Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

June 14, 1994

U.S. Nuclear Regulatory Commission
Washington, DC 20555

Attn: Document Control Desk

Subject: Braidwood Nuclear Power Station Units 1 and 2
Response to Notice of Violation
Inspection Report Nos. 50-456/94015; 50-457/94015
NRC Docket Numbers 50-456; 50-457

Reference:
1) E. G. Greenman letter to K. Kaup dated May 16, 1994, transmitting Notice of Violation 50-456/94015; 50-457/94015

2) E. G. Greenman letter to K. Kaup dated April 21, 1994, transmitting Inspection Report 50-456/94008; 50-457/94008

3) E. G. Greenman letter to S. Berg dated February 22, 1994 transmitting Notice of Enforcement Discretion for Commonwealth Edison Company Regarding Braidwood Station Units 1 and 2

Enclosed is Commonwealth Edison Company's (ComEd) response to the Notice of Violation (NOV) which was transmitted with the referenced letter and Enforcement Conference Report. The NOV cited a Severity Level IV violation, requiring a written response.

If your staff has any questions or comments concerning this letter, please refer them to Sara Reece-Koenig, Regulatory Performance Administrator at (708) 663-7250.

Sincerely,

D. L. Farrar
Nuclear Regulatory Services Manager

Attachment

cc: J. B. Martin, NRC Regional Administrator - RIII
R. R. Assa, Project Manager - NRR
S. G. Du Pont, Senior Resident Inspector

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ATTACHMENT
RESPONSE TO NOTICE OF VIOLATION
NRC INSPECTION REPORT
50-456/94015; 50-457/94015

VIOLATION (456/94015; 457/94015):

Technical Specification (TS) 3.7.6 requires that two independent trains of Main Control Room Ventilation be operable in all modes of operation.

Contrary to the above, from at least September 1992 to February 20, 1994, both trains of the Main Control Room Ventilation system were inoperable due to depleted damper actuator batteries.

This is a Severity Level IV violation (Supplement I).

REASON FOR THE VIOLATION:

ComEd acknowledges the violation which resulted from a failure to communicate design basis information. This was demonstrated by the lack of procedures addressing the need to pull the Control Room Ventilation (VC) system damper actuator battery fuses during system auxiliary transformer and electrical bus outages. This action is intended to prevent battery damage or drainage.

Additionally, this violation resulted from a failure to adopt the appropriate surveillance and preventive maintenance procedures for the VC damper actuators. During a July 1992 review of the fuse sizing in the damper actuators, the vendor manual was reviewed. Although not called out by the vendor, the System Engineer and Electrical Maintenance personnel determined that preventive maintenance should be performed. Electrical Maintenance agreed to prepare the test procedure; however, the need to prepare the procedure was not documented in any tracking system and the appropriate test procedure was not written.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED:

The procedures associated with deenergizing electrical busses feeding the bubble tight damper actuators were revised to include pulling the VC damper actuator battery fuses.

Training was conducted on this event for engineers, emphasizing the need to ensure that design basis information is incorporated into the appropriate plant procedures. Additionally, this event was cited as an example of the need to exhibit a questioning attitude. The Station policies for releasing spare parts and expectations for system engineers were also included in the training for this event.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED (Continued):

Braidwood Electrical Maintenance Procedure (BwHS) 4002-126 "Bubble Tight Damper Surveillance" was implemented to provide for actuator cleaning and inspection and for testing of each actuator's battery.

The scope of surveillances conducted to verify that the design features of the VC dampers remain functional was reviewed by engineering in conjunction with the vendor. This review identified additional surveillances that need to be implemented. Operability of the VC dampers is unaffected by the absence of these surveillances.

An in-depth audit of the VC system was performed by Site Quality Verification in May 1994. The audit addressed system components, Vendor Equipment & Technical Information Program reviews, and adequacy of the surveillance program. The audit identified some discrepancies which have been documented on Problem Identification Forms for investigation.

A review of all batteries maintained in the Commonwealth Edison Stores System has been conducted to identify batteries used at Braidwood that may require preventive maintenance. This review found several components that lack preventive maintenance to ensure their associated batteries function as designed. During the review, no operability concerns were identified concerning components utilizing batteries. Further evaluations to determine the extent of preventive maintenance required are ongoing.

A Corporate Design Information Review Team investigated the quality, control, and accessibility of design information for possible modifications on how to most effectively and efficiently support the needs of the users. Draft recommendations for improvements have been made to the Engineering Managers Team who will act on the recommendations.

Under the Maintenance Strategy, System Engineering's role has been defined as the system owner with full accountability for system performance. A key element is the analysis of failures and scope of programmatic maintenance. This emphasis should ensure that similar failures are subject to analysis.

CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATION:

Braidwood is currently reviewing the design basis training taught to engineering personnel. The review will ensure that the following topics are adequately presented:

- Accessing design basis information,
- Safety Evaluation Report review as part of the licensing basis,
- Conformance with the General Design Criteria,
- Definition of operability with regard to design events, transients,and external events under various combinations,
- Considerations for non-safety-related equipment during accident conditions, and
- Guidance in determining the threshold of when an operability issue should become an operability concern.

This review will be completed and training initiated by
June 30, 1994.

A questionnaire was developed and used as an interview tool for site engineers. Group Leads used the questionnaire to interview each engineer relative to the systems they oversee. The intent was to determine the individuals' level of understanding of the design basis of their systems, the top technical issues that exist, and whether any vendor supplied skid mounted equipment that performs complex functions is understood by the engineers. Initial interviews were completed on April 26, 1994. Management review of the questionnaire responses is ongoing. Site Engineering will review the design basis of each component identified on the questionnaires and verify that proper surveillance and maintenance requirements, in accordance with qualifications and vendor recommendations, are being implemented. This review will be completed by August 1, 1994.

The VC system is currently being reviewed as part of an ongoing program of Reliability Centered Maintenance studies. These studies evaluate the failures and recommend preventive maintenance based on history, not just vendor recommendations. This VC system study will be completed by December 1, 1994.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED:

Full compliance was achieved on February 20, 1994, when the Station exited Technical Specification 3.0.3 after meeting the conditions of the Notice of Enforcement Discretion which was granted to block the VC dampers shut, satisfying the Technical Specifications.