



Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

January 30, 1995

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

SUBJECT: LaSalle County Nuclear Power Station Unit 2
Request for Emergency Technical Specification Amendment
and Relief Request
Facility Operating License NPF-18
NRC Docket 50-374

REFERENCE: May 4, 1989 letter from E. Greenman to C. Reed,
Quarterly Cycling of MSIV Pilot solenoid valves.

Pursuant to 10 CFR 50.91(a)(5), Commonwealth Edison Company (CECo) proposes to amend Appendix A, Technical Specifications, of Facility Operating License NPF-18 and requests that the Nuclear Regulatory Commission (NRC) grant an emergency amendment to Technical Specification 3.3.1. Additionally, a relief request to extend the ASME Technical Specification surveillance requirement 4.0.5 is requested. This amendment and relief request are needed by 2:45 a.m. CST on February 15, 1995. Also, this letter provides a one time change to the referenced commitment on quarterly cycling of MSIV Pilot solenoid valves.

Due to a personnel error in determining the next MSIV - Closure Scram channel functional test surveillance interval, it was just recently realized that the surveillance will be required to be performed prior to shutdown on February 18, 1995 for the LaSalle Station Unit 2 sixth refuel outage. Specifically, the MSIV - Closure Scram channel functional test surveillance will exceed the specified quarterly surveillance interval and the allowed factor of 1.25 times the surveillance interval at 2:45 a.m. CST on February 15, 1995, which is approximately three days prior to the scheduled shutdown ending LaSalle Unit 2 operating cycle 6. Performance of the surveillances will require LaSalle Unit 2 to reduce power to less than 25% core thermal power to verify the proper position of the MSIV limit switches for RPS instrumentation operability. Approval of this emergency change will extend the surveillance intervals to allow Unit 2 to continue full power operation until the scheduled shutdown ending Unit 2 operating cycle 6. The total surveillance interval period shall not exceed 120 days, i.e., the surveillance shall be performed prior to 02:45 a.m. CST on February 20, 1995.

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An emergency change is needed and could not be avoided due to the short time frame that exists between when the need to perform the surveillance was first realized (January 19, 1995), and when the MSIV- Closure Scram channel functional test must be performed (February 15, 1995). On January 25, 1995 it was decided to develop this request due to the combination of high dose accumulation when performing the surveillance and proximity to the shutdown of LaSalle Unit 2 for its sixth refueling outage. This short time frame, combined with the time necessary to develop this request, will not allow time for public comment. Therefore, this condition was not created by the failure to make a timely application for a Technical Specification Amendment. The attached safety analysis shows that this proposal provides a net safety benefit by not requiring LaSalle Unit 2 to reduce power to less than 25% power and undergo unnecessary cycles on plant equipment and any associated challenges to safety systems.

Attachment E is ASME Section XI Inservice Testing Program Relief Request, Valve Relief Request RV-57, which requests a one-time extension of the ASME quarterly surveillance interval for the MSIVs as required by Technical Specification 4.0.5. The relief request description and bases is similar to the aforementioned emergency Technical Specification change.

The Reference provides NRC concurrence of ComEd's change in commitment to cycle the MSIVs quarterly (they were previously done on a monthly basis) due to an ASCO pilot solenoid valve failure associated with the MSIV. Due to this emergency change, this letter indicates that the MSIVs will exceed the quarterly surveillance by as much as 5 days for this one time only. The ASCO solenoids will remain within the current EQ life of the solenoids for this cycle. ComEd believes this is acceptable, especially due to the fact that the ASCO solenoids will be replaced during the refuel outage.

This proposed emergency amendment request is subdivided as follows:

1. Attachment A gives a description and safety analysis of the proposed changes in this amendment.
2. Attachment B includes a summary of the proposed changes and the marked-up Technical Specifications pages for LaSalle Unit 2, with the requested changes indicated.
3. Attachment C describes ComEd's evaluation performed in accordance with 10 CFR 50.92 (c), which confirms that no significant hazard consideration is involved.

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4. Attachment D provides an Environmental Assessment Applicability Review.
5. Attachment E is ASME Section XI Inservice Testing Program Relief Request, Valve Relief Request RV-57, which requests a one-time extension of the ASME quarterly surveillance interval for the MSIVs as required by Technical Specification 4.0.5.

This proposed emergency amendment has been reviewed and approved by ComEd On-Site and Off-Site Review in accordance with Commonwealth Edison procedures.

To the best of my knowledge and belief, the statements contained above are true and correct. In some respect these statements are not based on my personal knowledge, but from obtained information furnished by other Commonwealth Edison employees, contractor employees, and consultants. Such information has been reviewed in accordance with company practice, and I believe it to be reliable.

Commonwealth Edison is notifying the State of Illinois of this application for amendment by transmitting a copy of this letter and its attachments to the designated state official.

Please direct any questions you may have concerning this submittal to this office.



Very truly yours,

Gary G. Benes
Gary G. Benes

Nuclear Licensing Administrator

Subscribed and Sworn to before me
on this 30th day of
January, 1995.

Mary Jo Yack
Notary Public

January 30, 1995

Attachments:

- A. Description and Safety Analysis of the Proposed Changes
- B. Marked-Up Technical Specification Pages
- C. Evaluation of Significant Hazards Considerations
- D. Environmental Assessment Applicability Review
- E. ASME Section XI Inservice Testing Program Relief Request, Valve Relief Request RV-57.

cc: J. B. Martin, Regional Administrator - RIII
P. G. Brochman, Senior Resident Inspector - LSCS
W. D. Reckley, Project Manager, NRR
Office of Nuclear Facility Safety - IDNS

ATTACHMENT A

DESCRIPTION OF SAFETY ANALYSIS OF THE PROPOSED CHANGES

Description of the Proposed Change

This Emergency Technical Specification amendment request proposes a one time extension of the functional test for the Main Steam Line Isolation Valve (MSIV) - closure scram functional unit in the reactor protection system for LaSalle County Station (LaSalle), Unit 2 Technical Specifications. This request is needed to allow continued full power operation of LaSalle Unit 2 for a maximum of 5 days beyond the current functional test interval of 92 days (plus the 1.25 extension allowance of Specification 4.0.2), therefore, resulting in a maximum surveillance interval of 120 days.

Description of the Current Operating License/Technical Specification Requirement

The current requirements of Technical Specification Surveillance Requirement 4.3.1.1, Reactor Protection System Instrumentation, requires the following:

"4.3.1.1 Each reactor protection system instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL FUNCTIONAL TEST, AND CHANNEL CALIBRATION operations for the OPERATIONAL CONDITIONS and at the frequencies shown in Table 4.3.1.1-1."

Table 4.3.1.1-1, "Reactor Protection System Instrumentation Surveillance Requirements," requires a quarterly channel functional test for the following "Functional Unit" that is requested to have a one time interval extension of a maximum of 5 days:

5. "Main Steam Line Isolation Valve - Closure."

Bases for the Current Requirement

The bases for the current requirements of the above Technical Specification items provide Operational Conditions for which Surveillances are required and the Surveillance Requirements needed to preserve the ability of these systems to perform their intended design functions. The channel functional test verifies that the associated scram "instrument" and associated relays will function to cause a scram. These tests are performed quarterly based on the need to assure trip channel operability.

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Description of the Need for Amending the Technical Specification and Basis for Emergency

One of the Reactor Protection System Instrumentation "Functional Units" listed in Table 4.3.1.1-1 will exceed the specified quarterly surveillance interval and the allowed factor of 1.25 times the surveillance interval on February 15, 1995 for Item 5. This is only 3 days before the scheduled shutdown for the LaSalle Unit 2 sixth refueling outage, L2R06, on February 18, 1995.

Due to a problem that has developed with the LaSalle Unit 2 MSIV Limit Switches, LaSalle Unit 2 must reduce power to less than 25% core thermal power (CTP) prior to the end of the channel functional test interval to verify that the limit switches are in the "Spring Return-to-Normal" position. The nature of the problem is that some of the limit switches may not always automatically return the limit switch arm to the normal position after being toggled during valve strokes. If a limit switch arm is not in the normal position when the valve is next moved from open to closed or vice-versa, the limit switch will not toggle. For the MSIV limit switches that input to the MSIV - Closure Scram RPS logic (MSIV- RPS limit switch), the problem can be readily identified. This failure will occur when a MSIV-RPS limit switch fails to return to normal after tripping during closure of the associated MSIV (only partial closure is required to conduct the functional test). When the MSIV is reopened, the limit switch may not be reset and thus the associated RPS logic relay will remain de-energized and is thus detectable in the Main Control Room. If an MSIV-RPS limit switch returns to normal after being tripped, then the limit switch will reset, and thus re-energize the associated RPS logic relay. Visual observation of limit switch position after MSIV cycling is required, because the limit switch may not spring return to the normal position after being reset, which is not detectable until the next time the MSIV is cycled for a surveillance. During the time interval, an MSIV-RPS limit switch could be inoperable, unable to trip on MSIV closure.

All MSIV limit switches were in the "Spring Return-to-Normal" position after the most recent functional test on October 23, 1994, when LaSalle Unit 2 was starting up from a forced outage. Therefore the RPS limit switches for the MSIV - Closure Scram are currently Operable. However, the position of the MSIV limit switches will be unknown, without visual observation, after cycling the MSIVs during the next scheduled channel functional test. Therefore, LaSalle Unit 2 must reduce power to less than 25% core thermal power, approximately 200 MWe, in order to allow

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personnel access to the primary containment drywell to verify proper MSIV limit switch position in the "Spring Return-to-Normal" position. The quarterly channel functional test is due again at the maximum of 1.25 times the current 92 day surveillance test interval at 02:45 a.m. CST on February 15, 1995.

Without this Technical Specification amendment, LaSalle Unit 2 will need to be significantly derated from 100% power down to less than 25% CTP to verify the proper position of MSIV limit switches for RPS instrumentation operability after conducting the surveillance. The MSIV limit switches are being replaced per a modification that is scheduled to be completed in L2R06. Approval of this emergency change will allow LaSalle Unit 2 to continue full power operation until the scheduled shutdown for L2R06. This emergency change will provide a net safety benefit by not requiring the unit to maneuver to less than 25% CTP and undergo unnecessary cycling of plant equipment, precluding an additional downshift and upshift of the reactor recirculation pumps, and any associated challenges to safety systems. Also, this extension will save approximately 200 mrem dose to personnel.

The circumstances leading to the emergency amendment request could not be avoided, because this problem associated with the due date of the LaSalle Unit 2 MSIV limit switches functional test surveillance was not identified until January 19, 1995. After the most recent performance of the surveillance on October 23, 1994, the next due date was estimated to be after shutdown for L2R06, thus the surveillance was not expected to be performed prior to the scheduled shutdown date of February 18, 1995. The normal surveillance computer tracking program (General Surveillance Computer Program) was reviewed on January 19, 1995. The MSIV - Closure Scram surveillance was found to have a critical date (1.25 times the quarterly frequency) of February 15, 1995. Plans were initially made to perform the surveillance prior to the refuel outage. The possibility of a one time extension of the quarterly STI was determined on January 25, 1995. LaSalle has been developing this amendment request since January 25th. Due to the due date of the MSIV - Closure channel functional test, that must currently be performed by 2:45 a.m. CST on February 15, 1995, neither the 30 day period for public comment required for a normal Technical Specification amendment per 10 CFR 50.91(a)(2), nor the 15 day period for public comment required for an Exigent change per 10 CFR 50.91(a)(6) can be met. Therefore, this request for amendment is being submitted as an emergency change per 10 CFR 50.91(a)(5). Per Attachment C, this

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Technical Specification amendment request does not involve a significant hazards consideration.

Therefore, Commonwealth Edison requests an Emergency Technical Specification amendment for a one time extension of the functional test interval for the Reactor protection system instrumentation surveillances for item 5, Main Steam Line Isolation Valve - Closure.

Description of the Amended Technical Specification Requirement

LaSalle County Station proposes a one time extension of the quarterly STI for a maximum of 5 days for the MSIV - Closure scram Channel Functional Test by adding the following footnote to Table 4.3.1.1-1:

"The quarterly surveillance interval which began at 3:45 a.m. CDT on October 23, 1994, is extended until the scheduled shutdown ending Unit 2 operating cycle 6. The total surveillance interval shall not exceed 120 days, i.e., the surveillance shall be performed prior to 2:45 a.m. CST on February 20, 1995."

Bases for the Amended Technical Specification Request

In late 1983 the BWR Owners' Group formed a Technical Specification Improvement (TSI) Committee to develop recommendations for improving the BWR Standard Technical Specifications. The TSI established a program for the development of reliability analyses to identify improvements for surveillance test intervals (STI) and Allowed Outage Time (AOT) in the standard technical specifications. The improved STI and AOT would be implemented to minimize unnecessary testing and excessively restrictive outage times. The improvements recommended by the TSI Committee can help to address the following problems associated with plant operations:

- o Scrams and safety system challenges inadvertently caused during the performance of surveillance tests,
- o AOT not long enough to permit completion of surveillance tests, repairs or maintenance,
- o Excessive actuation of equipment which can lead to shortened lifetimes and increased failure rates, and

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- o Radiation exposure to personnel performing surveillance tests.

General Electric (GE) subsequently submitted several topical reports to the NRC for review justifying STI and AOT extensions for reactor protection system (RPS), primary containment isolation system (PCIS), emergency core cooling system (ECCS) and control rod block instrumentation. The NRC evaluated and approved the reports and has encouraged the utilities to submit technical specification amendment requests to implement the GE recommendations. In their safety evaluation reports (SER), the NRC required the applicants to:

1. Confirm the applicability of the generic analyses to their specific plant.
2. Demonstrate that instrumentation drift characteristics are bounded by the assumptions used in the GE analysis.
3. Confirm that differences between the plant-specific and generic analyses were included in the plant-specific analysis.

GE confirmed the applicability of the generic analysis to LaSalle as well as the differences between it and the generic analysis as was previously provided in Reference 1.

The SERs issued for the GE Topical Reports require confirmation that instrument setpoint drift due to extended STIs is properly accounted for in the setpoint calculation methodology. This issue is not applicable to LaSalle Station because the drift issue pertains to instrumentation with calibration frequencies less than or equal to the current functional test frequencies. The channel calibration extension in the generic analysis is for analog trip units (from 31 to 92 days) when the corresponding functional test is being extended from monthly to quarterly. The LaSalle RPS Instrumentation functional test being extended does not need to have the calibration interval extended, because the calibration period is already at 18 months and the instrumentation has no setpoint drift concerns. (This was previously presented to the NRC by Reference 1.)

The change from monthly to quarterly functional test STI for the MSIV - Closure scram and the change from monthly to weekly functional test STI for the Manual Scram function was submitted as an exigent change (Reference 1). The request was made to allow continued operation of Unit 2 and provide ComEd more time to correct the limit switch problem without excessive power

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cycling and personnel dose due to the original monthly STI. The exigent change was approved by the NRC by Reference 2. Since the approval, the MSIV - Closure scram functional test surveillance has been performed three times during forced outages and one time during a load drop to 21% power. The modification was ready for installation for a Unit 2 maintenance outage planned for June 1994; however, due to forced outages and the extension of the Unit 1 sixth refuel outage, the Unit 2 maintenance outage was postponed. The forced outages that have occurred have been of insufficient planned duration to do the necessary modification.

Section 5.7.1, of General Electric Topical Report, NEDC-30851P-A, "Technical Specification Improvement Analyses for BWR Reactor Protection System", March 1988, referenced in Technical Specification Bases for Specification 3/4.3.1, states the following:

"The individual sensor channel test intervals were varied next while keeping the scram contactor test interval fixed at the optimum test interval of 7 days. The results of this evaluation are presented in Table 5-5 for each transient group and the sum of the transient groups. The results indicate that the RPS failure frequency changes very little from monthly channel functional tests to tests conducted every 4 months (124 days). This is illustrated in Figure 5-3 where the RPS failure frequency curve is relatively flat in the range of 30 to 124 days and starts a more gradual increase for test intervals greater than 124 days. This indicates that sensor channel test intervals can be changed from their current monthly interval to either 3 or 4 month test intervals without significantly affecting the overall RPS failure frequency."

The above referenced analyses provided by GE demonstrates that extending the STI for the subject instrumentation results in fewer reactor scrams and challenges to plant safety systems, enhanced equipment lifetimes, less personnel exposure and reduced labor requirements that more than offset the negligible reduction in reliability associated with the extensions. The generic RPS STI extension was approved by the NRC. LaSalle Station Units 1 and 2 MSIV - Closure scram functional test STI extension from monthly to quarterly has been verified to be bounded by a generic analysis that was performed, and has been approved by the NRC in Reference 2. The MSIV closure scram channel functional test STI extension of a maximum of 5 days (120 day STI) is thus bounded by the generic analysis performed by GE.

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The quarterly surveillance requirement has been performed five times at intervals of less than or equal to 92 days since the initial limit switch problem was determined in January of 1994. The first surveillance was performed on January 18, 1994 and the most recent surveillance was performed on October 23, 1994. All surveillances for the MSIV closure scram were performed satisfactorily. Therefore, performing this surveillance just prior to shutdown of Unit 2 for L2R06 provides little added assurance of operability for the remainder of the operating cycle compared to the impact on plant operation and additional dose that would be received. The required surveillance will be performed after the MSIV limit switches are replaced, prior to Startup from L2R06.

Schedule

It is requested that the proposed emergency Technical Specification amendment be approved prior to the end of the current surveillance test interval on February 15, 1995 at 0245 hours (02:45 a.m. CST) to allow LaSalle Unit 2 to continue operating until the scheduled shutdown for the sixth refuel outage ending Unit 2 cycle 6.

References

1. Letter dated 1/28/94 from G. G. Benes to T. E. Murley - LaSalle Units 1 and 2, Request for Exigent amendment to Tech Spec 3.3.1 and 3.3.4.
2. Letter dated 2/25/94 from A.T. Gody to D. L. Farrar - Issuance of Amendments LaSalle County Station, Units 1 and 2 (TAC Nos, M88620 and M88606).