

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-456/87030(DRS); 50-457/87029(DRS)

Docket Nos. 50-456; 50-457

Licenses No. NPF-72; CPPR-133

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

Facility Name: Braidwood Station, Units 1 and 2

Inspection At: Braidwood Site, Braidwood, Illinois

Inspection Conducted: August 25 through September 4, 1987

Inspectors: *S. A. Reynolds*  
S. A. Reynolds

9/30/87  
Date

*F. J. Jablonski*  
R. N. Sutphin

9/30/87  
Date

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9/30/87  
Date

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Quality Assurance Programs Section

9/30/87  
Date

Inspection Summary

Inspection on August 25 through September 4, 1987 (Reports No. 50-456/87030(DRS); 50-457/87029(DRS))

Areas Inspected: Routine, unannounced inspection of licensee's QA Program implementation in preparation for operation in the specific areas of procurement, receipt and storage, records control, committee activities, audits, tests and experiments, control of test equipment, and surveillance testing. This inspection was conducted utilizing portions of Inspection Procedures 35741, 35745, 35746, 35747, 35748, 35749, 35750, 39301, and 40301.

Results: Two violations were identified: (1) material control, Paragraph 2.a.(2); (2) measuring and testing equipment, Paragraph 2.h.

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## DETAILS

### 1. Persons Contacted

#### Commonwealth Edison Company (CECo)

- \*C. Schroeder, Services Superintendent
- \*P. Barnes, Regulatory Assurance Supervisor
  - A. Chomacke, Senior Participant, Offsite Review, Braidwood
  - D. Cline, Stores Supervisor
- \*A. D'Antonio, Quality Control
- \*J. Gosnell, Quality Control Supervisor
- \*G. Nelson, Assistant Technical Staff Supervisor
  - D. Paquette, Assistant Superintendent, Maintenance
- \*S. Stapp, Quality Assurance Inspector
- \*J. Woldridge, Technical Staff

\*Indicates those attending the September 4, 1987, exit meeting.

Other individuals were contacted as a matter of course during the inspection.

### 2. Areas Inspected

The purposes of this inspection were to verify that the QA Program had been properly implemented for Braidwood, Units 1 and 2 in specific programmatic areas and to evaluate the QA Program for Braidwood, Unit 2. Braidwood, Units 1 and 2 share a common CECo QA Program, and in most cases, the same procedures. This inspection included QA Program implementation in the areas of procurement, material handling, committee activities, tests and experiments, document control, audits, preoperational testing, test equipment and surveillance testing. This inspection evaluated licensee management involvement and control in assuring quality in these areas and attempted to determine the effectiveness of training and qualifications. Verification of the above, as well as compliance with regulatory requirements and QA Program commitments, was accomplished by review of applicable procedures and records, and interviews with personnel.

#### a. Procurement Control

##### (1) Reference Documents

- (a) QR 4.0 "Procurement Document Control"
- (b) QR 7.0 "Control of Purchased Material Equipment and Services"
- (c) BwAP 800-2, "Control of Requests for Purchase," Revision No. 1.
- (d) Q.P. No. 17-51, "Quality Assurance Records for Operations - Control of Station Records."

(2) Results

The inspectors selected 11 different safety-related items in the storeroom to use as a basis for verification of procurement program implementation. The items included those identified on purchase orders (POs) 303838, 296089, 312757, 502207, 312254, T02324, MDC BR 116-861, 756225, Eval 86-081, 290999, and 502080.

Records pertaining to the procurement of the items were retrieved and reviewed for compliance with requirements. The inspector observed that the licensee experienced some difficulty in the timely retrieval of the records and in some instances extensive explanations were required to furnish facts and information relative to the records, and the basis for acceptance of the items.

The records for PO 296089 were considered by the licensee to have been complete and were in the permanent microfilm file. Item 16 on the PO specified Stores Item (SI) 763D02, Plate, Valve, Metal Seat, 36 in, for a Cat 1 Valve, DW/NO 4-2535-500, Anderson Greenwood and Co. P/N NO 4-2457-010, Code No. A605 ASME Section III, Class III, 1974, Agenda W 1975, to be made of SA 515-70 material. Records indicated that the item was furnished with SA 516-70 material, a lower grade material than that specified. The tag on the item in the storeroom identified the material as SA 515-70 which was incorrect.

In accordance with licensee procedures, upon receipt, this condition should have been declared nonconforming and a Nonconformance or Discrepancy Report issued to control the items, pending disposition. In addition, hold tags should have been applied to the parts. The licensee could not retrieve those type items or otherwise show that the activities had taken place, nor that an engineering evaluation had been made. It should be noted that internal audits of the procurement area failed to identify the documentation or hardware problems.

Criterion VII of Appendix B to 10 CFR 50, requires that material and equipment conform to procurement requirements and that documentary evidence be available prior to installation or use. Criterion VII also requires that this documentary evidence be sufficient to identify the specific requirements, such as codes, standards, or specifications, which were met.

Failure to provide complete and adequate documentation including engineering evaluations or dispositions, to verify that the purchased item met specific material requirements is considered a violation of 10 CFR 50, Appendix B, Criterion VII (456/87030-01; 457/87029-01).



At the conclusion of the inspection, the licensee issued Discrepancy Record (DR) No. DR 20-No. 87-H365 to document this nonconforming condition. The DR also included a discrepancy with Item 14 of the PO that the licensee found after a complete review of PO 296089. Hold tags were issued and applied to the nonconforming items and an engineering evaluation was requested.

One item, P.O. 501784, BR 1043, for Diesel Fuel, was selected for a review of current activities associated with procurement of consumables. The inspector observed the actual receipt and sampling of this item for acceptance. No problems were identified.

One violation was identified.

b. Material Handling

(1) Reference Documents

- (a) Q.P. No. 13-51, "Handling, Storage, and Shipping for Operations - Control of Equipment, Materials, and Nuclear Fuel."
- (b) BwAP 800-1, "Classification of Parts of Safety-Related Components," Revision No. 4.
- (c) Audit Report No. QAA-20-86-46, "ISI Activities/Documentation and Crane Inspections."
- (d) Audit Report No. QAA-20-87-21, "Material Control."
- (e) Audit Report No. QAA-20-87-59, "Storage of Material."
- (f) Audit Report No. QAA-20-87-08, "Inspection and Tests - Crane Inspections."

(2) Results

The inspector verified that administrative controls for receipt of safety-related items had been established and were generally implemented in accordance with commitments. Controls for storage and handling had also been established and were implemented.

Audit reports of activities in this area were reviewed for effectiveness and followup of items identified by the QA staff. The audits appeared to be effective in assessing licensee performance to commitments and requirements. In the four audit reports reviewed, the licensee had identified 12 items that required attention. The licensee responded to those audit items in an appropriate manner and had adequate plans to resolve them. The inspector had no concern for the licensee's responsiveness in this area.

No violations were identified.

c. Safety Committee Activities

(1) Reference Documents

- (a) Nuclear Safety Office Manual for Offsite Review.
- (b) Discipline Qualifications for the Braidwood Senior Participant.
- (c) Policies on Record Retention.
- (d) Organization Chart for the Department of Nuclear Safety.
- (e) Braidwood Administrative Procedures for Onsite Reviews.
- (f) Offsite Review Discipline Qualification Checksheet.
- (g) Braidwood Onsite Review and Investigation Reports 87-113 through 87-115.

(2) Results

Onsite review activities were reviewed with the Assistant Technical Staff Supervisor and included a review of all of the recent changes in the Braidwood Administrative Procedures that applied to onsite reviews. Qualifications and assignments of reviewers were checked, and minutes or reports of meetings and onsite reviews were reviewed for compliance with requirements.

Offsite Safety Review Activities were reviewed with the Senior Participant at the site. The current revision of the Nuclear Safety Office Manual for Offsite Review was reviewed and was found acceptable.

No violations were identified.

d. Tests and Experiments

(1) Reference Documents

- (a) Braidwood Administrative Procedures:
  - BwAP 1205-3, "Onsite Review and Investigation Function," Revision 7.
  - BwAP 1205-6, "Conduct of 10 CFR 50.59 Safety Evaluations," Revision 2.
  - BwAP 1300-3, "Preparation and Approval of Temporary Procedures and Temporary Changes to the Permanent Procedures," Revision 5.

- (b) Braidwood Project Startup Manual, Units 1 and 2, Revision 20.
- (c) Nuclear Stations Division Directive A01, "Nuclear Stations Division FSAR Update Directive," Revision 3.

(2) Results

The inspector reviewed the administrative controls for handling plant tests and experiments that involve safety-related components, systems, or structures, or modes of operation different from those specified in the FSAR. Applicable portions of the above listed procedures were reviewed and determined to provide adequate control of tests and experiments. No Unit 2 tests and experiments had been performed.

No violations were identified.

e. Quality Assurance Records Control

(1) Reference Documents

(a) Braidwood Administrative Procedures:

- BwAP 1340-2, "Quality Records Turnover," Revision 3.
- BwAP 1304-3, "Document Retention," Revision 2.
- BwAP 1340-10, "Records Storage System Survey," Revision 0.

(b) Braidwood Master Retention Schedule, Revision 3.

(c) Commonwealth Edison Company QA Manual Quality Procedure 17-51, "Quality Assurance Records for Operations - Control of Station Records."

(d) CECO QA Manual Quality Procedure 17-51, Attachment A, "Retention Times for Safety-Related Lifetime and Nonpermanent Records," Revision 3.

(2) Results

The inspector determined that administrative controls for QA records appeared adequate; however, implementation of those controls was not reviewed or evaluated.

During the above review, the inspector noted that the record retention times specified for QA Records in Attachment A of QP 17-51 differed, for certain types of records, from the licensee's current commitments to ANSI N45.2.9 - 1974, "Requirements for Collection, Storage, and Maintenance



of Quality Assurance Records for Nuclear Power Plants" and Section 6.10 of the Braidwood Technical Specification. After the inspector discussed this matter with licensee QA personnel, the licensee committed to revise Attachment A of QP 17-51 to resolve the concerns. Pending review, this will be tracked as an Open Item (456/87030-02; 457/87029-02).

f. Audits

(1) Reference Documents

(a) Braidwood Technical Specification, Section 6.5.1.b.

(b) Braidwood Quality Assurance Audits:

- QAA 20-87-05, "Calibration of Portable Test and Measuring Equipment."
- QAA 20-87-10, "Radioactive Waste."
- QAA 20-87-12, "Staffing and Training."
- QAA 20-87-66, "Technical Staff Corrective Actions."

(2) Results

The inspector reviewed the above listed audits and determined that the licensee's performance and documentation were adequate. The inspector observed a few minor omissions and incomplete notations on audit checklists, reports, and followups; however, those concerns were quickly and adequately resolved by the licensee.

The inspector reviewed station QA qualification records for lead auditors involved with the above audit and determined that those five auditors met requirements of ANSI N45.2.23, "Qualification of QA Program Audit Personnel for Nuclear Power Plants." Training records for those five auditors were reviewed and appeared to be adequate. Backup documents provided with the records generally provided sufficient objective evidence to support the auditor qualifications.

No violations were identified.

g. Preoperational Test Program Records

(1) Reference Documents

(a) Braidwood Administrative Procedures:

- BwAP 1340-2, "Quality Records Turnover," Revision 3.

- BwAP 1340-3, "Document Retention,"  
Revision 2.

- (b) Braidwood Master Retention Schedule, Revision 3.
- (c) Braidwood Nuclear Station Project Procedure PSU-05,  
"Maintenance and Control of Startup Department  
Documentation," Revision 1.

(2) Results

The inspector reviewed the administrative controls for maintaining preoperational test program records and reviewed the retention periods for those records. The administrative controls appeared adequate and the retention times specified on the Master Retention Schedule appeared to be in accordance with the Technical Specification. Two station QA audits of this area were reviewed by the inspector. The audits were adequate in scope and coverage.

The inspector reviewed the records of several preoperational tests and personnel qualifications for five individuals involved with preoperational test programs. The records were adequately maintained and controlled.

No violations were identified.

tr. Measuring and Test Equipment (M&TE)

(1) Reference Documents

- (a) BwAP No. 400-4, "Control of Portable Measuring and Test Equipment," Revision 5.
- (b) QP No. 2, "Calibration and Control of Station Instrumentation and Control Equipment," Revision 9.
- (c) QR No. 12.0, "Control of Measuring and Test Equipment," Revision 42.
- (d) QP No. 12-1, "Calibration Control of Commonwealth Edison Test and Measuring Equipment," Revision 16.
- (e) QP No. 12-51, "Control of Measuring and Test Equipment for Operations - Portable Test and Measuring Equipment," Revision 19.

The inspector reviewed a random sample of 10 M&TE items in the Instrument and Control Department, 9 items in the Electrical Department, and 13 items in the Mechanical Department.

The inspector observed that when a M&TE item was determined to be out of calibration, a Discrepancy Record (DR) or equivalent



was issued by the concerned department. The DR form required that the cause of discrepancy and effect on the system be documented. The inspector was informed that in all three departments, the use of the out of calibration equipment on the last day of usage was verified. If that use was in order, no further verification of prior use was made.

The licensee's Topical Report, CE-1-A Revision 45, commits the licensee to Regulatory Guide 1.33, Revision 2, which endorses ANSI N18.7. ANSI N18.7 - 1976, Paragraph 5.2.16 requires that "When calibration testing, or other measuring devices are found out of calibration, an evaluation shall be made and documented concerning the validity of previous tests and the acceptability of devices previously tested from the time of previous calibration."

In several instances, when M&TE was found out of calibration, the licensee only evaluated the last acceptable usage of the M&TE, instead of evaluating all instances where the out of calibration M&TE was used since the previous acceptable calibration.

The licensee had not evaluated the failure mode of out of calibration M&TE nor, in most cases, the effect of using the M&TE on all previous occasions; therefore, the test results obtained by use of such M&TE are of indeterminate quality.

Criterion XII of Appendix B to 10 CFR 50, requires that measures be established to control M&TE.

Failure to have controls to evaluate the past use of out of calibration equipment affects many systems in the plant and is considered a violation of 10 CFR 50, Appendix B, Criterion XII (456/87030-03 ; 457/87029-03).

One violation was identified.

i. Surveillance Testing

(1) Reference Documents

- (a) BwVS 800-8, "Main Steam Isolation Valve Instrument Air Check Valve Leakage Test," Revision 0.
- (b) BwVS 7.1.1-1, "Testing of Main Steam System Safety Valves," Revision 0.
- (c) 2 BwOS 8.2.1.2.9-1, "125V DC ESF Battery Bank and Charger 211 Operability Weekly Surveillance," Revision 53.

(2) Results

The licensee maintains a computerized log of all station surveillances. The station surveillance coordinator indicated

that about eight percent of the Unit 2 system surveillances were completed.

The inspector reviewed completed test reports of a few surveillance tests. The necessary program and procedures required for surveillance program were in place. Implementation of those procedures will be verified in a subsequent inspection.

No violations were identified.

### 3. Conclusion

After completing the evaluation of QA Program implementation in the areas described in Section 2, it was concluded that:

- Management involvement and control was apparent in the areas of performing audits, following up and correcting audit findings, and providing qualified and trained auditors, preoperational testing personnel and safety committee members.
- Management was generally responsive to NRC concerns especially in the areas of procurement and records control discussed in Section 2a and e. The violation pertaining to M&TE discussed in Section 2h will require aggressive management involvement to ensure adequate review of the potential impact of the problem.

### 4. Open Items

Open items are matters that have been discussed with the licensee, which will be reviewed further by the inspector, and involve some action on the part of the NRC or licensee or both. An open item disclosed during this inspection is included in Paragraph 2.e.(2).

### 5. Exit Interview

The inspectors met with licensee representatives (denoted in Paragraph 1) on September 4, 1987, at the Braidwood Station and summarized the purpose, scope, and findings of the inspection. The inspectors discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspectors during the inspection. The licensee did not identify any such documents or processes as proprietary.