ATTACHMENT B

PROPOSED CHANGES
TO APPENDIX A, TECHNICAL SPECIFICATIONS,
FOR FACILITY OPERATING LICENSE
DPR-39 and DPR-48

(Annotated and clean copy of the affected Technical Specification page, 74f3)

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT

10. Repaired Tube means a tube that has undergone a process that re-establishes its serviceability. The sleeving process utilized shall be one of the following:

    a. The Combustion Engineering welded sleeve process as described in Report CEN-331-P, Revision 1-P. See Note 1.

    b. The Westinghouse Electric Corporation mechanical sleeve process as described in Report WCAP-11669.

    c. The Bechtel-KWU Alliance welded sleeve process as described in Report BKAT-01-P, Revision 1.

11. F* Distance is the length of undegraded tube required to resist pullout. This distance is measured from the bottom of the upper hardroll transition toward the bottom of the tubesheet and has been conservatively determined to be 1.05 inches (not including eddy current uncertainty).#

12. F* Tube is a tube with indications below the F* Distance, equal to or greater than 40%, and no indications within the F* Distance.

Note 1: Report CEN-331-P, Revision 1-P, shall be implemented in conjunction with the process enhancements cited in the letter from J.H. Mueller, Commonwealth Edison, to the NRC, dated September 18, 1996.

Valid for Z1R14 and thru Z1C15.

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	10. Repaired Tube means a tube that has undergone a process that re-establishes its serviceability. The sleeving process utilized shall be one of the following: a. The Combustion Engineering welded sleeve process as described in Report CEN-331-P, Revision 1-P. See Note 1. b. The Westinghouse Electric Corporation mechanical sleeve process as described in Report WCAP-11669. c. The Bechtel-KWU Alliance welded sleeve process as described in Report BKAT-01-P, Revision 1. 11. F* Distance is the length of undegraded tube required to resist pullout. This distance is measured from the bottom of the upper hardroll transition toward the bottom of the tubesheet and has been conservatively determined to be 1.05 inches (not including eddy current uncertainty).# 12. F* Tube is a tube with indications below the F* Distance, equal to or greater than 40%, and no indications within the F* Distance. Note 1: Report CEN-331-P, Revision 1-P, shall be implemented in conjunction with the process enhancements cited in the letter from J.H. Mueller, Commonwealth Edison, to the NRC, dated September 18, 1996. # Valid for Z1R14 and thru Z1C15.

ATTACHMENT C

EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATIONS FOR PROPOSED CHANGES TO APPENDIX A, TECHNICAL SPECIFICATIONS, FOR FACILITY OPERATING LICENSE DPR-39 and DPR-48

Commonwealth Edison Company (ComEd) has evaluated this proposed amendment and determined that it involves no significant hazards considerations. According to Title 10, Code of Federal Regulations, Part 50, Section 92, Paragraph c [10 CFR 50.92 (c)], a proposed amendment to an operating license involves no significant hazards considerations if operation of the facility in accordance with the proposed amendment would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated; or

2. Create the possibility of a new or different kind of accident from any accident previously evaluated; or

3. Involve a significant reduction in a margin of safety.

A. INTRODUCTION

ComEd proposes to amend Zion Technical Specification Section 4.3.1.B.4.A.10.a. The existing Technical Specification "Steam Generators" allows for the installation of Combustion Engineering sleeves via Topical Report CEN-331-P, Revision 1-P. Advancements have been made to the installation and inspection (baseline and subsequent) processes since the time that the original Topical Report was reviewed and approved by the Staff. These enhancements improve the quality of the sleeving and inspection processes and have not changed the reliability or design of the weld, or the original intent of the sleeving process. Specifically, these enhancements consist of:

- The disqualification of Inconel 600 tube plug material.
- Upgrade of the cross wound probe with the Plus Point Probe and its associated data acquisition and analysis equipment.
- Visual inspection equipment improvements.
- Sleeve welding equipment improvements.
- Sleeve installation equipment improvements.
- Plug design improvements.

These enhancements have been implemented to the sleeving process during previous Zion steam generator inspections, most recently on the Unit 1 and Unit 2 1995 outages. ComEd is requesting that the Staff approve a Technical Specification amendment to add a note to Technical Specification Section 4.3.1.B.4.A.10.a. The proposed note would refer to a letter from J.H. Mueller, ComEd, to the NRC, dated September 18, 1996, which describes the subject enhancements and their bases.

B. 10 CFR 50.92 ANALYSIS

1. The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed amendment continues to allow the Combustion Engineering sleeves to be used as an alternate tube repair method for Zion steam generators, along with the process enhancements which are described in the letter identified in the proposed Technical Specification note. The sleeve configuration, which was designed and analyzed in accordance with the criteria of Regulatory Guide (RG) 1.121 and Section III of the ASME Code, is unaffected by the enhancements. Fatigue and stress analyses of the sleeved tube assemblies as described in the currently approved Topical Report, CEN-331-P, Revision 1-P, are unaffected by the enhancements.

Mechanical testing which has shown that the structural integrity of the sleeves under normal, faulted, and upset conditions is within the acceptable limits and is unaffected by the enhancements. Leakage rate testing for the tube sleeves which has demonstrated that primary to secondary leakage is not expected during any plant condition is unaffected by the enhancements. The consequences of leakage through the sleeved region of the tube, including the enhancements, is bounded by the existing steam generator tube rupture (SGTR) analysis included in the Zion Updated Final Safety Analysis Report.

The proposed Technical Specification change reflects enhancements to the installation and inspection process identified in Topical Report CEN-331-P, Revision 1-P, which is currently referenced in the Technical Specifications. These enhancements do not increase the probability or consequences of an accident previously evaluated. The enhancement which disallows the installation of the tubes plugs made from Inconel 600 material was done so based upon industry information and is addressed by NRC Bulletin 89-01. The use of the Plus Point Probe, its associated data acquisition equipment, and improved visual inspection equipment, are conservative actions and improve the quality of the sleeving process. The use of the mechanical plug in lieu of the welded plug meets the established design requirements and is advantageous in the area of dose reduction, because of reduced time to install. Minor changes to the sleeve installation equipment as described in the Topical Report, represent equipment enhancements and do not alter the sleeve design or qualification testing.

The proposed Technical Specification change does not adversely impact any previously evaluated design basis accident. Installation of the sleeves, with the described enhancements, can be used to repair degraded tubes by returning the condition of the tubes to their original design basis condition for tube integrity and leak tightness during all plant conditions. Therefore, the currently approved sleeving process with the described enhancements will not increase the probability of occurrence of an accident previously evaluated.

Therefore, these proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. **The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.**

The implementation of the enhancements to the proposed sleeving process will not affect the plant design basis. The current stress and fatigue analyses of the repair identified in Topical Report CEN-331-P, Revision 1-P, has shown the ASME Code and RG 1.121 allowable values are met and are unaffected by the described enhancements. The current sleeving design, with the described enhancements, will continue to maintain overall tube bundle structural integrity and leak tightness at a level consistent with that of the originally supplied tubing. Leak and mechanical testing of the sleeves, are unaffected by the proposed enhancements and continue to support the conclusions that the sleeve retains both structural integrity and leak tightness during all operating and accident conditions. Repair of a tube with a sleeve, utilizing the described enhancements, does not provide a mechanism that results in an accident outside of the area affected by the sleeve.

The described change to implement the cited enhancements will not create a new or different type of accident. The change only reflects enhancements to the currently approved installation/inspection process and, would not change or impact any hypothetical accident previously discussed. Use of improved Non-Destructive Examination, data acquisition and visual inspection equipment improves the quality of the sleeving process and has no negative effect on the margin of safety. The elimination of the use of the Inconel 600 plug also improves the margin of safety.

Any hypothetical accident as a result of potential tube or sleeve degradation in the repaired portion of the tube is bounded by the existing SGTR analysis. The sleeve design, including described enhancements, does not affect any other component, or affect any location on the tube outside of the immediate area repaired.

Therefore, the proposed changes do not create the possibility of a new or different type of accident from any accident previously evaluated.

3. **The proposed change does not involve a significant reduction in a margin of safety.**

The currently approved sleeving repair of degraded steam generator tubes has been shown by analysis to restore the integrity of the tube bundle to its original design basis condition. By implementing the described enhancements, the consistent quality of the upper sleeve weld has increased thereby reducing the potential for rework and reducing the potential for leaving a weld indication in service.

The proposed change does not involve a reduction in the margin of safety. The change reflects enhancements to the installation/inspection processes which are currently referenced in the Technical Specifications. These enhancements would not have any adverse effects on the previously evaluated design transient or accident analyses. The enhancements represent acceptable industry standards.

Therefore, the proposed changes do not involve a significant reduction in the margin of safety.

Based on the preceding analysis it is concluded that operation of Zion Unit 1 and Unit 2 in accordance with the proposed amendment, does not increase the probability of an accident previously evaluated, does not create the possibility of a new or different kind of accident from any accident previously evaluated, nor reduce any margins to plant safety. Therefore, this proposed amendment does not involve a significant hazards consideration as defined in 10 CFR 50.92.

ATTACHMENT D

EVALUATION OF ENVIRONMENTAL ASSESSMENT FOR PROPOSED CHANGES TO FACILITY OPERATING LICENSES AND APPENDIX A, TECHNICAL SPECIFICATIONS, FOR FACILITY OPERATING LICENSE DPR-39 and DPR-48

Commonwealth Edison Company (ComEd) has evaluated this proposed amendment against the criteria for and identification of licensing and regulatory actions requiring environmental assessment in accordance with Title 10, Code of Federal Regulations, Part 51, Section 21 (10 CFR 51.21). ComEd has determined that this proposed amendment meets the criteria for a categorical exclusion as provided under 10 CFR 51.22 (c)(9). This determination is based upon the following:

1. The proposed licensing action involves the issuance of an amendment to a license for a reactor pursuant to 10 CFR 50 which changes a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or which changes an inspection or a surveillance requirement. This proposed license amendment request clarifies requirements for the installation of Combustion Engineering sleeves by referencing a letter from J. Mueller, ComEd, to the Nuclear Regulatory Commission, dated, September 18, 1996; which explicitly identifies enhancements to the sleeving process.

2. This proposed license amendment request involves no significant hazards consideration as demonstrated in Attachment C;

3. There is no significant change in the types or significant increase in the amounts of any effluent that may be released offsite; and

4. There is no significant increase in individual or cumulative occupational radiation exposure.

Therefore, pursuant to 10 CFR 51.22(b), neither and environmental impact statement nor an environmental assessment is necessary for this proposed license amendment request.