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September 30, 1987

Mr. Thomas E. Murley, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Dresden Station Units 2 and 3
Quad Cities Station Units 1 and 2
"Response to NRR Request for Plant
Specific Review for Compliance with
10 CFR 50.62"
NRC Docket Nos. 50-237/249 and 50-254/265

- References (a): Letter from J.A. Zwolinski to D.L. Farrar
Request for Plant Specific ATWS Review for
Dresden Units 2 & 3, dated December 17, 1986.
- (b): Letter from J.A. Zwolinski to D.L. Farrar
Request for Plant Specific ATWS Review for
Quad Cities Units 1 & 2, dated January 27, 1987.
- (c): Licensing Topical Report, Anticipated
Transient Without Scram - Response to NRC
ATWS Rule 10 CFR 50.62, General Electric
Company NEDE-31096-P, dated December 1985.
- (d): Letter from G. Lainas to T.A. Pickens (BWR
Owners' Group), Acceptance for Reference
of LTR-31096-P, dated October 21, 1986.
- (e): Letter from H.R. Denton to C. Reed, ATWS
Options, dated January 8, 1979.

Dear Mr. Murley:

The Anticipated Transient Without Scram (ATWS) rule, 10 CFR 50.62 requires Commonwealth Edison Company to submit sufficient information to demonstrate to the Commission the adequacy of the Alternate Rod Injection (ARI) system, Recirculation Pump Trip (RPT) system, and the Standby Liquid Control System (SLCS) in meeting the requirements of the rule. This specific request for information was made in References (a) and (b). This letter provides the required information for Dresden and Quad Cities Stations.

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Commonwealth Edison Company participated in the BWR Owners' Group development of a Licensing Topical Report (LTR) [Reference (c)] which details conceptual designs to satisfy the 10 CFR 50.62 requirements. The NRC subsequently issued a Safety Evaluation Report (SER), [Reference (d)], which defines the basis for NRC acceptance of the GE LTR. We endorse the GE LTR as described in the following paragraphs which are specific to each ATWS mitigating system.

- I) Alternate Rod Injection (ARI): Our design was reviewed against the NRC staff's SER Appendix A checklist for plant specific review of the ARI system. Of the fourteen design criteria identified in the checklist, our design complies with the exception of Item 1 which states, "Rod injection motion will begin within 15 seconds and be completed within 25 seconds from ARI initiation". (See Attachment 1 for specific details and justification of deviation from this requirement.)

- II) Recirculation Pump Trip (RPT): The RPT design implemented at Dresden and Quad Cities is modeled after the NRC approved Monticello design. It should be noted that an RPT on level will only occur after a nine second consecutive level drop. This delay is desirable to avoid making the consequences of a postulated LOCA more severe. (See Reference (e) for previous NRC concurrence.)

- III) Standby Liquid Control System (SLCS): Our design provides two pump simultaneous operation (80 gpm) with increased sodium pentaborate concentration (14%). The design meets the equivalency requirement of the rule and does not invalidate the original SLCS design basis.

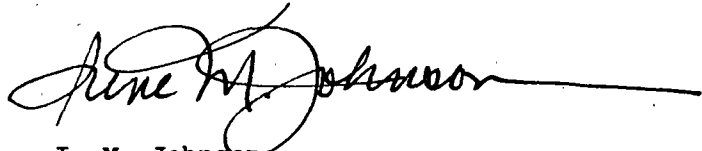
Modifications to provide two pump SLCS capability will be completed during the current refueling outage on Quad Cities Unit One and Dresden Unit Three (currently scheduled for Winter-Spring '88). All remaining ATWS modifications required to fully comply to the rule have been installed.

It should be noted that Dresden and Quad Cities Stations do not have Tech Specs for the Alternate Rod Injection and Recirculation Pump Trip (Items I and II).

We will work with your staff in developing a schedule for submitting these Technical Specifications which were required through References (a) and (b).

Please direct any questions you may have regarding this matter to this office.

Very truly yours,

A handwritten signature in cursive script, appearing to read "I. M. Johnson", with a long horizontal line extending to the right.

I. M. Johnson
Nuclear Licensing Administrator

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Attachment

cc: M. Grotenhuis - NRR
T. Ross - NRR
Regional Administrator - RIII
Senior Resident Inspector - Quad Cities
Senior Resident Inspector - Dresden

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ATTACHMENT

"JUSTIFICATION FOR DEVIATION FROM NRC STAFF SER
APPENDIX A CHECKLIST FOR ALTERNATE ROD INJECTION (ARI)"

The purpose of this attachment is to describe and justify an identified deviation from the NRC Staff's SER Appendix A checklist for plant specific review of the ARI system. Presented is the NRC Staff's criteria, a description of the criteria basis, and results of CECo's actual ARI testing.

Staff's Criteria - ARI System function time: Rod injection motion will begin within 15 seconds and be completed within 25 seconds from ARI initiation.

Criteria Basis - The GE LTR describes system function time criteria basis requirements in Sections 3.2 and 3.3. With the exception of one, all design criteria affected by completion time are satisfied (on a plant generic basis) provided rod insertion occurs within approximately 60 seconds of ARI initiation time. The design requirement that ARI actuation occurs quickly enough that all rods will be fully inserted by the time the Scram Discharge Volume (SDV) is full is satisfied provided rod motion is complete within 25 seconds after ARI actuation. As this time (25 seconds) was determined on a generic basis and envelopes all plant SDV designs a plant-unique evaluation can be performed to justify longer ARI initiation times.

CECo's Testing - Tests have been performed on all Quad Cities and Dresden ARI Systems. Results indicate that all scram inlet and outlet valves are open within 30 seconds. Calculations are currently being performed to verify that SDV fill volume exceeds the plant specific CRD displacement volume including an average drive leakage rate with a 30 second ARI completion. This will verify that ARI system design meets the design basis requirements.