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April 29, 1988

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 and 2
Response to Inspection Reports No.
50-457/88-007
NRC Docket No. 50-457

REFERENCE: (a) G.C. Wright Letter to C. Reed dated March 29, 1988

Dear Mr. Davis:

This letter is in response to the inspection conducted by Messrs. R.D. Lanksbury, P.G. Brockman, B.H. Little, S.M. Hare, W.B. Grant, W.J. Kropp and S.P. Sands on February 16 through March 7, 1988 of activities at Braidwood Station. Reference (a) indicted that certain activities appeared to be in violation of NRC requirements. We do not believe the cited violation on Deviation Reporting is a violation and believe that it resulted from an incomplete understanding of the Deviation Reporting Program at Braidwood. The basis for our position and the Commonwealth Edison Company response to the Notice of Violation are provided in the enclosure.

This response was due on April 28, 1988. Because of problems with our wordprocessing system, this report could not be printed until today. An extension to submit the report today was granted by R. Gardner on April 28, 1988. If you have any further questions on this matter, please direct them to this office.

Very truly yours,

Henry E. Bliss

H.E. Bliss
Nuclear Licensing Manager

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cc: NRC Resident Inspector - Braidwood
NRC Document Control Desk

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ENCLOSURE

COMMONWEALTH EDISON COMPANY
RESPONSE TO INSPECTION REPORT 457/88007

VIOLATION: (457/88007-01)

10 CFR 50, Appendix B, Criterion XVI, states, Measures shall be established to assure that conditions adverse to quality; . . . are promptly identified and corrected. The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management.

Administrative Procedure BwAP 1250-2 (Deviation Reporting) defines:

> "Deviation: A departure from accepted equipment performance or a failure to comply with administrative controls or NRC requirements which results in, or could, if uncorrected, result in a failure of an item to perform as required by Technical Specification or approved procedures."

BwAP 1250-2 Paragraph 3 (processing of Deviations) specifies that the person identifying the deviation; "Initiate a Deviation Report (DVR) Form 15-52-1. Enter as much applicable information as is known on Part 1 of the DVR and forward the DVR to the Supervisor responsible for the equipment or activity."

Contrary to the above, on February 18, 1988, Licensee personnel, after identifying a departure from accepted equipment performance, a plugged boric acid recirculation line, failed to initiate a Deviation Report.

RESPONSE: (456/88007-01)

Commonwealth Edison Company believes that the event described above does not constitute a violation. This belief is based upon our review of this item and what is presented below. The violation cites an incomplete definition for a deviation. As stated in BwAP 1250-2, the cited definition reads as follows:

> "Deviation: A departure from accepted equipment performance or a failure to comply with administrative controls or NRC requirements which results in, or could, if uncorrected, result in a failure of an item to perform as required by Technical Specification or approved procedures. Deviations are categorized as follows:

a. Reportable Events: Items which constitute a Reportable Event are identified in Federal Regulations and are described in BwAP 1250-6A3 and 6A4.

b. Non-Reportable Events: Deviations which do not fit into the above categories are classified as non-reportable events and consist of items that represent a significant deviation from accepted normal operation of the reactors and associated equipment, included in this category are:

1) Equipment malfunctions or error which cause a unit derating.

2) Recurring equipment problems or errors, which taken alone, do not meet this criterion, but which have potential for causing a unit derating or outage extension.

The above definition is wholly consistent with that contained in QP 15-52 of the Commonwealth Edison Quality Assurance Manual. As this event would be classified as a non-reportable event, no DVR is required because:

a. There was no impact on Technical Specification requirements.

b. The pump was out of service for maintenance (O.O.S. 88-2-386, NWR A19630).

c. No derating of the unit occurred, and

d. No recurring problems have been identified with the affected pump which would lead to a unit derating.

Braidwood has developed and maintains in a controlled manner a Deviation Information Manual. This manual is assigned to cognizant personnel involved in the DVR process, and a copy is maintained in the NRC Resident's Office. Incorporated in this manual is detailed guidance relative to the identification, classification and reporting of deviations. Specifically, the threshold for initiation of a DVR has been developed at the corporate level and is applied to all Commonwealth Edison Nuclear Stations. This threshold criterion is incorporated in Section I of the subject manual. The cited incident was reviewed against this criterion and does not meet the threshold for initiation of a DVR.

Braidwood Station does not normally generate DVR's for equipment that is out-of-service and under the scope of the Nuclear Work Request System. Sufficient controls exist in this system to ensure that the requirements of 10 CFR 50 Appendix B, Criterion XVI are met. Additionally, post-maintenance testing is required for all equipment and separately, operability testing is required for Technical Specification related equipment. These requirements ensure that the equipment has been properly returned to service prior to utilizing the equipment for Technical Specification compliance.

The violation states that the recirculation line was plugged. This is an incorrect statement. No plugging occurred. The Nuclear Station Operator (NSO) on duty postulated that the line was plugged because no flow was noted. Subsequent investigation determined that no plugging occurred.

The sequence of events related to this proposed violation and violation 457/88007-02E are documented in a DVR. DVR 20-2-88-029 was written on the same shift that the departure from accepted performance of the boric acid system was identified, i.e. the recirculation valve was discovered closed. DVR 20-2-88-029, however, does not mention the recirculation line being plugged because the line was subsequently demonstrated not to be plugged. Operators experienced a difficulty detecting flow through the mini-recirculation line (3/4 inch) because the flow was such a small amount, approximately 2 gallons per minute (gpm), in relation to the allowable tolerance of the existing flow gauge 2FI-AB012 (range: 0-90 gpm) for the line. Upon discovering recirculation valve 2AB8458 closed, the operators opened it and restarted the common boric acid transfer pump. The pump started successfully, however, no flow through the 3/4 inch mini-recirculation line was observed on the flow indicator, 2FI-AB012. The Unit-2 NSO initially believed that the lack of flow was due to the mini-recirculation line being plugged; however, this was just a conjecture at the time and, as such, no log entry to this effect was made. When the parallel, 2 inch line was throttled open, operators were able to witness an immediate increase in the recirculation flow rate.

Based on the above Commonwealth Edison Company believes that this notice of violation should be withdrawn.

VIOLATION: (457/88007-02A, 457/88007-02B, 457/88007-02C, 457/88007-02D, AND 457/88007-02E)

10 CFR 50, Appendix B, Criterion V states, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished."

Contrary to the above, the following examples were identified where procedure BwAP 330-1, "Equipment Out-Of-Service", Revision 5 dated January 7, 1988, was not appropriate to the circumstances, and where activities had not been accomplished in accordance with the procedure.

The Licensee failed to approve five Temporary Lifts (88-1-0048, 88-1-0049, ILC-MS114, MSXXX, and MS-1-428) in accordance with Section C.6.b. of the subject procedure. These Temporary Lifts were completely processed (Out-of-Service tags removed) without the required documentation. (457/88007-02A)

The procedure was not appropriate to the circumstances in that it failed to contain instructions describing the use of, and accounting for, instructions written on the Temporary Lifts. These procedural inadequacies resulted in the Licensee not complying with the instructions written on Temporary Lifts 88-1-428 and 88-2-201. (457/88007-02B)

The Licensee failed on January 10, 1988, to restore Out-of-Service 88-096 in accordance with Section C.4.n. of the subject procedure by leaving recirculation valve 1AF009B in the Out-of-Service position, closed. This resulted in damaging the Diesel Auxiliary Feedwater Pump by operating it without a recirculation flowpath. (457/88007-02C)

The Licensee failed on February 17, 1988, to Temporary Lift the Out-of-Service (88-1-193) associated with the Diesel Auxiliary Feedwater Pump in accordance with Section C.6.c. of the subject procedure by leaving a "dummy fuse" in the control circuitry. This resulted in the pump failing to start when a remote start was attempted. (457/88007-02D)

The Out-of-Service procedure was not appropriate in that it failed to ensure that the common Boric Acid Transfer Pump had the required recirculation flow path when the Unit 2 Boric Acid Transfer Pump was taken Out-of-Service. (457/88007-02E)

RESPONSE: (457/88007-2A)

Commonwealth Edison acknowledges that the five temporary lifts listed in the notice of violation were not approved in accordance with section C.6.B of BwAP 330-1. The first four temporary lifts were processed without the required shift engineer (or designee)/shift foreman authorization. The other temporary lift had been authorized by the shift foreman, but, since it remained in effect for more than 24 hours, a shift engineer's authorization should have been obtained.

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED:

A review of all Unit-1 temporary lifts was conducted on February 18, 1988 and a total of nine temporary lifts were identified as lacking proper shift engineer/shift foreman authorization. All nine were reviewed by a licensed shift supervisor and initialled to signify concurrence with the temporary lift.

CORRECTIVE ACTION TO AVOID FURTHER VIOLATION:

A notice was sent to all shift supervisors and control room operators on identifying and discussing problem areas. The need for closer attention to detail and the strict procedure adherence were emphasized.

DATE OF FULL COMPLIANCE:

Full compliance has been achieved.

RESPONSE: (457/88007-02B)

Commonwealth Edison acknowledges that BwAP 330-1, Station Equipment Out-of-Service Procedure was not appropriate to the circumstances in that it failed to contain instructions describing the use of, and accounting for, instructions written on the temporary lifts. Specifically, written instructions on temporary lifts to Out-of-Service 88-1-428 and 88-2-201 were adhered to in contrast to procedural requirements.

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED:

The lack of compliance on temporary lift instructions for Out-of-Service 88-1-428 and 68-2-201 were reviewed for plant impact and safety significance and no concerns were found. BwAP 330-1 was also revised to give the shift the option of clearing the Out-of-Service, prior to completion of the nuclear work request(s), thereby reducing the need to perform temporary lifts.

CORRECTION ACTION TAKEN TO AVOID FURTHER VIOLATION:

BwAP 330-1, Station Out-of-Service Procedure and BwAP 330-1T11, Temporary Lift/Equipment in Test Record Sheet will be revised to provide guidance on special instructions to be utilized with temporary lifts. Also, for better tracking purposes, temporary lift status will be covered as a part of appropriate shift turnover process. BwAP 335-1 Operating Shift Turnover and Relief, will be revised to facilitate this effort.

DATE OF FULL COMPLIANCE:

The procedure changes are expected to be completed by July 31, 1988.

RESPONSE: (457/88007-02C)

Commonwealth Edison acknowledges that Out-of-Service 88-096 was improperly restored on January 10, 1988. Valve 1AF009B was left in the closed position. This resulted in damaging the Diesel Auxiliary Feedwater Pump by operating it without a recirculation flow path on February 8, 1988 during the performance of 1BwOS 3.2.1.1.A-2.

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED:

Upon discovery of the improper valve lineup, valve 1AF009B was opened to establish a recirculation flow path. The pump was subsequently secured.

CORRECTIVE ACTION TAKEN TO AVOID FURTHER VIOLATION:

The Out-of-Service procedure BWAP 330-1 has been revised to include second verification of Out-of-Service and Return-to-Service positions for safety related systems by a qualified individual. Tailgate sessions will be conducted on this topic with appropriate operating personnel. Also, the operating surveillance 1/2 BwOS 3.2.1.1.A-2 "Train B Manual Safety Injection Initiation Surveillance" will be revised to include a mechanical lineup for the B train auxiliary feedwater components.

DATE OF FULL COMPLIANCE

Tailgate sessions are expected to be completed by May 31, 1988. The operating surveillance is expected to be revised by June 31, 1988.

RESPONSE: (457/88007-02D)

Commonwealth Edison ackowledges that the temporary lift issued on February 17, 1988 for Out-of-Service 88-1-193 and Out-of-Service 88-1-917 to test the repaired Auxiliary Feedwater (AFW) Pump was improperly executed. An operator was sent to the 1AF01J, Unit-1 Diesel AFW Pump control panel with verbal instructions to re-install four control power fuses. Upon opening the 1AF01J cabinet door, the operator found only three empty fuse holders - the fourth one contained a ceramic, "dummy fuse". Not realizing this was a "dummy fuse", the operator re-installed only three fuses. The "dummy fuse" interrupted the continuity in the Diesel AFW Pump starting circuitry and prevented the pump from starting on demand.

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED:

Upon replacing the "dummy fuse" with a functional fuse, successful starts of the Diesel AFW Pump were observed on subsequent attempts.

CORRECTIVE ACTION TAKEN TO AVOID FURTHER VIOLATION:

Procedure BwAP 330-1, Section C.3.6, Administrative Requirements for Temporarily Lifting Out-of-Service Card and/or Placing Equipment in Test and BwAP 330-1T11, Temporary Lift/Equipment in Test Record Sheet, were revised to institute more specific guidance on the administration of the Temporary Lift Program.

Appropriate operating department personnel will be briefed on this incident during tailgate sessions.

DATE OF FULL COMPLIANCE:

Full compliance is expected to be achieved by May 31, 1988.

RESPONSE: (457/88007-02E)

Commonwealth Edison ackowledges that the recirculation valve 2AB8458 was inadvertently left closed when the Unit-0 Boric Acid Transfer Pump was placed on recirculation on February 18, 1988. Upon investigation it was determined that the cause for this incident was attributable to procedural deficiency in BwOP AB-10 rather than deficiencies in the Out-of-Service Procedure.

In addition to the procedural inadequacy there was an operator oversight in that the Unit-0 Boric Acid Transfer was placed on recirculation and the operator did not recognize that there was insufficient flow. Contributing to this event was the fact that this guidance was not clearly delineated in BwOP AB-10.

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED:

Valve 2AB8458 was opened and flow from the Unit-2 Boric Acid Tank via the Unit-0 Boric Acid Transfer Pump to the Reactor Coolant System was demonstrated operable.

Temporary procedure 2720 was written for BwOP AB-10 to ensure recirculation flow paths are available. Temporary procedure 2752 was written for BwOP AB-6 and temporary procedure 2753 was written for BwOP AB-7 to ensure that the Unit-0 Boric Acid Transfer Pump will have a flowpath if the Unit 1/2 Pump is Out-of-Service.

CORRECTIVE ACTION TAKEN TO AVOID FURTHER VIOLATION:

Permanent revisions to BwOP AB-10, BwOP AB-6 and BwOP AB-7 are being written to incorporate additional guidance.

Appropriate operating personnel will be briefed on the incident via tailgate sessions.

DATE OF FULL COMPLIANCE:

Tailgate sessions are expected to be completed by May 31, 1988. The procedures are expected to be revised by July 31, 1988.

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