NOV 0 7 1983

MEMORANDUM FOR: Richard W. Starostecki, Director, DPRP, Region I Richard C. Lewis, Director, DPRP, Region II Charles E. Norelius, Director, DPRP, Region III James E. Gagliardo, Director, DRRP&EP, Region IV Tom Bishop, Acting Director, DRRP&EP, Region V

FROM: Edward L. Jordan, Director Division of Emergency Preparedness and Engineering Response Office of Inspection and Enforcement

SUBJECT: IE INFORMATION NOTICE 83-76: REACTOR TRIP BREAKER MALFUNCTIONS (UNDERVOLTAGE TRIP DEVICES ON GE TYPE AK-2-25 BREAKERS)

The subject notice informed licensees of a newly discovered malfunction involving the UV trip device used on the RTBs at San Onofre, Units 2 and 3. The malfunction may result in the armature of the UV trip device being jammed in an intermediate position rather than in contact with the air gap adjusting screw. As a result, the RTB could fail to trip on demand within the specified criteria of the UV trip device.

The notice did not require licensees to take any action; however, it did suggest that licensees using the subject breakers may find it prudent to periodically inspect their breakers to assure that the armatures of the UV trip devices are in contact with the air gap adjusting screw and not in an intermediate position. The notice also informed licensees that the NRC would consider an RTB to be inoperable if the armature of a UV trip device is found in an intermediate position.

Because of the safety implications of an inoperable RTB, we recommend that resident inspectors encourage affected licensees to examine the UV trip devices as suggested in the notice. Because of our position regarding operability, we request that resident inspectors treat any RTB having its UV armature in an intermediate position as being inoperable. Finally, we request that resident inspectors call us at (301) 951-0550 whenever such a condition is found or any additional breaker anomaly is observed.

Original Signed Byl

8505170206 840914 PDR FOIA BARFIEL84-615 PDR Edward L. Jordan, Director Division of Emergency Preparedness and Engineering Response Office of Inspection and Enforcement

Technical Contact: I. Villalva (301) 492-9635

cc: See next page

## Multiple Addressees

cc: R. C. DeYoung, IE
J. Taylor, IE
S. Schwartz, IE
J. Partlow, IE
R. Baer, IE
R. Vollmer, NRR
V. Noonan, NRR
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Commonwealth Edison One First National Plaza, Chicago, Illinois Address Reply to: Post Office Box 767 Chicago, Illinois 60690

November 17, 1983

Mr. Harold R. Denton, Director Office of Nuclear Reactor Regulation U.S. Nuclear Regulatory Commission Washington, DC 20555

> Subject: LaSalle County Station Unit 1 Request for Expedited Change to NPF-11 Appendix A Technical Specifications Regarding Reactor Feedwater Inboard Check Valves Type C Test NRC Docket No. 50-373

# Dear Mr. Denton:

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The purpose of this letter is to request the following exigent change in Technical Specifications for LaSalle County Station Unit 1.

### CHANGE REQUEST NPF-11/83-05

Exempt the reactor feedwater inboard check valves from Type C test requirements until startup following the first refueling outage.

This proposed change is addressed in Attachment A and has received onsite and offsite review and approval. This is required to allow Unit 1 to startup during the week of November 21, 1983 and it falls within the Exigent Change category.

Commonwealth Edison has reviewed this amendment request and has determined that no significant hazard consideration exists. Our review is documented in Attachment B.

Pursuant to 10 CFR 170, this change reflects one example of a Class III amendment. A remittance of \$4,000 is, therefore, enclosed.

To the best of my knowledge and belief the statements contained herein and in the attachment are true and correct. In some respects these statements are not based on my personal knowledge but upon information furnished by other Commonwealth Edison and contractor employees. Such information has been reviewed in accordance with Company practice and I believe it to be reliable. H. R. Denton

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November 17, 1983

Commonwealth Edison is notifying the State of Illinois of our request for this amendment by transmittal of a copy of this letter and its attachments to the designated State Official.

If you have any questions concerning this matter, please contact this office.

Enclosed please find three (3) signed originals and forty (40) copies of this letter and the enclosures.

Very truly yours,

CW Scholden "11/83

C. W. Schroeder Nuclear Licensing Administrator

Attachments

cc: Dr. A. Bournia NRC Resident Inspector - LSCS G. N. Wright (State of Illinois)

SUBSCRIBED and SWORN to before me this <u>MTH</u> day of <u>Monember</u>, 1983

Public Notary

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### ATTACHMENT A

### LASALLE COUNTY STATION UNIT 1

#### TECHNICAL SPECIFICATION CHANGE REQUEST

SUBJECT: Reactor Feedwater Inboard Check Valves Type C Test REFERENCES (a): FSAR Figure 6.2-32

(b): Technical Specification Page 3/4 6-32

### BACKGROUND

LaSalle County Station has a reactor feedwater system primary containment valve arrangement with three (3) valves per feedwater line as shown on FSAR Figure 6.2-32 Detail (b) (see attached). Each line has two (2) check valves and a motor operated gate valve. This arrangement meets the intent of General Design Criterion 55 on "the other defined basis criteria". During the postulated loss of coolant accident, it is desirable to maintain reactor coolant makeup from all sources of supply. This design preserves the reliable coolant makeup to the reactor vessel from the normal source when required and prevents inadvertent isolation of the feedwater lines. When the plant was originally designed, Commonwealth Edison believed that only two isolation valves were required on these lines per prior NRC interpretations of GDC 55 regarding feedwater make-up requirements dominating the isolation requirement.

To meet this design requirement Commonwealth Edison installed the motor operated 1B21-F065A and B feedwater injection valves and the special positive-closing check valves 1821-F032A and B which have air operated actuators. Each motor operated feedwater injection valve was supplied with power from a separate ESS power bus, and can be operated from the control room following a loss of offsite electrical power. Each of the outboard positive-closing check valves has testability features to conform to 10 CFR 50, Appendix J criteria. The feedwater line between the inboard and outboard feedwater check valves as well as the valves themselves were specially designed and constructed in accordance with Standard Review Plan 3.6.2-10, and ASME Section 3, so as to preclude the possibility of a credible feedwater line break between the check valves (the "superpipe" criteria). The inboard feedwater check valves 1821-FOIOA and B were not expected to be tested to Appendix J criteria and were procured with a different leakage tolerance. They were installed only to prevent a significant loss of inventory in the event of a feedwater line break. Subsequently, prior to the issuance of the Unit 1 operating license, the inboard feedwater check valves were required by NRR to be tested to 10 CFR 50, Appendix J criteria, as containment isolation valves, in addition to the other two valves in these lines. A low pressure seal feature was therefore added to these inboard feedwater check valves to meet the Type C test requirement as designated in the Tech Specs.

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## DISCUSSION

On November 3, 1983 LaSalle County Station Unit 1 was shutdown for a brief cold shutdown outage to perform various maintenance and surveillance items. While testing the reactor feedwater lines per Technical Specification surveillance requirements 4.6.1.2.d, it was determined that the reactor feedwater inboard check valves 1B21-F010A and B did not meet Technical Specification 3.6.1.2.b for primary containment combined leakage rate limit for Type B and C tests (0.6 La).

Commonwealth Edison currently anticipates replacing the seal material for the inboard feedwater check valves in accordance with the design and material specified by the valve manufacturer.

Following the first failure of the valves to pass a local leak rate test which was performed after approximately eighteen months of operation, we observed some damage to the original seal material, which we concluded was the result of machining the material rather than grinding it to tolerance. We also concluded that the sharp edges around the pressure equalizing ports in the disk had cut the seal material in multiple locations. These sharp edges have since been removed.

Because of the difficulty of obtaining molded seal material as was used for the original seals, the manufacturer supplied new seals which were extruded and the ends of the material were vulcanized together to form the seal. On November 3, 1983, following approximately another month of operation, the inboard feedwater check valves again failed to pass local leak rate tests. The inspection of the seals revealed a gap in each seal on the circumference, one about one-half inch long and the other about one and one-half inches in length, at the vulcanized points of the seals. The seal material in the "B" valve also appeared to be brittle with multiple minute cracks. We are also investigating a possible alignment problem that may have prevented the disk from closing squarely against the seat which could also contribute to type "C" test failure.

The valve manufacturer is now supplying Commonwealth Edison with new molded seals as in the original design. We believe this will resolve the new and different failure modes which were experienced with the extruded/vulcanized seals. A representative of the manufacturer is also on-site to evaluate the effects of the alignment tolerances.

With these repairs, we believe that the seal design and material in the inboard feedwater check valves will be essentially identical to the seals which have been successfully used and tested at other sites for periods of several years. We also anticipate that a successful local leak rate test will be passed following the repairs currently in progress on the inboard feedwater check valves. However, because of two successive failures of the valves to pass the local leak rate test criteria following operations, we feel that further relief from the Appendix J criteria should be sought for these valves until solutions to the existing problems can be resolved and further repairs and/or modifications can be performed during the first refueling outage.

### CONCLUSION

Because the feedwater lines will still have two isolation valves in each line which meet the requirements of Appendix J to 10 CFR 50, because the outboard motor operated isolation valve is supplied with power from an ESS bus, and because the feedwater line between the two check valves is designed and constructed so as to preclude a credible line break, it is believed that no unreviewed safety hazard exists and that compliance with GDC 55 is not compromised. For LaSalle Unit 1, therefore, Commonwealth Edison proposes to change the Appendix A Technical Specifications to License NPF-11 as indicated on the attached marked up page 3/4 6-32 until startup after the first refueling outage. This amendment will exempt the Feedwater Line Inboard Check Valves from Appendix J Type C testing until startup following the first refueling outage. The leakage requirements of Appendix J have been met by currently valid Type C tests performed within the past 3 months on two valves in each feedwater line: Feedwater Outboard Testable Check Valves (Item #19, 1B21-F032A and B, on Tech Spec Page 3/4 6-27) and Feedwater Outboard Remote Manual Isolation Valve (Item #2, 1821-F065A and B; on Tech Spec Page 3/4 6-32), and Reactor Water Cleanup Return Valve (Item #2, 1G33-F040, on Tech Spec Page 3/4 6-32). In addition the remote motor operated valves 1821-F065A and B and RWCU valve 1G33-F040 will be administratively controlled as stated in the LaSalle FSAR Section 6.2.4.2.1:. "The valve(s) is remote manually closed from the main control room to provide long term leakage protection upon operator determination that continued makeup from the feedwater system is unavailable or unnecessary (after LOCA)."

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## AMENDMENT 47 OCTOBER 1979



	60°	PRIMARY CONTAINMENT ISOLATION VALVES
VALV	E FUNCTION AND NUMBER	
d.	Other Isolation Valves	
1,	MSIV Leakage Control System	
	1E32-F001A, E. J. N(b)	
2.	Reactor Feedwater and RWCU Syste	m Return
	1821-F010A, B ###	전 전 같은 것은 것은 것은 것은 것은 것을 것을 것을 했다.
	1821-F065A, B · 6 · f ·	경험 전문 등 모양되었다. 양말 이 것은 것을 위한 것이다.
2	Posidual Heat Removal/Low Pressu	re Coolant Injection System
з.	1E12-E042A B C	Te coordine injection system
	1E12-F016A, B, C	
	1E12-F017A, B	
	1E12-F004A, B, (CJ)	
	1E12-F027A, B(j)	성을 경찰을 만들었다. 여름 물건을 들었다. 것은 것
	1E12-F024A 1) B	
	1612-6021(1)	
1.14	1512-F064A B (j)	
	1F12-F011A B(j)	
	1E12-F088A, B, C(J)	
	1E12-F0254 B, C(J)	
	1E12-F030(J)	
	1E12-F005(J) (i)	
	1E12-F073A, B(1)	장님은 말을 가는 것이 같다. 집을 가는 것은 것이 많이 많이 많다.
	1112-F0/4A, B(j) (a new (, ch,	inued) .
Lu. Ai	1512-FUDDA, B(j)	그는 것 같아요. 김 가슴에 가슴에 많다. 영화 영화 영화 영화
nanne	1612-F3114 B(j)	
	1E12-F041A, B, C(k)	것, 그렇게 잘 가지 않는 것 같은 것 같은 것 같이 많이 많이 많이 했다.
	1E12-F050A, B(K)	KINGBA COMPACIENT IS I STATE STATE

#### ATTACHMENT B

## Significant Hazards Consideration

Commonwealth Edison has evaluated the proposed Technical Specification Amendment and determined that it does not represent a significant hazards consideration. Based on the criteria for defining a significant hazards consideration established in 10 CFR 50.92, operation of LaSalle County Station Unit 1 in accordance with the proposed amendment will not:

- Involve a significant increase in the probability or consequences of an accident previously evaluated because of two (2) other valves in the line will be type C tested per the Technical Specifications, FSAR and Appendix J to 10 CFR 50 criteria and Commonwealth Edison believes this change is an acceptable alternative to General Design Criteria 55.
- Create the possibility of a new or different kind of accident from any accident previously evaluated because:
  - a) The containment leakage criteria will still be met even with single failure since two valves in the line will meet Appendix J criteria.
  - b) The feedwater line break accident will not be affected by this change because the inboard check valve will still be able to prevent gross inventory loss if a feedwater line break were to occur.
- 3) Involve a significant reduction in the margin of safety because the leakage criteria for the primary containment as a whole will still meet the leakage margins as required by Appendix J to 10 CFR 50. Commonwealth Edison believes that two valves in each line which meet Appendix J criteria is an acceptable alternative to General Design Criteria 55 on the "other defined basis criteria."

Based on the preceding discussion, it is concluded that the proposed change clearly falls within all acceptable criteria with respect to the system or component, the consequences of previously evaluated accidents will not be increased and the margin of safety will not be decreased. Therefore, based on the guidance provided in the Federal Register and the criteria established in 10 CFR 50.92(e), the proposed change does not constitute a significant hazards consideration. NOV 2 4 1983

Docket No. 50-10-16 Docket No. 50-237-31 Docket No. 50-249-19

Commonwealth Edison Company ATTN: Mr. Cordell Reed Vice President Post Office Box 767 Chicago, IL 60690

Gentlemen:

Enclosed you will find a revised first page for the Notice of Violation submitted to you with our letter dated October 13, 1983. This revision corrects an error in the inspection period referenced in the Notice.

We will be happy to discuss any questions you have regarding this matter.

Sincerely,

Lpp

"Original signed by W. D. Shafer"

W. D. Shafer, Chief Projects Branch 2

Enclosure: Revised Page for Notice of Violation Issued October 13, 1983

cc w/encl: D. L. Farrar, Director of Nuclear Licensing D. J. Scott, Station Superintendent DMB/Document Control Desk (RIDS) Resident Inspector, RIII Phyllis Dunton, Attorney General's Office, Environmental Control Division



#### Appendix

#### NOTICE OF VIOLATION

## Commonwealth Edison Company

Docket No. 50-237

As a result of the inspection conducted on July 20 through September 19, 1983, and in accordance with the NRC Enforcement Policy, 47 FR 9987 (March 9, 1982), the following violations were identified:

1. 10 CFR 50, Appendix B, Criterion XVI, states in part, "Measures shall be established to assure that conditions adverse to quality, ... are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition." Commonwealth Edison Company Topical Report CE-1A "Quality Assurance Program for Nuclear Generating Stations," Section 16, states that corrective actions are verified for satisfactory completion to preclude repetition.

Contrary to the above, adequate corrective action to preclude repetition was not taken following a July 19, 1983, incident where a perforation was found in a corrugated expansion bellows on one of the torus-to-drywell vacuum breaker lines causing a breach of primary containment. This resulted in three more perforations on two other expansion bellows discovered on August 11, 1983.

This is a Severity Level IV violation (Supplement I).

 Technical Specification 6.2.A.7, "Plant Operating Procedures," requires that detailed written procedures including applicable checkoff lists covering surveillance and testing requirements shall be prepared, approved and followed.

A note in Surveillance Procedure DOS-1600-1, "LPCI System Valve Operability Test," states, "Drain water between 1501-27 and 1501-28 before opening 1501-28 valves to prevent possibility of stagnant water plugging drywell spray nozzles. Leave control switches in normal operating position. Valve 1501-28 may be run after water is drained." Surveillance Procedure DOS-1500-1, "Quarterly Valve Timing," also tests the 1501-27 and 1501-28 valves.

Contrary to the above:

a. Surveillance Procedure DOS-1600-1 was not sufficiently detailed in that it did not include the precautionary note concerning draining the water between valves 1501-27 and 1501-28 before manipulation of those valves.