

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-456/84-37(DRP); 50-457/84-35(DRP)

Docket Nos. 50-456; 50-457

License No. CPPR-132; CPPR-133

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

Facility Name: Braidwood Nuclear Power Station, Units 1 and 2

Inspection At: Braidwood Site, Braidwood, Illinois

Inspection Conducted: November 26 through December 31, 1984

Inspector: *W. Forney*  
R. N. Gardner

1/09/85  
Date

Approved By: *W. Forney*  
W. Forney, Chief  
Projects Section 1A

1/09/85  
Date

Inspection Summary

Inspection on November 26 through December 31, 1984 (Report No. 50-456/84-37(DRP); 50-457/84-35(DRP))

Areas Inspected: Special, announced safety inspection of the Braidwood Construction Assessment Program (BCAP) in regards to licensee action on previously identified items, Construction Sample Reinspection (CSR) Reinspection Checklists, CSR Documentation Review Checklists, and CSR reinspection activities. The inspection consisted of 110 inspector-hours onsite by one NRC inspector.

Results: No items of noncompliance or deviations were identified.

DETAILS

1. Persons Contacted

Commonwealth Edison Company

- \*M. Wallace, Project Manager
- \*G. Marcus, Director of Quality Assurance
- \* \*\*E. Fitzpatrick, Assistant Quality Assurance Manager
- \*J. Deress, Projects Engineering Manager
- \* \*\*N. Kaushal, BCAP Director
- \*D. Smith, Nuclear Licensing Administrator
- \* \*\*N. Smith, Quality Assurance Supervisor
- \* \*\*C. Schroeder, Project Licensing and Compliance Superintendent
- \*E. Swartz, Nuclear Licensing Administrator
- \* \*\*R. Byers, BCAP Assistant Director
- \* \*\*G. Orlov, BCAP Assistant Director
- \*D. Farrow, Nuclear Licensing
- \*D. Shamblin, Project Construction Superintendent
- \*P. Lau, BCAP QA Engineer
- \*L. Weiss, BCAP Deputy Manager
- \*\*L. Kline, Licensing and Compliance

Daniel Construction Company

- \*\*M. Clinton, BCAP Inspection Supervisor
- E. Shevlin, BCAP Lead Inspector

Stone and Webster Engineering Company (S&W)

- \*V. Hoffman, Site Manager
- P. Amoruso, RPSR Supervisor
- J. Thompson, CSR Supervisor

Sargent and Lundy Engineers (S&L)

- \*K. Kostal, Project Director, Braidwood
- \*D. Leone, Projects Director, Byron and Braidwood

Evaluation Research Corporation (ERC)

- \*J. Hansel, Project Manager
- \*R. Ham, Assistant Project Manager
- \*W. Chase, Consultant

Isham, Lincoln and Beale

\*R. Lauer, Attorney

Other

\*D. Cassel, BPI, Attorney

The inspector also contacted and interviewed other licensee and contractor personnel during the course of this inspection.

\*Denotes those present at the December 6, 1984 public meeting on BCAP.

\*\*Denotes those present at exit interview.

2. Licensee Action on Previously Identified Items

(Closed) Unresolved Item (50-456/84-32-02; 50-457/84-30-02): The electrical cable reinspection checklist did not adequately prescribe electrical cable reinspection requirements. The licensee has revised the subject checklist to address the inspector's concerns. The inspector reviewed Revision 1 of the electrical cable reinspection checklist and determined that the revised checklist is acceptable. This item is closed.

3. Review of CSR Reinspection Checklists

The inspector reviewed the following BCAP reinspection checklists:

- a. Concrete Expansion Anchor Assembly.
- b. Visual Inspection ASME III Welds (NB, NC, ND).
- c. Generic AWS D1.1 Visual Inspection.
- d. AWS D1.3 Weld Inspection Checklist.
- e. Visual Inspection of ASME III Welds (NF).
- f. HVAC Equipment Installation.

The inspector was assisted in the review of these checklists by the Senior Resident Inspector. The checklists were determined to be acceptable.

4. Review of CSR Documentation Review Checklists

The inspector reviewed the following CSR checklists:

- a. Small Bore Piping Configuration
- b. NDE Generic
- c. Conduit
- d. Cable
- e. Cable Pans

The inspector was assisted in the review of these checklists by the Senior Resident Inspector. The checklists were determined to be acceptable.

5. CSR Reinspection Activities

- a. On November 28, 1984, the inspector witnessed the reinspection of electrical conduit number COA22V9 which was located in the auxiliary building. The inspector observed that the reinspection package included the required reinspection checklist, checklist instruction, and S&L drawing. The BCAP hold tag was attached to the subject conduit. Assisting the BCAP inspectors was an L. K. Comstock electrician who removed covers from enclosures as necessary to allow access to the ends of the conduit. During the reinspection the BCAP inspectors observed deficiencies such as loose conduit fittings.

The inspector concluded that the reinspection was performed in an acceptable manner.

- b. On November 28, 1984, the inspector witnessed the reinspection of electrical conduit number C1A2251 which was located in the auxiliary building. The inspector observed that the reinspection package included the required reinspection checklist, checklist instruction, and S&L drawing. During the reinspection the BCAP inspectors identified the following deficiencies:

- (1) conduit missing a support,
- (2) conduit separation violation,
- (3) conduit resting on Category 1 tray.

The BCAP inspectors observed that an adjacent conduit (not included in the BCAP inspection package) was observed to have similar deficiencies. The BCAP inspectors were including these deficiencies in their observation report.

The inspector concluded that the reinspection was performed in an acceptable manner.

- c. On December 5, 1984, the inspector witnessed the reinspection of three conduits located in the auxiliary building. The conduits were numbered C77, C52, and C90. The inspector observed that the reinspection package included the required reinspection checklists, checklist instructions, and S&L drawings. Included in the conduit reinspections were attributes such as conduit separation, support installation and location, marking of conduits, and tightness of connections. No deficiencies were identified during the reinspection.

The inspector concluded that the reinspection was performed in an acceptable manner.

- d. On December 12, 1984, the inspector accompanied by an Evaluation Research Corporation (ERC) inspector, performed an overinspection of a 3/4 inch section of small bore pipe. The configuration of the small bore pipe was previously reinspected by the BCAP taskforce. The reinspection package was numbered CSR-I-M-1-056. During the overinspection, the inspector determined that the reinspection performed by the BCAP taskforce accurately documented the condition of the small bore pipe.
- e. On December 17, 1984, the inspector witnessed a portion of the reinspection of conduit support TS 3-6. The reinspection package, identified as item number CSR-I-E-COH-18, included the required reinspection checklist, checklist instruction, and conduit support drawings. The reinspection of this support required a reinspection of the hanger and hanger components by the BCAP electrical inspectors and a reinspection of the conduit support welds by BCAP mechanical/welding inspectors. During the witnessing of this reinspection no observations were identified.

The inspector concluded that the reinspection was performed in an acceptable manner.

#### 6. Public Meeting to Discuss BCAP

The December public BCAP status meeting was held on December 6, 1984, at the Mazon Emergency Offsite Facility (EOF). Participants in the meeting included Messrs. B. Davis, R. Warnick, W. Forney, and R. Gardner of the NRC staff, T. Maiman, N. Kaushal, E. Fitzpatrick, and N. Smith of CECO, K. Kostal of S&L, and R. Ham of ERC.

Subjects addressed during the meeting included a presentation on the status of BCAP activities, a summary of the S&L review of discrepancies identified to date, the BCAP QA overinspection program, and the status of ERC reviews and observations identified to date.

During the meeting the licensee, in response to the NRC's request made at the conclusion of the previous public meeting, discussed in detail the status of 3CAP observations.

7. Exit Interview

The inspector met with licensee representatives (denoted under Persons Contacted) during and at the conclusion of the inspection on January 7, 1985. The inspector summarized the scope and findings of the inspection.

Attachments:

1. Memo from C. E. Norelius  
to J. G. Keppler dtd  
12/19/84
2. Ltr from CECO to  
J. G. Keppler dtd  
12/21/84