



September 20, 1996

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

Subject: Zion Station Units 1 and 2  
Revision to Application for Amendment to Facility Technical Specifications  
Re. Containment Leakage Testing per Option B to 10 CFR 50, App. J  
Operating Licenses DPR-39 and DPR-48  
NRC Docket Nos. 50-295 and 50-304

Reference: a) Letter from J. H. Mueller, Commonwealth Edison, to U.S. Nuclear  
Regulatory Commission, dated August 29, 1996  
b) Letter from J. H. Mueller, Commonwealth Edison, to U.S. Nuclear  
Regulatory Commission, dated August 26, 1996

This letter revises Commonwealth Edison's (ComEd's) previous application to amend the Zion Unit 1 and 2 Technical Specifications to implement Option B to 10 CFR 50, Appendix J, and will eliminate the need for an exemption to Option B of 10 CFR 50 Appendix J as requested by Reference (b).

## Background

Reference (a) transmitted an application to amend, pursuant to 10 CFR 50.90, Appendix A of the Zion Unit 1 and 2 Facility Operating License, DPR-39 and DPR-48. The proposed amendment consisted of Technical Specifications changes needed to implement Option B to 10 CFR 50 Appendix J at Zion Station. In Attachment F of the proposed amendment, ComEd indicated that a request for exemption to Option B of 10 CFR 50 Appendix J would be submitted for Unit 1 penetration P-16, to replace a previous exemption to Option A of 10 CFR 50 Appendix J for the penetration.

The request for exemption to Option B of 10 CFR 50 Appendix J was submitted via Reference (b). The requested exemption would have resulted in deferral of Type B testing of penetration P-16, until a permanent plant modification could be completed during the spring 1997 Unit 1 refueling outage. The modification will eliminate the need for any future Type B testing of the penetration.

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Subsequently, it was determined that a more appropriate method of deferring Type B testing of penetration P-16 would be to include an exception for the penetration in the proposed new Technical Specification governing containment leakage rate testing. ComEd is therefore revising the amendment application as necessary to utilize this method. The amendment application is also being revised to indicate that a previous exemption for other penetrations, P-70 and P-99 was applicable to both units.

### **Revised Amendment Application**

Although only Attachments A and F are affected by the revision, the entire amendment application is being re-submitted to preclude confusion. The changed portions of the text in Attachments A and F are indicated by revision bars in the right margin. The revised amendment application is comprised of the following attachments to this letter:

Attachment A provides a description and safety analysis of the proposed changes to the Technical Specifications.

Attachment B provides an annotated copy and a clean copy of the affected pages of the Technical Specifications .

Attachment C provides an evaluation of Significant Hazards Considerations in accordance with 10 CFR 50.92.

Attachment D provides an evaluation of the need for an Environmental Assessment in accordance with 10 CFR 51.21 and 10 CFR 51.22.

Attachment E provides a description of the implementation plan for the Containment Leakage Rate Testing Program.

Attachment F provides the disposition of previously approved exemptions to 10 CFR 50 Appendix J Option A.

### **Withdrawal of Exemption Request**

Since the proposed revised amendment will eliminate the need for an exemption to Option B of 10 CFR 50 Appendix J, the exemption requested by Reference (b) is hereby requested to be withdrawn.

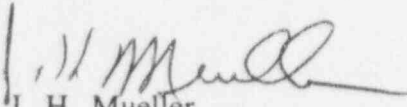
The proposed amendment revision has been reviewed and approved by Zion Station Onsite and Offsite Review personnel in accordance with ComEd procedures. To the best of my

knowledge and belief, the statements contained in this revised amendment application are true and correct. In some respects these statements are not based on my personal knowledge, but obtained information furnished by other ComEd employees, contract employees, and consultants. Such information has been reviewed in accordance with company practices, and I believe it to be reliable.

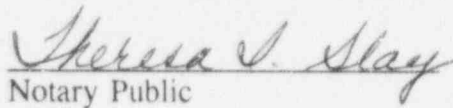
ComEd is notifying the State of Illinois of this revised application for amendment by transmitting a copy of this letter and it's attachments to the designated state official.

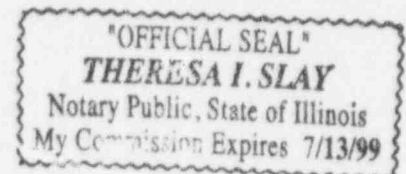
Please direct any questions you may have concerning this submittal to this office.

Respectfully,

  
J. H. Mueller  
Site Vice President  
Zion Station

Subscribed and Sworn to before me, a Notary Public in and for  
the State of Illinois and County of Lake  
this 20<sup>th</sup> day of September, 1996.

  
Notary Public



#### Attachments

cc: NRC Regional Administrator - RIII  
Zion Project Manager - NRR  
Senior Resident Inspector - Zion Station  
Office of Nuclear Facility Safety - IDNS  
IDNS Resident Inspector  
Master Files  
Reg. Assurance File  
DCD Licensing

## ATTACHMENT A

### DESCRIPTION AND SAFETY ANALYSIS FOR PROPOSED CHANGES

#### Description of Proposed Change

Commonwealth Edison (ComEd) company proposes to amend Appendix A, Technical Specifications, of Facility Operating Licenses DPR-39 and DPR-48 for Zion Station Units 1 and 2 respectively, to implement Option B to 10 CFR 50 Appendix J. This Option allows use of a performance based program for Type A, B, and C containment leakage tests.

#### Description and Bases of Current Requirements

The current Technical Specifications reference 10 CFR Part 50, Appendix J (as modified by approved exemptions) as specifying the frequency of Type A, B, and C containment leakage testing. Although not explicitly stated in the specifications, these references refer to Option A of Appendix J. The test frequency requirements of Option A are very prescriptive, requiring three Type A tests during a ten year service period, and, in general, Type B and C tests each refueling outage, not to exceed two years.

The purpose of containment leakage tests, as stated in Appendix J, is to assure that (1) leakage through the primary reactor containment, and systems and components penetrating containment, does not exceed allowable leakage rate values as specified in the technical specifications or associated bases, and (2) periodic surveillance of reactor containment penetrations and isolation valves is performed, so that proper maintenance and repairs are made during the service life of the containment, and systems and components penetrating the primary containment.

The stated basis for the current Technical Specifications containment leakage requirements is to provide a current assessment of potential leakage from containment during simulated accident conditions, thus assuring that public exposure would be well below 10 CFR 100 values in the event of a design basis accident.

#### Reason for Requesting an Amendment

ComEd is requesting an amendment to the Zion Units 1 and 2 Technical Specifications to allow implementation of Option B to 10 CFR 50 Appendix J for conducting Type A, B, and C containment leakage rate testing. Option B establishes requirements for performance based programs in which test intervals are based on system and component performance history. A performance based program is much more cost effective than the prescriptive Option A program currently required by the Unit 1 and 2 Technical Specifications, since it permits extending the interval between tests if the performance history shows that more frequent testing provides little or no additional assurance of safety.

## ATTACHMENT A

An estimate of this cost effectiveness can be determined from the Final Rule for 10 CFR Part 50, published in the Federal Register on September 26, 1995. The Final Rule states that the cost associated with complying with current Appendix J requirements has been estimated to be \$165,000 for a complete battery of Type B / C tests, and \$1,890,000 for Type A tests. The Final Rule also states that over the average remaining lifetime of 20 years, the present value of all remaining leak testing is about \$7 million per reactor at a five percent discount rate. It was also estimated that approximately 75 percent of this cost could be averted with a performance based rule. Since the remaining lifetime for Units 1 and 2, without plant life extension, is approximately 17 years, the total potential savings for Zion Station realized by implementing Option B is approximately \$8.9 million.

The Proposed Rule published in the Federal Register on February 21, 1995 states that "relaxing the frequency of Type A, B, and C tests leads to an increase in overall reactor risk of approximately two percent. This increase is considered to be marginal to safety." Therefore, implementation of Option B at Zion Station will result in significant financial savings for Zion Station with only a marginal increase in risk.

### Description and Bases of the Proposed Requirements

A general description of the proposed changes to the current Technical Specifications is provided below. The specific changes proposed are shown in annotated and clean copies of the affected pages provided as Attachment B to this LAR.

- Limiting Conditions for Operation (LCO's) 3.10.1 and 3.10.2, and the associated Surveillance Requirements 4.10.1 and 4.10.2 in Section 3.10/4.10, "Containment Structural Integrity," have been revised such that acceptance criteria and references to 10 CFR Part 50 Appendix J have been deleted and replaced with references to the Containment Leakage Rate Testing Program.
- A new specification (6.10) has been added to Section 6.0, "Administrative Controls," to establish the minimum requirements for a Containment Leakage Testing Program in accordance with Option B of 10 CFR Part 50, Appendix J.
- New Specification 6.10 requires that the program be in accordance with the guidelines contained in Regulatory Guide 1.163, which endorses NEI 94-01 (with certain exceptions) as providing methods acceptable to the NRC staff for complying with the provisions of Option B of 10 CFR Part 50, Appendix J.



## ATTACHMENT A

- The program required by new Specification 6.10 allows an exception to the NEI 94-01 requirements for minimum interval between the first and last tests in a series of consecutive tests. This exception will allow credit for testing conducted at the same interval as refueling outages. A description of the ComEd plan for implementing this program is provided as Attachment E to this LAR.
- The program required by new Specification 6.10 allows a limited duration exception to the NEI 94-01 requirements for Type B testing for one Unit 1 penetration, P-16. This exception will provide ComEd an opportunity to complete a modification that will permanently eliminate the need to test the penetration. A discussion of the basis for this exception is provided Attachment F to this LAR.
- New Specification 6.10 also documents the values for the peak calculated containment internal pressure for the design basis loss of coolant accident ( $P_a$ ), the maximum allowable containment leakage rate ( $L_a$ ) at  $P_a$ , and the leakage rate acceptance criteria for the containment and containment air locks, which were previously stipulated in SR 3.6.1.1 and SR 3.6.2.1 respectively.
- Finally, new Specification 6.10 states that the program must also be in accordance with previously approved exemptions. A description of these exemptions is provided for information in Attachment F to this LAR.

The bases for Option B to 10 CFR 50 Appendix J are documented in the Proposed Rule and the Final Rule issuing Option B to 10 CFR 50 Appendix J, as published in the Federal Register on February 21, 1995, and September 26, 1995, respectively. As documented in these publications, the implementation of a performance based program can provide licensees with substantial savings while incurring only marginal additional industry wide risk.

The bases for the specific changes proposed to the current Technical Specifications are documented in a letter from the NRC to the NEI dated November 2, 1995, which promulgated model Technical Specifications for implementing Option B to 10 CFR 50 Appendix J. The overall objective of the model specifications is to (1) replace references to 10 CFR 50 Appendix J in the LCO's and Surveillance Requirements with references to a licensee prepared performance based program, and (2) add a set of minimum program requirements to the administrative section of the Technical Specifications. This objective formed the bases for the changes to the Zion specifications.

### Schedule Requirements

ComEd plans to utilize the provisions of Option B to extend Type A, B, and C testing frequencies during Z2R14. Currently, entry into Mode 4 at the close of Z2R14 is expected to occur in late October, 1996. Therefore, ComEd is requesting NRC approval of the proposed changes in support of entry into Mode 4.