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10 CFR 50.90

RS-07-087

July 31, 2007

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. STN 50-456 and STN 50-457

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

Subject: Request for License Amendment Related to Technical Specification 5.5.2, "Primary Coolant Sources Outside Containment"

Reference: Letter from W. D. Beckner (NRC) to A. R. Pietrangelo (Nuclear Energy Institute), "TSTF Status Report – October 2000," dated October 31, 2000, (ADAMS Accession No. ML003765449)

In accordance with 10 CFR 50.90, "Application for amendment of license or construction permit," Exelon Generation Company, LLC (EGC) is requesting an amendment to Appendix A, Technical Specifications (TS), of Facility Operating License Nos. NPF-72, NPF-77, NPF-37, and NPF-66 for Braidwood Station, Units 1 and 2, and Byron Station, Units 1 and 2, respectively.

The proposed amendment would revise TS 5.5.2, "Primary Coolant Sources Outside Containment," to clarify the intent of refueling cycle intervals (i.e., 18 month intervals) with respect to system integrated leak test requirements and to add a statement that the provisions of Surveillance Requirement (SR) 3.0.2 are applicable.

The proposed amendment is consistent with Industry/Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-299, "Administrative Controls Program 5.5.2.b Test Interval and Exception." In the referenced letter, the NRC acknowledged the approval of the TSTF-299 proposed TS changes as an administrative change to Revision 2.0 of NUREG-1431, "Standard Technical Specifications – Westinghouse Plants."

The attached amendment request is subdivided as shown below.

Attachment 1 provides an evaluation of the proposed changes.

Attachments 2-A and 2-B include the marked-up TS page with the proposed changes indicated for Braidwood Station and Byron Station, respectively.

Attachments 3-A and 3-B include the associated typed TS page with the proposed changes incorporated for Braidwood Station and Byron Station, respectively.

EGC requests that approval of this license amendment be granted prior to July 3, 2008. Following NRC approval, the amendment will be implemented within 30 days.

The proposed amendment has been reviewed by the Braidwood Station and the Byron Station Plant Operations Review Committees and approved by their respective Nuclear Safety Review Boards in accordance with the requirements of the EGC Quality Assurance Program.

EGC is notifying the State of Illinois of this application for a change to the TS by sending 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 about this request, please contact Mr. David Chrzanowski at (630) 657-2816.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 31st day of July 2007.

Respectfully,

Darin M. Benyak
Director – Licensing and Regulatory Affairs

Attachment 1: Evaluation of Proposed Changes
Attachment 2-A: Markup of Proposed Technical Specifications Page Changes for Braidwood Station
Attachment 2-B: Markup of Proposed Technical Specifications Page Changes for Byron Station
Attachment 3-A: Typed Page for Technical Specification Changes for Braidwood Station
Attachment 3-B: Typed Page for Technical Specification Changes for Byron Station

ATTACHMENT 1
Evaluation of Proposed Changes

INDEX

1.0 DESCRIPTION

The proposed amendment would revise Technical Specification (TS) 5.5.2, "Primary Coolant Sources Outside Containment." The changes are consistent with Industry/Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-299, "Administrative Controls Program 5.5.2.b Test Interval and Exception." In Reference 1, the NRC acknowledged their approval of the TSTF-299 proposed TS changes as an administrative change to Revision 2.0 of NUREG-1431, "Standard Technical Specifications – Westinghouse Plants."

2.0 PROPOSED CHANGE

TS 5.5.2 currently requires, in part, that the program for primary sources outside containment include integrated leak test requirements for each system at refueling cycle intervals or less.

Consistent with the NRC-approved TSTF-299, the proposed TS change revises TS 5.5.2 to require, in part, that the program for primary coolant sources outside containment include integrated leak test requirements for each system at least once per 18 months, and adds a statement that the provisions of Surveillance Requirement (SR) 3.0.2 are applicable. Specifically, TS 5.5.2 is revised as follows (changes are shown in bold italics):

> b. Integrated leak test requirements for each system at ***least once per 18 months.***
>
> ***The provisions of SR 3.0.2 are applicable.***

3.0 BACKGROUND

The NRC previously approved conversion of the Braidwood Station, Units 1 and 2, and Byron Station, Units 1 and 2 to the Improved Standard Technical Specifications (ISTS) based on Revision 1 of NUREG 1431, "Standard Technical Specifications Westinghouse Plants, " dated April 1995, in Amendments 98 and 106, respectively (i.e., Reference 2). As part of a continuing effort to maintain and improve the use of TS, the industry and the NRC have created a generic change process to maintain the Standard Technical Specifications.

During the development of the ISTS, the industry and the NRC determined that surveillance intervals should be more specific and stated in easily measurable intervals. This lead to replacing surveillance intervals based on "refueling interval" with requirements based on the nominal fuel cycle for each plant, such as 18 months, in Sections 3.0 through 3.9 for NUREG 1431. TSTF-299 was initiated to improve consistency in the presentation of surveillance intervals in TS 5.5.2 with the presentation of similar surveillance intervals in the remainder of the Standard Technical Specifications. TSTF-299 was incorporated in NUREG 1431, Revision 2, dated April 2001. Because the fuel cycle length can vary from plant-to-plant, this value for the surveillance interval is bracketed, indicating that the plant incorporating this requirement must insert their plant specific information. Braidwood Station, Units 1 and 2, and Byron Station, Units 1 and 2, operate on an 18-month fuel cycle.

In addition, TSTF-299 adds a statement to TS 5.5.2 to state that SR 3.0.2 is applicable. A refueling cycle may be longer than 18 months in order to achieve the required burnup because of shutdowns or power reductions that may occur during the fuel cycle. Allowing SR 3.0.2 to be applicable to integrated system leak test requirements allows a 25% extension of the frequency that allows flexibility in scheduling leak tests to account for extended fuel cycles due to shutdowns and power reductions. The incorporation of this allowance is consistent with other similar Surveillance Requirements in the ISTS.

4.0 TECHNICAL ANALYSIS

EGC proposes to revise the requirements of TS 5.5.2 to incorporate the TSTF-299 changes approved by the NRC. TSTF-299 is incorporated into the Braidwood Station, Units 1 and 2, and Byron Station, Units 1 and 2, TS with no exceptions. TS 5.5.2.b provides for integrated system leak test requirements at refueling cycle intervals or less. TS 5.5.2.b is revised to require integrated leak test requirements for each system at least once per 18 months. TS 5.5.2.b is essentially a SR. Presenting the requirement in this manner achieves consistency with similar SR requirements in the Braidwood Station, Units 1 and 2, and Byron Station, Units 1 and 2, TS because refueling cycle intervals are nominally 18 months in length.

The revised TS 5.5.2.b will require integrated system leak test requirements at least once per 18 months. However, a refueling cycle interval may be longer than 18 months in order to achieve the required fuel burnup because of shutdowns and power reductions. Incorporating the allowance to apply a 25% frequency extension as provided in SR 3.0.2 to the integrated system leak test requirements allows flexibility in scheduling the activities that is inherent in the current requirement of "refueling cycle interval or less." Without this allowance, a unit could be required to shutdown solely to perform an integrated system leak test in the event the refueling cycle interval is extended to achieve the required fuel burnup. The applicability of SR 3.0.2 must be explicitly stated in TS 5.5.2 because SR 3.0.2 only applies to SRs in TS Sections 3.0 through 3.9, unless specifically stated.

The proposed change affects only the interval at which integrated system leak tests are performed, not the effectiveness of the integrated system leak test requirements. Under the proposed change, integrated system leak testing will be performed at 18-month intervals. If an extension of that interval becomes necessary because of scheduling considerations, the provisions of SR 3.0.2 will provide the necessary flexibility.

The Bases for SR 3.0.2 state that the 25% extension facilitates Surveillance scheduling and considers unit operating conditions that may not be suitable for conducting the Surveillance (e.g., transient conditions or other ongoing Surveillance or maintenance activities). In addition, the Bases for SR 3.0.2 state that the 25% extension does not significantly degrade the reliability that results from performing the Surveillance at its specified Frequency. The maximum extension that can be applied to those portions of systems outside of containment subject to the integrated system leak test requirements of TS 5.5.2.b is 25% of 18 months (i.e., approximately 4.5 months).

5.0 REGULATORY ANALYSIS

5.1 NO SIGNIFICANT HAZARDS CONSIDERATION

According to 10 CFR 50.92, "Issuance of amendment," paragraph (c), a proposed amendment to an operating license involves no significant hazards consideration 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.

In support of this determination, an evaluation of each of the three criteria set forth in 10 CFR 50.92 is provided below regarding the proposed license amendment.

Overview

In accordance with 10 CFR 50.90, "Application for amendment of license or construction permit," Exelon Generation Company, LLC (EGC) is requesting an amendment to Appendix A, Technical Specifications (TS), of Facility Operating License Nos. NPF-72, NPF-77, NPF-37, and NPF-66 for Braidwood Station, Units 1 and 2, and Byron Station, Units 1 and 2, respectively.

The proposed amendment would revise TS 5.5.2, "Primary Coolant Sources Outside Containment," to clarify the intent of refueling cycle intervals with respect to system integrated leak test requirements (i.e., 18 month intervals) and to add a statement that the provisions of Surveillance Requirement (SR) 3.0.2 are applicable. The change is consistent with Industry/Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-299, "Administrative Controls Program 5.5.2.b Test Interval and Exception."

EGC has evaluated whether or not a significant hazards consideration is involved with the proposed TS changes by focusing on the three criteria set forth in 10 CFR 50.92 as discussed below:

Criteria

1. **Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?**

   Response: No.

   The proposed amendment affects only the interval at which integrated system leak tests are performed, not the effectiveness of the integrated system leak test requirements. Revising the integrated system leak test requirements from "at refueling cycle interval or less" to "at least once per 18 months" is considered to be an administrative change because Braidwood Station, Units 1 and 2, and Byron Station, Units 1 and 2, operate on 18-month fuel cycles. Incorporation of the allowance to extend the 18-month interval by 25%, as allowed by Surveillance Requirement (SR) 3.0.2, does not significantly degrade the reliability that results from performing the Surveillance at its specified Frequency.

   Test intervals are not considered as initiators of any accident previously evaluated. As a result, the probability of any accident previously evaluated is not significantly increased by the proposed amendment. Technical Specification (TS) 5.5.2 continues to require the performance of periodic integrated system leak tests. Therefore, accident analysis assumptions will still be verified. As a result, the consequences of any accident previously evaluated are not significantly increased.

   Based on the above discussion, the proposed changes do not involve an increase in the probability or consequences of an accident previously evaluated.

2. **Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?**

   Response: No.

   The proposed amendment affects only the interval at which integrated system leak tests are performed; they do not alter the design or physical configuration of the plant. No changes are being made to Braidwood Station, Units 1 and 2, and Byron Station, Units 1 and 2, that would introduce any new accident causal mechanisms.

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

3. **Does the proposed change involve a significant reduction in a margin of safety?**

   Response: No.

   The proposed amendment does not change the design or function of plant equipment. The proposed amendment does not significantly reduce the level of assurance that any plant equipment will be available to perform its function. The proposed amendment provides operating flexibility without significantly affecting plant operation.

   Based on this evaluation, the proposed change does not involve a significant reduction in a margin of safety.

Therefore, the proposed changes do not involve a significant hazards consideration under the criteria set forth in 10 CFR 50.92(c).

5.2 APPLICABLE REGULATORY REQUIREMENTS/CRITERIA

Section 182a of the Atomic Energy Act requires applicants for nuclear power plant operating licenses to include technical specifications (TS) as part of the license. The Commission's regulatory requirements related to the content of the TS are contained in Title 10, Code of Federal Regulations (10 CFR), Section 50.36, "Technical specifications." The TS requirements in 10 CFR 50.36 include the following categories: (1) safety limits, limiting safety systems settings and control settings, (2) limiting conditions for operation (LCO), (3) surveillance requirements, (4) design features, and (5) administrative controls.

As stated in 10 CFR 50.59, "Changes, tests, and experiments," paragraph (c)(1)(i), a licensee is required to submit a license amendment pursuant to 10 CFR 50.90, "Application for amendment of license or construction permit," if a change to the TS is required. Furthermore, the requirements of 10 CFR 50.59 necessitate that the NRC approve the TS changes before the TS changes are implemented. EGC's submittal meets the requirements of 10 CFR 50.59(c)(1)(i) and 10 CFR 50.90.

6.0 ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, "Standards for protection against radiation," or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in paragraph (c)(9) of 10 CFR 51.22, "Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review." Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

7.0 REFERENCES

1. Letter from W. D. Beckner (NRC) to A. R. Pietrangelo (Nuclear Energy Institute), "TSTF Status Report – October 2000," dated October 31, 2000, (ADAMS Accession No. ML003765449)

2. Letter from R. R. Assa (NRC) to O. D. Kingsley (Commonwealth Edison Company), "Issuance of Amendments," dated December 22, 1998.

Attachment 2-A

BRAIDWOOD STATION
UNITS 1 AND 2

Docket Nos. STN 50-456 and STN 50-457

License Nos. NPF-72 and NPF-77

Request for License Amendment Related to Technical Specification 5.5.2
"Primary Coolant Sources Outside Containment"

Markup of Technical Specifications Page

5.5-2

5.5 Programs and Manuals

5.5.1 Offsite Dose Calculation Manual (ODCM) (continued)

3. Shall be submitted to the NRC in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Radioactive Effluent Release Report for the period of the report in which any change in the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (i.e., month and year) the change was implemented.

5.5.2 Primary Coolant Sources Outside Containment

This program provides controls to minimize leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to levels as low as practicable. The systems include the recirculation portions of the Containment Spray, Safety Injection, Chemical and Volume Control, and Residual Heat Removal. The program shall include the following:

a. Preventive maintenance and periodic visual inspection requirements; and

b. Integrated leak test requirements for each system at ~~refueling cycle intervals or~~ less. least once per 18 months.

The provisions of SR 3.0.2 are applicable.

5.5.3 Deleted.

Attachment 2-B

BYRON STATION
UNITS 1 AND 2

Docket Nos. STN 50-454 and STN 50-455

License Nos. NPF-37 and NPF-66

Request for License Amendment Related to Technical Specification 5.5.2
"Primary Coolant Sources Outside Containment"

Markup of Technical Specifications Page

5.5-2

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a. Preventive maintenance and periodic visual inspection requirements; and

b. Integrated leak test requirements for each system at ~~refueling cycle intervals or~~ less. at least once per 18 months.

The provisions of SR 3.0.2 are applicable.

5.5.2 Deleted.

Attachment 3-A

BRAIDWOOD STATION
UNITS 1 AND 2

Docket Nos. STN 50-456 and STN 50-457

License Nos. NPF-72 and NPF-77

Request for License Amendment Related to Technical Specification 5.5.2
"Primary Coolant Sources Outside Containment"

Typed Technical Specifications Page

5.5-2

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a. Preventive maintenance and periodic visual inspection requirements; and

b. Integrated leak test requirements for each system at least once per 18 months.

The provisions of SR 3.0.2 are applicable.

5.5.3 Deleted.

Attachment 3-B

BYRON STATION
UNITS 1 AND 2

Docket Nos. STN 50-454 and STN 50-455

License Nos. NPF-37 and NPF-66

Request for License Amendment Related to Technical Specification 5.5.2
"Primary Coolant Sources Outside Containment"

Typed Technical Specifications Page

5.5-2

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a. Preventive maintenance and periodic visual inspection requirements; and

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The provisions of SR 3.0.2 are applicable.

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