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DCD

August 16, 1989

Mr. A. Bert Davis
Regional Administrator
U. S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Braidwood Station Units 1 & 2
Response to Inspection Report
Nos. 50-456/89-017 and 50-457/89-017
NRC Docket Nos. 50-456 and 50-457

Reference. (a) E. G. Greenman letter to C. Reed dated June 26, 1989

(b) E. G. Greenman letter to C. Reed dated July 17, 1989

Dear Mr. Davis:

Reference (a) provided the results of the inspection conducted by Messrs G. A. VanSickle, T. M. Tongue and T. E. Taylor on June 1 through June 20, 1989 of activities at Braidwood Station. Reference (b) was issued with a Notice of Violation (NOV) indicating that certain activities appeared to be in violation of NRC requirements. Reference (b) also requested that Braidwood Station discuss any changes made or planned to the program to ensure the continuous operability of all emergency core cooling system (ECCS) equipment.

The Commonwealth Edison Company response to the NOV is provided in the enclosure. The section of the enclosure entitled Corrective Action Taken to Avoid Further Violation discusses the changes being made to the program to ensure continuous operability of all ECCS equipment.

If you have any questions on this matter, please direct them to this office.

Very truly yours,

T. J. Kovach
Nuclear Licensing Manager

TJK/EWC/jfe

cc: NRC Resident Inspector - Braidwood
NRC Document Control Desk

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ENCLOSURE

COMMONWEALTH EDISON COMPANY

RESPONSE TO INSPECTION REPORTS 456/89017 and 457/89017

VIOLATION:

Braidwood Technical Specification 3.5.2 requires that two independent emergency core cooling systems (ECCS) subsystems be operable, with each subsystem including an operable centrifugal charging pump, during Modes 1, 2, or 3 operation. Action Statement a. requires that an inoperable subsystem be restored to operable status with seven days, or that the unit be shut down to at least hot standby (Mode 3) within the next six hours and to hot shutdown (Mode 4) within the following six hours.

Contrary to the above, from March 22 through June 1, 1989, recirculation isolation valve 2CV8479B for centrifugal charging pump 2B was shut, thereby rendering the 2B centrifugal charging pump inoperable. One Unit 2 ECCS subsystem was thus inoperable for more than seven days with the unit in Mode 3 or higher without action to place the unit in a mode in which Technical Specification 3.5.2 does not apply.

RESPONSE:

Commonwealth Edison acknowledges that the recirculation isolation valve 2CV8479B for centrifugal charging pump 2B was shut as described in the Notice of Violation. As a result of this event a Braidwood Station Error Evaluation Presentation occurred. During this presentation the root cause of this event was identified to be a personnel error. The following contributing causes were also identified:

1. The Equipment Attendant who repositioned the valve was aware of the need to accomplish the task expeditiously in accordance with procedure. This caused him to rush his work and mis-identify the valve of interest.

2. Braidwood Operating Procedures did not require Tracking or Independent Verification of restoration of locked safety related equipment.

3. The existing locked valve program had a common "core" for an entire safety related train of components. This did not provide protection to prevent mis-identification of components within a train. As such this enabled the equipment attendant to have a key that locked both the component that was intended to be operated and the mis-identified component.

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A review of the pump data collected from the 2B CV ASME pump surveillance performed after the conclusion of this event was conducted. Based on this review it was concluded that the pump would have operated to mitigate the postulated accidents analyzed in Section 15 of the Updated Final Safety Analysis Report (UFSAR) without significant risk of damage from deadheading. Additionally, the Braidwood Emergency Operating Procedures had been structured to provide prompt recognition and corrective action for a case where potential CV pump deadheading has been identified as a concern. Under the worst case conditions of operating at 100% power, normal operating temperature and pressure in the Reactor Coolant System, with a Design-Basis Event (LOCA) there would be no impact on the safety of the plant or public as this event is enveloped in the UFSAR.

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED:

Upon discovery that the 2B CV pump manual mini-flow isolation valve, 2CV8479B, was closed, it was immediately opened and independently verified to be opened. It was then locked in this position. This restored the 2B CV pump to an operable status.

CORRECTIVE ACTION TAKEN TO AVOID FURTHER VIOLATION:

The Braidwood Station Error Evaluation Presentation highlighted to upper level management personnel the significance of this incident and the importance of implementing the following three (3) corrective actions to prevent recurrence of this type of event.

A. Braidwood Station has revised Braidwood Administrative Procedures (BwAPs) 330-3, "Locked Equipment Program," and 340-2 "Use of Mechnical and Electrical Lineups," to provide the following direction:

   1. A piece of locked equipment shall not be locked in other than its lineup identified position unless so directed by an approved procedure or the Shift Engineer. If a piece of locked equipment is locked in other than its lineup identified position, then a Caution Card shall be placed on that piece of equipment to identify this abnormal configuration.

   2. For a safety-related piece of locked equipment each change from its normal operating position shall be entered in the Component Abnormal Position Log. Restoration of the safety-related piece of locked equipment to its normal operating position shall also be documented in the Component Abnormal Position Log.

   3. Each change of position for a safety-related piece of equipment entered in the Component Abnormal Position Log shall be independently verified.

B. Braidwood Station is also revising the Locked Equipment Program. This revision will result in unique lock cores for all locked components covered by this program. The keys for this program will be administratively controlled by the Shift Engineer's Office. Master keys will exist for each respective unit which can be used for emergency use only. These master keys will be on the Fire Marshal's key ring and on the remote shutdown panel key rings.

C. The Assistant Superintendent for Operations is developing a tail-gate training session for appropriate shift personnel that will discuss this event along with the corrective actions taken to prevent recurrence.

DATE OF FULL COMPLIANCE:

Braidwood Station has completed all procedure revisions as of August 10, 1989. The tail-gate sessions are expected to be completed by October 1, 1989. The Locked Equipment Program changes are expected to be completed by December 31, 1989.