

June 17, 1997

United States Nuclear Regulatory Commission
Washington, D.C. 20555



Attention: Document Control Desk

Subject: Byron Nuclear Power Station, Units 1 & 2
Facility Operating Licenses NPF-37 & NPF-66
NRC Docket Numbers: 50-454 and 50-455

Braidwood Nuclear Power Station, Units 1 & 2
Facility Operating Licenses NPF-72 & NPF-77
NRC Docket Numbers: 50-456 and 50-457

"Containment Vessel Structural Integrity"

Pursuant to Title 10, Code of Federal Regulations, Part 50, Section 90 (10 CFR 50.90), Commonwealth Edison Company (ComEd) proposes to amend Appendix A, Technical Specifications, for Facility Operating Licenses NPF-37 and NPF-66 for Byron Nuclear Power Station, Units 1 & 2 and Facility Operating Licenses NPF-72 and NPF-77 for Braidwood Nuclear Power Station, Units 1 and 2.

ComEd proposes to revise the Technical Specifications Sections 3/4.6.1.6, 4.6.1.2, 6.8.4 and 6.9.1.11, to support the new requirements published in 10CFR50.55a which requires utilities to update their existing Containment Vessel Structural Integrity Programs to meet the requirements found in Subsection IWL of the 1992 Edition, 1992 Addenda of ASME Section XI and five additional modifications found in 10CFR50.55a(b)(2)(ix). Additionally, this technical specification amendment incorporates Regulatory Guide 1.35.1, 1990, "Determining Prestressing Forces for Inspection of Prestressed Concrete Containment."

This package consists of the following:

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|-----------------|---|
| Attachment A | Description and Safety Analysis of Proposed Changes to Appendix A |
| Attachment B-1 | Marked Up Pages for Proposed Changes to Appendix A for Byron Station |
| Attachment B-1a | Marked Up Pages for Proposed Changes to Proposed Improved Technical Specification for Byron Station |
| Attachment B-2 | Marked Up Pages for Proposed Changes to Appendix A for Braidwood Station |

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- Attachment B-2a Marked Up Pages for Proposed Changes to Proposed Improved
Technical Specification for Braidwood Station
- Attachment C Evaluation of No Significant Hazards Consideration for Proposed Changes to
Appendix A
- Attachment D Environmental Assessment for Proposed Changes to Appendix A

The proposed changes in this license amendment have been reviewed and approved by both On-Site and Off-Site review in accordance with ComEd procedures.

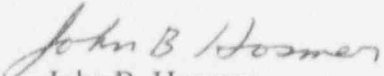
ComEd is notifying the State of Illinois of our application for this license amendment request by transmitting a copy of this letter and its attachment to the designated State Official.

This amendment request is required for the next scheduled unbonded post-tensioning and reinforced concrete inservice examinations. These examinations are scheduled for 1998 at Byron and 2001 at Braidwood. Approval of this change is requested by January 10, 1998, to support the scheduled for the next inservice examination at Byron.

I affirm that this transmittal is true and correct to the best of my knowledge, information and belief.

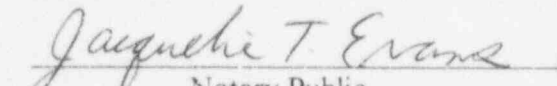
Please address any comments or questions regarding this matter to Denise Saccomando, Senior PWR Licensing Administrator at (630) 663-7283.

Sincerely,


John B. Hosmer
Engineering Vice President



Signed before me on this 19th day of June, 1997 by


Notary Public

Attachments

- cc: A. B. Beach, Regional Administrator - RIII
 G. F. Dick, Jr., Byron/Braidwood Project Manager - NRR
 S. D. Burgess, Senior Resident Inspector - Byron
 C. J. Phillips, Senior Resident Inspector - Braidwood
 Office of Nuclear Safety - IDNS

ATTACHMENT A

DESCRIPTION AND SAFETY ANALYSIS OF PROPOSED CHANGES TO APPENDIX A, TECHNICAL SPECIFICATIONS, OF FACILITY OPERATING LICENSES NPF-37, NPF-66, NPF-72, AND NPF-77

A. DESCRIPTION OF THE PROPOSED CHANGE

Commonwealth Edison (ComEd) proposes to revise the Technical Specifications (TS) for the Concrete Containment Tendon surveillances. ComEd will add a surveillance program to comply with Title 10 of the Code of Federal Regulations (10 CFR) Section 50.55a(b)(2)(vi) and Section 50.55a(b)(2)(ix). Byron Nuclear Power Station Units 1 & 2 (Byron) and Braidwood Nuclear Power Station Units 1 & 2 (Braidwood) propose to revise the following TSs:

TS 3/4.6.1.6, "Containment Vessel Structural Integrity," and associated Bases will be revised to delete current surveillance detail;

TS Surveillance Requirement (TSSR) 4.6.1.2 will be revised to incorporate the requirements of TSSR 4.6.1.6.3.

TS 6.8.4.g will be added to ensure a program is provided that demonstrates containment vessel structural integrity; and

TS 6.9.1.11 will be added to ensure a report is provided to the NRC within 30 days following the detection of any abnormal degradation of the containment structure.

The CFR requires that the containment vessel structural integrity be determined in accordance with the requirements of ASME Section XI, 1992 Edition, 1992 Addenda, Subsection IWL, "Requirements for Class CC Concrete Components of Light-Water Cooled Power Plants," and the five modifications presented in 10 CFR 50.55a(b)(2)(ix), "Examination of concrete containments."

The proposed changes are discussed in detail in Section D of this attachment. The affected current TS pages are shown in Attachments B-1 and B-2 with the changes noted. The affected Improved TS (ITS) pages are shown in Attachments B-1a and B-2a with the changes noted.

B. DESCRIPTION AND BASES OF THE CURRENT REQUIREMENTS

The current TS Limiting Condition for Operation (LCO) 3.6.1.6 requires the containment to be operable per the surveillance requirements. TSSRs 4.6.1.6.1 and 4.6.1.6.2 provide the methods for scheduling, inspecting and testing the tendons; testing individual wire strands taken from the specified tendons; inspecting and measuring the amount of grease coverage for the tendons; and inspecting the end anchorages and adjacent surfaces. TSSR 4.6.1.6.3 supports the inspections of

the containment vessel surfaces prior to a Type A containment leakage rate test. A footnote to LCO 3.6.1.6 permits a one-time exception to the requirements of TSSR 4.6.1.6.1 for Unit 1 to allow the sheathing filler grease voids to be in excess of 5% of the net duct volume for up to 35 tendons until the end of the steam generator replacement outage at each Station.

The current bases for the inspection and structural integrity assessment for the performance of the Containment Vessel Examination is provided in proposed Revision 3 to Regulatory Guide 1.35, "Inservice Inspection of UngROUTED Tendons in Prestressed Concrete Containment Structures," April 1979. The current bases for the determination of prestressing forces for the performance of tendon lift-offs are provided in proposed Regulatory Guide 1.35.1, "Determining Prestressing Forces for Inspection of Prestressed Concrete Containments," April 1979.

Proposed Regulatory Guide 1.35.1 provides guidance for determining the current expected prestressing forces in the tendons selected for surveillance activities.

C. NEED FOR REVISION OF THE REQUIREMENTS

The revision of the current requirement is required to meet a recent revision 10 CFR 50.55a. Specifically, 10 CFR 50.55a(b)(2)(vi) includes compliance Subsection IWL and 10 CFR 50.55a(b)(2)(ix) describes five modifications to IWL. The revision took effect on September 9, 1996. 10 CFR 50.55a(g)(6)(ii)(B)(4) allows the post-tensioning system surveillance requirements to be satisfied by the existing post-tensioning program accepted by the NRC prior to September 9, 1996. However, the statements presented in the Federal Register discussion of 10 CFR 50.55a(g)(6)(ii)(B)(4) are not clear as to whether inspections in accordance with proposed Revision 3 to Regulatory Guide 1.35 are acceptable. To incorporate the requirements of 10 CFR 50.55a(b)(2)(vi) and the five modifications in 10 CFR 50.55a(b)(2)(ix), a program is added to the Administrative Controls Section of the TS. The details of the structural integrity surveillance requirements are relocated to this owner-controlled program. This approach is consistent with NUREG 1431, "Standard Technical Specifications for Westinghouse Plants," Revision 1.

D. DESCRIPTION OF THE REVISED REQUIREMENTS

Revision to Current TS (Attachments B-1 and B-2)

The following changes are proposed to incorporate the CFR requirements:

- TSSR 4.6.1.2 will be revised to incorporate the requirements of TSSR 4.6.1.6.3. This TSSR provides requirements for inspection of containment vessel surfaces.

- LCO 3.6.1.6 will be revised to replace the specific requirements that describe containment operability with a statement that the containment is required to be operable. The provision noted in the footnote to LCO 3.6.1.6 will be relocated to TS 6.8.4.g. Action statements for LCO 3.6.1.6 will be revised to permit one hour to restore containment operability or require a plant shutdown.
- The requirements of TSSRs 4.6.1.6.1 and 4.6.1.6.2 will be relocated to the Containment Vessel Structural Integrity Program.
- TSSR 4.6.1.6.3 will be relocated to TS 3/4.6.1.2.
- Bases 3/4.6.1.6 will be revised to replace the existing program compliance recommendations of proposed Revision 3 to Regulatory Guide 1.35, "Inservice Inspection of UngROUTed Tendons in Prestressed Concrete Containment Structures," April 1979, with the requirements of 10 CFR 50.55a(b)(2)(vi) and 10 CFR 50.55a(b)(2)(ix). Additionally, the Bases will be revised to replace the reference to proposed Regulatory Guide 1.35.1, April 1979, with a reference to the issued Regulatory Guide 1.35.1, July 1990.
- TS 6.8.4.g will be added to define the containment vessel structural integrity program. The exception noted in the footnote to LCO 3.6.1.6 is included as an additional provision.
- TS 6.9.1.11 will be added to provide a report to the NRC within 30 days of detecting abnormal degradation of the containment structure found during inspection.

Revision to ITS (Attachments B-1a and B-2a)

ComEd submitted an application for conversion to the ITS in a letter from G. Stanley and K. Graesser to the NRC dated December 13, 1996. In order to incorporate license amendments for requests submitted after December 13, 1996 into the ITS, markups have been provided on the Proposed ITS in addition to the current TS. The requested changes to the proposed ITS are as follows:

- SR 3.6.1.2 will be revised to reflect the program name change to "Containment Vessel Structural Integrity Program."
- SR 3.6.1.2 Bases section will be revised to delete proposed Revision 3 to Regulatory Guide 1.35, April 1979, and proposed Regulatory Guide 1.35.1, April 1979. The requirements of 10 CFR 50.55a(b)(2)(vi) and 10 CFR 50.55a(b)(2)(ix), and the recommendations of Regulatory Guide 1.35.1, July 1990, will be added. The program name change and provision for tendon grease removal are also reflected.
- TS 3.6.1 Bases reference section will be revised to add the requirements of 10 CFR 50.55a(b)(2)(vi) and 10 CFR 50.55a(b)(2)(ix), and the recommendations of Regulatory Guide 1.35.1, July 1990.

- Section 5.5.6 will be revised to delete references to proposed Revision 3 to Regulatory Guide 1.35, April 1979, and proposed Regulatory Guide 1.35.1, April 1979. These are replaced by the requirements of 10 CFR 50.55a(b)(2)(vi) and 10 CFR 50.55a(b)(2)(ix), and the recommendations of Regulatory Guide 1.35.1, July 1990.
- Section 5.6.8 will be revised to reflect the program name change.

E. BASES FOR THE REVISED REQUIREMENTS

10 CFR 50.55a(b)(2) took effect on September 9, 1996, resulting in the need to revise the current TS. Byron and Braidwood determined that the existing programs did not perform the additional exams required by the CFRs. Therefore, Byron and Braidwood are revising the current TS requirements.

In addition, the NRC approved a provision for Unit 1 tendon grease coverage to facilitate removal of up to 35 containment tendons in advance of the each station's steam generator replacement outage. The NRC documented its acceptance of the provision in an SER dated May 6, 1997 for Amendments 89 (Byron) and 81 (Braidwood). The provision is maintained as part of the program described in TS 6.8.4.g. This provision is only applicable until the end of the respective steam generator replacement outages for Byron Unit 1 and Braidwood Unit 1.

Byron and Braidwood are adding a Containment Vessel Structural Integrity Program to meet the requirements of the CFR. Additionally, Byron and Braidwood are revising the recommendations contained in this program from those described in proposed Regulatory Guide 1.35.1 (1979) to those described in the issued Regulatory Guide 1.35.1 (1990). There are no significant changes from the proposed regulatory guide to the issued regulatory guide.

F. IMPACT OF THE PROPOSED CHANGES

The program currently in place to meet the current TSSRs will not be significantly impacted by incorporation of the CFR requirements. However, additional requirements will be added to the overall program as a result of incorporating 10 CFR 50.55a(b)(2), including, but not limited to, the following:

- Visual inspection of grease caps that are accessible,
- Evaluation of consecutive surveillances of prestressing forces for the same tendon or a group of tendons,
- Examination of all concrete surfaces,
- Qualifications for the visual examination of the personnel performing concrete exams,

- Use of a registered professional engineer to evaluate the results following the concrete examinations, and
- Evaluation of the acceptability of inaccessible areas when conditions could indicate the presence of degradation.

Currently, there is an outstanding application for amendment to TS 3/4.6.1 and associated Bases, submitted to the NRC on January 30, 1997, that requests an increase in the peak containment pressure (P_a). Since this request has not been approved, the markups in Attachments B-1 and B-2 are done on current TS pages that have not incorporated these changes.

There is also an outstanding application for amendment, submitted to the NRC on May 19, 1997, that relocates pressure and temperature limits to a Pressure-Temperature Limits Report (PTLR). This affects page 6-23 of the current TS by adding the PTLR as item 6.9.1.11. Since this request has not been approved, the markups in Attachments B-1 and B-2 are done on current TS pages that have not incorporated this change. Therefore, the Containment Vessel Structural Integrity Report is added to the current TS as item 6.9.1.11. Whichever application for amendment is approved first, will have its associated report designated 6.9.1.11 with the subsequent amendment report designated 6.9.1.12.

G. SCHEDULE REQUIREMENTS

These changes are required for the next scheduled unbonded post-tensioning and reinforced concrete inservice examinations. These examinations are scheduled for 1998 at Byron and 2001 at Braidwood. Approval of this change is requested by January 10, 1998 to support the schedule for the next inservice examination at Byron.