



**Commonwealth Edison**  
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Chicago, Illinois 60690

October 1, 1985

Mr. James G. Keppler  
Regional Administrator  
Region III  
U. S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, Il 60137

SUBJECT: Braidwood Station Unit 1  
Response to Inspection Reports Nos.  
50-456/85-026  
NRC Docket Nos. 50-456

REFERENCE: (a) J. J. Harrison letter to Cordell Reed dated  
August 12, 1985.

Dear Mr. Keppler:

This letter is in response to the inspection conducted by Messrs. D. L. Williams and A. Dunlop, Jr. on May 20 through July 11, 1985 of activities at Braidwood Station. Reference (a) indicated that certain activities appeared to be in noncompliance with NRC requirements. The Commonwealth Edison Company response to the Notice of Violation is provided in the enclosure. The delay in responding to this report was discussed with Mr. W. Little of your staff.

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

Very truly yours,

*Anthony Mior*  
for D. L. Farrar  
Director of Nuclear Licensing

/klj  
Enclosure

cc: NRC Resident Inspector - Braidwood

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Enclosure  
Commonwealth Edison Company  
Response to  
Inspection Report 456/85-026  
Item 456/85-026-01

VIOLATION A

10 CFR 50, Appendix B, Criterion XI, "Test Control," as implemented by the Commonwealth Edison Quality-Assurance Manual, Quality Requirement 11.0 and the Braidwood Startup Manual requires that testing to demonstrate that systems perform satisfactorily in service be performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in design documents.

10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings", as implemented by Commonwealth Edison Quality Assurance Manual, Quality Requirements 5.0 requires that appropriate acceptance criteria be included in documents affecting quality to show that the activity has been completed satisfactorily.

Contrary to the above, sufficient testing and acceptance criteria were not incorporated in the Auxiliary Feedwater (AFW) system test procedure to ensure that the design basis of the Braidwood FSAR is verified. The design basis in question is verified by performing an AFW pump endurance run to ensure satisfactory bearing/bearing oil temperature and vibration and that pump room temperature and humidity remain within environmental qualification limits for safety related equipment. The preoperational test procedure does perform the pump endurance run for both AFW pumps, but does not require sufficient data to be taken or recorded and the acceptance criteria does not encompass all that is necessary to verify this design basis(456/85-026/01(DRS)).

RESPONSE

Commonwealth Edison agrees the identified acceptance criteria were not incorporated in the Auxiliary Feedwater system test BwPT-AF-10 procedure as approved. The Project Engineering Department approval letter to support ECCS full flow testing was not clear and could have been more explicit in expressing the intended restriction of approval to only support ECCS full flow testing.

#### CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED

The acceptance criteria were added to the test procedure by means of a Test Change Request. Subsequently, the approval of test procedure BwPT-AF-10 has been rescinded and a revised procedure is being developed and will incorporate the acceptance criteria and other changes.

#### CORRECTIVE ACTION TAKEN TO AVOID FURTHER NONCOMPLIANCE

Subsequent and unrelated to the review and initial approval of BwPT-AF-10, Commonwealth Edison has re-emphasized the program for paralleling the Byron Unit 1 test program on Byron Unit 2 and Braidwood Units 1 and 2. Part of that program requires comparison of each subsequent unit test with the corresponding Byron 1 test and commitments made after the execution of the Byron 1 test. This re-emphasis should prevent recurrence of the type of oversight identified.

#### DATE OF FULL COMPLIANCE

Full compliance to correct the omission of the acceptance criteria was reached on July 11, 1985 when the acceptance criteria were added via a test change request.

The revised BwPT-AF-10 procedure is expected to be approved by the end of November, 1985, and will include the acceptance criteria.

Enclosure  
Commonwealth Edison Company  
Response to  
Inspection Report 456/85-026  
Item 456/85-026-02A, B, C

VIOLATION B

10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," as implemented by the Commonwealth Edison Quality Assurance Manual, Quality Requirement 16.0 and the Braidwood Startup manual states, in part, "Measures shall be established to assure conditions adverse to quality such as... deficiencies... are promptly identified and corrected."

1. A test deficiency was not written for the BWPT FC-10 preoperational test by the System Test Engineer to identify a deficient condition until directed by the Test Review Board(456/85026/02a(DRS)).
2. The description of the deficient condition was inadequate to properly define the problem that test deficiency FC-10-K was initiated to correct in that the deficient condition involved both writing and verifying procedures while the description only addressed writing procedures(456/85026-02b(DRS)).
3. Corrective actions taken to resolve deficient conditions were not adequate to close test deficiencies: for FC-10-K, the deficiency itself was closed even though the deficient condition had not been corrected; for DO-12-80 no documentation of the verification of procedures existed; and for RH-10-123, the deficiency was closed with temporary equipment installed(456/85-026/02c(DRS)).

RESPONSE

Aside from the fact that each part of this Notice of Violation deals with deficiencies, a common thread exists in each part. Specifically, each part concerns itself with deficiencies covering verification of operating procedures (Appendix C to all Preoperational Test Procedures). Consequently, Commonwealth Edison's response to this violation will be broken into four parts.

1. Deficiencies related to operating procedure verification.
2. Identifying deficient conditions by the end of the testing day. (456/85026-02A)

3. Deficiency description matching the deficient condition. (456/85026-02B)
4. Deficiency corrective action matching the deficiency description. (456/85026-02C)

## 1. OPERATING PROCEDURE VERIFICATION

### Discussion

The program for verification of operating procedures during the initial testing program was administered primarily through Appendix C to all Preop Test Procedures. A number of Preop Tests were completed prior to the associated operating procedure being written or available for verification. Complicating this situation was the fact that: (1) Testing responsibilities were transferred from the Station to Startup, (2) Instructions on implementing Appendix C were lacking, and (3) the verbage of Appendix C (Boilerplate for all Tests) was, to some extent, confusing in its administration. All of this typically left the System Test Engineer (STE) going to the Post Test Test Review Board (TRB) with a completed test and the question of how to administer Appendix C. Most of the STE's deferred to the TRB for proper direction.

### Corrective Action

On July 22, 1985, a deficiency was generated for all tests which had been started but which had not been Released to Operations. The deficiency stated, "The commitment to verify the operating and surveillance procedures associated with this test to the maximum extent practicable during the initial testing program has not been completed." Station Operations is responsible for fulfilling this verification commitment. When in their estimation the commitment is completed, Operations will complete Section II of the deficiency, stating: "To the maximum extent practicable operating procedures have been verified". The Assistant Superintendent Operation (or designee) will sign Section II. The deficiency will then be processed in the appropriate manner.

### Corrective Action to Prevent Recurrence

A new Appendix C will be included in all Preop Tests started after July 23, 1985. This new document will more clearly address the procedure verification process. In addition, a Training Instruction (TI-20, dated 8/9/85) has been issued which describes the rudiments of tracking the procedure verification requirements. Formal training was held which described the corrective action plan, as well as the requirements within the Training Instruction.

### Date of Full Compliance

All corrective actions are completed.

### 2. IDENTIFYING DEFICIENT CONDITIONS BY THE END OF TESTING DAY (456/85026-02A)

This part of the violation relates to deficiency FC-10-K which deals with Appendix C (operating procedure verification) administration. This subject was discussed above. However this violation and the voltage drop problems in the WO-10 chiller starting circuit (discussed in great detail with NRC Region III staff) prompted us to look into this situation in some detail. We have confidence that deficient conditions found during testing are documented via the Test's Significant Events Log (SEL) but have some concern as to whether these conditions were documented on deficiency forms. As a result, Edison has instituted the following actions.

### Corrective Actions

The SEL for all Safety Related tests which had been started by 7/23/85 and which had received TRB approval by 9/15/85 will be reviewed. Deficient conditions noted on the SEL which have not been documented on a deficiency form will be so addressed. If these conditions were rectified this will also be shown on the deficiency form.

Deficiencies written on those tests which have already received post test TRB review by 9/15/85 will be separately reviewed by the TRB. Deficiencies written on tests which have not received post test TRB review by 9/15/85 will be reviewed by the TRB in the normal course of business.

### Action to Prevent Recurrence

A training session was held which included a review of the WO-10 chiller situation and emphasized the verbage from the Startup Manual which states that "Conditions discovered during testing which appear deficient to the STE will be identified as deficiencies at the end of the testing day..." Finally, our Training Instructions will be revised to clear up any inconsistency between them and the Startup Manual.

### Date of Full Compliance

All corrective actions are expected to be completed by 10/15/85.

3. DEFICIENCY DESCRIPTION MATCHING DEFICIENT CONDITIONS  
(456/85026-2B)

This part of the violation relates specifically to deficiency FC-10-K. Commonwealth Edison believes this concern is limited only to the administration of Appendix C. Consequently, the corrective action discussed above is sufficient. However, Edison has taken action to prevent recurrence on a more generic basis which is discussed below.

Action to Prevent Recurrence

A training session was held which discussed this issue. Training also included direction to the STE's that the deficiency description should include what was observed and may include the cause of the deficient condition (e.g. if a pressure switch fails to actuate at its expected value the deficiency description should say "PSxxx failed to actuate at its expected value" the deficiency description may say "PSxxx is out of calibration").

Date of Full Compliance

All corrective actions are completed.

4. DEFICIENCY CORRECTIVE ACTION MATCHING DEFICIENCY DESCRIPTION  
(456/85026-02c)

This part of the violation relates specifically to deficiencies FC-10-K and DO-12-80 which pertain to Appendix C administration. This is discussed in Item 1 above. Commonwealth Edison believes that cited deficiency RH-10-123 in itself is not cause for concern because sufficient documentation exists elsewhere to track the problem. For instance, the POAD system files for RH-10 still shows that the motor in question is temporary. However, Commonwealth Edison agrees (1) that the common thread between RH-10-123 and this additional documentation is rather thin, (2) closing deficiencies in the manner cited can lead to problems and (3) some appropriate level of corrective action and action to prevent recurrence is warranted.

### Corrective Action and Action to Prevent Recurrence

A training session was held which discussed with all STE's the need for a more comprehensive review of each deficiency to assure appropriate corrective action has been taken. CECO Quality Assurance has a procedure entitled "Q.A. Review of Closed Deficiencies" (SQI-32) which addresses the method used by Site Quality Assurance for reviewing the completeness of deficiencies. This procedure requires that Site QA verify the corrective action portion of the deficiency report is properly filled in and noting what was performed to resolve the deficiency. Should a part of the deficiency be incomplete or corrective action be insufficient, the Deficiency Report will be returned to the Startup Deficiency Coordinator for further review or correction. Additionally, ten percent of the deficiency reports received by site QA for closure are randomly selected for field verification by QA through examination of the installation or supporting documentation as appropriate. Site QA believes the current Site QA procedure for reviewing and processing deficiencies is sufficient. Further, Site QA does not consider the temporary installation of equipment sufficient to allow closure of deficiencies as was done for RH-10-123. Site QA attributes the failure to properly close the subject deficiencies as an oversight in closely reading the corrective action portion of the deficiency. It also should be noted that neither of the subject deficiencies (DO-12-80 or RH-10-123) were among those which were field verified by Site QA. A training session to reiterate the procedural requirements and specifics addressed in this notice of violation was conducted September 13, 1985 for the applicable Commonwealth Edison QA personnel.

#### Date of Full Compliance:

All corrective actions are completed.

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