UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO REQUEST FOR RELIEF CR-19

LASALLE COUNTY STATION, UNITS 1 AND 2

DOCKET NOS. 50-373 AND 50-374

1.0 INTRODUCTION

Subsections IWE and IWL of Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code) provide the requirements for inservice inspection (ISI) of Class CC (concrete containments) and Class MC (metallic containments) pressure retaining components. By notice in the Federal Register dated August 8, 1996, the U.S. Nuclear Regulatory Commission amended its regulations (rule) to incorporate, by reference, the 1992 edition with 1992 addenda of Subsections IWE and IWL. The effective date for the amended rule was September 9, 1996, and it required licensees to incorporate the new requirements into their ISI plans and to complete the first containment inspection within five years, that is, by September 9, 2001. Since the amended rule became effective on September 9, 1996, any repair or replacement activity to be performed for the containments after that date must be in accordance with the respective requirements of Subsections IWE and IWL. However, a licensee can submit a request for relief for the date of implementation of its containment repair and replacement (R/R) activities with proper justification. The provision for granting relief is incorporated in the regulation.

2.0 DISCUSSION

2.1 RELIEF REQUEST NO. CR-19

10 CFR 50.55a(g)(4)(v) requires Class MC and CC pressure retaining components and their integral attachments to meet the applicable R/R requirements of the ASME Code, Section XI, 1992 Edition with the 1992 Addenda, Subsections IWA-4000 & 7000, IWE-4000 & 7000, and IWL-4000 & 7000. Relief is requested from immediate compliance with the applicable R/R requirements of the 1992 Edition of the Code until December 31, 1997.

2.2 BASIS FOR RELIEF (As stated)

Relief is requested from immediate compliance with the repair and replacement requirements of Subsections IWE and IWL. Pursuant to 10 CFR 50.55a(a)(3)(ii), relief is requested on the basis that immediate compliance with the aforementioned requirements would result in unusual difficulty without a compensating increase in the level of quality and safety.

A revision to 10 CFR 50.55a was published on August 8, 1996, which endorses Subsections IWE and IWL of the ASME Boiler and Pressure Vessel Code Section XI, 1992 Edition with the 1992 Addenda. This revision requires the completion of an expedited examination by September 9, 2001. However, in a letter to the Nuclear Energy Institute (NEI) dated November 6, 1996, the NRC staff clarifies that all repair and replacement activities within the scope of Subsection IWE and IWL which are conducted after September 9, 1996 must be conducted in accordance with the applicable rules of Subsections IWE and IWL of ASME Section XI, 1992 Edition with the 1992 Addenda.

Immediate compliance with the repair and replacement rules of ASME Section XI, 1992 Edition with the 1992 Addenda for IWE and IWL components is impractical because substantial time and resources must be expended for the following major efforts:

1. CONTAINMENT STRUCTURE COMPONENT CLASSIFICATION: The Station materials, erection, fabrication procedures and testing of containment structures at LaSalle County are in general conformance to the following rules;

   a. Containment steel liner, backed by concrete, containment steel boundaries, not backed by concrete, and penetrations were constructed to the rules of ASME Section III, Division I, Subsection NE, 1971 Edition with the Summer 1972 Addenda.

   b. Containment concrete and reinforcing steel was constructed to the rules of ACI-318, 1971 and ASTM A615-1972.

   c. Containment Post Tensioning System is in general conformance with the rules of ASME Section III, Division II, Subsections CC-2400, CC-4400, and CC-5400, July 1, 1977.

   d. Containment structural steel was constructed to the rules of AISC Manual-1969.

   In order to comply with 10 CFR 50.55a(g)(4)(v), it will be necessary to identify and reclassify all containment components to Class MC and CC classification criteria. This effort will include the retrieval and review of all applicable fabrication and installation documentation, the development of a basis document to identify the correct classification boundaries and the eventual development of an inservice inspection program to govern all IWE/IWL-related activities at LaSalle Station.

2. PROCEDURE REVISIONS: The requirements of Subsections IWE and IWL must be incorporated into applicable station procedures. The current Inservice Inspection program, (which includes the repair and replacement program), for LaSalle Station is currently based

on the rules of ASME Section XI, 1989 Edition, and only addresses the inservice inspection requirements for Class 1, 2, and 3 pressure retaining components and component supports. Therefore, various procedures that control Code repair and replacement activities must be revised to incorporate the unique requirements of Subsection IWE and IWL.

3. EXAMINER TRAINING AND CERTIFICATION: The unique examiner qualification required by Subsections IWE and IWL must be incorporated into the existing Commonwealth Edison (ComEd) certification and training program. The existing ComEd certification and training program only addresses the certification requirements for Class 1, 2 and 3 pressure retaining components and component supports. The ComEd certification and training program must be revised to incorporate the unique requirements of Subsections IWE and IWL.

4. LASALLE RESTART PLAN: Currently, both LaSalle units are in extended outages for refueling and maintenance. It is fully expected that both units will remain in these extended outages during the entire period for which this relief is requested. Many of the resources that would need to be utilized for the sole purpose of meeting these new Code Requirements are also actively involved in implementing a variety of actions associated with these dual unit outages, including implementation of the LaSalle Station Restart Plan. This effort further extends the time period needed to adequately address the Code Requirements in order to assure quality as well as compliance.

   Since the containment structures at LaSalle Station were constructed to the rules of ASME Section III, ACI-318-1971, ASTM A615-1972 and AISC Manual-1969, all repair and replacement activities conducted on these components have been subjected to the ComEd Quality Assurance Manual (Commonwealth Edison Company, Topical Report CE-1-A, Section 2, 3.1). The ComEd Quality Assurance Manual requires repair and replacement activities to be conducted in accordance with the original design specifications using approved procedures. This approach assures applicable design bases are maintained. As stated in ComEd Quality Assurance Program Topical Report CE-1-A, Revision 65, approved by the October 20, 1994, George F. Dick, Jr. letter to D.L. Farrar, the ComEd Quality Assurance Program complies with the quality requirements of 10 CFR 50, Appendix B, ASME Section III NCA-4000, and ANSI/ASME NQA-1. Currently ComEd is working to minor revision 65d, dated February 10, 1997. (Minor revisions do not require NRC Review and approval since they do not involve a reduction in commitments). Additionally, the containment structure integrity is verified by: the periodic pressure tests in accordance with 10 CFR 50, Appendix J, Option B, and the surveillance of the post-tensioning system. Post-tensioning system testing and

examinations are performed in accordance with Technical Specification required programs, LaSalle Administrative Procedure LAP-100-51, "Inservice Inspection Program for Post-Tensioning Tendons", and implementing procedure, LaSalle Technical Surveillance LTS-1000-1, "Inservice Inspection of Post-Tensioning Tendons". These approved procedures incorporate the requirements of NRC Regulatory Guide 1.35 Revision 3, "Inservice Inspection of Ungrouted Tendons in Prestressed Concrete Containments".

For the above reasons, the immediate application of the requirements of Subsections IWA-4000 & 7000, IWE-4000 & 7000, and IWL-4000 & 7000 imposes added administrative burden (such as requirement for a repair/replacement plan and NIS-2 form) without a compensating increase in the level of quality or safety."

2.3 ALTERNATIVE TEST (As stated)

Until December 31, 1997, all repair and replacement activities conducted on applicable Class MC and CC pressure retaining components and their integral attachments at LaSalle Station will be performed in accordance with the existing ComEd QA Program requirements. Compliance with ASME Section XI, 1992 Edition with the 1992 Addenda, Subsections IWA-4000 & 7000, IWE-4000 & 7000, and IWL-4000 & 7000 will begin on January 1, 1998.

Should the need arise to complete Repair/Replacement activities on any Class MC and CC pressure retaining components or their integral attachments prior to January 1, 1998, these activities will be controlled using approved Nuclear Work Requests in accordance with LaSalle Administrative Procedure LAP-1300-1, "Action/Work Request Processing". These Nuclear Work Requests will be classified as "Nuclear Safety Related", and thus, their preparation, review, approval, implementation and associated post Repair/Replacement testing is governed by the ComEd QA Manual (Commonwealth Edison Company, Topical Report CE-1-A, Section 2, 3.1). The ComEd Quality Assurance Program complies with the quality requirements of 10 CFR 50 Appendix B, ASME Section III NCA-4000, and ANSI/ASME NQA-1. Post-tensioning system testing and examinations will be performed in accordance with Technical Specification required programs, LaSalle Administrative Procedure LAP-100-51, "Inservice Inspection Program for Post-Tensioning Tendons", and implementing procedure, LaSalle Technical Surveillance LTS-1000-1, "Inservice Inspection of Post-Tensioning Tendons. These approved procedures incorporate the requirements of NRC Regulatory Guide 1.35, Revision 3, "InService Inspection of Ungrouted Tendons in Prestressed Concrete Containments".

2.4 EVALUATION

The relief is requested on the basis that immediate compliance with the requirements of the rule for R/R activities would result in unusual difficulty without a compensating increase in the level of safety and quality. In its

submittal, ComEd provided a number of reasons, such as reclassification of components to Class CC and MC classification criteria, revisions to existing procedures for R/R activities to incorporate the unique requirements of Subsections IWE and IWL, and incorporation of unique examiner training and qualification requirements in the ComEd procedures to demonstrate the impracticality of meeting the requirements of the rule for R/R activities. In its letter dated May 13, 1997, ComEd clarified and provided a summary description of the alternative that is used for the containment R/R activities. Until December 31, 1997, all R/R conducted on Class CC and Class MC components and their integral supports will be performed in accordance with the existing LaSalle Administrative Procedures for nuclear safety related components. These activities will be governed by the ComEd Quality Assurance Manual. The ComEd QA program complies with the QA requirements of 10 CFR Part 50, Appendix B; ASME Section III NCA-4000; and ANSI/ASME NQA-1. Also, the inspection and R/R activities related to the containment post-tensioning tendons for both units are governed by LaSalle Station Technical Specifications. The staff considers the alternative program for R/R activities reasonable and acceptable during the period of relief.

To justify relief beyond the period that the staff considers as a reasonable period, ComEd stated that both LaSalle units are in extended outages, and will remain in these outages during the entire period for which the relief is requested. Furthermore, ComEd emphasizes that the resources required to implement the requirements of the rule are also involved in the implementation of the LaSalle Station restart plan and the extended period will allow ComEd to adequately address the Code (i.e., the rule) requirements that will assure quality as well as compliance. The staff considers the reasoning provided for the extended relief period acceptable.

The licensee commits to implement the requirements of the rule for the containment R/R activities starting January 1, 1998.

3.0 CONCLUSION

Based on the review of the information provided in the relief request, the staff finds the temporary use of the current procedure for containment R/R activities instead of the requirements of the amended 10 CFR 50.55a rule to be reasonable and acceptable. Also, the staff concludes that immediate compliance with the requirements of the amended rule for containment R/R activities during the period September 9, 1996, through December 31, 1997, would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Accordingly, request for relief CR-19, to delay implementation of the rule for R/R activities until January 1, 1998, is acceptable for authorization pursuant to 10 CFR 50.55a(a)(3)(ii).

Principal Reviewer: H. Ashar, DE/ECGB

Date: July 3, 1997