Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

October 21, 1993

Dr. Thomas E. Murley
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington D.C. 20555

Attn.: Document Control Desk

Subject: Quad Cities Station Units One and Two
Application for Amendment for Facility
Operating Licenses DPR-29 and DPR-30.
Technical Specifications
NRC Docket No. 50-254 and 50-265

Dr. Murley,

Pursuant to 10 CFR 50.90, Commonwealth Edison (CECo) proposes to amend Appendix A, Technical Specifications, of Facility Operating Licenses DPR-29 and DPR-30. The proposed amendment deletes the requirements for demonstrating the operability of redundant equipment when ECCS equipment is found to be inoperable, or made inoperable for maintenance. This proposed change is similar to one previously approved for Dresden Station (Amendments 107 and 102 for Units Two and Three, dated August 10, 1989), and also to one approved for Quad Cities Station addressing the same issue for the HPCI and RCIC systems (Amendments 130 and 124 for Units One and Two, dated March 8, 1991).

The proposed amendment request is subdivided as follows:

1. Attachment A provides a description and safety analysis of the proposed changes.

2. Attachment B provides a summary of the proposed changes.

3. Attachment C provides the marked-up Technical Specification pages for Quad Cities Station with the requested changes as indicated.

4. Attachment D describes CECo's evaluation performed in accordance with 10 CFR 50.92(c), which confirms that no significant hazards consideration is involved.

5. Attachment E provides the Environmental Assessment.

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6. Attachment F provides copies of NRC Safety Evaluations which are referenced above and in Attachment A.

Commonwealth Edison respectfully requests review and approval of this proposed amendment to the Quad Cities Station Units One and Two Technical Specifications by December 23, 1993. This schedule will reduce unnecessary redundant testing (and associated challenges to the systems and components) of the RHRSW and RHR systems during planned maintenance on the RHRSW pumps.

This proposed amendment has been reviewed and approved by CECo On-Site and Off-Site Review in accordance with Commonwealth Edison procedures.

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.

Commonwealth Edison 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.

Very truly yours,

John L. Schrage
Nuclear Licensing Administrator

Attachments:

A. Description and Safety Analysis
B. Summary of Proposed Changes
C. Marked-up Technical Specification pages
D. Evaluation of Significant Hazards Consideration
E. Environmental Assessment
F. NRC Safety Evaluations for Referenced Technical Specification Amendments

cc: J. Martin - Regional Administrator, RIII
T. Taylor - Senior Resident Inspector, Qaud Cities
C. Patel - Project Manager, NRR
Office of Nuclear Facility Safety - IDNS

Signed before me on this 21st day
of October, 1993,
by [illegible].
Notary Public

" OFFICIAL SEAL "
SANDRA C. LARA
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 6/25/94

ATTACHMENT A

DESCRIPTION OF PROPOSED AMENDMENT

INTRODUCTION

Technical Specification Section 3.5/4.5 provides the requirements for Quad Cities Station's "Core and Containment Cooling Systems." These requirements provide assurance that adequate cooling capability for heat removal is available in the event of a loss- of-coolant accident or isolation from the normal reactor heat sink. The equipment encompassed by this specification includes Core Spray, High Pressure Coolant Injection (HPCI), Residual Heat Removal (RHR), Residual Heat Removal Service Water (RHRSW), Reactor Core Isolation Cooling (RCIC), and Automatic Depressurization System (ADS). This amendment proposes to revise the surveillance requirements for assuring redundant equipment is operable when equipment included in the RHR or Core Spray systems is declared inoperable.

BACKGROUND

The pump seals on the RHRSW pumps have been a long standing maintenance issue at Quad Cities Station. This has resulted in pump and system unavailability. Commonwealth Edison (CECo) has recently undertaken an effort to resolve this problem for all RHRSW pumps on both units (eight pumps). This includes modifications and seal replacement. These modifications are expected to improve the performance of the seals.

Currently, the 1A RHRSW pump is out of service to implement the modifications and maintenance actions. Modifications and seal replacement have already been completed on the 1D and 2C RHRSW pumps. CECo will implement modifications and maintenance activities on the remaining RHRSW pumps in the following sequential order: 2D, 2B, 2A, 1B, and 1C. CECo is implementing the maintenance activities sequentially in order to more efficiently utilize manpower resources, and to minimize the safety impact on the station.

DESCRIPTION OF THE CURRENT REQUIREMENT

Quad Cities Technical Specification Section 3.5/4.5 requires the immediate and daily operation of redundant equipment when a Core Spray subsystem, Containment Cooling subsystem or pump, or the LPCI mode of the RHR system or a pump in the LPCI mode of the RHR system, are found to be inoperable. The Containment Cooling subsystem includes the RHRSW and RHR pumps. Therefore, the maintenance activities which are being implemented on the RHRSW pumps requires the station to start and operate each of the remaining RHRSW pumps and the RHR pumps on a daily basis. This daily starting and operation of the pumps during an RHRSW pump outage provides unnecessary challenges to the pumps and pump seals, and results in increased silting and fouling of the tube side of the RHR heat exchangers.

BASES FOR THE CURRENT REQUIREMENT AND THE PROPOSED CHANGE

The requirement for demonstrating operability of the redundant ECCS systems at Quad Cities Station Units One and Two was originally chosen because there was a lack of plant operating history and a lack of sufficient equipment failure data. Since that time, plant operating experience has demonstrated that testing of the redundant ECCS equipment when one system is inoperable is not necessary to provide adequate assurance of system operability. In fact, removal of the redundant system from service for testing creates the risk that the redundant system will fail. Actual industry observations of this type of configuration have indicated that failures of the redundant system are related to the test itself and not an indication that the system would have failed should it have been needed. Operability of these systems can be shown by checking records to verify that valve lineups, electrical lineups and instrumentation requirements have not been changed since the last time the system was verified to be operable.

Current planned maintenance on the RHRSW pumps at Quad Cities Station has resulted in daily testing of the remaining RHRSW pumps and the RHR pumps for the affected unit. This daily starting and operation of the pumps during an RHRSW pump outage provides unnecessary challenges to the pumps and pump seals, and results in increased silting and fouling of the tube side of the RHR heat exchangers (RHRSW side).

Quad Cities proposes to delete the requirements for demonstrating the operability of redundant equipment when ECCS equipment is found to be inoperable, or made inoperable for maintenance. This proposed change is similar to one previously approved for Dresden Station (Amendments 107 and 102 for Units Two and Three, dated August 10, 1989), and also to one approved for Quad Cities Station addressing the same issue for the HPCI and RCIC systems (Amendments 130 and 124 for Units One and Two, dated March 8, 1991). The NRC Safety Evaluations for these Amendments are provided in Attachment F. The proposed verification of operability, as used in this context, means to administratively check by examining logs or other information to determine whether these components/systems are out of service for maintenance or other reasons.

The current BWR Standard Technical Specifications (STS), Improved Technical Specifications (ITS) (NUREG 1433), and the technical specifications of recently licensed BWRs implement the philosophy of system operability based on satisfactory performance of monthly, quarterly, refueling interval, post maintenance or other specified performance tests, without requiring additional testing when another system is inoperable.

SCHEDULE REQUIREMENTS

Commonwealth Edison respectfully requests review and approval of this proposed amendment to the Quad Cities Station Units One and Two Technical Specifications by December 23, 1993. This schedule will reduce unnecessary redundant testing (and associated challenges to the systems and components) of the RHRSW and RHR systems during planned maintenance on the RHRSW pumps.

ATTACHMENT B

SUMMARY OF PROPOSED CHANGES

QUAD CITIES NUCLEAR POWER STATION
DPR-29 AND DPR-30

1. Page 3.5/4.5-2 (DPR-29 and 30)

Delete Section 4.5.A.2, which states; "When it is determined that one core spray subsystem is inoperable, the operable core spray subsystem and the LPCI mode of the RHR system shall be demonstrated to be operable immediately. The operable core spray subsystem shall be demonstrated to be operable daily thereafter."

Renumber Section 4.5.A.3 as Section 4.5.A.2.

Delete Section 4.5.A.4, which states; "When it is determined that one of the RHR pumps is inoperable, the remaining active components of the LPCI mode of the RHR, containment cooling mode of the RHR, and both core spray subsystems shall be demonstrated to be operable immediately and the operable RHR pumps daily thereafter."

2. Page 3.5/4.5-3 (DPR-29)
Pages 3.5/4.5-2a and 3 (DPR-30)

Delete Section 4.5.A.5, which states; "When it is determined that the LPCI mode of the RHR system is inoperable, both core spray subsystems, the containment cooling mode of the RHR shall be demonstrated to be operable immediately and daily thereafter."

3. Page 3.5/4.5-2a (DPR-30)

Move partial sections 3.5.A.4 and 3.5.A.5 from page 3.5/4.5-2a to page 3.5/4.5-2. Delete page 3.5/4.5-2a.

4. Page 3.5/4.5-4 (DPR-29)
Page 3.5/4.5-3 (DPR-30)

Delete Section 4.5.B.2, which states; "When it is determined that one RHR service water pump is inoperable, the remaining components of that loop and the other containment cooling loop of the RHR system shall be demonstrated to be operable immediately and daily thereafter."

5. Page 3.5/4.5-4 (DPR-29 and 30)

Delete Section 4.5.B.3, which states; "When one loop of the containment cooling mode of the RHR system becomes inoperable, the operable loop shall be demonstrated to be operable immediately, and daily thereafter."

6. Page 3.5/4.5-5 (DPR-29)
Page 3.5/4.5-4 (DPR-30)

Renumber section 4.5.B.4 as Section 4.5.B.2.

7. Page 3.5/4.5-15 (DPR-29)

Delete, from paragraph 3 of Section A, "Under these limiting conditions of operation, increased surveillance testing of the remaining ECCS systems provides assurance that adequate cooling of the core will be provided during a loss-of-coolant accident."

8. Page 3.5/4.5-16 (DPR-29)
Page 3.5/4.5-11 (DPR-30)

Delete from Section A, "For multiple failures, a shorter interval is specified; to improve the assurance that the remaining systems will function, a daily test is called for."

Delete from Section A, "To assure that the remaining core spray and the LPCI mode of the RHR system are available, they are demonstrated to be operable immediately. This demonstration includes a manual initiation of the pumps and associated valves."

Delete from Section A, "..., which will be demonstrated to be operable,..."

9. Page 3.5/4.5-17 (DPR-29)
Page 3.5/4.5-11 (DPR-30)

Delete from Section B, "The operable system is demonstrated to be operable each day when the above condition occurs."

10. Page 3.5/4.5-12 (DPR-30)

Delete from Section B ".... which is tested daily."

Move the section on Page 3.5/4.5-12 that begins with "Based on the fact that..." and ends with "...a 7-day repair period was specified." to Page 3.5/4.5-11.

11. Page 3.5/4.5-23 (DPR-29)
Page 3.5/4.5-15 (DPR-30)

Delete the section of the second paragraph under 4.5, SURVEILLANCE REQUIREMENTS BASES, that begins "With components or subsystems out of service, overall core..." and ends "...flow rate test in addition to the operability checks."

Delete the section in the third paragraph under 4.5, SURVEILLANCE REQUIREMENTS BASES, that begins with "With a cooling system ...." and ends with ".... subjected to a flow rate test."

Add the text in the INSERT (beginning with " With a system, subsystem, loop, or equipment ..." and ending with "... subjected to a flow rate test.") as a new second paragraph to 4.5 SURVEILLANCE REQUIREMENTS BASES.