

Commonwealth Edison Company  
Dresden Generating Station  
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May 03, 1999

JMHLTR# 99-0057

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

Dresden Nuclear Power Station, Units 2 and 3  
Facility Operating License Nos. DPR-19 and DPR-25  
NRC Docket Nos. 50-237 and 50-249

Subject: Application for Amendment to Appendix A, Technical Specifications,  
Relocation of Technical Specification 3/4.6.1, "Primary System  
Boundary - Chemistry"

In accordance with 10 CFR 50.90, Commonwealth Edison (ComEd) Company proposes a change to Appendix A, Technical Specifications (TS), Facility Operating Licenses DPR-19 and DPR-25. The application for amendment proposes a change to Technical Specification (TS) Section 3/4.6.1, Primary System Boundary - Chemistry. The requested changes relocate the Chemistry TS requirements to the Updated Final Safety Analysis Report (UFSAR) and to applicable plant procedures controlled by the 10CFR50.59 process. This change is consistent with the Improved Standard Technical Specifications (ISTS) as documented in NUREG-1433 "Standard Technical Specifications, General Electric Plants, BWR/4, Revision 1," and as previously approved for the James A. Fitzpatrick Nuclear Power Plant, (Reference 1). It is also similar to the change submitted by Quad Cities Nuclear Power Station (Reference 2) and recently approved by the NRC (Reference 3). The TS for reactor coolant chemistry limits contain requirements for reactor coolant, conductivity, chloride concentration, and pH. The TS for chemistry limits do not meet any screening criteria for retention in the TS in accordance with the NRC Final Policy Statement on Technical Specification Improvements, (Reference 4).

The purpose of this amendment is to support injection of noble metal compounds into the reactor vessel to prevent crack initiation and to mitigate any existing crack growth in the reactor vessel surfaces, internal components and piping due to Intergranular Stress Corrosion Cracking (IGSCC). The noble metal solutions injected into the reactor coolant are expected to temporarily increase reactor coolant conductivity and pH levels. This increase is only expected during the metal application period, which is planned to occur in operational mode 3. The reactor water cleanup system will be used to reduce the conductivity and pH levels to normal pre-application operation levels.

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This process has been previously reviewed and approved by the USNRC for use at the Duane Arnold Energy Center, (Reference 5). ComEd's long range plan included the application of this process for the Unit 2 refueling outage scheduled for the fourth quarter of this year. Therefore, ComEd requests approval of this amendment prior to September 15, 1999 to support the planned refueling Unit 2 outage scheduled to begin in October 1999.

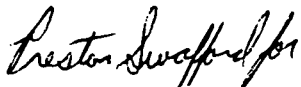
This proposed amendment request is subdivided as follows:

1. Attachment A gives a description and safety analysis of the proposed changes in this amendment.
2. Attachment B includes the marked-up Technical Specification pages with the requested changes indicated.
3. Attachment C describes ComEd's evaluation performed in accordance with 10 CFR 50.92(c), which confirms that no significant hazards consideration is involved.
4. Attachment D provides information supporting an Environmental Assessment.

This proposed amendment has been reviewed and approved by ComEd Onsite and Offsite Review in accordance with ComEd procedures.

ComEd is notifying the State of Illinois of this application for amendment by transmitting a copy of this letter and its attachments to the designated State Official. If there are any questions or comments concerning this letter, please refer them to Mr. Dale Ambler, Regulatory Assurance Manager, at (815) 942-2920, extension 3800.

Sincerely,



J. M. Heffley  
Site Vice President  
Dresden Nuclear Power Station

Attachments: (1) Description and Safety Analysis for Proposed Changes  
(2) Marked-up Pages for Proposed Changes  
(3) Significant Hazards Consideration  
(4) Environmental Assessment

cc: Regional Administrator – NRC Region III  
NRC Senior Resident Inspector - Dresden Nuclear Power Station

STATE OF ILLINOIS

Docket Nos. 50-237  
50-249

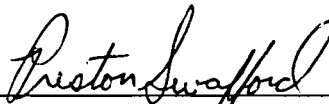
IN THE MATTER OF:

COMMONWEALTH EDISON (COMED) COMPANY

DRESDEN NUCLEAR POWER STATION - UNITS 2 & 3

AFFIDAVIT

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

  
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Preston Swafford

Station Manager Dresden Nuclear Power *for*

J. M. Heffley

Site Vice President Dresden Nuclear Power Station

Subscribed and sworn to before me, a Notary Public in and

for the State above named, this 30 day of

April, 1999.



  
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Notary Public

Attachment  
Description and Safety Analysis for Proposed Changes  
"Application for Amendment to Appendix A, Technical Specifications, Relocation of  
Technical Specification 3/4.6.1, "Primary System Boundary – Chemistry" "

**A. SUMMARY OF PROPOSED CHANGES**

In accordance with 10 CFR 50.90, Commonwealth Edison (ComEd) Company proposes a change to Appendix A, Technical Specifications (TS), Facility Operating Licenses DPR-19 and DPR-25. The application for amendment requests a change to Technical Specifications Section 3/4.6.1, Primary System Boundary - Chemistry. The requested changes relocate the TS requirements to the Updated Final Safety Analysis Report (UFSAR) and to applicable plant procedures controlled by the 10 CFR 50.59 process. This change is consistent with the Improved Standard Technical Specifications (ISTS) as documented in NUREG-1433, Revision 1, and as previously approved for the James A. Fitzpatrick Nuclear Power Plant, (Reference 1) and the Quad Cities Nuclear Power Station, (Reference 3). The TS for reactor coolant chemistry limits contain requirements for reactor coolant, conductivity, chloride concentration, and pH. The TS for chemistry limits do not meet any screening criteria for retention in the TS in accordance with the NRC Final Policy Statement on Technical Specification Improvements, (Reference 4).

The proposed changes are described in Section E of this Attachment. The marked up TS pages are shown in Attachment 2.

**B. DESCRIPTION OF THE CURRENT REQUIREMENTS**

TS Section 3/4.6.1 provides chemistry limits for the reactor coolant system for OPERATIONAL MODE(s) 1, 2 and 3. Table 3.6.1-1 provides limits on chlorides, conductivity and pH. Appropriate action requirements and surveillance requirements are also provided.

Action 1 permits temporary operation with chemistry limits outside of the limits required in OPERATIONAL MODE 1 without requiring NRC notification.

Action 2 applies to OPERATIONAL MODES 2 and 3 and also permits temporary operation with chemistry limits outside of the limits in Table 3.6.1-1 without requiring NRC notification.

The surveillance requirements provide adequate assurance that concentrations in excess of the limits will be detected in sufficient time to take corrective action.

**C. BASES FOR THE CURRENT REQUIREMENTS**

The chemistry limits for the reactor coolant system are established to prevent damage to the reactor materials in contact with the coolant. Chloride limits are specified to prevent stress corrosion cracking of the stainless steel. The effect of chloride is not as great when the oxygen concentration in the coolant is low, thus the 0.2 ppm limit on chlorides is permitted during power operation.

Attachment  
Description and Safety Analysis for Proposed Changes  
"Application for Amendment to Appendix A, Technical Specifications, Relocation of  
Technical Specification 3/4.6.I, "Primary System Boundary – Chemistry" "

Conductivity is monitored on a continuous basis since changes in this parameter are an indication of abnormal conditions. When the conductivity is within limits, the pH, chlorides and other impurities affecting conductivity should also be within their acceptable limits. With the conductivity meter inoperable, additional reactor coolant samples must be analyzed to ensure that the chlorides are not exceeding the limits.

**D. NEED FOR REVISION OF THE REQUIREMENT**

ComEd requests approval of this amendment prior to September 15, 1999, to support activities associated with the planned Unit 2 refueling outage scheduled to begin October, 1999. The purpose of this amendment is to support injection of noble metal compounds into the reactor vessel to prevent crack initiation and to mitigate any existing crack growth in the reactor vessel surfaces, internal components and piping due to Intergranular Stress Corrosion Cracking (IGSCC). The noble metal solutions injected into the reactor coolant will produce reaction byproducts, which will temporarily cause reactor coolant conductivity and pH levels to increase. This increase is only expected during the metal application, which is planned to occur in operational mode 3. The reactor water cleanup system will reduce the conductivity and pH levels to normal pre-application operation levels following the application. This process has been previously reviewed and approved by the NRC for use at the Duane Arnold Energy Center, (Reference 5).

**E. DESCRIPTION OF THE PROPOSED CHANGES**

The requested change will relocate TS Section 3/4.6.I, Primary System Boundary - Chemistry, to the Updated Final Safety Analysis Report (UFSAR) and to applicable plant procedures that are controlled by the 10 CFR 50.59 process.

**F. SAFETY ANALYSIS OF THE PROPOSED CHANGES**

The NRC final policy statement on TS Improvements for Nuclear Power Reactors, (Reference 4), concluded that the purpose of the TS is to impose only those conditions or limitations upon reactor operations necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety. The policy statement recommends that TS's that do not meet the screening criteria for retention as a TS may be relocated to another licensee controlled document. The criteria when applied to the current TS for reactor coolant chemistry parameters yields that those parameters do not comprise instrumentation, systems, components, process variables, design features or operating restrictions:

1. Used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary;

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**"Application for Amendment to Appendix A, Technical Specifications, Relocation of**  
**Technical Specification 3/4.6.I, "Primary System Boundary – Chemistry" "**

2. Used as an initial condition of a Design Basis Accident or Transient Analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier;
3. Used as part of the primary success path and which functions or actuates to mitigate a Design Basis Accident or Transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier;
4. Which operating experiences or probabilistic safety assessment has shown to be significant to public health and safety. (Section 3.5, Table 4-1 and Section 6 of Reference 6)

The reactor coolant TS that is proposed to be relocated does not meet the screening criteria of 10 CFR 50.36, and therefore does not warrant being in the TS. For this reason, the proposed changes are administrative in nature. In addition, the proposed changes are consistent with the Improved Standard Technical Specifications (ISTS) (NUREG-1433, Revision 1).

**G. IMPACT ON PREVIOUS SUBMITTALS**

ComEd has reviewed the proposed Operating License Amendment request regarding impact on any previous submittals, and has determined that there is no impact on any outstanding previous submittals.

**H. SCHEDULE REQUIREMENTS**

ComEd requests approval of this amendment prior to September 15, 1999, to support activities in the upcoming Unit 2 refueling outage scheduled to begin October, 1999.

**I. REFERENCES**

- (1) Letter from J. Williams (USNRC) to J. Knubel (Power Authority of the State of New York), dated December 1, 1998, "Issuance of Amendment for James A. Fitzpatrick Nuclear Power Plant"
- (2) Letter from J.P. Dimmette (ComEd) to U.S. NRC dated January 21, 1999, "Application for Amendment to Appendix A, Technical Specifications, Relocation of Technical Specification 3/4.6.I, Primary System Boundary – Chemistry"

Attachment

Description and Safety Analysis for Proposed Changes  
"Application for Amendment to Appendix A, Technical Specifications, Relocation of  
Technical Specification 3/4.6.I, "Primary System Boundary – Chemistry" "

- (3) Letter from R.M. Pulsifer (USNRC) to O.D. Kingley dated March 31, 1999, "Issuance of Amendments" (Approving the amendment request submitted in Reference 2).
- (4) USNRC Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors, 58 FR 39132, dated July 22, 1993.
- (5) Letter from G.B. Kelly (USNRC) to Lee Liu (Duane Arnold Energy Center), dated October 3, 1996, "Amendment No. 218 to Facility Operating License DPR-49"
- (6) General Electric Topical Report NEDO-31466 dated November 1987, "Technical Specification Screening Criteria Application and Risk Assessment."