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Downers Grove, IL 60515-5701

November 26, 1997

ComEd

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

Subject: Response to Request for Additional Information Relating to Containment
Vessel Structural Integrity Technical Specifications Amendment

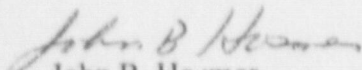
Byron Nuclear Power Station, Units 1 and 2
NRC Docket Numbers: 50-454 and 50-455

Braidwood Nuclear Power Station, Units 1 and 2
NRC Docket Numbers: 50-456 and 50-457

- References:
1. J. Hosmer letter to the Nuclear Regulatory Commission dated June 17, 1997, transmitting Request to Amend Technical Specification Related to Containment Vessel Structural Integrity
 2. G. Dick letter to I. Johnson dated September 30, 1997, transmitting Request for Addition Information

Reference 1 transmitted the Commonwealth Edison Company's (ComEd) request to amend the Technical Specifications related to the Containment Vessel Structural Integrity Programs at Byron and Braidwood Units 1 and 2. Subsequent to that submittal, the Nuclear Regulatory Commission issued a Request for Additional Information (RAI) via Reference 2. Attached is ComEd's response to the RAI. If you have any questions regarding this response, please contact this office.

Sincerely,


John B. Hosmer
Engineering Vice President

Attachment

cc: Regional Administrator-RIII
Byron/Braidwood Project Manager-NRR
Senior Resident Inspector-Byron
Senior Resident Inspector-Braidwood
Office of Nuclear Safety-IDNS

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ADD 1/1



NRC Request for Additional Information

1. **Proposed Section 4.6.1.6 of the Technical Specifications (TS) states that the containment vessel structural integrity (CVSI) needs to be verified in accordance with your CVSI Program. Insert "D" (proposed TS 6.8.4.g, CVSI Program) indicates that the CVSI Program will be in accordance with ASME Code, Section XI, Subsections IWE and IWL, as modified and supplemented by 10 CFR 50.55a(b)(2)(vi) and (xi), and Regulatory Guide (RG) 1.35.1, July 1990. In accordance with NUREG-1431, Revision 1, "Standard TS for Westinghouse Plants," the details of the surveillance program have been relocated and Insert D merely lists the code, regulation and RG without giving any details on how these requirements will be met. Several of these requirements are new to Byron and Braidwood. Please provide the details of the CVSI Program so the staff can review their implementation at Byron and Braidwood.**

RESPONSE:

The Byron/Braidwood Containment Vessel Structural Integrity (CVSI) Programs detail the requirements for the examination and testing of ASME Class MC and Class CC components and component supports. The CVSI Programs are being developed in accordance with the requirements of the 1992 Edition with the 1992 Addenda of the ASME Boiler and Pressure Vessel Code, Section XI, Division 1, Subsections IWE and IWL, as modified by NRC final rulemaking to 10 CFR 50.55a published in the Federal Register on August 8, 1996.

The bases for the Braidwood and Byron CVSI Programs will be comprised of two (2) program documents currently under development. The program documents under development include (1) "Braidwood/Byron Units 1&2 Containment Inservice Inspection Jurisdictional Boundary Basis" which provides the basis for inclusion and identification of metal and concrete components which are required to be included in the CVSI program and (2) "Braidwood/Byron Units 1 & 2 Containment Inspection Program Plan" which summarizes the requirements for the examination and testing of ASME Class MC and Class CC pressure retaining components. These new program documents implemented by the procedures noted below provide the criteria for the new Braidwood/Byron CVSI programs.

Since commercial operation, inspections and tests of the containment systems have been performed in accordance with 10 CFR 50 Appendix J, Regulatory Guide 1.35, Proposed Rev.3, April 1979, and Regulatory Guide 1.35.1, proposed Rev. 0, April 1979, to assure containment integrity and design function are maintained. Surveillance requirements for containment structural integrity are currently addressed in the Byron and Braidwood Technical Specifications, Sections 4.6.1.6.1 "Containment Vessel Tendons," 4.6.1.6.2 "End Anchorages and Adjacent Concrete Surfaces," and 4.6.1.6.3 "Containment Vessel Surfaces." The detailed implementation

Technical Specification requirements is through the following existing Byron/Braidwood procedures and surveillances:

BwVP 200-15 "Containment Vessel Tendon Inspection Requirements"
BVP 200-15 "Containment Vessel Tendon Inspection Requirements"

Provide program requirements for:

- tendon selection
- surveillance references
- tendon inspection history

BwVS 6.1.6.1-1 "Containment Vessel Tendon Test"
1/2BVS 6.1.6.1-1 "Containment Vessel Tendon Test"

Provide inspection/testing criteria for:

- lift-off force (predicted and actual)
- containment concrete
- tendon anchorage assemblies
- verification of predicted lift-off limits
- grease volume and chemical analysis
- trending of examination/test results
- filing of special reports to Commission

BwVS 6.1.6.3-1 "Visual Inspection of the Containment Surfaces Prior to the Type A Leak Test"

1/2BVS 6.1.6.3-1 "Visual Inspection of the Containment Surfaces Prior to the Type A Leak Test"

Provide visual inspection criteria for:

- interior surface (liner, leak chase, attachments)
- exterior concrete degradation and/or grease leakage
- filing of special reports to Commission

Requirements for Section XI repairs/replacements resulting from these referenced surveillances are addressed in procedures BwAP-1600-5 "ASME Section XI Repair/Replacement Program" and BAP 1600-5 "ASME Section XI Repair/Replacement Requirements" which meet the requirements of the 1992 Edition, 92 Addenda, Section XI for subsections IWE and IWL. These procedures and surveillances will continue to be the detailed implementation tools for the CVSI Program. Additional technical aspects of the inspection and test activities are further implemented by vendor procedures, which are reviewed and approved by cognizant Com Ed personnel.

In the June 17, 1997 submittal, ComEd requested changes to the Byron and Braidwood Technical Specifications which would incorporate the requirements of

10CFR50.55a(b)(2)(vi) and 10CFR50.55a(b)(2)(ix). The specific changes requested by ComEd include the following:

- TSSR 4.6.1.2 will be revised to incorporate the requirements of TSSR 4.6.1.6.3 (visual inspection of containment surfaces) as described in Insert A of the submittal. This requirement will continue to be implemented by Braidwood and Byron procedures BwVS 6.1.6.1-1 and 1/2 BVS 6.1.6.3-1, respectively.
- LCO 3.6.1.6 will be revised by replacing the specific list of TSSRs that must be satisfied for containment operability with a statement that the containment is required to be operable. The footnote to LCO 3.6.1.6 will be relocated to the new TS 6.8.4.g as described in Insert D. This footnote is only applicable to Unit 1 until the end of the Steam Generator Replacement outages (B1R08 and A1R07).
- The specific Action Requirements for LCO 3.6.1.6 will be replaced with a requirement allowing one hour to restore containment operability or require a plant shutdown as described by Insert B. This requirement will be reflected in plant procedures upon approval of the amendment request. The reporting requirements associated with the LCO 3.6.1.6 will be relocated from the Action Requirements to new TS 6.9.1.11. Reporting requirements will be consistent with IWE/IWL as modified by 10CFR50.55a as indicated in Insert E.
- TSSRs 4.6.1.6.1 and 4.6.1.6.2 will be relocated to an owner controlled program. As indicated above, the specific requirements are currently contained in Braidwood and Byron surveillance procedures BwVS 6.1.6.1-1 and 1/2 BVS 6.1.6.1-1, respectively. The surveillance requirements from the current TS will continue to be implemented by these procedures with modifications as required by IWE/IWL as modified by 10CFR50.55a.
- The Bases for TS 3/4.6.1.6 will be revised to identify the bases for the CVSI requirements as consistent with the recently revised 10CFR50.55a, with lift-off forces determined consistent with Regulatory Guide 1.35.1, Revision 3 (Insert C).

In the course of Byron/Braidwood CVSI Program revision, the requirements of IWL as modified by 10 CFR 50.55a, were reviewed for impact on existing Byron/Braidwood commitments and implementation methodology (including procedures and surveillances referenced above). As a result of this review, it was determined that the Byron/Braidwood CVSI Programs currently in place would not be significantly impacted by the incorporation of the CFR requirements. It was noted, that revisions to the CVSI program are necessary as a result of incorporating the modifications reflected in 10 CFR 50.55a(b)(2) and limitation of the use of ASME Section XI, 1992 Edition with 1992 Addenda. These changes include but are not limited to the following:

- Visual inspection of grease caps that are accessible (CFR mod.),
- Evaluation of consecutive surveillances of prestressing forces for the same tendon or a group of tendons (CFR mod.),
- Additional specificity for examination of concrete and liner surfaces (Section XI criteria),
- Personnel qualification requirements specific to concrete inspections (Section XI criteria),
- Use of professional engineer per IWL-2320 (Section XI criteria), and
- Evaluation of the acceptability of inaccessible areas when conditions could indicate the presence of degradation (CFR mod.).

These specific revisions will be incorporated into existing site procedures and surveillances.

2. **Insert E (proposed TS 6.9.11) states a report must be submitted to the NRC within 30 days if abnormal degradation is found. Please describe the CVSI Program requirements for report generation and submittal if no abnormal degradation is found.**

RESPONSE:

Byron and Braidwood CVSI programs are subject to the requirements of the 92 Edition 92 Addenda, Section XI, Article IWA-6000 for records and reports. As such, records of the examinations and tests are prepared and maintained in accordance with site procedures, consistent with IWA-6300 and subject to review by regulatory and enforcement authorities. Submittal of reports of no abnormal degradation to the regulatory and enforcement authorities is not required by Section XI. The specific conditions noted in 10CFR50.55a(b)(2)(ix) would be reported as required in the CFR by inclusion in the ISI summary report required by IWA-6000.