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October 27, 1997

JSPLTR: #97-0182

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

**SUBJECT: Dresden Nuclear Power Station Units 2 and 3  
Quad Cities Nuclear Power Station Units 1 and 2  
Request for Amendment to Facility Operating Licenses DPR-19, DPR-25,  
DPR-29 and DPR-30, Appendix A, Technical Specifications (TS),  
Changes to Technical Specification 3/4.4.A, "Standby Liquid Control  
System"  
NRC Docket Nos. 50-237/249 and 50-254/265**

Pursuant to 10 CFR 50.90, ComEd proposes to amend Appendix A, Technical Specifications 3/4.4.A, of Facility Operating Licenses DPR-19, DPR-25, DPR-29 and DPR-30. The purpose of this amendment request is to amend the aforementioned requirements to be consistent with NUREG-1433, Improved Standard Technical Specifications. The proposed changes clarify the applicability, action and surveillance requirements for the Standby Liquid Control System.

The proposed Technical Specification Amendment is subdivided as follows:

1. Attachment A gives a description and safety analysis of the proposed changes.
2. Attachment B includes the proposed changes to the Technical Specifications pages, including marked-up versions of the current pages.
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. In addition, ComEd's Environmental Assessment Applicability Review is included.

This proposed Technical Specification amendment has been reviewed and approved by ComEd On-Site and Off-Site Review in accordance with ComEd procedures.

ADD 1/1

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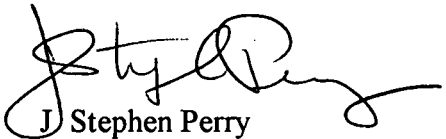
ComEd requests NRC approval of this request by February 1, 1998 to be effective no later than 30 days following approval. Approval of this amendment allows Dresden and Quad Cities the opportunity to implement the revised requirements for the Standby Liquid Control System during upcoming planned refueling operations.

To the best of my knowledge and belief, the statements contained above are true and correct. In some respect these statements are not based on my personal knowledge, but obtained information furnished by other Commonwealth Edison employees, contractor employees, and consultants. Such information has been reviewed in accordance with company practice, and I believe it to be reliable.

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.

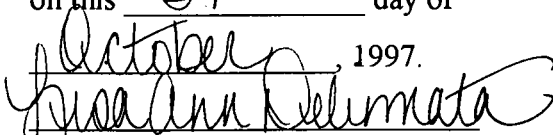
Please direct any questions you may have concerning this submittal to Frank Spangenberg, Regulatory Assurance Manager (815) 942-2920 extension 3800.

Sincerely,

  
J. Stephen Perry  
Site Vice President  
Dresden Nuclear Power Station

Subscribed and Sworn to before me

on this 27th day of

October, 1997.  
  
Notary Public



Attachments:

- A. Description and Safety Analysis of the Proposed Changes
- B. Marked-Up Technical Specification Pages
- C. Evaluation of Significant Hazards Considerations and Environmental Assessment Applicability Review

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cc: A. Bill Beach , Regional Administrator - RIII  
C.G. Miller, Senior Resident Inspector - Quad Cities  
K. R. Riemer, Senior Resident Inspector - Dresden  
R. M. Pulsifer, Project Manager - NRR  
J. F. Stang, Project Manager - NRR  
D.C. Tubbs, MidAmerican Energy Company  
Office of Nuclear Facility Safety - IDNS

## ATTACHMENT A

### DESCRIPTION AND SAFETY ANALYSIS OF THE PROPOSED CHANGES

#### Description of the Proposed Change

Pursuant to 10 CFR 50.90, ComEd proposes to amend Appendix A, Technical Specifications 3/4.4.A, "Standby Liquid Control System," of Facility Operating Licenses DPR-19, DPR-25, DPR-29 and DPR-30. The purpose of this amendment request is to revise the TS requirements for the Standby Liquid Control System. The proposed changes modify the applicability requirements from "... MODE 1, 2 and 5<sup>(a)</sup>" to "... MODE 1 and 2." Correspondingly, footnote (a) is proposed to be deleted. Footnote (a) refers to "With any control rod withdrawn. Not applicable to control rods removed per Specification 3.10.I or 3.10.J." With the deletion of footnote (a), footnote (b) is renumbered accordingly. The proposed amendment also deletes TS 3.4.A, Action 2 as this Action is only applicable during MODE 5. With the aforementioned deletion of the applicability during MODE 5, Action 2 is unnecessary.

Surveillance Requirement 4.4.A.1.c is proposed to be changed from "The heat tracing circuit is OPERABLE by determining the temperature of the pump suction piping to be greater than or equal to 83 °F." to "*The temperature of the pump suction piping to be greater than or equal to 83 °F.*" Heat trace operability is adequately encompassed by the daily verification that the pump suction is within the temperature limits.

Surveillance Requirement 4.4.A.2.c is proposed to be changed from "Verifying that each valve, manual, power operated or automatic, in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position." to "*Verifying that each valve, manual, power operated or automatic, in the flow path that is not locked, sealed, or otherwise secured in position, is in the correct position, or can be aligned to the correct position.*" The proposed allowance is added because SLCS is a manually actuated system. Operator action to realign the system provides a system initiation consistent with the safety analysis.

Surveillance Requirement 4.4.A.4.a is proposed to be changed from "Initiating one of the standby liquid control subsystems, including an explosive valve, and verifying that a flow path from the pumps to the reactor pressure vessel is available by pumping demineralized water into the reactor vessel. The replacement charge for the explosive valve shall be from the same manufactured batch as the one fired or from another batch which has been certified by having one of that batch successfully fired. Both injection loops shall be tested in 36 months." to "*Initiating one of the standby liquid control subsystems, including an explosive valve, and verifying that a flow path from the pumps to the reactor pressure vessel is available. Both injection loops shall be tested in 36 months.*" Details of the methods for performing surveillances are relocated to plant administrative controls. The design features and system operation which dictate the surveillance methods are described in the UFSAR. Changes to the UFSAR will be controlled by the provisions of 10 CFR 50.59.

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### **DESCRIPTION AND SAFETY ANALYSIS OF THE PROPOSED CHANGES**

Surveillance Requirement 4.4.A.4.b is proposed to be deleted from the Technical Specifications. TS 4.4.A.4.b currently states: "Demonstrating that the pump relief valve setpoint is between 1455 and 1545 psig and verifying that the relief valve does not actuate during recirculation to the test tank at normal system pressures." Verification of the relief valve proper operation and setpoint is conducted in accordance with the plant's Inservice Test Program (IST) and the ASME Code. Repeating these requirements in the TS is unnecessary. Changes to the IST program will be controlled by the provisions of 10 CFR 50.55a.

Surveillance Requirement 4.4.A.4.c is proposed to be changed from "Demonstrating that the pump suction line from the storage tank is not plugged by manually initiating the system, except the explosive valves, and pumping solution in the recirculation path." to "Demonstrating that the pump suction line from the storage tank is not plugged." Details of the methods for performing surveillances are relocated to plant administrative controls. The design features and system operation which dictate the surveillance methods are described in the UFSAR. Changes to the UFSAR will be controlled by the provisions of 10 CFR 50.59.

The proposed changes for 3/4.4.A are consistent with the requirements of Section 3.7.1 of the Improved Standard Technical Specifications (NUREG-1433).

The proposed changes are consistent with the criteria specified by the NRC in the "Final Policy Statement on Technical Specification Improvements for Nuclear Power Reactors," (58 FR 39132), which determines the design conditions and associated surveillance that should be located in the Technical Specifications limiting conditions for operation.

#### **Description and Bases of the Current Operating License/Technical Specification Requirement**

Current TS 3/4.4.A, "Standby Liquid Control System," provides the requirements that ensure the capability for bringing the reactor from full power to a cold, xenon-free shutdown assuming that none of the withdrawn control rods can be inserted. It is designed to inject a quantity of boron which is required to bring the reactor from full power to 3% delta k/k or a more subcritical condition, considering the hot to cold reactivity swing and xenon poisoning. Additional margin is provided to compensate for possible losses and imperfect mixing of the chemical solution in the reactor water. The SLCS satisfies the requirements of 10 CFR 50.62 on anticipated transient without scram.

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### DESCRIPTION AND SAFETY ANALYSIS OF THE PROPOSED CHANGES

#### Description of the Need and Bases for Amending the Technical Specifications

ComEd proposes to revise TS 3/4.4.A, to be consistent with Section 3.1.7 of NUREG-1433. As previously discussed, the proposed changes modify the applicability requirements from "... MODE 1, 2 and 5<sup>(a)</sup>" to "... MODE 1 and 2." Correspondingly, footnote (a) is proposed to be deleted. Footnote (a) refers to "With any control rod withdrawn. Not applicable to control rods removed per Specification 3.10.I or 3.10.J." With the deletion of footnote (a), footnote (b) is renumbered accordingly. The proposed amendment also deletes TS 3.4.A, Action 2 as this Action is only applicable during MODE 5. With the aforementioned deletion of the applicability during MODE 5, Action 2 is unnecessary. In MODES 1 and 2, shutdown capability is required. In MODES 3 and 4, control rods are not able to be withdrawn since the reactor mode switch is in shutdown and a control rod block is applied. This provides adequate controls to ensure that the reactor remains subcritical. In MODE 5, only a single control rod can be withdrawn from a core cell containing fuel assemblies. Adequate SDM (LCO 3.3.A, "SHUTDOWN MARGIN (SDM)") ensures that the reactor will not become critical. Therefore, the SLCS is not required to be OPERABLE when only a single control rod can be withdrawn.

Surveillance Requirement 4.4.A.1.c is proposed to be changed from "The heat tracing circuit is OPERABLE by determining the temperature of the pump suction piping to be greater than or equal to 83 °F." to "*The temperature of the pump suction piping to be greater than or equal to 83 °F.*" Heat trace operability is adequately encompassed by the daily verification that the pump suction is within the temperature limits.

Surveillance Requirement 4.4.A.2.c is proposed to be changed from "Verifying that each valve, manual, power operated or automatic, in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position." to "*Verifying that each valve, manual, power operated or automatic, in the flow path that is not locked, sealed, or otherwise secured in position, is in the correct position, or can be aligned to the correct position.*" The proposed allowance is added because SLCS is a manually actuated system. Operator action to realign the system provides a system initiation consistent with the safety analysis. The SLCS is manually initiated from the main control room, as directed by the emergency operating procedures, if the operator believes the reactor cannot be shut down, or kept shut down, with the control rods. The SLCS is used in the event that enough control rods cannot be inserted to accomplish shutdown and cooldown in the normal manner. The SLCS injects borated water into the reactor core to add negative reactivity to compensate for all of the various reactivity effects that could occur during plant operations. Verifying the correct alignment for manual, power operated, and automatic valves in the SLCS flow path provides assurance that the proper flow paths will exist for system operation. A valve is also allowed to be in the nonaccident position

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### DESCRIPTION AND SAFETY ANALYSIS OF THE PROPOSED CHANGES

provided it can be aligned to the accident position from the control room, or locally by a dedicated operator at the valve control. This is acceptable since the SLCS is a manually initiated system. This surveillance also does not apply to valves that are locked, sealed, or otherwise secured in position since they are verified to be in the correct position prior to locking, sealing, or securing. This verification of valve alignment does not require any testing or valve manipulation; rather, it involves verification that those valves capable of being mispositioned are in the correct position. This SR does not apply to valves that cannot be inadvertently misaligned, such as check valves. The 31 day frequency is based on engineering judgment and is consistent with the procedural controls governing valve operation that ensures correct valve positions.

Surveillance Requirement 4.4.A.4.a is proposed to be changed from "Initiating one of the standby liquid control subsystems, including an explosive valve, and verifying that a flow path from the pumps to the reactor pressure vessel is available by pumping demineralized water into the reactor vessel. The replacement charge for the explosive valve shall be from the same manufactured batch as the one fired or from another batch which has been certified by having one of that batch successfully fired. Both injection loops shall be tested in 36 months." to *"Initiating one of the standby liquid control subsystems, including an explosive valve, and verifying that a flow path from the pumps to the reactor pressure vessel is available. Both injection loops shall be tested in 36 months."* This surveillance ensures that there is a functioning flow path from the boron solution storage tank to the RPV, including the firing of an explosive valve. The replacement charge for the explosive valve shall be from the same manufactured batch as the one fired or from another batch that has been certified by having one of that batch successfully fired. The pump and explosive valve tested should be alternated such that both complete flow paths are tested every 36 months at alternating 18 month intervals. The surveillance may be performed in separate steps to prevent injecting boron into the RPV. An acceptable method for verifying flow from the pump to the RPV is to pump demineralized water from a test tank through one SLC subsystem and into the RPV. The 18 month frequency is based on the need to perform this surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the surveillance were performed with the reactor at power. The details of the methods for performing surveillances are relocated to plant administrative controls. The design features and system operation which dictate the surveillance methods are described in the UFSAR. Changes to the UFSAR will be controlled by the provisions of 10 CFR 50.59.

Surveillance Requirement 4.4.A.4.b is proposed to be deleted from the Technical Specifications. TS 4.4.A.4.b currently states: "Demonstrating that the pump relief valve setpoint is between 1455 and 1545 psig and verifying that the relief valve does not actuate during recirculation to the test tank at normal system pressures." This Surveillance Requirement is currently a once per 18 months requirement. Verification of the relief

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### DESCRIPTION AND SAFETY ANALYSIS OF THE PROPOSED CHANGES

valve proper operation and setpoint is currently and will continue to be conducted in accordance with the plant's Inservice Test Program (IST) (currently once every 96 months) and the ASME Code. The SLCS and the relief valve function is within the scope of and is monitored in accordance with, the Maintenance Rule. Repeating these requirements in the TS is unnecessary. Changes to the IST program will be controlled by the provisions of 10 CFR 50.55a.

Surveillance Requirement 4.4.A.4.c is proposed to be changed from "Demonstrating that the pump suction line from the storage tank is not plugged by manually initiating the system, except the explosive valves, and pumping solution in the recirculation path." to *"Demonstrating that the pump suction line from the storage tank is not plugged."* Details of the methods for performing surveillances are relocated to plant administrative controls.

The design features and system operation which dictate the methods are described in the UFSAR. Changes to the UFSAR will be controlled by the provisions of 10 CFR 50.59. Demonstrating that all heat traced piping between the boron solution storage tank and the suction inlet to the injection pumps is unblocked ensures that there is a functioning flow path for injecting the sodium pentaborate solution. An acceptable method for verifying that the suction piping is unblocked is to pump from the storage tank and recirculate back to the storage tank. The 18 month frequency is acceptable since there is a low probability that the subject piping will be blocked due to precipitation of the boron from solution in the heat traced piping. This is especially true in light of the periodic temperature verification of this piping.



**ATTACHMENT B**

**PROPOSED CHANGES TO THE TECHNICAL SPECIFICATIONS**