

December 13, 2001

Mr. Oliver D. Kingsley, President  
Exelon Nuclear  
Exelon Generation Company, LLC  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: LASALLE COUNTY STATION, UNITS 1 AND 2 - ISSUANCE OF  
AMENDMENTS (TAC NOS. MB2253 AND MB2254)

Dear Mr. Kingsley:

The U.S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 151 to Facility Operating License No. NPF-11 and Amendment No. 137 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 June 15, 2001.

The amendments will eliminate the Technical Specifications (TS) requirement that the Automatic Depressurization System (ADS) designated Safety/Relief Valves (S/RVs) open during the manual actuation of the ADS and rewords the Surveillance Requirement (SR) 3.5.1.8 frequency to require the testing of all required ADS manual actuation solenoids during the performance of SR 3.5.1.8 in place of testing on a staggered basis.

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/*

William A. Macon, Jr., Project Manager, Section 2  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-373, 50-374

Enclosures: 1. Amendment No. 151 to NPF-11  
2. Amendment No. 137 to NPF-18  
3. Safety Evaluation

cc w/encls: See next page

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Units 1 and 2

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EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-373

LASALLE COUNTY STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 151  
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 June 15, 2001, 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. 151, 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/*

Anthony J. Mendiola, 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: December 13, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 151

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 vertical lines indicating the area of change.

Remove Pages

3.5.1-5

Insert Pages

3.5.1-5

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-374

LASALLE COUNTY STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 137  
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 June 15, 2001, 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. 137, 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/*

Anthony J. Mendiola, 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: December 13, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 137

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 Pages

3.5.1-5

Insert Pages

3.5.1-5

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 151 TO FACILITY OPERATING LICENSE NO. NPF-11  
AND AMENDMENT NO. 137 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 letter dated June 15, 2001, Exelon Generation Company, LLC, the licensee for LaSalle County Station, Units 1 and 2, (LaSalle) proposed a change to modify the automatic depressurization system (ADS) safety/relief valve (S/RV) Technical Specification (TS) manual actuation surveillance requirement. The specific TS change evaluated herein is for TS Surveillance Requirement (SR) 3.5.1.8, and the associated Bases for this requirement to reflect a proposed change to allow stroking of only the S/RV actuator to demonstrate operability.

1.1 BACKGROUND

The LaSalle ADS S/RVs are Crosby Model HB-65-BP Dual Function S/RVs, that are designed to perform as either a safety valve or as a relief valve. The safety mode of operation is independent and separate from the relief mode. The safety mode of operation is initiated when the increasing static inlet steam pressure overcomes the restraining spring and frictional forces acting against the inlet steam pressure to move the disc in the opening direction. The relief mode of operation is initiated when an electrical signal is received at any or all of the solenoid valves located on the pneumatic relief-mode actuator assembly. The manual actuation of the ADS valves is initiated from the control room. The solenoid and air control valve will open to allow an air source to pressurize the lower side of the piston in the pneumatic cylinder to push it upwards. This action is transmitted through a lever arm and pivot mechanism which in turn pulls the valve lifting nut upwards, thereby opening the valve to allow steam discharge through the valve. Upon de-energizing the solenoid, the air valve will reposition to allow the pressurized air in the cylinder to vent to atmosphere and thus close the valve. Seven of the S/RVs use the relief mode to perform the ADS function.

The ADS is designed to provide depressurization of the reactor primary coolant system (PCS) during a small break loss-of-coolant accident (LOCA). This becomes necessary if the high-pressure core spray (HPCS) system fails or is unable to maintain required water level in the reactor pressure vessel (RPV). The ADS will depressurize the PCS to allow the combination of the low-pressure coolant injection (LPCI) system and low-pressure core spray (LPCS) system to inject into the PCS. The ADS valves can be opened automatically or remote manually.

SR 3.5.1.8 verifies that the ADS valves can be manually opened and that associated solenoids are functioning properly by observing the expected change in the indicated valve position. SR 3.5.1.8 is required to be performed at least once per 24 months on a staggered test basis for each valve solenoid.

Currently, approximately 50 percent of the ADS valves are removed from the plant and setpoint tested during each refueling outage in accordance with SR 3.4.4.1. The setpoint testing program includes the manual actuation of the ADS valves during the bench testing of the valves. The ADS valves are reinstalled in the plant and SR 3.5.1.8 is performed on all of the ADS valves to manually actuate the valves with plant-installed equipment.

## 1.2 BASES FOR PROPOSED TECHNICAL SPECIFICATION CHANGE

The licensee states that experience at LaSalle, and at other nuclear plants, has indicated that repeated manual actuation of the ADS valves can lead to undesirable seat leakage during plant operation. In the current operating cycles for Units 1 and 2, approximately 18 percent (i.e., 5 of 28) of the valves that experienced one open cycling stroke developed leakage, whereas, approximately 57 percent (i.e., 12 of 21) of the valves that experienced more than one open cycling developed through-seat leakage. The ADS valve leakage is directed to the pool of water in the primary containment suppression chamber causing a need to increase cooling to the pool of water or a plant shutdown to fix the leaking ADS valve.

The licensee states that the proposed change to SR 3.5.1.8 would allow the uncoupling of the ADS valve stem from the plant-installed remote manual actuation equipment prior to performing SR 3.5.1.8, thereby allowing the verification that the plant-installed manual actuation equipment functions without requiring the opening of the ADS valve. The ADS valves that are removed during each refueling outage will continue to be manually actuated during the bench testing of the valves as part of the setpoint testing program. The uncoupling of the ADS valve stem from the plant-installed remote manual actuation equipment will allow increased testing of the manual actuation valve solenoids without cycling the valve.

The licensee states that all of the components necessary to manually actuate the ADS valve will continue to be tested. The proposed changes to SR 3.5.1.8 will result in the testing of the manual actuation of the S/RVs being performed in two overlapping steps in accordance with the requirements of SR 3.4.4.1 and the proposed requirements of SR 3.5.1.8. The SR 3.4.4.1 setpoint testing of the ADS valves is performed after the valve and actuator assemblies have been removed from the plant and transported to an approved vendor. The valves are bench tested at the vendor location to verify the safety and relief mode of valve operation. The safety mode is tested by verifying that the pressure required below the valve disc to open the valve is consistent with design requirements. The relief mode is tested by providing air to the valve actuator and verifying the performance of the valve actuator, lever, and pivot mechanism to open the valve. The proposed changes to SR 3.5.1.8 would require the testing of the ADS valve manual relief mode after they are installed in the plant. The testing would be performed with the actuator uncoupled from the valve stem to allow the testing of the manual actuation electrical circuitry, manual actuation solenoid and air control valve, and the actuator without causing the ADS valve to open.

The licensee also states that the proposed change, to exclude valve actuation during SR 3.5.1.8, will allow the testing of all manual valve solenoids on a 24-month frequency instead of on a staggered basis, since the object of minimizing the number of times the ADS valves are opened due to testing is accomplished by the proposed change to the other testing requirement.

## 2.0 EVALUATION

The staff has reviewed the licensee's proposed TS change and finds that the current requirements can result in additional seat leakage of the ADS valves during power operation. Such leakage would be directed to the primary containment suppression chamber causing a need to increase cooling to the suppression pool water or a plant shutdown to fix the leaking valve. The proposed testing provides for actual stroking of the ADS S/RVs after performing the American Society of Mechanical Engineers (ASME) Code setpoint testing on a sample of valves combined with stroking only the S/RV actuators after the ADS S/RVs have been installed.

The staff finds that the proposed TS testing is acceptable since the only significant difference between the current TS testing and the testing proposed by the licensee is that the proposed sample stroke-testing of the total S/RV population each outage, when the S/RVs are setpoint tested, is less than the current testing of all S/RVs each refueling. However, the 1987 ASME/ANSI OM Part 1 standard (OM-1), which is currently applicable to the licensee, requires only that a sample of S/RVs be setpoint tested in any test period. Furthermore, OM-1 provides for the stroking of S/RV actuators only when setpoint tests, or maintenance or repair activities, are performed. Therefore, the licensee's proposed testing frequency meets the OM-1 required frequency that the staff has found to be adequate for testing valves of this type.

The staff notes that, with the proposed change to SR 3.5.1.8, all of the ADS S/RV air solenoids are actuated on a 24-month frequency. This is more frequent than the current SR which requires only that the air solenoids be tested on a staggered basis when the ADS S/RVs are actuated. Therefore, this part of the proposal exceeds the current TS requirement.

Based on the above evaluation, the staff finds that the licensee has adequately demonstrated the adequacy of the proposed changes to the TS for LaSalle County Station, Units 1 and 2. The proposed changes provide for testing of the ADS S/RVs to demonstrate adequate relief mode function without the need for actually stroking the ADS S/RVs. Therefore, the proposed TS change to TS SR 3.5.1.8 and associated Bases are 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. 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 (66 FR 41618). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

## 5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: G. Hammer and Y.S. Huang

Date: December 13, 2001