

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-456/87045; 50-457/87046

Docket Nos. 50-456; 50-457

Licenses No. NPF-72; NPF-75

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

Facility Name: Braidwood Station, Units 1 & 2

Inspection At: Braidwood Site, Braidwood, Illinois

Inspection Conducted: December 10-22, 1987

Inspector: F. J. Jablonski for
S. A. Reynolds

1-14-88
Date

Approved By: F. J. Jablonski
F. J. Jablonski

1-14-88
Date

Inspection Summary

Inspection on December 10-22, 1987 (Report No. 50-456/87045; 50-457/87046)

Areas Inspected: Routine, unannounced inspection of licensee's QA Program implementation in preparation for operation of Unit 2 in the specific areas of preoperational testing QA, QA program administration, document control, and maintenance. This inspection was conducted utilizing portions of Inspection Procedures 35301, 35740, 35742, and 35743.

Results: No violations or deviations were identified.

DETAILS

1. Persons Contacted

Commonwealth Edison Company (CECo)

- *E. Fitzpatrick, Station Manager
- *P. Barnes, Regulatory Assurance Supervisor
- *R. Bedford, Regulatory Assurance Staff
- *J. Gosnell, Quality Control Supervisor
- S. Heddon, Instrument and Control Supervisor
- *R. Kyrouac, Quality Assurance Superintendent
- *D. Paquette, Assistant Superintendent, Maintenance
- K. Radke, Station Lubrication Coordinator
- *J. Roth, Environmental Qualification Coordinator, Technical Staff
- *M. Takaki, Regulatory Assurance Staff

*Indicates those attending the December 22, 1987, exit meeting.

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

2. Licensee Action on Previous Inspection Findings

- a. (Closed) Open Item (456/87030-02; 457/87029-02): Retention times specified for QA records in procedure QP 17-51 were in conflict with licensee's current commitment to ANSI N45.2.9-1974 and Section 6.10 of Braidwood Technical Specification.

QP-17-51 was revised to correct the above. This item is closed.

- b. (Open) Violation (456/87030-03; 457/87029-03): Licensee did not establish measures to adequately control the use of out of tolerance (OOT) measuring and test equipment (M&TE) and evaluate the effects on operating equipment.

Corrective action described in the licensee's October 30, 1987 letter to the NRC was to revise procedure BwAP 400-4T2 to specify how evaluations of M&TE were to be performed and documented. The inspector reviewed the revised procedure and noted a more defined evaluation process over the previous procedure; however, the inspector was unable to review a sufficient number of evaluations to determine if the revised procedure effectively corrected the problem. This item is open and will be reviewed during a subsequent inspection.

The inspector also noted that there was a substantial backlog of incomplete evaluations of OOT M&TE. One of the steps in the evaluation process required a determination of whether a Technical Specification (Tech. Spec.) violation had occurred or Limiting Condition for Operation Action Requirement (LCOAR) entry was required. All of the incomplete evaluations reviewed by the inspector did not have this step completed. Failure to complete

the evaluations, including the above step, prevents the determination of operability for applicable Tech. Spec. related equipment and the determination of reportability per 10 CFR 50.73. Timely corrective actions were not taken; 70 evaluations were over 30 days old, 20 of these were over 180 days old. This indicated a significant breakdown in the evaluation process and appeared to be caused by lack of management attention and involvement.

The inspector was aware that this backlog was previously identified by the QA department. The QA department monitored the maintenance department's (Instrument and Control, Electrical, and Mechanical) commitments and issued a finding about untimely corrective action because of failure to meet commitments. As a result, additional manpower was provided; however, increased and aggressive management attention and involvement must continue to reduce the backlog to an acceptable level. The QC department did not identify the unacceptable backlog prior to QA even though the QC department maintained the official logbook for OOT M&TE evaluations. This matter is unresolved. Corrective actions will be reviewed during a future inspection. (456/87045-01; 457/87046-01).

3. Review of Allegations

(Closed) Allegation (RIII-87-A-0100)

The NRC received an allegation during June 1987, about several concerns with the Out-Of-Service (OOS) process. The concerns were reviewed by the inspector as discussed below.

OOS is the process used to tag and administratively remove a piece of equipment and necessary adjacent equipment from service to perform maintenance or surveillance activities. This process is used to protect personnel and operating equipment.

Concern No. 1

Supervisors were not "walking down" systems, according to the OOS procedure, prior to crews commencing work.

NRC Review

Braidwood Administrative Procedure, BWAP 330-1, "Station Equipment Out-Of-Service Procedure," Revision 52, required that the supervisor in charge of the work had the responsibility to assure that an inspection had been made to determine that OOS cards had been correctly placed and that the equipment was safe for work. The inspector interviewed supervisors from mechanical, electrical, and I&C maintenance departments and operations (fuel handling) department. Those supervisors were well aware of BWAP 330-1 requirements and stated that in almost all cases they personally "walked down" the system with a member of the crew, or the lead workman "walked down" the system after the supervisor had completed his "walkdown"; in some cases, the supervisors had the lead workman "walkdown"

the system. The inspector discussed this issue with non-supervisory maintenance and operations personnel and reviewed several in-place and in-progress system walkdowns. The inspector did not note any instances where a system was not adequately "walked down" in accordance with BWAP 330-1.

Results

The concern was not substantiated; out of service systems were "walked down" prior to commencing work per procedure, and in almost all cases by the supervisors with a crew member to verify the supervisor's "walk downs."

Concern No. 2

Operations personnel verification of OOSs was inadequate to identify errors (such as, use of boilerplate OOSs and not verifying adequacy).

NRC Review

The inspector discussed the OOS process with operations personnel. Those personnel were well aware of OOS requirements and necessary actions. The inspector reviewed several completed and in-place OOS and noted that all necessary forms were properly filled out and OOS cards were hung on the correct pieces of equipment with the correct position recorded. The inspector did not identify any instances where boilerplate OOSs were used.

Results

The concern was not substantiated; operations personnel adequately verified OOSs according to procedure. The inspector did not identify any problems associated with operations personnel's ability to identify errors through OOS verifications.

Concern No. 3

Training of Maintenance Foremen on systems is inadequate for them to understand the systems and related OOSs.

NRC Review

The inspector determined that maintenance personnel, including foremen, were required to have systems training in order to meet position qualification requirements. Based on review and discussions with maintenance, QA, and regulatory assurance personnel, the inspector determined that maintenance foremen had completed a two week systems training course. Based on discussions with several maintenance foremen, the inspector determined that maintenance foremen had considerable nuclear power plant experience. The maintenance foremen interviewed demonstrated sufficient knowledge and understanding of systems and OOS requirements.

Results

The concern was not substantiated; the inspector concluded that maintenance foremen had an adequate understanding of systems and OOS requirements based on the foremen's knowledge, experience, and training.

Concern No. 4

Training of maintenance personnel (including mechanics) on OOS procedures is inadequate; that is, training is different from actual practices.

NRC Review

The inspector was informed by maintenance personnel that OOS was included as part of annual requalification training. The inspector noted that training included both site-specific and company-wide OOS requirements. Maintenance personnel were generally aware of this fact. Maintenance personnel exhibited knowledge of the OOS requirements. The inspector did not identify any instances where the above mentioned training caused any problems.

Results

The concern was not substantiated; training appeared adequate. Both site-specific and company-wide OOS requirements are discussed during training.

Conclusion

Review of the allegation received during June 1987, did not identify any instances of impropriety that would have impact on the radiological health and safety of the public, nor were there any such instances made known to or identified by the inspector during the inspection.

No violations or deviations were identified during the inspection of the above concerns. This matter is closed.

4. QA Program

The purpose of this inspection was to determine if the QA Program, in specific programmatic areas, had been properly implemented for Braidwood, Unit 2. Braidwood Units 1 and 2 share a common CECO QA Program, and in most cases, the same implementing procedures. This inspection included review of QA Program implementation in the areas of preoperational testing, QA Program administration, document control, and maintenance. The inspector assessed licensee management involvement and control in assuring quality in these areas and attempted to determine the effectiveness of staffing, training, and qualifications.

a. Reference Documents

- ° BwAP 370-1, "Station Lubrication Program," Revision 2.
- ° BwAP 370-2, "Station Sampling Program," Revision 0.
- ° BwAP 400-7, "Preventive Predictive Maintenance Program," Revision 0.

b. Inspection Results

- (1) The inspector reviewed implementation of preoperational testing

QA through questioning, discussions, and observation of work. The inspector determined that the QA department satisfactorily understood basic responsibilities. The inspector reviewed various audits and surveillances performed in 1987, that covered preoperational testing activities which included tests of safety related systems and leak rate tests. Those audits and surveillances were adequately performed and documented, performance-related and compliance deficiencies were identified, and adequate corrective actions were taken to resolve the deficiencies.

The inspector reviewed qualification records for three QA engineers involved in preoperational testing, including one new engineer, and determined that the personnel met the requirements for the QA engineer position, as well as lead auditor/auditor.

- (2) The inspector reviewed the general administration of the QA Program. The inspector verified by document review, discussions with QA personnel, and by observation and review of various audits, surveillances, schedules, and auditor certifications that the station QA department had established adequate controls and mechanisms for performance and verification of the QA Program requirements.

The inspector noted that there was a staff of 14 QA engineers or inspectors in the QA department. Staffing level requirements were for 12 persons; the two extra persons were added to the QA staff to help during preoperational testing and startup for Units 1 and 2.

- (3) The inspector reviewed implementation of the administrative controls for handling and distribution of documents for safety related applications. The inspector noted that distribution of controlled documents was handled by central files personnel responsive to procedural requirements. A computer printout of the master revision list was readily available for verification of the latest revision. A review of various maintenance work requests indicated that current copies of drawings and procedures were used. The inspector reviewed an October 1987 QA audit report about implementation of the document control program and noted that no deficiencies were identified. The audit did not include review of the control of critical drawings in the control room.

In parallel with this inspection, a problem with the control of critical drawings in the control room was identified as documented in another NRC inspection (50-456/87038; 50-457/87036)), where this issue will be followed up.

- (4) The inspector reviewed implementation of maintenance programs and attempted to assess the material condition of Unit 2. Several corrective maintenance work requests about diesel generator repair and relief valve setpoint checks that were completed in April through November of 1987 were reviewed. It was determined that necessary information was included in the work request packages, equipment, and materials used were

identified, and work requests were adequately reviewed and approved before and after the work. There was no sizeable corrective maintenance backlog.

The inspector reviewed portions of the Preventive-Predictive Maintenance Program and determined it to be adequate. Scheduling of preventive maintenance appeared satisfactory, except as noted below, and there was no apparent backlog. Preventive-predictive maintenance activities were generally performed when required and suitably documented.

During a review of preventive maintenance scheduling, the inspector noted that almost all environmental qualification (EQ) maintenance and surveillance requirements for Unit 2 were not scheduled and some Unit 1 EQ maintenance and surveillance requirements were not scheduled. The inspector also noted that the licensee did not start the "EQ clock" until unit criticality even though the licensee was required by 10 CFR 50.49 to have an EQ Program established by November 30, 1985. A CECO corporate engineer informed the inspector that radiation and high temperatures were not present until the reactor was critical; therefore, the "EQ clock" was not required to be started until unit criticality. This issue is unresolved and will be reviewed during a future inspection (456/87045-02; 457/87046-02).

The inspector reviewed implementation of the Station Sampling Program and noted that the procedure, BWAP 370-2, was not strictly followed. The Oil Sample Program Log, an attachment to BWAP 370-2, was not being completed, and another attachment, the Oil Sampling and Analysis Program, was extremely cumbersome and difficult to use for accurate scheduling. The Station Lubrication Coordinator was aware of the problems and in the process of revising the program. This issue is unresolved pending review of the revised program (456/87045-03; 457/87046-03).

c. Summary

The inspector reviewed implementation of the QA Program for Unit 2 in the specific areas of preoperational testing QA, QA program administration, document control, and maintenance. Except for the items discussed above, the inspector did not identify any other concerns.

Based on reviews of program implementation, discussions with maintenance personnel, review of QA audits of maintenance activities, walkdowns of Unit 2, and documentation of work status and work performed, the inspector determined that the material condition of Unit 2 was satisfactory.

No violations were identified.

5. Conclusion

The inspector concluded that:

- Management involvement and control in assuring quality needed improvement in the maintenance area based on the OOT M&TE evaluation backlog issue
- Management involvement and control was satisfactory in the QA department based on evidence of effective planning, scheduling, and generally complete and timely audits. Management's approach to resolve the OOT M&TE evaluation backlog issue from a safety standpoint was lacking in that prompt resolutions were not sought; the attitude appeared to be "just satisfy minimum requirements".
- Staffing in the QA department was sufficient to meet current and future work loads.
- Training and qualifications of the QA staff contributed to an adequate understanding of work and responsibilities.

6. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, violations, or deviations. Three unresolved items disclosed during this inspection are included in Sections 2.b. and 4.b.(4).

7. Exit Interview

The inspector met with licensee representatives (denoted in Section 1) on December 22, 1987, at Braidwood Nuclear Station, and summarized the purpose, scope, and findings of the inspection. The inspector discussed the likely content of the inspection report with regard to documents or processes reviewed by the inspector. The licensee did not identify any such documents or processes as proprietary.