



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 9, 1995

Mr. D. L. Farrar
Manager, Nuclear Regulatory Services
Commonwealth Edison Company
Executive Towers West III
1400 Opus Place, Suite 500
Downers Grove, IL 60515

SUBJECT: REVIEW OF QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2,
INDIVIDUAL PLANT EXAMINATION SUBMITTAL - INTERNAL EVENTS (TAC NOS.
M74456 AND M74457)

Dear Mr. Farrar:

The staff has completed its initial review of the Quad Cities Nuclear Power Station, Units 1 and 2, Individual Plant Examination (IPE) for internal events and internal flooding. The results of that review are enclosed and consist of (1) a Staff Evaluation Report (SER) (Enclosure 1), (2) Technical Evaluation Report (Front-End) (Enclosure 2), Technical Evaluation Report (Back-End) (Enclosure 3), and Human Reliability Analysis (HRA) (Enclosure 4).

The Quad Cities IPE reported a single unit Core Damage Frequency (CDF) of 1.2E-6/yr from internal events. Dual unit loss of offsite power contributes 56 percent to the total CDF, single unit loss of offsite power contributes 16 percent, medium loss of coolant accident (LOCA) contributes 14 percent, anticipated transit without scram (ATWS) contributes 6 percent, general transients and others contribute 7.2 percent. Important potential operator errors are failure to depressurize, failure to initiate residual heat removal (RHR) cooling (suppression pool and containment cooling), and failure to switch low pressure coolant injection (LPCI) or core spray (CS) to the contaminated condensate storage tank (CCST) if suppression pool cooling is lost.

The staff could not conclude from Commonwealth Edison Company's (ComEd) submittal or the request for additional information (RAI) responses that: a thorough examination for plant-specific initiators was performed; the use of low beta factors for common cause failure analysis was appropriate; diagnostic human error and human error dependencies were appropriately treated; plant-specific factors and experience were adequately factored into estimating human error probabilities; and pre-initiator human errors (and especially miscalibration errors) were adequately examined and evaluated.

Based on the review of the Quad Cities, Units 1 and 2, IPE submittal and associated documentation, the staff could not reach the conclusion that ComEd has met the intent of Generic Letter 88-20.

During ComEd's review of the Zion Station IPE, ComEd discovered that some of the IPE methodology used in the IPE for Zion, and possibly for other ComEd stations, contained inconsistencies. As a result, by letter dated March 28, 1995, ComEd committed to re-review the IPE methodologies at the other ComEd

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stations (including Quad Cities) and resolve any inconsistencies. To further aid you in your reevaluation, enclosed is the staff evaluation. Please factor the staff's findings in your reevaluation. Within 30 days of receipt of this letter, please provide a schedule for resolution of the significant issues identified in the staff's evaluation. The NRC will be glad to meet with you, if you desire, to discuss these issues in more detail.

This completes the staff's initial review of the Quad Cities, Units 1 and 2, IPE and completes our actions under TAC Nos. M74456 and M74457. Plant specific TAC Nos. will be issued for the review of the final Quad Cities IPE submittal. If you have any questions, please contact me at (301) 415-3016.

Sincerely,

Original signed by

Robert M. Pulsifer, Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Docket Nos. 50-254, 50-265

- Enclosures:
1. Staff Evaluation Report
 2. Technical Evaluation Report, Front-End
 3. Technical Evaluation Report, Back-End
 4. Human Reliability Analysis Review

cc w/encls: see next page

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D. L. Farrar
Commonwealth Edison Company

Quad Cities Nuclear Power Station
Unit Nos. 1 and 2

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