

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-456/84-41(DRS)

Docket No. 50-456

License No. CPPR-132

Licensee: Commonwealth Edison Company
Post Office Box 767
Chicago, IL 60690

Facility Name: Braidwood Station Unit 1

Inspection At: Braidwood Site, Braidwood, IL

Inspection Conducted: December 18, 1984 through February 7, 1985

Inspectors: *D. L. Williams*
D. L. Williams

2/26/85
Date

A. Dunlop
A. Dunlop

2/26/85
Date

Approved By: *M. A. Ring*
M. A. Ring, Acting Chief
Test Programs Section

2/26/85
Date

Inspection Summary

Inspection on December 18, 1984 through February 7, 1985 (Report No. 456/84-41 (DRS))

Areas Inspected: Routine announced inspection review to preoperational test program implementation, preoperational test procedures, preoperational test performance and evaluation of preoperational test results. The inspection involved 68 inspector-hours onsite, including 8 inspector-hours offshift and 54 inspector-hours offsite.

Results: No items of noncompliance or deviations were identified.

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DETAILS

1. Persons Contacted

- *H. A. Zimmerman, Project Start-up Test Supervisor
- *L. M. Johnson, Station Quality Assurance
- *C. J. Tomashek, Project Start-up Superintendent
- *B. Jacobs, Start-up Test Engineer

Additional station technical and administrative personnel were contacted by the inspectors during the source of the inspection.

*Denotes those personnel present at the exit meeting on February 7, 1985.

2. Preoperation Test Program Implementation

This review consisted of a determination if administrative controls had been developed and implemented to support Final Safety Analysis Report (FSAR) commitments, Regulatory and Industry Standards requirements. The inspector has the following comments:

- a. A review of the Braidwood FSAR indicated the licensee has committed to Regulatory Guide 1.33, Rev. 2-1978, "Quality Assurance Program Requirements (Operations)," which in turn commits the licensee to ANSI 18.7-1976 "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants." These documents require the licensee to specify which activities will be controlled by ANSI 18.7-1976 during the preoperational test phase. Currently this is not formally documented. The licensee has committed to clarify the controlling documents. This is considered an unresolved item (456/84-41-01(DRS)) pending review of the formal documentation by the inspector.
- b. During the review of the Startup Manual for control of temporary modifications, jumpers and bypasses, it became apparent that independent verification was not required for approved pre-operational test procedures. This is not in accordance with ANSI 18.7-1976 Section 5.6.2 "Equipment Control." This was discussed with the licensee and immediate corrective action was undertaken on February 7, 1985. This is considered an unresolved item (456/84-41-02(DRS)) pending completion of the implementation of corrective action and review by the inspector for adequacy.
- c. While reviewing a completed preoperational test results package it became apparent that minor Test Change Requests (TCRs) were being initiated without the accepted level of review or concurrence that is a common practice in the industry. Furthermore, the documentation supporting these TCRs was found to be sometimes inadequate. According to the Braidwood Startup Manual, a Startup Test Engineer (STE) may initiate a minor TCR by writing a brief description of the reason for the change in the Significant Events

log, assigning a unique number to the TCR and logging it on the Test Change Request log. Also, the test procedure should have an entry where the change is to occur and finally he must notify the Shift Supervisor of the change for incorporation into his copy. Upon submittal of the completed test package for review and approval by the Test Review Board (TRB), the minor TCRs will be evaluated for approval after implementation. Attempting to reconstruct the reasons for a particular change and the potential impact on the acceptability of the system tested has been difficult at times. The TRB, when questioned, admitted that without the personal knowledge of the SIE, understanding and approval could be difficult. When this situation was discussed with the licensee they acknowledged the concern and took immediate corrective action to require that a form utilized for major TCRs be used for minor TCRs. This action should help in determining the reason for the change and the explicit steps taken. This is considered an unresolved item (456/84-41-03(DRS)) pending formal inclusion of this requirement in the Braidwood Startup Manual and review by the inspector.

An additional concern involves not obtaining approval or concurrence of a minor TCR prior to implementation. This is contrary to an accepted practice in the industry. The licensee refused to include a requirement for obtaining prior approval/concurrence to minor TCRs prior to implementation due to no clear regulatory requirement. The licensee feels that the present program provides adequate assurance to prevent problems due to poor engineering judgment, impact on other systems in the plant and current notification to operations personnel concerning conditions in the plant. This is considered an open item (456/84-41-04(DRS)) and this concern will be monitored by the inspector in the future for program adequacy.

3. Preoperational Test Procedure Review

The inspectors reviewed the following preoperational test procedures against the FSAR, SER, proposed Technical Specifications and Regulatory Guides 1.68 and 1.108(DG-10).

a. BWPT DG-10, Rev. 0, "Diesel Generator"

During the review of the procedure two concerns were identified with respect to acceptance criteria.

- (1) The acceptance criteria states ... "bring the diesel generator up to rated voltage and frequency." The Braidwood Startup Manual requires that the acceptance criteria shall have numerical bounds to determine acceptable performance. It was unclear what values were expected for determination of acceptable performance. The licensee has acknowledged the concern and committed to incorporate numerical bounds in the acceptance criteria.

- (2) During the review of the acceptance criteria it became apparent that not all of the acceptance criteria committed to in FSAR Chapter 14.2-25 were listed in the preoperational test procedure, for example, FSAR Chapter 14.2-25 requires a simultaneous start of both diesels. This action is completed in the procedure but not listed as an acceptance criteria. The licensee has agreed to add this action to the test procedure. These two items are considered two examples of an unresolved item (456/84-41-05(DRS)) pending incorporation of the TCRs and review by the inspector.

b. BWPT RH-10, Rev. 0, "Residual Heat Removal"

While reviewing Braidwood Q.A. Audit 20-84-51 the inspector determined that the Braidwood Q.A. organization had discovered that not all FSAR Chapter 14 commitments had been included in the approved preoperational test procedure. The Project Startup group has agreed to implement the following corrective actions.

- (1) Develop a FSAR commitment matrix to supplement the STE's FSAR commitment review.
- (2) Implementing an administrative procedure to assign responsibilities to complete this review.

This is considered an open item (456/84-41-06(DRS)) pending implementation of the controlling administrative procedure and review by the inspector.

c. BWPT DC-10, "125V DC system". No comments at this time.

d. BWPT RY-10, Rev. 0, "Reactor Coolant Pressurizer"

The review of the procedure was not completed during this inspection and will be completed and documented in a subsequent inspection report.

No items of noncompliance or deviations were identified.

4. Preoperational Test Performance

The inspectors witnessed the performance of portions of the below listed preoperational test procedures in order to verify that testing is conducted in accordance with approved procedures, independently verify the acceptability of test results, and evaluate the performance of licensee personnel conducting the tests.

BWPT DG-10, Rev. 0, "Diesel Generator"

No items of noncompliance or deviation were identified.

5. Preoperational Test Results Evaluation

The inspectors reviewed the results of the below listed preoperational test procedures to verify all test changes were identified and approved in accordance with administrative procedures; all test deficiencies were appropriately resolved, reviewed by management and retested as required; test results were evaluated by appropriate engineering personnel and specifically compared with acceptance criteria; data was properly recorded, signed, dated and documented as test deficiencies, as necessary; test packages were reviewed by QA for adequacy of contents; and test results were approved by appropriate personnel.

a. BWPT DC-10, Rev. 0, "125V DC system"

During the review of this completed test package the inspector had the following comments:

- (1) Numerous examples of inadequate documentation of minor TCRs were detected, these were discussed in paragraph 2.c.
- (2) During the conduct of the test the STE identified a potential deficient condition and failed to take action as required by the Braidwood Startup Manual. He was unable to obtain liquid samples for determining specific gravities from the normal sampling port. The samples were taken from an abnormal port and no evaluation was made to determine the acceptability of this sampling method. At the request of the inspector the licensee is gathering data to support the acceptance of this data and the method utilized. This is considered an unresolved item (456/84-41-07(DRS)) pending review by the inspector of the technical evaluation by the licensee.
- (3) The TRB has the responsibility to review and approve all completed test results packages. The TRB failed to indicate that any evaluation or corrective action for the above items had been initiated from their review and approval of BWPT-DC-10. Discussions with members of the TRB indicate that they were aware of the above problems and discussed the items with the STE. The inspector expressed concern that a discussion of problems encountered and resolutions determined from these discussions should be documented and included in the completed test package. The licensee has acknowledged this concern and has committed to initiate immediate corrective action. This is considered an unresolved item (456/84-41-08(DRS)) pending implementation and review of the corrective action for adequacy by the inspector.

6. Open Items

Open items are matters which have been discussed with the licensee which will be reviewed further by the inspector, and which involved some action on the part of the NRC or licensee or both. Open items disclosed during the inspection are discussed in Paragraphs 2c, 3b.

7. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, Items of Noncompliance, or Deviations. Unresolved items disclosed during the inspection are discussed in Paragraphs 2a, 2b, 2c, 3a, and 5a.

8. Exit Interview

The inspectors met with the licensee representatives (denoted in Paragraph 1) on February 7, 1985. The inspectors summarized the scope and findings of the inspection. The inspector also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspector during the inspection. The licensee did not identify any such documents/processes as proprietary. The licensee acknowledged the statements by the inspectors with respect to open and unresolved items.