

By letter dated September 26, 1997, as supplemented on April 7, 1998, and May 1, 1998, Commonwealth Edison Company (ComEd, the licensee) requested changes to the Technical Specifications (TS) for LaSalle County Station, Units 1 and 2. Revisions related to drywell and suppression chamber purge and the editorial changes requested in the September 26, 1997, application were approved and issued under Amendment Nos. 125 and 110 dated April 27, 1998. This safety evaluation discusses the remaining requested changes. Specifically, these amendments revise TS 3/4.7.2, "Control Room and Auxiliary Electric Equipment Room Emergency Filtration System" and TS 6.2.F.8, "Ventilation Filter Testing Program". The changes consolidate the testing requirements for these systems into a single Ventilation Filter Testing Program and revise the filter efficiencies and system flow rates credited in the Loss-of-Coolant Accident (LOCA) analysis. The proposed changes also upgrade the ventilation filter testing program to current industry standards and specify that the Auxiliary Electric Equipment Room (AEER) is required to be habitable during design basis accidents. The April 7 and May 1, 1998, submittals provided additional information that did not change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

2.1 Ventilation Filter Testing Program

The proposed amendments change the surveillance requirements (SR) for the control room and AEER emergency filtration systems as stated in TS 4.7.2. The licensee proposed to relocate the SR discussed below for the control room and AEER emergency filtration system (CREF) from the current TS to the Ventilation Filter Testing Program in Section 6.2.F.8 of the Administrative Controls section of the TS. In addition, the licensee proposed to add new SR discussed below for the control room recirculation filters (CRRF) and the AEER recirculation filters (AEERRF). The relocation and addition of these surveillances is consistent with the Standard Technical Specifications (STS) for General Electric Plants, BWR/6 (NUREG-1434). The Ventilation Filter Testing Program contains the surveillances currently located in TS 4.7.2, but will reference updated industry standards.

2.1.1 Test Frequency

The current TS specify tests to be performed at the following frequencies: every 18 months; after every 720 hours of operation; following maintenance on the filter; and, after fire, painting or chemical release in a ventilation zone. Proposed TS 6.2.F.8 states that tests will be conducted at the frequencies specified in Regulatory Guide (RG) 1.52, Revision 2, "Design, Testing, and Maintenance Criteria for Postaccident Engineered-Safety-Feature Atmosphere Cleanup System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants." This change is acceptable because RG 1.52 specifies the same testing frequencies.

2.1.2 Inplace Filter Testing

Current TS 4.7.2.b.1 requires verification that the inplace testing of the high-efficiency particulate air (HEPA) filter and charcoal adsorber for the CREF satisfies the acceptance criteria and uses the test procedures of RG 1.52, Revision 2. In addition, current TS 4.7.2.b.3 requires that a flow rate of 4000 cfm $\pm$10 percent be maintained when testing in accordance with ANSI N510-1975. These requirements are being relocated to Section 6.2.F.8 as discussed below.

Proposed TS 6.2.F.8.a requires that an inplace test of the HEPA filters in the CREF show a penetration and system bypass of less than 0.05 percent when tested in accordance with ASME N510-1989 at a flowrate of $\geq$3600 and $\leq$4400 cfm. The reference to the updated ASME standard is acceptable because it is the latest version of the standard to be endorsed by the NRC and is consistent with the STS. The acceptance value of 0.05 percent for the CREF is consistent with RG 1.52, Revision 2, guidance and is acceptable. The proposed flowrate is acceptable because it is consistent with the current TS requirement of 4000 cfm $\pm$10 percent.

Proposed TS 6.2.F.8.b provides the maximum penetration and system bypass for an inplace test of the charcoal adsorbers when tested in accordance with ASME N510-1989. The proposed limit is 0.05 percent for the CREF at a flowrate of $\geq$3600 and $\leq$4400 cfm. The acceptance value of 0.05 percent for the CREF is consistent with RG 1.52, Revision 2, guidance and is acceptable. The proposed flowrate is acceptable because it is consistent with the current TS requirement of 4000 cfm $\pm$10 percent.

The licensee also proposed to add new SRs in TS 6.2.F.8.b for the CRRF and the AEERRF for inplace tests of the charcoal adsorbers. The proposed maximum penetration and system bypass is two percent for the CRRF at a flowrate of $\geq$18000 and $\leq$28900 cfm. The proposed limit is two percent for the AEERRF at a flowrate of $\geq$14000 and $\leq$22800 cfm. The proposed acceptance value of two percent for the CRRF and the AEERRF is acceptable because it includes the design leakage through the charcoal filter bypass damper. In addition, the licensee adjusted the charcoal filter efficiencies credited in the dose analysis to account for the two percent bypass by conservatively assuming five percent bypass. The proposed CRRF and AEERRF flowrates are acceptable because they are in agreement with their design rated flowrates.

2.1.3 Laboratory Testing

Current TS 4.7.2.b.2 and 4.7.2.c require that laboratory analyses of the carbon samples use the test procedures of and meet the acceptance criteria of Regulatory Position C.6.a of RG 1.52, Revision 2. Regulatory Position C.6.a refers to Table 2 of RG 1.52. Table 2 references Test 5.b

of Table 5-1 of ANSI N509-1976, "Nuclear Power Plant Air-Cleaning Units and Components." Test 5.b references the test method from paragraph 4.5.3 of Military Specification RDT M16-1T, "Gas Phase Adsorbents for Trapping Radioactive Iodine and Iodine Components" (date not indicated), but specifies that the test is to be conducted at 80 degrees Celsius (°C) and 95 percent relative humidity (RH) with preloading and postloading sweep at 25°C. This test is referred to as the "25-80-25 test." The essential elements of this test are as follows:

- 70-percent RH for air filtration systems designed to control the RH to 70 percent,
- 5-hour pre-equilibration (pre-sweep) time, with air at 25°C and 70 percent RH,
- 2-hour challenge, with gas at 80°C and 70 percent RH, and
- a 2-hour elution (post-sweep) time, with air at 25°C and 70 percent RH.

The licensee has proposed to relocate these surveillances to TS 6.2.F.8.c. The proposed SR also requires that samples be obtained as described in RG 1.52, Revision 2, but specifies that the samples be tested in accordance with ASTM D3803-1989, "Standard Test Method for Nuclear-Grade Activated Carbon" at 30°C and 70 percent RH. ASTM D3803-1989 is updated guidance based on an NRC verification and validation effort on ASTM D3803-1979, which is updated guidance based on RDT M16-1T. The essential elements of the proposed TS change for testing per ASTM D3803-1989 are:

- 70-percent RH for air filtration systems designed to control the RH to 70 percent,
- 2-hour thermal stabilization, at 30°C,
- 16-hour pre-equilibration (pre-sweep) time, with air at 30°C and 70 percent RH,
- 2-hour equilibration time, with air at 30°C and 70 percent RH,
- 1-hour challenge, with gas at 30°C and 70 percent RH, and
- 1-hour elution (post-sweep) time, with air at 30°C and 70 percent RH.

The major differences between the current and proposed TS requirements for carbon testing are:

MAJOR DIFFERENCES	Proposed TS	Current TS
Pre-Equilibration (Pre-Sweep) Temperature	30°C	25°C
Challenge Temperature	30°C	80°C
Elution (Post-Sweep) Temperature	30°C	25°C
Total Pre-Test Equilibration	18 hours	5 hours
Tolerances of Test Parameters	Smaller	Larger

The discussion below demonstrates that these differences make the proposed TS more conservative than the present TS requirements.

ASTM D3803-1989 challenges the representative charcoal samples at 30°C rather than at 80°C. The quantity of water retained by charcoal is dependent on temperature, with less water being retained as the temperature rises. The water retained by the charcoal decreases its efficiency in adsorbing other contaminants. Because most charcoal is anticipated to be challenged at a temperature closer to 30°C rather than 80°C, the lower temperature test condition of ASTM D3803-1989 will yield more realistic results than a test performed at 80°C.

ASTM D3803-1989 specifies a test temperature of 30°C for both the pre- and post-test sweep rather than 25°C. There is little difference in the adsorption behavior of charcoal between these two temperatures. A temperature of 25°C is more conservative; however, the increase from 25°C to 30°C does not represent a significant variation in the test results.

ASTM D3803-1989 provides results which are reproducible compared to RDT M16-1T because it has smaller tolerances on various test parameters, and it requires that the charcoal sample be pre-equilibrated for a much longer period. The longer pre-equilibration time is more conservative because it will completely saturate the representative charcoal sample until it is in the condition to which the subject charcoal adsorbers are expected to be exposed during design-basis conditions. During the pre-equilibration, the charcoal is exposed to a flow of air controlled at the test temperature and RH before the challenge gas is fed through the charcoal. The purpose of the pre-equilibration phase of the test is to ensure that the charcoal has stabilized at the specified test temperature and RH for a period of time which results in the charcoal adsorbing all the available moisture before the charcoal is challenged with methyl iodide. Hence, the proposed testing in accordance with ASTM D-3803-1989 standard would result in a more realistic prediction of the capability of the charcoal.

Performing the laboratory test of the charcoal samples at 70 percent RH is based on the CREF, CRRF, and AEERRF being designed to maintain the RH of the air stream entering the charcoal to $\leq$70 percent under worst case design basis conditions. The CREF utilizes heaters to maintain the air stream at $\leq$70 percent RH. This is consistent with the guidance provided in RG 1.52, Revision 2, and is acceptable. The licensee provided Calculation L-001119 in Attachment E of

the September 26, 1997, letter to demonstrate that the air entering the CRRF and AEERRF charcoal filters will be maintained at ≤70 percent RH. In addition to reviewing this calculation, the staff performed its own independent calculation without taking credit for the additional heat provided by the fan motors. Based on review of the licensee's calculation and the staff's independent calculation, the staff concludes that the air entering the CRRF and AEERRF charcoal filters will be maintained at ≤70 percent RH under worst case design basis conditions.

Proposed TS 6.2.F.8.c also requires laboratory testing of charcoal samples at a face velocity of 40 fpm for the CREF and 80 fpm for the CRRF and AEERRF. The face velocity of 40 fpm for the CREF is consistent with RG 1.52, Revision 2, guidance and is acceptable. The face velocity of 80 fpm for the CRRF is based on the CRRF design rated flow of 26340 cfm. The face velocity of 80 fpm for the AEERRF is based on the AEERRF design rated flow of 31300 cfm. Therefore, testing the CRRF and AEERRF charcoal samples at a face velocity of 80 fpm is acceptable because it is consistent with the face velocity of the air that will pass over the installed charcoal at the system design rated flowrate.

In addition, proposed TS 6.2.F.8.c requires that laboratory testing of charcoal samples show an acceptable methyl iodide penetration. In the licensee's dose analysis, the CREF, CRRF and AEERRF charcoal beds (each with a depth of two inches) are credited with a filter efficiency of 95 percent, 70 percent, and 70 percent, respectively. The licensee's proposed acceptance criteria is a methyl iodide penetration of less than 2.5 percent for the CREF and less than 15 percent for both the CRRF and the AEERRF. The proposed acceptance criteria includes a safety factor of two which provides the staff with a degree of assurance that, at the end of the operating cycle, the charcoal will be capable of performing at a level at least as good as that assumed in the licensee's dose analysis. This factor of safety is acceptable based on the accuracy of test results obtained using the ASTM D3803-1989 standard.

The staff has reviewed the proposed test methods and acceptance criteria in TS 6.2.F.8.c and finds them acceptable.

2.1.4 Other Ventilation Filter Testing Program Surveillances

Current TS 4.7.2.d.1 requires verification that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than or equal to eight inches water gauge while operating the filter train at a flow rate of 4000 cfm ±10 percent. This surveillance is being relocated to proposed TS 6.2.F.8.d. The proposed TS requires a demonstration that the pressure drop across the combined moisture separator, heater, prefilter, HEPA filters and the charcoal adsorbers is less than eight inches water gauge for the CREF when tested at a flowrate of ≥3600 cfm and ≤4400 cfm, three inches water gauge for the CRRF when tested at a flowrate of ≥18000 and ≤28900 cfm, and three inches water gauge for the AEERRF when tested at a flowrate of ≥14000 and ≤22800 cfm. The CREF filter unit has a prefilter, upstream HEPA filter, charcoal filter, and downstream HEPA filter. The eight inches water gauge for the CREF is based on two inches water gauge per component in the filter unit. The eight inches water gauge for the CREF is consistent with the current TS and is acceptable. The filter units for the CRRF and AEERRF both have a prefilter and a charcoal filter. The standard convention of two inches water gauge per component in the filter unit would result a total pressure drop of four inches water gauge. However, preliminary testing demonstrated that the CRRF and AEERRF can only maintain the TS required flowrates at a maximum of three inches water gauge. As a result, three inches water gauge for the CRRF and AEERRF was chosen in the proposed TS. The staff noted

that, in its May 1, 1998 letter, the licensee stated it will test the CRRF and AEERRF prior to declaring the systems operable by simulating a pressure drop of three inches water gauge across the combined prefilter and adsorber and verifying that the flowrate through the filters is greater than the TS minimum flowrate. The three inches water gauge for the CRRF and AEERRF is acceptable because it will ensure that the systems can maintain the TS required flowrates by ensuring that the filters are replaced when they are dirty.

Current TS 4.7.2.d.3 requires verification that the heaters dissipate 20 ±2.0 kW when tested in accordance with ANSI N510-1975. This surveillance is being relocated to proposed TS 6.2.F.8.e. The proposed TS requires that the heaters for the CREF system dissipate between 18 and 22 kW when tested in accordance with ASME N510-1989. These limits are consistent with those in the current TS and are acceptable.

2.1.5 Conclusion

The Ventilation Filter Testing Program proposed by the licensee is consistent with the program in NUREG-1434, STS General Electric Plants, BWR/6, Section 5.5.8. The requested changes to TS 4.6.5.3 revise charcoal filter testing such that the current industry standard will replace the existing flawed test methodology. The staff has evaluated these changes and concludes that the testing methodology proposed by the licensee adequately demonstrates the operability of the CREF, CRRF, and AEERRF and is, therefore, acceptable.

2.2 Other Changes

Current TS 4.7.2.a requires verification at least once per 31 days on a staggered test basis by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers of the CREF and verifying that the train operates for at least 10 hours with the heaters operable. Proposed TS 4.7.2.a requires the following to be performed at least once per 31 days on a staggered test basis: (1) operate each CREF for greater than or equal to 10 continuous hours with the heaters operating, and (2) manually initiate flow through the CRRF and AEERRF for at least 10 hours. The proposed TS includes the requirements of the current TS and adds the additional requirement of manually initiating the CRRF and AEERRF and is, therefore, acceptable.

Current TS 4.7.2.d.2 requires verification that on (a) outside air smoke detection. and (b) air intake radiation monitors actuation test signals, the CREF filter train automatically switches to the pressurization mode of operation and the control room is maintained at a positive pressure of 1/8 inch water gauge relative to the adjacent areas during emergency train operation at a flow rate less than or equal to 4000 cfm. Proposed TS 4.7.2.d.2 requires verification that on (a) outside air smoke detection, and (b) air intake radiation monitors actuation test signals, the CREF filter train automatically switches to the pressurization mode of operation. It also requires, upon manual initiation of flow through the CRRF and AEERRF, verification that the control room and auxiliary electric equipment rooms are maintained at a positive pressure greater than or equal to 1/8 inch water gauge relative to the adjacent areas during emergency train operation at a flow rate less than or equal to 4000 cfm. The proposed TS adds the additional requirement of manually initiating the CRRF and AEERRF while the surveillance is being performed to accurately reflect the alignment during an accident. In addition, the proposed TS includes the requirement of maintaining the auxiliary electric equipment rooms at a positive pressure and is, therefore, acceptable.

The licensee also proposed to revise TS 3.7.2 Bases to specifically identify that the CRRF and AEERRF are required for system operability. The staff reviewed the proposed Bases changes and finds them acceptable.

2.3 Dose Calculations

The licensee's proposal revises the filter efficiencies (adjusted for bypass) and system flow rates credited in the LOCA analysis. In addition, the TS are revised to clarify that the habitability requirements of 10 CFR Part 50, Appendix A, General Design Criteria (GDC) 19 and, therefore, the ventilation system operability requirements in the TS apply to the AEER as well as the control room.

The licensee provided calculation L-001166, Revision 2, "Post LOCA Control Room, Auxiliary Electric Equipment Room, and Offsite Doses" that documents the expected radiation doses that would be received by individuals off-site and in the control room and Auxiliary Electric Equipment Room from a design basis LOCA. This calculation reflects the licensing basis assumptions with revised ventilation system parameters consistent with the proposed TS change. In addition, the licensee took credit for containment suppression pool scrubbing of the radioactive source term and the use of the revised dose conversion factors found in Publication 30 of the International Commission on Radiation Protection. These assumptions are consistent with current NRC staff positions that were not available during LaSalle's initial licensing. Scaling factors were applied to the calculated doses to adjust the results for the differences in the isotopic spectrums between the current design basis source term and Siemens (extended burn-up) fuel source term, which the licensee intends to use in the future.

The licensee's calculation considered the dose contributions from the release of radioactive materials due to primary containment leakage, Emergency Core Cooling Systems (ECCS) leakage, and Main Steam Isolation Valve (MSIV) leakage. Primary containment and ECCS leakage was assumed to be contained in the secondary containment and processed through the Standby Gas Treatment System prior to release from the 370 foot stack as an elevated release. Consistent with LaSalle's current design basis, MSIV leakage was assumed to bypass secondary containment through the steam piping and MSIV drain lines. Holdup and plate out of the radioiodines in the steam system and condenser are credited before the materials are assumed to be released from the Turbine Building as a ground level release.

The calculational models for the doses to plant operators take credit for radioiodine removal by the recirculation filter units in both the control room and the AEER ventilation systems. These filter units are bypassed during normal operation and do not automatically initiate during an isolation signal. The licensee assumes it would take a maximum of 4 hours for operators to manually initiate ventilation flow through these recirculation filter units.

The NRC staff reviewed the licensee's calculational models and assumptions. In addition, the staff performed several independent confirmatory calculations to verify portions of the licensee's dose assessment. The radiological consequences as analyzed by the licensee are well within the dose criteria of 10 CFR Part 100 and 10 CFR Part 50, Appendix A, GDC 19.

The staff concludes that the licensee has demonstrated with reasonable assurance that the LaSalle design (as modified by this action) will meet the Acceptance Criteria of the Standard

Review Plan (NUREG-0800) with respect to the radiological consequences to offsite individuals and plant operators during a design basis LOCA, and is, therefore, acceptable.

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 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 and 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 (62 FR 61840). 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.

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