



**Commonwealth Edison**  
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Address Reply to: Post Office Box 767  
Chicago, Illinois 60690

August 17, 1982

Mr. James G. Keppler, Regional Administrator  
Directorate of Inspection and  
Enforcement - Region III  
U.S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, IL 60137

Subject: Braidwood Station Units 1 and 2  
I&E Inspection Report Nos.  
50-456/81-01 and 50-457/82-01

Reference (a): July 7, 1982, letter from  
C. E. Norelius to Cordell Reed.

Dear Mr. Keppler:

Reference (a) provided the results of an inspection conducted by Mr. R. N. Sutphin of activities at Braidwood Station. During the inspection it was determined that certain activities were not in compliance with NRC requirements. Attachment A to this letter contains Commonwealth Edison's response to the Notice of Violation which was appended to reference (a).

In responding to Violation 1 it has become apparent that the post tensioning sequence was adequately controlled and that no basis exists for the citation. It is requested that this Violation be withdrawn. Construction records and personnel are available to discuss this matter further.

We have also determined that there is no basis for Violation 2. Appropriate corrective action to the unfavorable trend of Comstock NCR's was taken in a timely fashion. It is requested that this Violation also be withdrawn.

Concern has been expressed by the NRC for our acceptance of construction materials and workmanship which are not in complete conformance with engineering specifications. We find this practice acceptable as long as the nonconforming materials or workmanship do not compromise the inherent and engineered safety features of the plant. In many cases the nonconforming materials are superior to those specified. Changes to construction procedures are made to delete superfluous requirements which do not alter the acceptability of the finished product. In no case do these changes compromise the quality of the construction at Braidwood Station.

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To the best of my knowledge and belief the statements contained herein and in the attachment are true and correct. In some respects these statements are not based on my personal knowledge but upon information furnished by other Commonwealth Edison employees and contractor employees. Such information has been reviewed in accordance with Company practice and I believe it to be reliable.

Please direct further questions regarding this matter to this office.

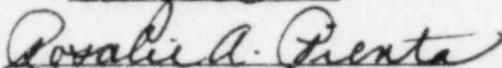
Very truly yours,



L. O. DelGeorge  
Director of Nuclear Licensing

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SUBSCRIBED and SWORN to  
before me this 17th day  
of August, 1982

  
Notary Public

4760N

## ATTACHMENT A

### Response to Notice of Violation

#### VIOLATION 1

10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings" states in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings."

Commonwealth Edison Company Topical Report CE-1-A, Section 5, states in part, "Activities affecting quality are required by the Edison Quality Program to be prescribed by documented instructions, procedures or drawings."

Braidwood S&L Specification L-2722, "Post Tensioning Installation" includes in Section 13-105.2, "shop drawings shall include detail and erection drawings, and shall be accompanied by the following:

- a. Stressing Sequence Drawings, and also stressing records for each tendon.

Section 13-603.2 includes in part, "...installer shall prepare a detailed stressing sequence schedule that shall be submitted in the form of stressing sequence drawings."

Section 13-603.3 states, "After final approval of these drawings, all stressing shall follow the approved schedules."

Contrary to the above, stressing of Unit 1 containment's post tensioning tendons have been completed without stressing sequence drawings having been prepared, reviewed, and approved, or used to control the work; and a drawing record was not provided for the results of the work.

#### Response:

The stressing of Unit I and Unit II containments was done in accordance with stressing sequences approved by the Architect-Engineer prior to commencement of work. All changes to the sequence were approved by the A-E prior to the actual work and were controlled by the CECO "Field Change Request" (FCR) procedures.

The stressing sequence was incorporated into a work procedure and the procedure has been updated to incorporate FCR's that have been written giving a permanent, controlled record of the work.

We feel that we are not in violation of Criterion V, Appendix B Section 5 of the CE Topical Report or the intent of Specification L-2722 because the method of documentation was equivalent to that specified and accomplished the same level of control. We request that this Violation be withdrawn.

VIOLATION 2:

10 CFR 50, Appendix B, Criterion XVI, "Corrective Action" states in part, "measures shall be established to assure that conditions adverse to quality, such as ... nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition."

Commonwealth Edison Company Quality Assurance Manual, Q.R. No. 16.0 - "Corrective Action" states in part in Section 16.3, "records will be regularly reviewed and analyzed by quality assurance and engineering personnel:

- a. To assure that the causes of nonconformities and the corrective action have been clearly described.
- b. To determine whether corrective measures will preclude recurrence."

Commonwealth Edison Company Quality Procedure Q.P. No. 16-1, Section 5.4, states in part ----"corrective action will be prescribed where recurring nonconformance is in evidence."

Contrary to the above, effective action was not taken to address corrective action to preclude recurrence or continuation of nonconformances associated with installation of cable pan and conduit hangers as follows:

An analysis of 319 L. K. Comstock Nonconformance Reports (NCR) over an eight month period indicated 68 were incorrect materials, 60 were for dimensional errors, 71 for noncompliance, 27 for incorrect fitup gaps, eight for incorrect location, and 16 for welding deficiencies. Many of these occurred during a three month portion of the eight month period. There was no recognition of significant adverse trends or the need for action to take effective corrective measures to prevent recurrence or the continuation of these nonconformances.

Seventy percent of the hangers had not been completed or inspected for configuration compliance. Two hundred and thirteen (213) of the 310 NCRs written during the eight month period had been recommended for "use-as-is" disposition. Many of these will require a design review for effect on structural integrity.

Response:

This is not considered to be an item of noncompliance.

Commonwealth Edison documented the results of a NCR trend analysis in a letter to Comstock on December 17, 1981. This resulted in fundamental changes to Comstock's construction practices at Braidwood, including special training conducted in January and February, 1982. The NRC inspection began in February. In April the trend analysis was again reviewed with Comstock. On April 20, 1982, corporate management from both Comstock and Commonwealth Edison met to review various unsatisfactory aspects of Comstock's work, including the adequacy of corrective actions taken since the trend analysis.

As a result of this meeting and previous site involvement, the following actions have been taken by PCD to preclude the installation of hangers prior to the issuance of a CECo Field Change Request.

- A. L. K. Comstock has implemented procedure 4.2.3 (Field Problem Reporting Procedures) which outlines the use of a "Field Problem Report." This report allows a more closely controlled communication link between field production personnel and LKC engineering personnel. This procedure will help preclude the installation of a hanger detail without first obtaining an approved Field Change Request.
- B. In April and May CECo Project Const uction department hired three additional LKC engineers and reassigned two S&L field engineers to the project. Their specific duties are to resolve and close out field construction problems in a timely manner.
- C. Documented t aining sessions with all applicable field personnel were held. The topic discussed was the proper use and timeliness of issuance of the CECo Field Change Request.
- D. L. K. Comstock hired a full time, on-site Q.A. Engineer to monitor program compliance. This was effective May 17, 1982.

Within the past months L. K. Comstock has significantly reduced the number of NCR's associated with the installation of electrical hangers. Overall it is Commonwealth Edison's assessment that adequate corrective measures have been taken to preclude repetition of this type of deficiency.

VIOLATION 3

10 CFR 50, Appendix B, Criterion XIII, "Handling, Storage, and Shipping" states in part, "Measures shall be established to control the handling, storage, shipping, cleaning, and preservation of material and equipment in accordance with work and inspection instructions to prevent damage or deterioration.

ANSI N45.2.2 states in part, in Section 7.2 "Detailed handling instruction and procedures shall be prepared for all items that require special handling instructions because of weight, size, susceptibility to shock damage, high nil ductility transition temperatures, or any other conditions that warrant special instructions. Commonwealth Edison Company Quality Assurance Manual Quality Procedure Q.P. No. 13-1 states in part, in Section 4.2, "...Items requiring special handling will be identified in the contractor's procurement documents. Special handling tools and equipment, when applicable, will be verified as complying with periodic test and inspection contractor approved procedures. Special procedures developed by the contractor for the unusual components will be utilized when applicable. Equipment identified for special handling and control will be noted in a control and follow-up system administered by construction...."

Phillips, Getchow Co. Quality Control Procedure QCP B4, states in part, in Revision No. 1, Section 6.1, "Where an items weight exceeds 20,000 (lbs.) (approximately 9091kg), or where indicated by the customer because of other considerations such as configuration, material properties, or safety relatedness: a "special lift procedure" shall be established."

Contrary to the above, there were no special lift procedures written, reviewed, approved, or used for the special lifts handled by Phillips, Getschow Co. during their handling and installation of safety related equipment, materials and components on Unit 1.

Response:

Corrective Action Taken and Results Achieved

A list of equipment installed by Phillips, Getschow with weights equal to or greater than 20,000 lbs was made. From this list a re-review of manufacturers' instruction manuals and procedures was done to determine any special lifting requirements. No special precautions were identified to be necessary for the lifting and setting of equipment in excess of 20,000 lbs.

The equipment was hoisted using the general requirements of the PGCco. lift procedure which requires the inspection of "tooling" that is used (i.e. cables, shackles etc.) and this had been accomplished.

At the present time an inspection is being conducted of all safety related equipment in excess of 20,000 lbs. that was set by Phillips, Getschow to assess and verify that no damage had occurred during erection. This should be completed by September 20, 1982.

Special lifting procedures had been required for the reactor pressure vessel, steam generators, pressurizer, reactor internals and reactor coolant pump internals. This equipment was installed by other contractors in accordance with approved procedures.

Corrective Action Taken To Avoid Further Noncompliance

The procedures of other site contractors setting safety-related equipment will be reviewed to assure that appropriate provisions have been made for special handling of components important to safety.

Date When Full Compliance Will Be Achieved

September 20, 1982.

VIOLATION 4

10 CFR 50, Appendix B, Criteria VI, "Document Control" states in part, "Measures shall be established to control the issuance of documents, such as instructions, procedures, and drawings including changes thereto, which prescribe all activities affecting quality. These measures shall assure that documents, including changes, are reviewed for adequacy and approved for release by authorized personnel and are distributed to and used at the location where the prescribed activity is performed..."

Commonwealth Edison Company Quality Assurance Manual Q.R. No. 6.0- "Document Control" states in part, "A document control system will be used to assure that documents such as specifications, procedures, and drawings are reviewed for adequacy and approved for release by authorized personnel.... Such documents will be distributed and used at the locations where the prescribed activity is performed. Changes to these documented will be handled similarly.... Each document recipient is responsible for ensuring that only the latest authorized documents are in use and the void documents are so identified..."

Commonwealth Edison Company Procedure Q.P. No. 6-1 states in part:

"Each recipient listed on the applicable distribution list shall, upon receipt of new documents, destroy or segregate and clearly mark all superseded documents. Each receiving office or area shall have a control method for checking receipt of new or revised documents, and assuring that the latest revised document is in use."

Contrary to the above, nine out of 25 post tensioning vendor drawings on the rack in the Braidwood site construction office for Unit 1 were superseded and not identified as such, six out of 22 similar drawings for Unit 2 were also superseded and not identified as such, and the latest revisions of the superseded drawings were not distributed and used at this prescribed location.

This demonstrates that approximately one-third (32 percent) of the total required post tensioning drawings at this drawing control location were out of control.

Response:

Corrective Action Taken and Results Achieved

As identified in the Inspection Report, the drawing files were updated on the day after the discrepancies were identified.

Corrective Action Taken to Avoid Further Noncompliance

Vendor drawings in the Project Construction office have all been stamped "For Information Only" and are not controlled. The site contractors' files will be used whenever controlled construction vendor prints are needed.

Date When Full Compliance Will Be Achieved

August 9, 1982.

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