

July 29, 2002

Mr. John L. Skolds, President
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: LASALLE COUNTY STATION, UNIT 2 - RELIEF REQUEST RV-13
(TAC NO. MB3803)

Dear Mr. Skolds:

By letter dated January 7, 2002, Exelon Generation Company, LLC, submitted a request for relief from the American Society of Mechanical Engineers / American National Standards Institute, Operation and Maintenance of Nuclear Power Plants, OM-1987, Part 1 (OM-1) requirement to test a minimum of 20% of Class 1 pressure relief valves within 24 months. The Relief Request RV-13 by LaSalle County Station, Unit 2, proposes as an alternative to OM-1 to delay Safety Relief Valve (S/RV) setpoint testing from October 2004 until the Unit 2 refueling outage, L2R10, currently scheduled for January 15, 2005.

The NRC staff has evaluated Relief Request RV-13, and finds that the proposed alternative may be authorized pursuant to 10 CFR 50.55a(a)(3)(ii) on the basis that compliance with OM-1 testing requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. The proposed testing provides reasonable assurance that the S/RVs will perform their intended safety function. The proposed alternative is only being authorized for the period October 2004 through January 2005 for LaSalle County Station, Unit 2. Our safety evaluation is enclosed.

Sincerely,

/RA/

Anthony J. Mendiola, Chief, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-374

Enclosure: Safety Evaluation

cc w/encl: See next page

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*SE dated 07/02/02

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OFFICE	PM:LPD3-2	LA:LPD3-2	SC:EMEB	OGC	SC:LPD3-2
NAME	WMacon, Jr.	CRosenberg	DTerao*	RHoefling**	AMendiola
DATE	07/25/02	07/25/02	07/02/02	07/24/02	07/29/02

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LaSalle County Station Units 1 and 2

cc:

Site Vice President - LaSalle
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 Department of Nuclear Safety
Office of Nuclear Facility Safety
1035 Outer Park Drive
Springfield, IL 62704

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
Mid-West Operations Support
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

Senior Vice President
Mid-West Regional Operating Group
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

LaSalle County Station Units 1 and 2

- 2 -

Director - Licensing
Mid-West Regional Operating Group
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

Senior Counsel, Nuclear
Mid-West Regional Operating Group
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO THE INSERVICE INSPECTION REQUIREMENTS

RELIEF REQUEST RV-13

LASALLE COUNTY STATION, UNIT 2

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-374

1.0 INTRODUCTION

The Code of Federal Regulations, 10 CFR 50.55a, requires that inservice testing (IST) of certain American Society of Mechanical Engineers (ASME) Code Class 1, 2, and 3 pumps and valves be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code (Code) and applicable addenda, except where relief has been requested and granted or proposed alternatives have been authorized by the Commission pursuant to 10 CFR 50.55a (f)(6)(i), (a)(3)(i), or (a)(3)(ii). In order to obtain authorization or relief, the licensee must demonstrate that: (1) conformance is impractical for its facility, (2) the proposed alternative provides an acceptable level of quality and safety, or (3) compliance would result in a hardship or unusual difficulty without a compensating increase in the level of quality and safety.

2.0 BACKGROUND

By letter dated January 7, 2002, Exelon Generation Company, LLC, (the licensee) submitted a one-time request for relief (RV-13) from certain ASME Code IST requirements pertaining to testing of the plant Class 1 main steam safety relief valves (S/RVs) at LaSalle County Station, Unit 2. The plant IST program requires that the testing meet the requirements of ASME / American National Standards Institute (ANSI), Operations and Maintenance of Nuclear Power Plants, OM-1987, Part 1 (OM-1). Specifically, relief request RV-13 seeks a one-time relief from performing as-found setpoint pressure tests on a minimum of 20% of these valves within any 24 months, as required by OM-1, Section 1.3.3.1(b). The following is a list of the plant S/RVs for which the licensee is seeking this one-time relief:

<u>VALVE ID</u>	<u>DESCRIPTION</u>
2B21-F013C	Unit 2 C Main Steam Safety Relief Valve
2B21-F013D	Unit 2 D Main Steam Safety Relief Valve
2B21-F013E	Unit 2 E Main Steam Safety Relief Valve
2B21-F013F	Unit 2 F Main Steam Safety Relief Valve
2B21-F013H	Unit 2 H Main Steam Safety Relief Valve
2B21-F013K	Unit 2 K Main Steam Safety Relief Valve
2B21-F013L	Unit 2 L Main Steam Safety Relief Valve

<u>VALVE ID</u>	<u>DESCRIPTION</u>
2B21-F013M	Unit 2 M Main Steam Safety Relief Valve
2B21-F013P	Unit 2 P Main Steam Safety Relief Valve
2B21-F013R	Unit 2 R Main Steam Safety Relief Valve
2B21-F013S	Unit 2 S Main Steam Safety Relief Valve
2B21-F013U	Unit 2 U Main Steam Safety Relief Valve
2B21-F013V	Unit 2 V Main Steam Safety Relief Valve

For the above described valves, the licensee is requesting one-time relief from the testing requirement for boiling water reactor pressure relief valves. OM-1, paragraph 1.3.3.1(b) requires that a minimum of 20% of the Class 1 pressure relief valves be setpoint tested within any 24 months. OM-1, paragraph 1.3.3.1(e)(1) sets sample expansion criteria beyond the minimum 20% sampling for any valves not meeting acceptance criteria.

3.0 PROPOSED ALTERNATIVE TESTING

As an alternative to the above required testing, the licensee proposed to replace 100% of its S/RVs with pre-tested valves in maintenance outage L2P01, which began April 9, 2002, and ended April 24, 2002. The licensee does not propose to test any S/RVs during refueling outage L2R09, currently scheduled for January 10, 2003. The licensee proposes to then perform setpoint testing on a minimum of 40% of the S/RVs during the L2R10 outage, currently scheduled for January 15, 2005. The licensee also proposes to perform setpoint testing on any S/RV not tested during the L2R10 outage (scheduled for January 15, 2005) during refueling outage L2R11.

4.0 BASIS FOR RELIEF

As a basis for the requested relief, the licensee states the following:

LaSalle County Station, Unit 2, is scheduled to setpoint test Safety Relief Valves (S/RVs) in refueling outage L2R09, currently scheduled to begin January 10, 2003. The testing is needed to satisfy the code requirement that a minimum of 20% of the S/RVs be setpoint tested within any 24 months.

However, LaSalle County Station, Unit 2, will replace 100% of its S/RVs during the upcoming planned maintenance outage L2P01, currently scheduled to start on March 30, 2002. This recently planned outage is being conducted as a proactive measure to improve the reliability of these valves. The purpose of the replacement is to install a full complement of pre-tested S/RVs that have undergone a seat design change for improved leak tightness. As a result of this maintenance outage, the setpoint testing for the next 20% sample of this group of valves would be required within 24 months. Accounting for a 1.25 extension factor from Technical Specification Surveillance Requirement 3.0.2 (i.e., 30 months) this testing would be required by October 2004. The October 2004 date is between the currently planned refueling outage dates for L2R09 (January 10, 2003) and L2R10 (January 15, 2005). This relief request proposes to delay the 20% S/RV setpoint testing until refueling outage L2R10. This will result in an extension of the maximum allowed testing frequency from 30 months to approximately 33 months.

A review of as-found S/RV setpoint testing history of LaSalle County Station, Units 1 and 2, demonstrates proven relief pressure reliability. There have been 178 S/RV setpoint tests performed in the history of the station with only 20 setpoint test failures based on the +/-3% setpoint acceptance criteria. Most of the failed tests (i.e., 18 of the 20 tests) were caused by the valves relieving at lower than their design setpoints (i.e., conservative failure). For the 2 remaining setpoint test failures, the valves relieved higher than their design setpoints (i.e., non-conservative failure). The proposed onetime extension of the S/RV testing frequency to approximately 33 months is not expected to affect the proven relief pressure reliability of these valves.

LaSalle County Station, Unit 2, refueling outage L2R09 is currently planned for January 10, 2003. This is only 10 months after the maintenance outage L2P01 (March 30, 2002) in which 100% of the S/RVs are being replaced with pre-tested valves. As a result, LaSalle County Station is proposing not to test any Unit 2 S/RVs during refueling outage L2R09. This is based on the following:

- LaSalle County Station does not expect the short duration of this relief to affect the setpoint performance of these S/RVs based on the setpoint testing history described above.
- LaSalle County Station has 8% excess relief capacity Installed. This excess capacity is sufficient to bound any unexpected setpoint drift that could reasonably be postulated.
- Shutdown risk in the area of decay heat removal is increased when S/RVs are taken out of service. There are times during the L2R09 outage when the shutdown risk could stay at status Green instead of turning to status Yellow for one or two days if S/RV work could be avoided.

Thus, not performing S/RV setpoint testing during L2R09 will allow greater flexibility in performing outage work.

This relief request proposes to delay the setpoint testing of 20% of the Unit 2 S/RVs installed in L2P01 from October 2004 until refueling outage L2R10 (January 15, 2005). This will result in an extension of the maximum allowed S/RV setpoint testing frequency from 30 months to approximately 33 months. This request is based on the following:

- S/RV setpoint testing can only be performed with the unit in an extended maintenance or refueling outage. LaSalle County Station is not planning any extended Unit 2 maintenance outages between refueling outages L2R09 and L2R10. The performance of an extended maintenance outage solely to perform S/RV setpoint testing would subject the unit to an extra transient.
- LaSalle County Station does not expect this approximate 3-month extension to affect the setpoint performance of these S/RVs based on the setpoint testing history described above.

- LaSalle County Station, Unit 2, will perform setpoint testing on a minimum of 40% of the S/RVs during L2R10. This is twice the S/RV setpoint testing that is required by the OM-1 Code to be performed during a 24 month period.
- LaSalle County Station, Unit 2, will perform setpoint testing on any S/RV not tested during L2R10 as part of the initial sample and any necessary sample expansion, in refueling outage L2R11. This will ensure that every Unit 2 S/RV is tested within the Code requirements.
- The S/RVs are passive during normal operation and are only challenged during certain transients.

Therefore, this proposed relief request provides an acceptable level of quality and safety.

5.0 EVALUATION

The staff finds that the S/RV setpoint testing can only be performed with the plant in a maintenance or refueling outage condition. The staff finds that performing S/RV testing during the L2R09 outage or placing the plant in an additional outage condition for the purpose of testing S/RVs between refueling outages L2R09 and L2R10, would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. The 1.25 extension factor allowed by the plant Technical Specification Surveillance Requirement 3.0.2 would already allow the testing to be performed as late as October 2004, and the proposed testing in January 2005 is only three months later.

The licensee has 8% additional relief capacity beyond that required to mitigate licensing-basis events, which significantly reduces the effect of additional upward setpoint drift of the S/RVs on maximum system pressure. Further, the licensee has evaluated the past S/RV setpoint performance data. The data demonstrate that the S/RVs have performed generally well with only a few cases of setpoint drift. The general trend for the S/RVs has been for the setpoints to drift in the low direction, which is conservative for system overpressure protection. Further, it is noted that the licensee's request is only for relief from the requirement to setpoint test 20% of the S/RVs within any 24-months, and that the requirement to test all of the S/RV population within five years will still be met.

Therefore, the staff finds that compliance with OM-1 testing requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. In addition, the licensee's proposed alternative testing of the S/RVs during the L2R10 outage, currently scheduled for January 15, 2005, provides reasonable assurance that the S/RVs will perform their intended safety function.

6.0 CONCLUSION

Based on the above evaluation, the staff concludes that the licensee's proposed alternative is authorized pursuant to 10 CFR 50.55a(a)(3)(ii) on the basis that compliance with OM-1 testing requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. The licensee's proposed testing provides reasonable assurance that the S/RVs will perform their intended safety function. The proposed alternative is only being authorized for the period October 2004 through January 2005 for LaSalle County Station, Unit 2.

Principal Contributor: G. Hammer, NRR/DE

Date: July 29, 2002