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Exelon Nuclear

10 CFR 50.90

RS-10-052
March 29, 2010

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Braidwood Station, Units 1 and 2
Facility Operating License Nos. NPF-72 and NPF-77
NRC Docket Nos. 50-456 and 50-457

Byron Station, Units 1 and 2
Facility Operating License Nos. NPF-37 and NPF-66
NRC Docket Nos. 50-454 and STN 50-455

Subject: License Amendment Request for an Extension of the Inspection Interval for Reactor Coolant Pump Flywheels Using the Consolidated Line Item Improvement Process

In accordance with 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Exelon Generation Company, LLC (EGC), is requesting an amendment to Appendix A, "Technical Specifications" (TS) of Facility Operating License Nos. NPF-72 and NPF-77 for Braidwood Station, Units 1 and 2, (Braidwood) and NPF-37 and NPF-66 for Byron Station, Units 1 and 2 (Byron). The proposed amendment would revise Technical Specification (TS) 5.5.7, "Reactor Coolant Pump Flywheel Inspection Program," by extending the reactor coolant pump (RCP) motor flywheel inspection interval from the currently approved 10-year inspection interval to an interval not to exceed 20 years.

The changes are consistent with the NRC-approved Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler TSTF-421, "Revision to RCP Flywheel Inspection Program (WCAP-15666-A)," with the exception of two RCP motor/flywheel combinations that were not included in the WCAP-15666-A evaluation. The availability of this TS improvement was announced in the Federal Register on October 22, 2003 (68 FR 60422) as part of the consolidated line item improvement process (CLIIP).

The proposed changes have been evaluated using the risk-informed processes described in Regulatory Guide (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," Revision 1, dated November 2002. The evaluation concluded that WCAP-15666-A, "Extension of Reactor Coolant Pump Motor Flywheel Examination," is applicable to Braidwood and Byron, with the exception of two RCP motor/flywheel combinations that were not included in the WCAP-15666-A evaluation.

The attached request is subdivided as shown below.

Attachment 1 provides an evaluation of the proposed changes.

Attachments 2 and 3 include the marked-up TS pages with the proposed changes indicated for the Braidwood and Byron TSs, respectively .

These proposed changes have been reviewed by the Braidwood and Byron Plant Operations Review Committees and approved by the respective Nuclear Safety Review Boards in accordance with the requirements of the EGC Quality Assurance Program.

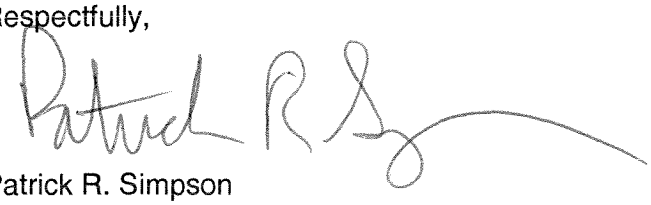
EGC requests approval of the proposed amendment by March 29, 2011. Once approved, the amendment will be implemented within 60 days.

In accordance with 10 CFR 50.91, "Notice for public comment; State consultation," paragraph (b), EGC is notifying the State of Illinois of this application for license amendment by transmitting a copy of this letter and its attachments to the designated State Official.

This submittal does not contain any regulatory commitments. Should you have any questions concerning this letter, please contact Ms. Lisa Schofield at (630) 657-2815.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 29th day of March 2010.

Respectfully,



Patrick R. Simpson
Manager - Licensing
Exelon Generation Company, LLC

Attachments:
1. Evaluation of Proposed Change
2. Proposed Mark-up of Braidwood Technical Specification 5.5
3. Proposed Mark-up of Byron Technical Specification 5.5

ATTACHMENT 1

Evaluation of Proposed Change

ATTACHMENT 1

Evaluation of Proposed Change

1.0 INTRODUCTION

The proposed amendment would revise Appendix A, "Technical Specifications" (TS) 5.5.7, "Reactor Coolant Pump Flywheel Inspection Program," of Facility Operating License Nos. NPF-72 and NPF-77 for Braidwood Station, Units 1 and 2, (Braidwood) and NPF-37 and NPF-66 for Byron Station, Units 1 and 2 (Byron). The changes are consistent with the NRC-approved Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler TSTF-421, "Revision to RCP Flywheel Inspection Program (WCAP-15666-A)," with the exception of two RCP motor/flywheel combinations that were not included in the WCAP-15666-A evaluation. The availability of this TS improvement was announced in the Federal Register on October 22, 2003 (68 FR 60422) as part of the consolidated line item improvement process (CLIIP).

2.0 DESCRIPTION OF PROPOSED AMENDMENT

Braidwood and Byron TS 5.5.7, "Reactor Coolant Pump Flywheel Inspection Program," currently state, in part, the following:

> In lieu of Regulatory Position c.4.b(1) and c.4.b(2), a qualified in-place UT examination over the volume from the inner bore of the flywheel to the circle of one-half the outer radius or a surface examination (MT and/or PT) of exposed surfaces of the removed flywheel may be conducted at approximately 10 year intervals coinciding with the Inservice Inspection schedule as required by ASME Section XI.

Consistent with the NRC-approved TSTF-421 and site-specific equipment, the proposed TS change revises TS 5.5.7 as follows:

> For reactor coolant pump motor serial numbers 4S88P961 and 1S88P961, in lieu of Regulatory Position c.4.b(1) and c.4.b(2), a qualified in-place UT examination over the volume from the inner bore of the flywheel to the circle of one-half the outer radius or a surface examination (MT and/or PT) of exposed surfaces of the removed flywheel may be conducted at approximately 10 year intervals coinciding with the Inservice Inspection schedule as required by ASME Section XI.
>
> For all other reactor coolant pump motors, in lieu of Regulatory Position c.4.b(1) and c.4.b(2), a qualified in-place UT examination over the volume from the inner bore of the flywheel to the circle of one-half the outer radius or a surface examination (MT and/or PT) of exposed surfaces of the removed flywheel may be conducted at an interval not to exceed 20 years.

3.0 BACKGROUND

The background for this application is adequately addressed by the NRC Notice of Availability published on October 22, 2003 (68 FR 60422), NRC Notice for Comment published on June 24, 2003 (68 FR 37590), TSTF-421, WCAP-15666-A, "Extension of Reactor Coolant Pump Motor Flywheel Examination," and the related NRC safety evaluation (SE) dated May 5, 2003.

4.0 REGULATORY REQUIREMENTS AND GUIDANCE

The applicable regulatory requirements and guidance associated with this application are adequately addressed by the NRC Notice of Availability published on October 22, 2003 (68 FR 60422), NRC Notice for Comment published on June 24, 2003 (68 FR 37590), TSTF-421, WCAP-15666-A and the related NRC SE dated May 5, 2003.

5.0 TECHNICAL ANALYSIS

5.1 Applicability of TSTF-421 and Published NRC Safety Evaluation

Exelon Generation Company, LLC (EGC) has reviewed the model SE published on June 24, 2003 (68 FR 37590), and verified its applicability as part of the CLIIP for the Braidwood and Byron reactor coolant pump (RCP) flywheels specified in WCAP-15666-A, Table 2-2, Category 3. This verification of applicability included a review of the NRC's model SE, as well as the information provided to support TSTF-421 (including WCAP-15666-A and the related SE dated May 5, 2003). EGC has concluded that the justifications presented in the TSTF proposal and the model SE prepared by the NRC are applicable to Braidwood and Byron, and justify the incorporation of the proposed changes to the respective TS for the Braidwood and Byron RCP flywheels specified in WCAP-15666-A.

5.2 Variation from TSTF-421 and Published NRC Safety Evaluation

The proposed change maintains the existing examination requirements for two alternate RCP flywheels that were not included in the WCAP-15666-A evaluation (i.e., as specified in Table 2-2, Category 3 of WCAP-15666-A). These two alternate RCP flywheels, as integral elements of RCP motors, were originally designed and built for the Marble Hill Nuclear Generating Station (Marble Hill), the construction of which was cancelled in the early 1980s.

EGC procured two original Marble Hill RCP motor/flywheel combinations, and subsequently installed one RCP motor/flywheel combination in Byron Unit 1 during the spring 2005 Unit 1 refueling outage (i.e., serial number 1S88P961). The second is currently stored as a spare RCP motor/flywheel combination at Braidwood (i.e., serial number 4S88P961). While these two RCP motor/flywheel combinations can be utilized at either Braidwood or Byron, the Marble Hill flywheels are not interchangeable with the Braidwood and Byron RCP flywheels that are specified in WCAP-15666-A.

Since neither the installed Marble Hill RCP motor/flywheel nor the spare were included in the 2001 WCAP-15666-A evaluation, the conclusion of the WCAP (i.e., justification for an extended RCP flywheel examination interval) is not applicable for these two RCP flywheels.

Therefore, the proposed TS provides separate examination requirements for the Marble Hill RCP flywheels and the WCAP-evaluated RCP flywheels.

EGC has concluded that the proposed RCP flywheel examination requirements (i.e., differentiated requirements for the WCAP-evaluated RCP flywheels and the alternate Marble Hill RCP flywheels) are consistent with the intent of TSTF-421, Revision 0, and with the NRC's model safety evaluation dated June 24, 2003, in that the relaxed examination interval is only applicable to the RCP flywheels that were evaluated as part of the WCAP.

6.0 REGULATORY ANALYSIS

A description of this proposed change and its relationship to applicable regulatory requirements and guidance was provided in the NRC notices related to the CLIIP, TSTF-421, topical report WCAP-15666-A, and the associated SE.

7.0 NO SIGNIFICANT HAZARDS CONSIDERATION

EGC has reviewed the proposed no significant hazards consideration determination published on June 24, 2003 (68 FR 37590) as part of the CLIIP. EGC has concluded that the proposed determination presented in the notice is applicable to the WCAP-evaluated RCP flywheels at Braidwood Station, Units 1 and 2, and Byron Station, Units 1 and 2, and the determination is hereby incorporated by reference to satisfy the requirements of 10 CFR 50.91(a).

8.0 ENVIRONMENTAL EVALUATION

EGC has reviewed the environmental evaluation included in the model SE published on June 24, 2003 (68 FR 37590) as part of the CLIIP. EGC has concluded that the findings presented in that evaluation are applicable to the WCAP-evaluated RCP flywheels at Braidwood Station, Units 1 and 2, and Byron Station, Units 1 and 2, and the evaluation is hereby incorporated by reference for this application.

9.0 PRECEDENT

This application is being made in accordance with the CLIIP, with the exception of a site-specific variation. This variation ensures that the proposed TS are consistent with the intent of TSTF-421, Revision 0, the NRC's model safety evaluation dated June 24, 2003, and the existing equipment at Braidwood and Byron.

10.0 REFERENCES

1. Federal Register Notice: Notice of Availability of Model Application Concerning Technical Specification Improvement Regarding Extension of Reactor Coolant Pump Motor Flywheel Examination for Westinghouse Plants Using the Consolidated Line Item Improvement Process, published October 22, 2003 (68 FR 60422)

2. Federal Register Notice: Notice of Opportunity to Comment on Model Safety Evaluation on Technical Specification Improvement Regarding Extension of Reactor Coolant Pump Motor Flywheel Examination for Westinghouse Plants Using the Consolidated Line Item Improvement Process, published June 24, 2003 (68 FR 37590)
3. Industry/Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-421, "Revision to RCP Flywheel Inspection Program (WCAP-15666)," Revision 0, November 2001
4. Westinghouse WCAP-15666-A, "Extension of Reactor Coolant Pump Motor Flywheel Examination," Revision 1, October 2003
5. Letter from H. Berkow (NRC) to R. Bryan (WOG), "Safety Evaluation of Topical Report WCAP-15666, 'Extension of Reactor Coolant Pump Motor Flywheel Examination,' (TAC NO. MB2819)," May 5, 2003

ATTACHMENT 2

Proposed Mark-up of Braidwood Technical Specification 5.5

Technical Specification Page

5.5-5

5.5 Programs and Manuals

5.5.6 Pre-Stressed Concrete Containment Tendon Surveillance Program

This program provides controls for monitoring any tendon degradation in pre-stressed concrete containments, including effectiveness of its corrosion protection medium, to ensure containment structural integrity. The program shall include baseline measurements prior to initial operations. The Tendon Surveillance Program, inspection frequencies, and acceptance criteria shall be in accordance with Section XI, Subsection IWL of the ASME Boiler and Pressure Vessel Code and applicable addenda as required by 10 CFR 50.55a, except where an alternative, exemption, or relief has been authorized by the NRC. Determining pre-stressing forces for inspections shall be consistent with the recommendations of Regulatory Guide 1.35.1, July 1990.

The provisions of SR 3.0.3 are applicable to the Tendon Surveillance Program inspection frequencies.

5.5.7 Reactor Coolant Pump Flywheel Inspection Program

This program shall provide for the inspection of each reactor coolant pump flywheel in general conformance with the recommendations of Regulatory Position c.4.b of Regulatory Guide 1.14, Revision 1, August 1975.

~~In~~ lieu of Regulatory Position c.4.b(1) and c.4.b(2), a qualified in-place UT examination over the volume from the inner bore of the flywheel to the circle of one-half the outer radius or a surface examination (MT and/or PT) of exposed surfaces of the removed flywheel may be conducted at approximately 10 year intervals coinciding with the Inservice Inspection schedule as required by ASME Section XI.

For reactor coolant pump motor serial numbers 4S88P961 and 1S88P961, in

For all other reactor coolant pump motors, in lieu of Regulatory Position c.4.b(1) and c.4.b(2), a qualified in-place UT examination over the volume from the inner bore of the flywheel to the circle of one-half the outer radius or a surface examination (MT and/or PT) of exposed surfaces of the removed flywheel may be conducted at an interval not to exceed 20 years.

ATTACHMENT 3

Proposed Mark-up of Byron Technical Specification 5.5

Technical Specification Page

5.5-5

5.5 Programs and Manuals

5.5.6 Pre-Stressed Concrete Containment Tendon Surveillance Program

This program provides controls for monitoring any tendon degradation in pre-stressed concrete containments, including effectiveness of its corrosion protection medium, to ensure containment structural integrity. The program shall include baseline measurements prior to initial operations. The Tendon Surveillance Program, inspection frequencies, and acceptance criteria shall be in accordance with Section XI, Subsection IWL of the ASME Boiler and Pressure Vessel Code and applicable addenda as required by 10 CFR 50.55a, except where an alternative, exemption, or relief has been authorized by the NRC. Determining pre-stressing forces for inspections shall be consistent with the recommendations of Regulatory Guide 1.35.1, July 1990.

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