

ATTACHMENT B

MARKED UP PAGES FOR
PROPOSED CHANGES TO APPENDIX A
TECHNICAL SPECIFICATIONS OF
FACILITY OPERATING LICENSES
NPF-72, AND NPF-77

BRAIDWOOD STATION UNITS 1 & 2
REVISED PAGES:

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SURVEILLANCE REQUIREMENTS (Continued)

4.4.5.4 Acceptance Criteria

a. As used in this specification:

- 1) Imperfection means an exception to the dimensions, finish or contour of a tube or sleeve from that required by fabrication drawings or specifications. Eddy-current testing indications below 20% of the nominal tube or sleeve wall thickness, if detectable, may be considered as imperfections;
- 2) Degradation means a service-induced cracking, wastage, wear or general corrosion occurring on either inside or outside of a tube or sleeve;
- 3) Degraded Tube means a tube or sleeve containing unrepaired imperfections greater than or equal to 20% of the nominal tube or sleeve wall thickness caused by degradation;
- 4) % Degradation means the percentage of the tube or sleeve wall thickness affected or removed by degradation;
- 5) Defect means an imperfection of such severity that it exceeds the plugging or repair limit. A tube or sleeve containing an unrepaired defect is defective;
- 6) Plugging or Repair Limit means the imperfection depth at or beyond which the tube shall be removed from service by plugging or repaired by sleeving in the affected area. The plugging or repair limit imperfection depth for the tubing and laser welded sleeves is equal to 40% of the nominal wall thickness. The plugging limit imperfection depth for TIG welded sleeves is equal to 32% of the nominal wall thickness. For Unit 1, this definition does not apply to defects in the tubesheet that meet the criteria for an F tube. For Unit 1 Cycle 6, this definition does not apply to the tube support plate intersections for which the voltage-based repair criteria are being applied. Refer to 4.4.5.4.a.11 for the repair limit applicable to these intersections; *
- 7) Unserviceable describes the condition of a tube if it leaks or contains a defect large enough to affect its structural integrity in the event of an Operating Basis Earthquake, a loss-of-coolant accident, or a steam line or feedwater line break as specified in 4.4.5.3c., above;
- 8) Tube Inspection means an inspection of the steam generator tube from the point of entry (hot leg side) completely around the U-bend to the top support of the cold leg. For a tube that has been repaired by sleeving, the tube inspection shall include the sleeved portion of the tube, and

* Insert A

Insert A

- * For Unit 1, Cycle 6, operation may continue provided that the projected distribution of indications found in the top of tubesheet roll transition resulting from the re-analysis of previous NDE data results in a probability of burst of less than 1×10^{-2} and predicted leakage is less than the site allowable leak limit. Otherwise, Unit 1 will shutdown and top of tubesheet roll transition indications will be plugged or repaired.

ATTACHMENT C

EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATIONS FOR PROPOSED CHANGES TO APPENDIX A TECHNICAL SPECIFICATIONS OF FACILITY OPERATING LICENSES NPF-72, AND NPF-77

Commonwealth Edison has evaluated this proposed amendment and determined that it involves no significant hazards considerations. According to Title 10 Code of Federal Regulations Section 50 Subsection 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

Commonwealth Edison (ComEd) proposes to revise Technical Specification Surveillance Requirement (TSSR) 4.4.5.4.a.6) "Plugging or Repair Limit," of TS 3.4.5, "Steam Generators."

This revision will provide guidance on actions to be taken based on the results of a review of previous Braidwood Steam Generator (SG) Non-Destructive Examination (NDE) data for top of tube sheet cracking indications.

Over the past eleven months ComEd has conducted a significant program to evaluate the safety significance of Top of Tubesheet (TTS) roll transition circumferential ODSCC cracks at not only Braidwood and Byron but at other units world wide. The results from this program clearly demonstrate:

- Steam Generators must be inspected periodically for the presence of TTS roll transition circumferential ODSCC cracks.
- First time use of techniques to identify circumferential indications insure that the largest indication will be repaired. In subsequent inspections the size of the most limiting indications found will be smaller.

- If circumferential indications are found, the scope of the inspection must be increased to 100% of the tubes.
- All TTS circumferential ODSCC cracks have been shown to have the same morphology.
- All circumferential indications which have been in operation for \geq one cycle after an initial inspection has been performed have been within the structural integrity limit.

Results of the program indicate that if circumferential cracks are detected using approved inspection techniques and repaired, then indications which were not identified during the inspection are shown to be small in size and will not grow to exceed the structural limit in the subsequent cycle of operation.

Therefore, the establishment of acceptance criteria to assess structural integrity and leakage potential during accident conditions, ensure that the requirements of General design Criteria (GDC) of 10CFR, Part 50 Appendix A are met, specifically GDC-14 "Reactor Coolant System Boundary."

B. NO SIGNIFICANT HAZARDS ANALYSIS

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

The previously evaluated applicable accidents are steam generator tube burst, and Main Steam Line Break (MSLB). The postulated MSLB outside of containment but upstream of the Main Steam Isolation Valve (MSIV) represents the most limiting radiological condition for this proposed change. This change requires that tube burst probability must be shown to be less than 1×10^{-2} for the projected distribution of indications resulting from the proposed re-analysis of previous NDE data. Otherwise, Unit 1 will be shutdown and top of tube sheet indications will be plugged or repaired. The presence of circumferential cracks in SG tubing does not affect the probability of occurrence of a MSLB, or the failure of the MSIV. Regarding SG tube rupture, the probability of burst of less than 1×10^{-2} has been previously accepted as providing an appropriate level of safety against tube burst for an individual tube degradation mechanism, and is consistent with the requirements of Generic Letter 95-05, "Voltage Based Repair Criteria for Westinghouse Steam Generator Tubes Affected By Outside Diameter Stress Corrosion Cracking." Additionally, Draft Regulatory Guide X.XX, "Steam Generator Tube Integrity," provides further support for a tube burst probability intersections of 1×10^{-2} as being acceptable for modes of degradation other than ODSCC. Thus, this proposed change does not result in a significant increase in the probability of an accident previously analyzed.

The changes proposed in this amendment request require that the predicted leakage be shown to be less than the site allowable leakage limit for the projected EOC distribution of indications resulting from the proposed re-analysis of previous NDE data. Otherwise, Unit 1 will be shutdown and top of tube sheet indications will be plugged or repaired. Thus, all offsite dose calculation assumptions remain satisfied and these proposed changes do not result in an increase in the consequences of an accident previously analyzed.

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

The changes proposed in this amendment request will not result in the installation of any new equipment or systems or the modification of any existing equipment or systems.

No new operating procedures, conditions or modes will be created by this proposed amendment.

Thus, this proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

The accidents of concern for this proposed amendment are SG tube burst and MSLB. The changes proposed in this amendment request require that tube burst probability be maintained less than 1×10^{-2} . This value has been previously accepted in Generic Letter 95-05 as providing an acceptable level of safety against tube burst and is consistent with Draft Regulatory Guide X XX "Steam Generator Tube Integrity". The changes proposed in this amendment request also require that site allowable leakage limits be maintained. Otherwise, Unit 1 will be shutdown and top of tube sheet indications will be plugged or repaired. Thus, all design basis and offsite dose calculation assumptions remain satisfied and the proposed change does not result in a significant reduction in a margin of safety.

This amendment request increases the safety margin to leak and burst in the event of a MSLB because it defines clear acceptance criteria in the Technical Specific for operation of a Steam Generator in which circumferential ODSCC at TTS has been identified.

Therefore, based on the above evaluation, Commonwealth Edison has concluded that these changes involve no significant hazards considerations.

ATTACHMENT D

ENVIRONMENTAL ASSESSMENT FOR PROPOSED CHANGES TO APPENDIX A TECHNICAL SPECIFICATIONS OF FACILITY OPERATING LICENSES NPF-72, AND NPF-77

Commonwealth Edison Company (ComEd) has evaluated this proposed license amendment request against the criteria for 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 license amendment request meets the criteria for a categorical exclusion set forth in 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 revises Technical Specification Surveillance Requirement (TSSR) 4.4.5.4.a 6) "Plugging or Repair Limit," of TS 3.4.5, "Steam Generators."

This revision will provide guidance on actions to be taken based on the results of the review of previous Braidwood Steam Generator (SG) Non-Destructive Examination (NDE) data for top of tube sheet indications.

2. this proposed license amendment request involves no significant hazards considerations;
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 an environmental impact statement nor an environmental assessment is necessary for this proposed license amendment request.