December 18, 1997

EA 97-413

Mr. L. W. Pearce
Site Vice President
Quad Cities Station
Commonwealth Edison Company
22710 206th Avenue North
Cordova, IL 61242

SUBJECT: NRC PREDECISIONAL ENFORCEMENT CONFERENCE SUMMARY

Dear Mr. Pearce:

This refers to the Predecisional Enforcement Conference conducted by Mr. A. B. Beach, Regional Administrator, and other members of the Region III and Headquarters staff on November 5, 1997. The subject of this conference was the apparent violations at Quad Cities Station identified in the NRC's letter to you dated September 17, 1997, involving 10 CFR 50.9, "Completeness and Accuracy of Information."

During the conference, your staff acknowledged the violations and presented information addressing the background, conclusions, significance, and lessons learned for issues involving the operability determination, secondary containment, and coupon sample test. Also, actions taken by the site to prevent recurrence were presented. Copies of the NRC's and licensee's handouts, and the attendance list are enclosed with this summary.

You will be notified by separate correspondence of our decision regarding the enforcement action based on the information presented and discussed at the Predecisional Enforcement Conference. No response is required until you are notified of the proposed Enforcement Action.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document Room.

Sincerely,

/s/ J. Jacobson for

John A. Grobe, Director
Division of Reactor Safety

Docket Nos. 50-254; 50-265
License Nos. DPR-29; DPR-30

Enclosures: As stated

300044

See Attached Distribution

IE45

DOCUMENT NAME: G:\DRS\QUA12157.DRS

To receive a copy of this document, indicate in the box "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	RIII/DRS	N	RIII/DRP		RIII/EICS		RIII/DRS	
NAME	JGavula:sd		MRing		HClayton	BC	JGrobe	
DATE	12/16/97		12/16/97		12/18/97		12/18/97	

OFFICIAL RECORD COPY

9712300109 971218
PDR ADOCK 05000254
Q PDR

IE01

cc w/encls: O. Kingsley, Nuclear Generation Group
President & Chief Nuclear Officer
M. Wallace, Senior Vice President,
Corporate Services
E. Kraft, Vice President, BWR Operations
Liaison Officer, NOC-BOD
D. A. Sager, Vice President,
Generation Support
D. Farrar, Nuclear Regulatory
Services Manager
I. Johnson, Licensing Operations Manager
Document Control Desk - Licensing
Quad Cities Station Manager
C. C. Peterson, Regulatory Affairs Manager
Richard Hubbard
Nathan Schloss, Economist,
Office of the Attorney General
State Liaison Officer
Chairman, Illinois Commerce Commission
W. D. Leech, Manager of Nuclear,
MidAmerican Energy Company

Distribution

Docket File w/encls
PUBLIC IE-01 w/encls
LPM, NRR w/encls
DRP w/encls
DRS w/encls
J. Lieberman, OE
RIII PRR w/encls
SRI, Quad Cities w/encls
J. L. Caldwell, RIII w/encls
A. B. Beach, RIII w/encls
CAA1 w/encls
J. Goldberg, OGC
RIII Enf. Coordinator w/encls
TSS w/encls
R. A. Capra, NRR w/encls
DOCDESK w/encls
R. Zimmerman, NRR

Attendance Sheet

DATE: 11/5/97 REF. NO. EA 97-413

LICENSEE: QUAD CITIES

NAME	TITLE	COMPANY
A. B. Beach	Regional Administrator	NRC
R. A. Capra	Director, PDIII-2	NRC
J. M. Jacobson	Acting Deputy Director, DRS	NRC
M. Dapas	Acting Deputy Director, DRP	NRC
R. M. Pulsifer	Project Manager	NRC
R. Landsman	Project Engineer	NRC
J. A. Gavula	Chief, Engineering Spec Branch 1	NRC
C. G. Miller	Senior Resident Inspector	NRC
T. Reis	Office of Enforcement	NRC
J. Heller	Enforcement Coordinator	NRC
B. Berson	Regional Counsel	NRC
H. Walker	Senior Specialist	NRC
E. S. Kraft, Jr.	BWR - Vice President	ComEd
L. W. Pearce	Site Vice President, Quad Cities	ComEd
D. B. Cock	Plant Manager, Quad Cities	ComEd
S. Eldridge	Engineering Assurance Supervisor	ComEd
R. Scoville	Staff Engineer, Quad Cities	ComEd
B. Rybak	Senior Licensing Administrator	ComEd
R. Freeman	Dreden	ComEd
R. Gavankar	Chief Engineer (Mech/Structural)	ComEd
J. Purkis	System Engineer Supervisor	ComEd
D. Stenger	Attorney (Winston & Strawn)	ComEd
B. Helfrich	Senior Counsel, Nuclear	ComEd
D. Farrar	Licensing	ComEd
B. Fairbank	Acting Site Engineer Manager	ComEd
D. Leech	Manager, Nuclear	Mid American Energy

ATTACHMENT

NRC HANDOUT

A. 10 CFR 50.9 (a) requires, in part, that information provided to the Commission by a licensee shall be complete and accurate in all material respects.

Contrary to the above, the August 25, 1996, Operability Determination Checklist, which was attached to the PORC minutes stated, "The beams and connections checked had functionality interaction coefficients (FICs) less than 1.0," was inaccurate. Specifically, supporting calculations showed FICs to be in excess of 1.0. This information was material because the correct information would likely have resulted in substantial further inquiry by the NRC.

B. 10 CFR 50.9 (a) requires, in part, that information provided to the Commission by a licensee shall be complete and accurate in all material respects.

Contrary to the above, during Quad Cities site visits on May 14 and 15, 1996, the statements made by Commonwealth Edison personnel to NRC officials, that the metal siding panels blown off the Reactor Building during high winds on May 10, 1996, had no effect on structural integrity, was inaccurate and misleading. Specifically, the panels were required for structural integrity during design basis wind load or a line break in secondary containment. This information was material because the correct information would likely have resulted in substantial further inquiry by the NRC.

ATTACHMENT

LICENSEE HANDOUT

ComEd
Quad Cities Station

Quad Cities Station Apparent Violations of 10 CFR 50.9

November 5, 1997

ComEd
Quad Cities Station

Opening Remarks

E. S. Kraft, Jr.

Agenda

- Operability Determination
- Secondary Containment Siding
- Coupon Sample Tests
- Actions Taken

Operability Determination

ComEd
Quad Cities Station

Operability Determination Issue

- Operability Determination Checklist, Attachment B of PIF 95-2256, stated:
  - "The beams and connections checked had functionality interaction coefficients less than 1.0."

ComEd
Quad Cities Station

Operability Determination Factual Background

- Corner Room Steel Issue Identified In August 1995 -- PIF 95-2256
- Management Took Aggressive Action
  - Initiated 72-hour Operability Evaluation
  - Preparations Made for Temporary Support of RHR Heat Exchangers

ComEd
Quad Cities Station

Operability Determination Factual Background

- Operability Evaluation
  - Primarily Qualitative, Based on Previous Dresden Operational Evaluation and Engineering Judgment
  - Preliminary Evaluations Performed for Quad Cities
    - > Based on these, Operational Evaluation stated that Functionality Interaction Coefficients for Representative Beams and Connections Were < 1.0

ComEd
Quad Cities Station

Operability Determination Factual Background

- PORC Did Not Accept as Final Determination at 8/24/95 Meeting
  - Allowed 24 hours for Further Evaluation
  - Wanted to Bound Problem - Knew More Calculations Needed
- Further Engineering Evaluation
  - Corporate Engineering Support Provided
  - Additional Sample Evaluations Performed on Beams (ComEd) and Connections (S&L) on 8/25

ComEd
Quad Cities Station

Operability Determination Factual Background

- During 8/25 Meeting, PORC Accepted and Directed:
  - Engineering to Continue Performing Formal Calculations
  - Engineering to Initiate Design for Modifications to Restore Steel to Design Basis Limits

ComEd
Quad Cities Station

Operability Determination Factual Background

- Final Operability Calculations Completed 9/15/95
  - Representative Beams Showed Acceptable Operability Functionality Interaction Coefficients
  - In One Case (Beam B4) Engineering Judgment Used to Conclude Acceptable Interaction Coefficients
- Design Effort Continued

ComEd
Quad Cities Station

Operability Determination Conclusions

- Operability Determination and Conclusion Were Valid:
  - Understand Source of Confusion
    - > Use of Term "Calculation"
    - > Lack of Explanation of Use of Engineering Judgment in the Operability Evaluation

ComEd
Quad Cities Station

Operability Determination Conclusions (Cont')

- While the Terms could Cause Confusion, there was No Intent to Mislead
  - Record of Second Set of Sample Calculations Performed
  - PORC Understood Operability Determination Evaluation was not Formal Calculation
  - Final Calculations Documented Engineering Judgment

ComEd
Quad Cities Station

Operability Determination Significance

- No Safety Consequences
  - Did Not Affect Station's Actions
  - PORC Review Not Affected
  - Final Calculations Confirmed Operability Conclusion

ComEd
Quad Cities Station

Operability Determination Lessons Learned

- ComEd Understands Potential for Confusion
  - Use of Term "Calculation"
  - Need to Explain Bases for Judgments

Secondary Containment Siding

ComEd
Quad Cities Station

Secondary Containment Issue

- Verbal Statements to NRC Regarding Function of Exterior Siding Panels on Secondary Containment
- Reflected Station's Understanding at Time Based on Inadequate Engineering Evaluation

ComEd
Quad Cities Station

Secondary Containment Factual Background

- Friday, May 10, 1996
  - High Winds Hit Station
    - > Damaged Exterior Siding Panels
    - > Other Damage to Site Facilities
  - Secondary Containment Declared Inoperable
  - Unit 2 Promptly Shut Down
  - Unit 1 Already Shutdown, in Refueling

ComEd
Quad Cities Station

Secondary Containment Factual Background

- Immediate Concerns Addressed by Engineering and Station Management
  - Personnel and Plant Safety
  - Stabilization of Secondary Containment Envelope
  - System Restoration

ComEd
Quad Cities Station

Secondary Containment Factual Background

- May 12, 1996
  - Operations Verified Standby Gas Treatment System Maintaining Negative 0.25 Inches Water Pressure in Secondary Containment
    - > Technical Specification Requirement
- Secondary Containment Not Declared Operable

ComEd
Quad Cities Station

Secondary Containment Factual Background

- Engineering Reviewing Function of Exterior Siding -- Mistakenly Believed Siding Not Required for Integrity
  - Vendor Information Was Not Questioned
  - Inadequate Review of Design Bases

ComEd
Quad Cities Station

Secondary Containment Factual Background

- May 10-15, Efforts t .estore Plant & Site
  - Secondary Containment Blowout Panel Repair
  - Secondary Containment Siding Stabilization
  - SBO Diesels Out of Service due to Cable Damage
  - Liquid Nitrogen Storage System Damage
  - Meteorology Tower Damage
  - Waste Oil Building Destroyed
  - Mixed Waste Building Damage
  - Corner Room Steel & Other Issue Resolution
  - Unit 1 Outage In Progress

ComEd
Quad Cities Station

Secondary Containment Factual Background

- May 15, 1996
  - Major Engineering Efforts Still Underway
  - Engineering Discussions with NRC
    - > Indicated Siding Not Needed for Secondary Containment
    - > Based on Belief of Vendor Input, Compliance with Technical Specification D/P Requirements, and Characteristics of Siding

ComEd
Quad Cities Station

Secondary Containment Factual Background

- May 15, 1996 (Cont')
  - NRC Senior Management Site Visit
    - > Primary Focus on SBO Cables
    - > ComEd Provided Understanding that Secondary Containment Operable without Siding and that ComEd Personnel had Verified with Vendor
  - As of May 15, 1-inch Line Break Scenario Not Identified

ComEd
Quad Cities Station

Secondary Containment Factual Background

- May 18-24, 1996
  - Management Decision to Keep Both Units Shutdown to Resolve Other Issues
- May 19, Secondary Containment Declared Operable and FSAR Change Started
- May 22, NRC Questioned Basis
- May 29, Secondary Containment Declared Inoperable

ComEd
Quad Cities Station

Secondary Containment Conclusions

- Statements Inaccurate Based on Information Later Developed, But Reflected Station's Understanding After Significant Event
  - Incorrect Initial Assessment Due to Lack of Questioning Attitude
  - Secondary Containment Met Technical Specification Surveillance Requirement
  - Characteristics of Siding Suggested Only Needed for Weather Protection

ComEd
Quad Cities Station

Secondary Containment Conclusions (Cont')

- Not Intentional
  - Real Time Oral Communication to NRC of What ComEd Believed Subsequent to Crisis

ComEd
Quad Cities Station

Secondary Containment Significance

- No Safety Consequences
  - Until Siding Repaired, Both Units Remained in Cold Shutdown
  - Seven Inch Internal Pressure from One Inch Instrument Line Break Is Not Possible During Cold Shutdown
  - Other Repairs Prevented Startup

ComEd
Quad Cities Station

Secondary Containment Lessons Learned

- ComEd Understands Potential Significance of Incorrect Information
- To Avoid Inadvertent Errors in Verbal Communications, Need Greater Effort to Clearly Convey Bases for Conclusions

Coupon Sample Tests

ComEd
Quad Cities Station

Coupon Sample Tests Issue

- Failure to Inform NRC of Coupon Sample Test Results on Corner Room Steel at April 11, 1996 Technical Meeting

ComEd
Quad Cities Station

Coupon Sample Tests
Factual Background

- NRC Reviewing Dresden Operability Evaluation for Corner Room Steel
- March 28, 1996 Phone Call with NRC Regarding Operability of Quad Cities Steel
  - NRC Requested Information on Several Issues, Including 10 % Overstress Factor
- April 1, 1996 Quad Cities Letter
  - Responded to Staff Questions -- Provided Analytical Basis and Stated Commitment to Repair Steel

ComEd
Quad Cities Station

Coupon Sample Tests
Factual Background

- March 29, 1996 -- Station Management Decided to Obtain Test Samples of Existing Structural Steel
  - Only Existing Samples were from Dresden
  - Small Group of Samples Taken at Quad Cities
  - Purpose of Testing was to Confirm Same Batch of Material Type (A-36) as Dresden, Not to Justify 10% Overstress

ComEd
Quad Cities Station

Coupon Sample Tests
Factual Background

- April 1 and 2, 1996 - Test Results Received
  - Confirmed A-36 Steel
- Test Results Not Considered Material
  - Not Statistically Valid Sample
  - Results In Line with Expe tations -- Not Considered to Contradict April 1 Letter
  - Other Conservatisms Remained Valid to Justify 10% Overstress

ComEd
Quad Cities Station

Coupon Sample Tests
Factual Background

- April 11, 1996 Technical Meeting
  - Many Technical Issues Discussed, Including Operability Calculations, Basis for Calculations

ComEd
Quad Cities Station

Coupon Sample Tests Lessons Learned

- Greater Sensitivity to the Need to Provide Bases for Conclusions to NRC

ComEd
Quad Cities Station

Actions Taken

ComEd
Quad Cities Station

Actions Taken

- Vendor Information -- Documentation and Verification
- Third-party Review of 10 CFR 50.59 Evaluations
- Establishment of Engineering Assurance Group
- Formal Review of Written Correspondence with NRC

ComEd
Quad Cities Station

Actions Taken (Cont')

- Training Completed
  - Engineering - Secondary Containment Enforcement Issues
  - Station Supervisors - Briefed on Need for "Complete and Accurate" Information
  - Regulatory Affairs - Regulatory Interface Training

ComEd
Quad Cities Station

Future Actions

- Training on 10 CFR 50.9 for selected personnel who interact with the NRC.

ComEd
Quad Cities Station

Concluding Remarks

E. S. Kraft, Jr.