April 30, 1986

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKETED
USNRC

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

'86 MAY -5 A10:45

In the Matter of:	)	
	)	
COMMONWEALTH EDISON COMPANY	)	
	)	Docket Nos. 50-456
(Braidwood Station, Units 1 and 2)	)	50-457

BRIEF OF COMMONWEALTH EDISON COMPANY
IN OPPOSITION TO THE
ADMISSION OF SUBCONTENTION 2.C

In its order dated April 24, 1986, Commonwealth Edison Co. (Braidwood Station Units 1 and 2) CLI-86-08 ___ NRC ___ (1986), the Commission directed the Licensing Board to separately apply the five factor test of 10 C.F.R. § 2.714 to Subcontention 2.C. Observing that this aspect of Intervenors' Amended Quality Assurance Contention (the "contention") was separately admitted by the Licensing Board pursuant to a stipulation by the parties on July 23, 1985, the Commission apparently assumed that Subcontention 2.C has an existence separate from the balance of the contention, now stricken.

The facts are otherwise. Subcontention 2 originally comprised 3 subparts and was an integral part of the contention. In its order admitting the contention, the Licensing Board struck subcontentions 2.A and 2.B, but provided the Intervenors yet another opportunity to resubmit Subcontention 2.C. with

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further specificity and basis. This opportunity was granted notwithstanding the Intervenors' deposition of an NRC Staff employee, Robert Warnick, on the subject of alleged harassment and intimidation of L. K. Comstock, Inc. quality control inspectors prior to the time the contention was submitted.

Applicant, Commonwealth Edison Company ("Edison") strenuously opposed the pre-contention discovery of the NRC Staff authorized by the Licensing Board and the further opportunity to resubmit Subcontention 2.C. Edison's arguments to the Board were unavailing, however. In response to the Licensing Board's invitation, Subcontention 2.C was finally proposed by Intervenors on July 12, 1985. In view of the Licensing Board's rulings admitting the contention on June 21, 1985 and certain supplemental information provided by Intervenors as additional basis for Subcontention 2.C on July 15, Edison stipulated to the admission of this final aspect of the contention during the course of the prehearing conference on July 23, 1985. This stipulation did not waive Edison's objections to the process by which the contention (including 2.C) was admitted.

The admission of Subcontention 2.C is tainted by the same procedural irregularities which should have led both the Appeal Board and the Commission to reject the entire contention. Edison reasserts its position that the Licensing Board's authorization of pre-contention discovery against the

NRC Staff violated Section 2.714 and 2.740 of the Commission's Rules of Practice and incorporates by reference the arguments made in Applicant's Objections to Board Order dated April 29, 1985, Commonwealth Edison Company's Motion for Directed Certification dated July 8, 1985, Commonwealth Edison Company's Petition for Review of Appeal Board Decision and Petition for Exemptions from Commission Regulation dated September 23, 1985 and Commonwealth Edison Company's Answers to Questions posed by the Commission dated December 19, 1985.

Without waiving any of the arguments made in those pleadings, the succeeding portions of this brief address the five factors set forth in 10 C.F.R. § 2.714 which govern the admissibility of late-filed contentions. It is clear that it is Intervenors' burden to affirmatively demonstrate that balancing of the five factors weighs in favor of admitting a late-filed contention. Boston Edison Co. (Pilgrim Nuclear Power Station) ALAB-816, 22 NRC 461, 466 and n.22 (1985). However, in this instance the application of the five factors to Subcontention 2.C leads inevitably to the conclusion that almost all of that Subcontention is inexcusably tardy and that a balancing of the five factors leads to rejection of the entire Subcontention.

Factor (i) Good cause, if any for failure to file on time.

The Commission has held in this very docket that the good cause factor is a "crucial element in the analysis of whether a late-filed contention should be admitted" (CLI-86-08, slip op. at p. 2). With the exception of one

sentence, Subcontention 2.C alleges events that took place in August, 1984, almost one year prior to the submission of Subcontention 2.C. Numbered paragraph 1 of the Subcontention refers to complaints of more than 25 Comstock QC inspectors to the NRC in September, 1984. That same paragraph refers to a complaint by a former Comstock QC inspector, John Seeders, to the NRC in August, 1984. Numbered paragraph 2 of the Subcontention refers to the termination of a Comstock welding inspector, Worley Puckett, also in August, 1984 and refers to certain proceedings before the United States Department of Labor in November, 1984. Exhibit G to Intervenors Motion to Admit Claims of Intimidation and Harassment of Comstock Quality Control (QC) Inspectors and Motion for Protective Order dated July 12, 1985 is a letter from the Department of Labor dated November 6, 1984 and shows a copy to the NRC.

Since Intervenors have not complied with the requirements of Section 2.714 and made no showing as to why they waited until July, 1985 to raise issues of alleged harassment and intimidation which took place in August, 1984, Edison is unable to fully analyze the circumstances surrounding the timing of the submission of Subcontention 2.C. However, there are strong indications that the same sort of unjustified delay which the Commission observed in CLI-86-08 took place with respect to the allegations of harassment and intimidation. NRC Staff Inspection Report 84-34 was issued on December 31, 1984 and refers at page 4 of the details section to an August 17, 1984 incident of harassment involving a

Comstock QC inspector. (A copy of Inspection Report 84-34 is attached hereto as Attachment A). August 17, 1984 is the same date that Mr. Seeders sent a letter to Comstock management, with copies to the NRC Staff and Edison, as set forth in Subcontention 2.C. Both Mr. Seeders and Mr. Schulz, who was then the NRC Inspector who received Mr. Seeders' letter, confirmed that Inspection Report 84-34 documented tha NRC Staff's disposition of Mr. Seeders' complaints in his August 17, letter. (Schulz dep. pp. 452-53; Seeders dep. pp.158-161). A copy of Inspection Report 84-34 was routinely sent to Douglas Cassel, one of the counsel for Intervenors, on December 31, 1984.

It appears that Intervenors fail to mention Inspection Report 84-34 in an attempt to avoid the conclusion that they unjustifiably delayed in submitting Subcontention 2.C. Thus, there is no indication in Subcontention 2.C or the documentation submitted in support of the July 12, 1985 motion to admit 2.C that Intervenors relied on Inspection Report 84-34.* Mr. Seeders' unexecuted affidavit attached to the July 12 motion recites that he decided "last August that he would do whatever it takes" to see that allegations of harassment

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* Intervenors did refer to both Inspection Report 84-34 and Mr. Seeders August 17, 1984 letter in their original Subcontention 2.C filed on May 24, 1985. The admissibility of that Subcontention item was deferred and Intervenors were given yet another chance to provide basis and specificity for Subcontention 2.C. Intervenors did not see fit to refer to Inspection Report 84-34 in their July version of Subcontention 2.C. Inexplicably, Intervenors have asserted in their April 3, 1986 brief to the Commission at page 10, that they first learned of "harassment of L. K. Comstock quality control inspectors through the May 17, 1985 call from the whistle-blower...." Yet the telephone call relates only to Mr. Puckett. Intervenors did not refer to Mr. Puckett in their May 24, 1985 version of Subcontention 2.C.

and intimidation were resolved. Mr. Seeders further testified that he was contacted by counsel for intervenors between one and two months prior to July 12 (Seeders dep. p. 289). How Intervenors came to contact Mr. Seeders in May or June of 1985 is not known to Edison. It is apparent, however, that Intervenors were aware of those allegations of harassment and intimidation no later than the time they received Inspection Report 84-34 and waited until July, 1985 to submit an appropriate contention with respect to Mr. Seeders' allegations.

Numbered paragraph 2 of Subcontention 2.C describes Mr. Puckett's allegations. Edison has incomplete knowledge of when or under what circumstances Intervenors first became aware of these allegations. What is known is that intervenors were apparently able to obtain information from the attorney who represented Mr. Puckett before the Department of Labor. Attachment B to this brief is a letter from counsel for intervenors, Mr. Guild, to Mr. Puckett's Department of Labor counsel returning Mr. Puckett's file. This letter was produced by Mr. Puckett in response to a deposition subpoena. The file was returned on July 11, 1985, one day before Subcontention 2.C was filed. There is no indication of how long the file was in Intervenors' possession or how they obtained it. Moreover, had Intervenors pursued the information set forth in Inspection Report 84-34, they would undoubtedly have learned of Mr. Puckett's allegations soon after December 31, 1984. At his deposition, Mr. Seeders indicated that he was

well aware of the circumstances of Mr. Puckett's termination as a quality control inspector by Comstock (Seeders dep. pp. 304-05).

To meet the good cause criterion of Section 2.714 for late filed contentions, "[i]ntervenors are required to diligently uncover and apply all publicly available information". Kansas Gas & Electric Co. (Wolf Creek Generating Station, Unit No. 1, LBP-84-17, 19 NRC 878, 886-87 (1984). As the Commission has stated, an intervenor has an "obligation to examine the publicly available documentary material ... with sufficient care to enable it to uncover any information that could serve as the foundation for a specific contention." Duke Power Co. (Catawba Nuclear Station, Units 1 and 2) CLI-83-19, 17 NRC 1041, 1045 (1983). In this proceeding Intervenors had information which would have led them unerringly to the allegations of Mr. Seeders and Mr. Puckett no later than December 31, 1984. They unaccountably tarried until July 12, 1985 to present Subcontention 2.C. A delay of this magnitude clearly precludes a finding of good cause for the late submission of these aspects of Subcontention 2.C. Commonwealth Edison Co. (Braidwood Station, Units 1 and 2) CLI-86-08 ___ NRC ___ 1986) (slip op. at p. 4)

There is only one sentence in Subcontention 2.C which relates to events subsequent to the issuance of Inspection Report 84-34. That sentence reads: "Although

QC Supervisor R. M. Sakalac (sic) was finally terminated in 1985 for his mistreatment of QC inspectors and other misconduct, the effects of his harassment remain uncorrected and systematic harassment continues at Comstock to the present." The Supplement to Intervenors Motion to Admit Subcontention 2.C indicates that the events in question took place at the end of March, 1985 and that Intervenors were unaware of the details of these events until July, 1985. In these circumstances, Edison concedes that there was good cause for the filing of that portion of Subcontention 2.C which relates to events which took place in March, 1985.

Factors (ii) and (iv). The availability of other means whereby the petitioner's interest will be protected and the extent to which the petitioner's interest will be represented by existing parties.

While these factors are given less weight than other factors in resolving the admissibility of late-filed contentions, the Commission has held in this proceeding that they weigh in Intervenors favor. CLI-86-08 (slip op. at p. 9). Accordingly, Applicant does not contest that these factors are in favor of admitting the late-filed contention.

Factor (iii) The extent to which petitioner's participation may reasonably be expected to assist in developing a sound record.

If viewed as of the time Subcontention 2.C was submitted, it is arguable that Intervenors demonstrated their

ability to assist in developing a sound record. In addition to identifying employees of Edison and the NRC Staff, Intervenors listed 30 or more present or former Comstock QC inspectors (whose identities were not disclosed), Mr. Seeders, Mr. Puckett and present and former Comstock management personnel as witnesses (July 12, 1985 motion at pp. 5-6).

Subsequent events have belied the promise of assistance in developing a sound record which the listing of those witnesses would indicate. Intervenors' answers to interrogatories disclose that they do not know the identity of any QC inspector who was allegedly harassed and intimidated beyond those set forth in an NRC Staff memorandum attached to Intervenors' July 15, 1985 pleading. Moreover, Mr. Seeders, who authorized the affidavit attached to Intervenors' July 12 motion, was unable to recall the name of any of the more than 10 inspectors described in paragraph 3 of his affidavit as being "eager" to present testimony to the Licensing Board. (Seeders dep. pp. 360-64)

A key issue in any assessment of claims of intimidation and harassment is the extent to which such incidents have deterred quality control inspectors from the performance of their duties. Duke Power Co. (Catawba Nuclear Station, Units 1 and 2) LBP-84-24, 19 NRC 1418, 1518-20; 1530-31 (1984). Yet each Comstock QC inspector who has been deposed has stated unequivocally that no actions undertaken by Comstock management deterred him from the conscientious

performance of his inspection duties.* This is confirmed by the NRC Staff Inspection Reports which looked into these allegations (Inspection Reports 85-009 and 85-021, Attachments C and D, respectively).

As with the portions of the QA contention ordered stricken by the Commission, Intervenors' contribution to the development of a sound record will include adverse examination of Comstock management personnel, Edison management personnel and the NRC Staff. In addition, to establish the claims of harassment, Intervenors must also conduct adverse examination of the very QC inspectors whose claimed harassment and intimidation is asserted in Subcontention 2.C to discourage "the identification and correction of deficiencies in safety-related components and systems at the Braidwood Station." Recognizing the absolute dearth of any objective evidence that the QC inspectors had sacrificed the quality of their inspections because of pressures allegedly imposed by Comstock management, Intervenors are now sponsoring the testimony of three

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* See Deposition of Myra Sproul, January 29, 1986 at pp. 47-49; Deposition of Danny Holley, January 28, 1986 at pp. 86, 93; Deposition of Richard Snyder, January 29, 1986 at pp. 78, 83; Deposition of Larry Phillips, January 29, 1986 at pp. 31-33; Deposition of Dean L. Peterson, March 4, 1986 at p. 18; Deposition of Larry A. Perryman, March 3, 1986 at pp. 82-85; Deposition of Robert L. Wicks, March 4, 1986 at pp. 31-36; Deposition of Michael S. Mustered, March 5, 1986 at pp. 36-38; Deposition of Herschel W. Stout, Jr., February 24, 1986 at pp. 137-141; Deposition of John Seeders, November 5, 1985 at pp. 34-35; Deposition of Robert D. Hunter, February 25, 1986 at p. 156; Deposition of Worley Puckett, December 6, 1986 at p. 143; Deposition of Timothy Stewart, January 28, 1986 at p. 57; Deposition of Richard L. Martin, March 3, 1986 at p. 14.

industrial psychologists on this issue. While only the testimony of Dr. Daniel Ilgen has been received to date, a cursory review of its contents further diminishes any expectation that Intervenors will assist in the development of a sound record on this issue. At bottom, Dr. Ilgen's testimony would have this Board accept an abstract theory which postulates an adverse effect on the integrity of QC inspectors and the inspections they performed based on a psychologist's assessment of Comstock's work environment, rather than the sworn testimony of the inspectors themselves that they performed their inspections properly (Ilgen testimony, pp. 21-23). Development of a sound record is hardly furthered by vague opinion testimony based on second-hand psychoanalysis of the QC inspectors which purports to contradict the testimony of the subjects of alleged harassment that any such harassment was ineffectual.

Factor (v) The extent to which admission of the subcontention will broaden the issues or delay the proceedings.

Since Subcontention 2.C is the only issue remaining for litigation before this Licensing Board, it is indisputable that admission of this issue for litigation will both broaden the issues and delay the proceeding. Moreover, even when Subcontention 2.C was proposed in July, 1985, the only other contention then pending for litigation was an emergency planning contention of very limited scope.

Conclusion

After balancing the five factors under Section 2.714 it is plain that Intervenors can not support admission of Subcontention 2.C. Two of the five factors required to be considered by the Licensing Board under 10 CFR § 2.714(a)(1), contribution to the development of a sound record and delay of the proceeding, favor dismissal of the contention. The second and fourth factors, the availability of other means whereby the Intervenors' interest will be protected and whether Intervenors' interest would be represented by other parties to the proceeding, weigh in favor of admitting the contention. It is established in this proceeding that these factors are of little weight in determining whether a late-filed contention may be admitted. CLI-86-09 (slip op. at p. 9) Good cause for failure to file Subcontention 2.C in a timely fashion, the first and most important factor, cannot be shown for all but one sentence of Subcontention 2.C.

The three controlling factors in determining the admissibility of Subcontention 2.C, are the first, the third, and the fifth. The Intervenors could not prevail on any of these with respect to Subcontention 2.C. Their delay in filing Subcontention 2.C insofar as it relates to Messrs. Seeders and Puckett is inexcusable, thereby requiring them to present a "compelling case" on the remainder of the five factors in order to gain admission of those aspects of Subcontention 2.C (CLI-86-08 slip op. at p. 10). Their contribution to the

development of a sound record on any of the portions of Subcontention 2.C is minimal. Moreover, it is clear that admission of any portion of Subcontention 2.C would expand the issues and delay the proceeding. After balancing all the factors, it is clear that all of Subcontention 2.C (including that portion of the subcontention which was timely filed) should be rejected.

Michael I. Miller

One of the Attorneys for
Commonwealth Edison Company

Michael I. Miller
Isham, Lincoln & Beale
3 First National Plaza
Chicago, Illinois 60602
(312) 558 7500

Joseph Gallo
Isham, Lincoln & Beale
Suite 1100
1150 Connecticut Avenue, N.W.
Washington, D. C. 20036
(202) 833 9730

April 30, 1986

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	'86 MAY -5 A10:45
COMMONWEALTH EDISON COMPANY	)	Docket Nos. 50-456
	)	50-457
(Braidwood Station Units 1 and 2)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the BRIEF OF COMMONWEALTH EDISON COMPANY IN OPPOSITION TO THE ADMISSION OF SUBCONTENTION 2.C were served on the persons listed below by deposit in the United States mail, first-class postage prepaid this 30th day of April, 1986, except that copies were served by messenger delivery on Messrs. Grossman and Cole. Courtesy copies are being sent by messenger delivery on May 1, 1986 to Messrs. Guild and Treby.

Herbert Grossman, Esquire
Chairman
Administrative Law Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. Richard F. Cole
Administrative Law Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. A. Dixon Callihan
Administrative Law Judge
102 Oak Lane
Oak Ridge, TN 37830

Ms. Bridget Little Rorem
117 North Linden Street
P.O. Box 208
Essex, IL 60935

Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Atomic Safety and Licensing Appeal Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Stuart Treby, Esquire
Elaine I. Chan, Esquire
Office of the Executive
Legal Director
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Robert Guild, Esquire
Douglass W. Cassel, Jr., Esquire
Timothy W. Wright, III, Esquire
BPI
109 North Dearborn Street
Suite 1300
Chicago, Illinois 60602

Mr. William L. Clements
Chief, Docketing and Services
U.S. Nuclear Regulatory
Commission
Office of the Secretary
Washington, D.C. 20555

William Little
Director, Braidwood Project
Region III
U.S. Nuclear Regulatory
Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Joseph Gallo
Joseph Gallo
One of the Attorneys for
Commonwealth Edison Company

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

DE1

Attachment A

Docket No. 50-456
Docket No. 50-457

Commonwealth Edison Company
ATTN: Mr. Cordell Reed
Vice President
Post Office Box 767
Chicago, IL 60690

Gentlemen:

This refers to the routine safety inspection conducted by Messrs. R. D. Schulz and R. Gardner of this office on November 12 through December 19, 1984, of activities at Braidwood Nuclear Power Station, Units 1 and 2, authorized by NRC Construction Permits No. CPPR-132 and No. CPPR-133 and to the discussion of our findings with Mr. D. Shamblin at the conclusion of the inspection.

The enclosed copy of our inspection report identifies areas examined during the inspection. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations, and interviews with personnel.

During this inspection, certain of your activities appeared to be in noncompliance with NRC requirements, as described in the enclosed Appendix. With respect to item 3, the inspection showed that subsequently: the documentation had been received, the cabinet was not damaged and had been installed properly, and the corrective action included verifying that any other items lacking the required documentation had not been released for installation. Consequently, no reply to this item of noncompliance is required and we have no further questions regarding this matter at this time.

Regarding the remaining two items, a written response is required.

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosure(s) will be placed in the NRC Public Document Room unless you notify this office, by telephone, within ten days of the date of this letter and submit written application to withhold information contained therein within thirty days of the date of this letter. Such application must be consistent with the requirements of 2.790(b)(1). If we do not hear from you in this regard within the specified periods noted above, a copy of this letter, the enclosure(s), and your response to this letter will be placed in the Public Document Room.

The responses directed by this letter (and the accompanying Notice) are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96-511.

We will gladly discuss any questions you have concerning this inspection.

Sincerely,

R. Warnick, Chief
Projects Branch 1

1. Appendix, Notice of Violation
2. Inspection Reports
   No. 50-456/84-34(DRP);
   No. 50-457/84-32(DRP)

cc w/encls:
D. L. Farrar, Director
of Nuclear Licensing
M. Wallace, Project Manager
D. Shamblin, Construction
Superintendent
J. F. Gudac, Station
Superintendent
C. W. Schroeder, Lice and
Compliance Superin
DMB/Document Control (RIDS)
Resident Inspector, RIII
Braidwood
Resident Inspector, RIII Byron
Phyllis Dunton, Attorney
General's Office, Environmental
Control Division
D. W. Cassel, Jr., Esq.

Appendix

NOTICE OF VIOLATION

Commonwealth Edison Company

Docket No. 50-456
Docket No. 50-457

As a result of the inspection conducted on November 12 through December 19, 1984, and in accordance with the General Policy and Procedures for NRC Enforcement Actions, (10 CFR Part 2, Appendix C), the following violations were identified:

1. 10 CFR 50, Appendix B, Criterion IX, states in part that measures shall be established to assure that special processes, including welding, are controlled and accomplished in accordance with applicable codes and specifications.

   Sargent and Lundy Specification F/L-2782, HVAC Work, June 6, 1983, commits to either AWS D1.1, 1977 or AWS D1.3, 1978 for the welding of stiffener angles, companion angles, or support angles to the duct.

   Structural Welding Code, AWS D1.1, and Specification For Welding Sheet Steel In Structures, AWS D1.3 require that welds upon visual inspection contain no cracks.

   Contrary to the above, the following safety-related companion angle to duct welds were completely cracked resulting in no bonding between the weld metal and companion angle:

   duct 4032 - 1 weld
   duct 4024 - 5 welds
   duct 4684 - 4 welds
   duct 4686 - 3 welds

   This is a Severity Level V violation (Supplement II).

2. 10 CFR 50, Appendix B, Criterion V, states in part that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances.

   Sargent and Lundy Specification F/L-2739, July 5, 1977, Amendment 6, Piping System Installation, commits to AWS D1.1, Structural Welding Code, 1975, for AISC safety-related steel welds not under the jurisdiction of the ASME Boiler and Pressure Vessel Code, Section III, Subsection NF.

   Contrary to the above, for AISC safety-related steel welds, not under the jurisdiction of the ASME Boiler and Pressure Vessel Code, Section III, Subsection NF, the piping contractor did not have an AWS D1.1, Visual Weld Examination Procedure.

   This is a Severity Level V violation (Supplement II).

3. 10 CFR 50, Appendix B, Criterion V, states in part that activities affecting quality shall be accomplished in accordance with instructions, procedures or drawings.

Commonwealth Edison Company Quality Assurance Manual, Section Q. P. No. 7-1, Control of Procured Material And Equipment - Receiving and Inspection, June 6, 1984, requires in Section 5 that items lacking required documentation be placed on hold.

L. K. Comstock Procedure, 4.10.3, Requisitioning For Installation CECo Stored Equipment/Material, November 11, 1980, requires that a CECo furnished material requisition form be used for issuance of material and the authorized signatures of personnel approving the material requisitions be on file with the CECo Site Lead Electrical Engineer.

Contrary to the above, Hydrogen Recombiner Power and Control Cabinet, 00G04J, was received on July 7, 1981 without the documentation required by Purchase Order Number 216484, was not placed on hold, and was subsequently released from the warehouse for installation. In addition, no material requisition could be found authorizing the release of the cabinet.

This is a Severity Level V violation (Supplement II).

Pursuant to the provisions of 10 CFR 2.201, you are required to submit to this office within thirty days of the date of this Notice a written statement or explanation in reply, including for each item of noncompliance: (1) corrective action taken and the results achieved; (2) corrective action to be taken to avoid further noncompliance; and (3) the date when full compliance will be achieved. Consideration may be given to extending your response time for good cause shown. No response to Item 3 is required.

Dated

R. F. Warnick, Chief
Projects Branch 1

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-456/84-34(DRP); 50-457/84-32(DRP)

Docket Nos. 50-456; 50-457 Licenses 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, IL

Inspection Conducted: November 12 through December 19, 1984

Inspector: R. D. Schulz

R. Gardner

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

12/28/84
Date

Inspection Summary

Inspection on November 12 through December 19, 1984 (Report No. 50-456/84-34(DRP); 50-457/84-32(DRP)
Areas Inspected: Routine, unannounced safety inspection of allegations, licensee action on previously identified items, work activities observed during plant tours, piping material traceability verification program, pipe supports, hydrogen recombiner power and control cabinet, licensee nonconformance reports, electrical cables, and reactor coolant piping. The inspection consisted of 139 inspector-hours onsite by two NRC inspectors including 12 inspector-hours onsite during off-shifts.
Results: Of the nine areas inspected, no items of noncompliance were identified in six areas, one item of noncompliance was identified in each of the remaining areas. (Deficient HVAC welds - Paragraph 4; lack of appropriate pipe support, welding inspection procedure - Paragraph 6; and failure to follow material control procedures - Paragraph 7).

DETAILS

1. Persons Contacted

Commonwealth Edison Company (CECo)

*M. Wallace, Project Manager
*G. Fitzpatrick, Assistant Manager Quality Assurance Corporate
*C. Schroeder, Licensing and Compliance Superintendent
*D. Shamblin, Construction Superintendent
T. Quaka, Quality Control Supervisor
G. Groth, Assistant Construction Superintendent
S. Hunsader, Quality Assurance Supervisor
R. Wrucke, Licensing Engineer
E. Netzel, Quality Assurance Supervisor
M. Gorski, Engineer
R. Tate, Quality Assurance Engineer
*W. Vahle, Field Engineering Manager
*L. Kline, Project Licensing Compliance

Phillips Getschow Company (PGCo)

*T. G. O'Connor, Site Manager
*J. Carlson, Quality Control Supervisor
L. J. Butler, Assistant Quality Control Supervisor
W. Berg, General Foreman
G. Galloway, Assistant Project Engineer
R. Hamilton, Welding Supervisor
M. Knaff, Engineering Group Instrument Supervisor

G. K. Newberg Company

C. Zavada, Level II Inspector

L. K. Comstock and Company, Inc. (LKC)

*I. Dewald, Quality Control Manager
L. Seese, Assistant Quality Control Site Manager
M. Lechner, Lead Inspector
J. Malmquist, Area Manager
T. Simile, Welding Engineer

Pullman Sheet Metal

*D. Grant, Site Quality Assurance Manager
*G. Minor, Quality Control Supervisor

Sargent and Lundy

D. A. Gallagher, Field Project Manager
K. Fus, Field Coordinator

*Denotes those personnel contacted concerning inspection findings.

2. Allegations

a. (Closed) Allegation (RIII-84-A-0096). Part I - Phillips-Getschow rusted pipe was described on August 9, 1984, as having less than minimum wall thickness.

Commonwealth Edison identified a 10 CFR 50.55(e) reportable item on June 21, 1984, regarding wall thickness inadequacies for one heat of 2" S/80 pipe. The inspector investigated the minimum wall issue and identified numerous heats of pipe with potential minimum wall deficiencies in Inspection Report 84-17. The investigation resulted in two violations designated by control numbers (456/84-17-01; 457/84-17-01) and (456/84-17-02; 457/84-17-02). The violations concerned failure to adequately control pipe in a rusted condition. In addition, an open item designated by control number (456/84-17-03; 457/84-17-03) is documented in Inspection Report 84-17 for 337,350 feet of pipe which requires analysis for wall thickness degradation. This allegation is considered to be closed.

Part II - Holes burned in steel above the reactor which were thought to be identified.

Flame out holes in steel have been identified in the containments and documented in nonconformance reports, with the corrective action approved by Sargent and Lundy. The Gust K. Newberg Construction Company identified the holes in the following nonconformance reports:

Nonconformance No.	Description
213-557	Structural Steel, Containment II
213-558	Structural Steel, Containment I
213-577	Structural Steel, Containment I
213-599	Structural Steel, Containment II
213-602	Structural Steel, Containment II
213-609	Structural Steel, Containment II
213-619	Structural Steel, Containment II
213-620	Structural Steel, Containment II
213-623	Structural Steel, Containment II
213-630	Structural Steel, Containment II
213-637	Structural Steel, Containment II
213-656	Structural Steel, Containment II
213-658	Structural Steel, Containment II
213-660	Structural Steel, Containment II
213-676	Structural Steel, Containment II
213-835	Structural Steel, Containment I

This allegation is considered to be closed.

b. (Closed) Allegation (RIII-84-A-0119). On August 17, 1984, the alleger, an employee of the L. K. Comstock quality control department, stated that he was intimidated and harassed by L. K. Comstock quality control supervisory personnel. On September 21, 1984, the inspector met with the alleger and four other quality control inspectors. The five individuals did not provide any specific examples or records substantiating intimidation or harassment. During the course of the interview, it was revealed that the main issue is a morale problem which appears to be related to monetary matters and subjective opinions of poor management. The inspector met with Commonwealth Edison Project management and Construction Superintendent to discuss the issue of intimidation and harassment. Subsequently, Commonwealth Edison management met with the L. K. Comstock Site Quality Control management to ensure that all parties understood that any form of intimidation or harassment would not be tolerated by Commonwealth Edison or the NRC. This allegation is considered closed.

3. Licensee Action on Previously Identified Items

a. Bulletins

The following Bulletins are considered closed because they concern boiling water reactors which are not used at Braidwood:

I. E. Bulletin 80-13 - Core Spray Spargers
I. E. Bulletin 80-14 - Scram Discharge Volume
I. E. Bulletin 80-25 - Target Rock SRV's
I. E. Bulletin 80-01 - Air Operated ADS Valves
I. E. Bulletin 80-07 - Jet Pumps
I. E. Bulletin 80-17 - BWR Control Rods

b. Unresolved Items

(Closed) (456/83-10-05; 457/83-10-05): Calibrated instruments utilized to verify acceptable pipe bends, in numerous cases, are not traceable to inspection records. This item was additionally identified in inspection report number 83-09 and will be tracked by control number 83-09-02(c). The item is closed due to duplicate findings, however, 83-09-02(c) will remain open and be reviewed at a later date for adequate corrective action.

(Closed) (456/84-08-05; 457/84-08-05): Six high strength bolts were below the required structural steel torque values. The six bolts were re-tightened by the turn of the nut method and this problem was determined to be an isolated case, as these bolts had been removed and replaced without proper authorization. Training was conducted with regard to the proper procedures to follow in the removing and replacing of items. The six bolts were documented on nonconformance report number 213-795 on June 5, 1984.

c. Open Items

(Closed) (456/84-17-05; 457/84-17-05): Blockwall columns with structural steel bolted and welded connections missing inspection reports. A sampling inspection plan was originally proposed by the licensee to assure quality work; however, the licensee has decided to inspect all connections or provide additional support to those not inspected. This action was based upon the numerous weld deficiencies identified. All connections are to be repaired or additionally supported as required. This corrective action was documented on November 2, 1984, in a 10 CFR 50.55(e) transmittal by the licensee to the NRC. The 50.55(e) is identified by designated number 82-10.

(Closed) (456/84-17-07; 457/84-17-07): Instrument piping drawing contained a statement, "pitch pipe 1/2" per foot if possible". The note on the drawing has been changed and now states single pipe pressure instruments are recommended to have their sensing lines installed with a continuous slope (1/2" per foot recommended), however, it is acceptable to have horizontal runs without slope and a high point without high point vent valves, provided no traps are formed. Flow lines must have 1/2" per foot slope. No lines were identified by the NRC inspector with unacceptable pitch and an instrument line retro-fit program, per quality control procedure, has been instituted by the piping contractor to verify acceptable pitch.

4. Plant Tours

The inspector observed work activities in-progress, completed work, and plant status during general inspections of the plant. Observation of work included high strength bolting, safety-related pipe welding, anchor bolts, structural welds, and cable trays in the containments and auxiliary building. Particular note was taken of material identification, nonconforming material identification, housekeeping, and equipment preservation. Craft personnel were interviewed in the work areas.

While touring the containment and fuel handling building, the inspector noticed numerous pieces of small bore piping laying on the floor with a hold tag attached to each bundle of pipe containing five or six pieces. This pipe was on hold per Phillips Getschow Co. nonconformance report number 2001 as a result of potential minimum wall deficiencies. This issue was discussed with Phillips Getschow Co. quality control supervision, and since the pipe laying on the floor was not an optimum material control practice, a decision was made by quality control supervision to remove this pipe to designated hold areas. The pipe has been removed from the containments and fuel handling building and the inspector considers this issue closed.

The inspectors toured the plant on several occasions and identified HVAC duct welds that had cracked completely in a direction parallel to the weldment. These welds were designed to join a companion angle to the

duct but the cracking resulted in no bonding of the weld metal to the companion angle. The welds were made by a silicone bronze braze process. The cracked safety-related welds and associated ducts identified by the inspector are detailed below:

Duct	No. of Welds	Systems
4024-Unit II	5	Aux. Bldg. Vent System
4032-Unit II	1	Aux. Bldg. Vent System
4684-Unit I	4	Aux. Bldg. Control Room Vent Sys.
4686-Unit I	3	Aux. Bldg. Control Room Vent Sys.

Sargent and Lundy Specification F/L-2782, HVAC Work, commits to either AWS D1.1, 1977 or AWS D1.3, 1978 for the welding of stiffener angles, companion angles, or support angles to the duct. Engineering Change Notice 4591 was incorporated in Specification F/L-2782 on June 6, 1983 and allowed the welding of angles to duct to the criteria of either AWS D1.1 or AWS D1.3. Neither welding codes, AWS D1.1 or AWS D1.3, allow cracks in welds. The cracked welds are in violation of 10 CFR 50, Appendix B, Criterion IX (456/84-34-01; 457/84-32-01). Additionally, the inspectors noticed other welds on ducts 4684 and 4685 that appeared to be cracked, however, these cracks were not complete cracks resulting in a lack of bonding and may only be surface cracks. The welds were painted, making weld quality determination difficult. The inspectors requested Pullman Sheet Metal quality control supervision to investigate these cracks and subsequent inspections by Pullman resulted in the documentation of twenty-nine weld cracks in Correction Notices 5534 and 5535. Subsequent inspections by the licensee will determine the severity of the cracking in the HVAC duct system and Sargent and Lundy will analyze the cracking for design significance.

The inspector reviewed Pullman silicone bronze braze welding procedure, PSM-WP-307, which was approved by Sargent and Lundy on March 3, 1981. The procedure only rejected weld cracks that were parallel to weldment. This is not in accordance with AWS D1.1 or AWS D1.3 which do not allow cracks in any direction. Furthermore, rejection of only parallel cracks results in difficult inspection criteria with regard to the definition of the allowable angle for parallel cracks. Parallel cracks did not appear to be defined. The rejection of only silicone bronze cracks parallel to the weldment will remain an open item awaiting analysis and justification by the licensee (456/84-34-02; 457/84-32-02).

5. Piping Material Traceability Verification Program

The material traceability verification program was reviewed. The program was instituted as a result of an NRC finding identified in Inspection Report Number 83-09, which stated that a documented inspection program to verify correct material installation had not been implemented for 2" and under safety-related piping prior to July 1983, and for over 2" safety-related piping prior to November 1982. As a result of this finding the licensee decided to inspect all the piping installed prior to

the above applicable dates in order to determine the acceptability of piping material installations. Completion of the material traceability verification program is expected oy February 28, 1985.

As of November 23, 1984, the following inspection results have been recorded by Phillips, Getschow Co. for large bore and small bore piping:

Large Bore Piping(Over 2")

Total number of items inspected - 1679
Percentage of total items - 18%
Total number of probable items accepted - 1440
Total number probable rejections - 25
Total number of items requiring further analysis - 213

Small Bore Piping (2" and under)

Total number of items inspected - 4668
Percentage of total items - 28%
Total number of probable items accepted - 3870
Total number of probable rejections - 12
Total number of items requiring further analysis - 786

The final acceptance and rejection of items will be made by the licensee.

No violations or deviations were identified.

6. Pipe Supports

The inspector reviewed Visual Examination Procedure, VE-01, Revision 2, and discovered that Phillips, Getschow Co. had a procedure for ASME Section III, Subsection NF, Welds and ANSI B31.1 Safety-Related Welds, but did not have an inspection procedure for safety-related AISC Steel Welds under the jurisdiction of AWS D1.1, Structural Welding Code, 1975.

Sargent and Lundy Specification F/L-2739, July 5, 1977, Amendment G, Piping System Installation, commits to AWS D1.1, Structural Welding Code, 1975, for AISC safety-related steel welds not under the jurisdiction of the ASME Boiler and Pressure Vessel Code, Section III, Subsection NF. However, the architect engineer, Sargent and Lundy, did not specify on the drawings that the weld inspection was under the jurisdiction of AWS D1.1. In addition, the final pipe support documentation did not indicate the Code acceptance criteria that the non-NF safety-related welds were inspected to for compliance; although the NF welds were documented as being in compliance with ASME Section III, Subsection NF acceptance criteria. Numerous safety-related pipe support welds fall under the jurisdiction of the AWS D1.1, Structural Welding Code. The acceptance criteria for both ASME and AWS D1.1 welds contain the attributes of porosity and crater pits, however, crater pits and porosity are not inspection criteria for ANSI B31.1 safety-related welds. Therefore, the acceptance criteria for ASME and AWS D1.1 welds are more restrictive and evidence should be provided by the licensee to assure that the non-NF

safety-related welds were inspected to the applicable AWS D1.1 or ASME criteria and not to the ANSI B31.1 acceptance criteria. The inspector interviewed six quality control welding inspectors and all stated that they rejected welds for porosity and crater pit: and they were inspecting all safety-related welds to the ASME procedure. The inspector also has examined numerous AWS D1.1 pipe support welds a: i these welds met the acceptance criteria of AWS D1.1, 1975. The six eiding inspectors and NRC examined pipe support welds are only a sampl of their respective total populations, and this sample does not provide statistical assurances that all non-NF safety rel: ted weld inspections were performed to the AWS D1.1 Code or ASME Code. Failure to have an AWS D1.1, Structural Welding Code, visual inspection procedure is in violation of 10 CFR 50, Appendix B, Criterion V (456/84-34-03; 457/84-32-03).

Constant and variable supports were examined for proper markings and the supports were identified in accordance with Specification F/L-2739 and Engineering Change Notice No. 7595. The markings included manufacturer's catalog number, serial number, size, load, and travel.

The inspector randomly selected eight pipe supports and examined the tube steel, wide flanges, and plate used in the supports for material traceability. The supports are detailed below:

Support No.	System
1RH02081S	Residual Heat Removal
1RC12101S	Reactor Coolant
1RY09100S	Reactor Coolant Pressurizer
1RC04004V	Reactor Coolant
1RC13091S	Reactor Coolant
1RC13053S	Reactor Coolant
1RC13090S	Reactor Coolant
1RC13044S	Reactor Coolant

All material inspected was the correct type. The plate and wide flanges met the requirements of ASTM A-36 and the tube steel met the requirements of ASTM A500 Grade B. Material receipt inspection reports and material test reports were reviewed and found to be satisfactory.

Additionally, eight pipe supports were randomly selected and examined for compliance to Sargent and Lundy Specification F/L-2739, drawings, and Phillips Getschow Co. Procedure, QCP-B23, Revision 8, Installation and Inspection Of Component Supports. The supports inspected and their system identification are as follows:

Pipe Support	System
1CV06001V	Chemical and Volume Control
1SI20020X	Safety Injection
1SI09036X	Safety Injection
1CV06009C	Chemical and Volume Control
1RH02006R	Residual Heat Removal

Pipe Support	System
1CV06015R	Chemical and Volume Control
1RYF47A036T	Reactor Coolant Pressurizer
1SI09034V	Safety Injection

The supports were installed in compliance with the specification, drawings, and procedure. Attributes examined included welding, location, dimensional tolerances including pin to pin distance, material identification, welder identification, weld rod traceability, clamp and U-bolt condition, locking devices, and configuration.

7. Hydrogen Recombiner Power and Control Cabinet

The inspectors examined the installation of the Unit 1, Hydrogen Recombiner Power and Control Cabinet 00G04J. The installation was in accordance with drawing 0-3391Y Revision G and Specification L-2790, Amendment 40, Electrical Installation Work, July 18, 1984. The inspection included verification of concrete expansion anchors, dimensional tolerances, and weld conformance with regard to quality, location, and length. The cabinet was properly marked with Serial No. 113C and Part No. N139000234-01. The Material Receiving Report, No. 7337, was reviewed and the inspector discovered that the cabinet was received on July 7, 1981, without the documentation required by Purchase Order Number 215484. However, the cabinet was not placed on hold as required by the Commonwealth Edison Company Quality Assurance Manual, Section Q.P. No. 7-1, Control of Procured Material and Equipment-Receiving and Inspection. Furthermore, the cabinet was released for installation to the electrical contractor without a material requisition as required by L. K. Comstock Procedure 4.10.3, Requisitioning for Installation CECo Stored Equipment/Material. The date of the release is unknown without a material requisition. Failure to follow procedures concerning the material requisition and hold policy is in violation of 10 CFR 50, Appendix B, Criterion V (456/84-34-04). The documentation was subsequently received on March 22, 1983, and the inspector confirmed that the cabinet was purchased and supplied in accordance with Sargent and Lundy Specification F/L-2845, Amendment 5, dated June 23, 1983, Post LOCA Hydrogen Control System. Purchase Order Number 216484 included 10 CFR 21 reporting requirements. Since the inspector determined that the cabinet was installed correctly and was not damaged, and corrective action by the licensee (documented on nonconformance report number 699) included verifying that no other equipment had been released for installation without the required documentation, no reply to this item of noncompliance is required.

8. Nonconformance Reports (NCR's)

Fifteen Commonwealth Edison nonconformance reports were randomly selected and reviewed for identification of nonconforming conditions, corrective action, and design basis disposition. The nonconformances are listed below:

NCR No.	Date	Subject
561	8/18/83	Weld Cracks in HVAC Ducts.
639	7/25/84	Removal of Piping ASME Nameplates.
637	7/10/84	Diesel Oil Storage Tank Machining.
626	6/14/84	Defective Electrical Penetration Support Bushings.
625	6/5/84	Improper Wire Connections - 480V Motor Control Center Compartments.
613	3/8/84	Rusted bolts - Electrical Penetrations.
609	5/16/84	Radiographs of ASME Section III Pipe Welds Violate Density Requirements.
602	4/17/84	Incorrect Structural Steel Material Specification and Lack of Traceability for Plate.
594	2/2/84	Concrete Block Certifications.
595	2/29/84	Incorrect Cable Grips.
593	1/24/84	Wiring Error, 125V D.C. Buses.
600	3/13/84	Incorrect Classification of ASME, NF Supports.
537	6/13/84	Flanges Not in Conformance With Heat Treatment Requirements.
543	7/12/84	Use of Incorrect Filler Metal.
631	6/18/84	Bent Flare End Plates on Spent Fuel Storage Racks.

No violations or deviations were identified.

9. Electrical Cables

Five Unit 1 installed cables were inspected in the upper cable spreading room for compliance to IEEE-384, the cable pull cards, and L.K. Comstock procedure 4.3.8, Cable Installation Inspection. Detailed below are the cables which were inspected:

Cable No.	From	To	Type
1MS659	Main Steam Junction Box V1JB2212A	Annunciator Input Cabinet 1PA31J	7/C-14
1LV051	Auxiliary Power Control System Cabinet 1PA33J	Annunciator Input Cabinet 1PA31J	12/C-14
1DG204	Diesel Generator Control Panel 1PL07J	Annunciator Input Cabinet 1PA31J	12/C-14 12/C-14
1CC026	Main Control Board - Engr. Safety Features 1PM06J	Annunciator Input Cabinet 1PA31J	7/C-14

Cable No.	From	To	Type
1CS010	Main Control Board - Engr. Safety Features 1PM06J	Annunciator Input Cabinet 1PA31J	7/C-14

Cable number 1MS659 in riser 1R255 did not have the support cable grips attached as a result of rework request No. 936. The inspector notified the L. K. Comstock quality control manager and the cable grips were immediately reattached. The inspector considers this item closed. NRC inspections of the cables included the following attributes:

- raceway free of debris
- raceway free of sharp edges
- raceway free of damage
- segregation codes correspond
- raceway corresponds to routing shown on pull card
- cable routed per pull card
- cable correct size and type
- cable free of damage
- cable correctly identified
- cables are properly supported

No violations or deviations were identified.

10. Reactor Coolant Piping

Three reactor coolant piping spools were examined in the Unit 1 containment. The spools were classified as ASME Boiler and Pressure Vessel Code, Section III, Subsection NB, Class 1 and consisted of 8" S/160 SA-376 TP304 piping material installed in accordance with design specification 1540BB. The spools were identified on drawings 1C-RC-1-4, 1C-RC-1-4P, and 1C-RC-1-5. Field examinations included the identification of welder symbols and weld numbers, weld quality, material identification markings, configuration, clearances, and line location in accordance with the as-built drawing.

After the line was walked down the NRC inspector reviewed the following associated documentation to determine compliance with regulatory requirements and agreement with the actual hardware installations.

- Piping, NPP-1 Code Data Reports
- Valve, NPV-1 Code Data Reports
- Welding Filler Metal Material Certifications including Ferrite Testing
- Piping Material Certifications
- Weld Numbers and Welder Qualification Records
- Welding Procedure Qualification Records
- Nondestructive Examination Reports, Penetrant and Radiograph
- Nondestructive Inspector Qualifications, SNT-TC-1A
- Quality Control Inspection Records including End preps, Fit-up, Root Weld, Pre-Heat, Interpass Temperature, and Final Visual Weld Examinations

. Material Requisitions
. Field Change Orders
. Penetrant Material Test Reports, ASME Section V

Three procedures were reviewed:

. VE-01, Revision 2, Section 8, Visual Examination Procedure For Butt Welded Pipe - ASME Section III, Class 1, 2, and 3

. QAP-1, Revision 5, Liquid Penetrant Examination

. QC-RT-1, Revision 16, Radiographic Examination

Procedure VE-01 was in conformance with the ASME Boiler and Pressure Vessel Code, Section III, 1974, including acceptance criteria for welds, maximum offset of aligned sections, thickness of weld reinforcement for vessels - pumps - valves, thickness of weld reinforcement for piping.

Procedure QAP-1 was in conformance with the ASME Boiler and Pressure Vessel Code, Section 5, Article 6, 1974, including: penetrant materials qualification, temperature range, surface preparation, examination method, and acceptance standards.

Procedure QC-RT-1 was in conformance with the ASME Boiler and Pressure Vessel Code, Section 5, Article 2, 1974, including: radiographic procedure qualification, location markers, and interpretation of radiographs.

No violations or deviations were identified.

11. Open Items

Open items are matters which have been discussed with the licensee, which will be reviewed further by the inspector, and which involve some action on the part of the NRC or licensee or both. An open item disclosed during the inspection is discussed in Paragraph 4.

12. Exit Interview

The inspector met with licensee and contractor representatives (denoted under Persons Contacted) during and at the conclusion of the inspection on December 18, 1984. The licensee acknowledged the information.

Attachment B

BPI
Business and Professional People for the Public Interest
109 North Dearborn Street, Suite 1300 • Chicago, Illinois 60602 • Telephone: (312) 641-5570

July 11, 1985

Lee Hornberger, Esq.
4030 Mt. Carmel - Tobasco Road
Cincinnati, Ohio 45230

Dear Lee:

Thank you very much for the loan of Worley Puckett's file. I return it herewith.

We will keep you posted on our progress.

Sincerely,

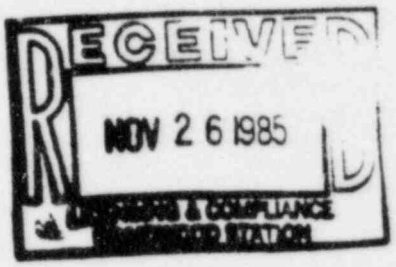
Robert Guild

RG:beg
Encl.

Attachment C

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

NOV 21 1985



Docket No. 50-456
Docket No. 50-457

Commonwealth Edison Company
ATTN: Mr. Cordell Reed
Vice President
Post Office Box 767
Chicago, IL 60690

Gentlemen:

This refers to the special safety inspection conducted by Mr. J. F. Schapker of this office on March 5 through November 7, 1985, of activities at Braidwood Station, Units 1 and 2, authorized by NRC Construction Permits No. CPPR-132 and No. CPPR-133 and to the discussion of our findings with Messrs. M. Wallace and C. Schroeder and others of your staff at the conclusion of the inspection.

The enclosed copy of our inspection report identifies areas examined during the inspection. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations, and interviews with personnel.

During this inspection, certain of your activities appeared to be in violation of NRC requirements, as specified in the enclosed Appendix. A written response is required.

In accordance with 10 CFR 2.790 of the Commission's regulations, a copy of this letter and the enclosures will be placed in the NRC's Public Document Room.

The responses directed by this letter (and the accompanying Notice) are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96-511.

We will gladly discuss any questions you have concerning this inspection.

Sincerely,

J. J. Harrison, Chief
Engineering Branch

Enclosures:
1. Appendix, Notice of Violation
2. Inspection Reports No. 50-456/85009(DRS); No. 50-457/85009(DRS)

cc w/enclosures:
D. L. Farrar, Director of Nuclear Licensing
M. Wallace, Project Manager
D. Shamblin, Construction Superintendent
J. F. Gudac, Plant Manager
C. W. Schroeder, Licensing and Compliance Superintendent
DCS/RSB (RIDS)
Licensing Fee Management Branch
Resident Inspector, RIII Braidwood
Resident Inspector, RIII Byron
Phyllis Dunton, Attorney General's Office, Environmental Control Division
D. W. Cassel, Jr., Esq.
J. W. McCaffrey, Chief, Public Utilities Division
H. S. Taylor, Quality Assurance Division
E. Chan, ELD
J. Stevens, NRR
The Honorable Herbert Grossman, ASLB
The Honorable A. Dixon Callihan, ASLB
The Honorable Richard F. Cole, ASLB

Appendix

NOTICE OF VIOLATION

Commonwealth Edison Company

Docket No. 50-456
Docket No. 50-457

As a result of the inspection conducted on March 5 through November 7, 1985, and in accordance with the General Policy and Procedures for NRC Enforcement Actions (10 CFR Part 2, Appendix C), the following violation was identified:

10 CFR 50, Appendix B, Criterion V, states in part that activities affecting qua'ity shall be prescribed by documented instructions, procedures, or drawings, and shall be accomplished in accordance with these instructions, procedures, or drawings.

L. K. Comstock Company Welder Qualification Procedure 4.7.1, Revision 07-18-80, states in part in Section 3.10 that the QC inspector shall have in his possession the Welder Qualification Test Record, Form 88, and the record is to be completed during the period the welder is performing the weld process, and that upon completion of the testing of the weld coupons by the independent testing company the Form 88 is to be signed and dated.

Contrary to the above:

a. A welder qualification record was signed and dated prior to the testing of the welder's coupons by the independent testing company.

b. The welder qualifications records exhibited numerous clerical errors and omissions.

This is a Severity Level V violation (Supplement II).

Pursuant to the provisions of 10 CFR 2.201, you are required to submit to this office within thirty days of the date of this Notice a written statement or explanation in reply, including for each violation: (1) corrective action taken and the results achieved; (2) corrective action to be taken to avoid further violation and (3) the date when full compliance will be achieved. Consideration may be given to extending your response time for good cause shown.

NOV 21 1985
Dated

J. J. Harrison, Chief
Engineering Branch

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-456/85009(DRS); 50-457/85009(DRS)

Docket Nos. 50-456; 50-457 Licenses No. CPPR-132; CPPR-133

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

Facility Name: Braidwood Station, Units 1 and 2

Inspection At: Braidwood Site, Braidwood, Illinois

Inspection Conducted: March 5 through November 7, 1985

Inspector: W. F. Schapker 11/19/85
Date

Approved By: D. H. Danielson, Chief 11/19/85
Materials and Processes Section Date

Inspection Summary

Inspection on March 5 through November 7, 1985 (Reports No. 50-456/85009(DRS); No. 50-457/85009(DRS))
Areas Inspected: Special, unannounced safety inspection to review allegations concerning welding deficiencies by the electrical contractor (L. K. Comstock). This inspection involved a total of 192 inspector-hours onsite by one NRC inspector including 30 inspector-hours of in-office review.
Results: Of the areas inspected, one violation was identified (failure to document welder qualification records to procedure requirements - paragraph 2.h and 2.j, allegation 4).

DETAILS

1. Persons Contacted

Commonwealth Edison Company (CECo)

*M. Wallace, Project Manager
*C. Schroeder, Licensing and Compliance Superintendent
*L. Kline, Licensing and Compliance Supervisor
*G. Groth, Assistant Construction Supervisor
R. Gardner, PSI Coordinator, Level III
C. Mennecke, Lead Electrical Supervisor
P. Berry, QA Inspector
*C. Tomashek, Startup Superintendent
*T. Quaka, QA Superintendent
*D. Smith, Nuclear Licensing
*W. Vahle, Project Field Engineer
*J. Gieseker, Project Construction Engineer
T. Ronkoske, Project Field Engineer

L. K. Comstock Company (LKC)

T. Simile, Welding Engineer
*R. Seltmann, QA Manager
*I. Dewald, QC Manager
*F. Rolan, Project Manager
*J. Klena, Project Engineer

Sargent & Lundy Engineers (S&L)

*G. Jones, Project Manager
*D. Gallagher, Field Engineer
*K. Kostal, Project Director

USNRC

*W. Kropp, Resident Inspector
*L. McGreger, Senior Resident Inspector

The inspector also contacted and interviewed other licensee and contractor personnel.

*Denotes those attending the final exit interview.

2. (Closed) RIII 84-A-0123 Allegations

On August 28, 1984, a former employee of the L. K. Comstock Company (LKC) at the Braidwood Nuclear Station contacted the Senior Resident Inspector - Operations (SRI) Braidwood, with information regarding the L. K. Comstock Company. On August 31, 1984, the former employee telephoned Region III and spoke with the Chief, Plant Systems Section, Division of Reactor Safety (DRS) and provided the following allegations. In reviewing these allegations the NRC, in addition to utilizing information supplied by the alleger, also used a hearing transcript provided by the Department of Labor (DOL) relating to the alleger's complaints with DOL that also identified some apparent technical issues.

a. Allegation

L. K. Comstock Company (LKC) welders have been welding A-446 material to A-36 material; however, a weld procedure was not available. These welds were contrary to AWS D1.1-1975 according to the alleger. A nonconformance report (NCR) was eventually written (NCR No. 3099). The alleger questioned the qualification of the weld when joining A-446 material to A-36 material, as A-446 is not addressed in the AWS code. The alleger also identified that the technique sheet "0" for LKC weld procedure 4.3.3 was a reject.

NRC Review

The electrical contractor (LKC) issued a nonconformance report (NCR No. 3099), and subsequently issued a stop-work order on August 17, 1984, thereby stopping welding activities regarding this problem. The NCR was later dispositioned "Use-As-Is." This disposition was based on the interpretation by the contractor, licensee engineers, and the architect-engineers of the American Welding Society (AWS) Standard D1.1-1975, Section 5.5, that states A36 steel is also qualified for use with welding procedure specification, Attachment H, of LKC Weld Procedure 4.3.3. The procedure was revised to include A-36 to A-446 as part of the qualified base materials. Subsequently, the NCR was closed and the stop-work order was lifted. The technique "0" which was referenced in weld procedure 4.3.3 was requalified on July 2, 1984 with acceptable test results.

Conclusion

This allegation was substantiated with no adverse effect on the quality of the welds. The NRC inspector reviewed the referenced NCR and weld procedure and concurred with the disposition of the NCR; that is, the referenced base material (A-446) although not specifically listed in AWS D1.1-1975 code, is qualified by virtue of qualifications performed in Weld Procedure 4.3.3, Attachment H, wherein A-446 to A-500 was a qualified material combination and A-36 to A-500 was also a qualified combination. The chemical and

mechanical properties of A-446 and A-36 are closely compatible and do not pose a weldability problem. Although A-446 is not listed in the AWS D1.1-1975 code, the code does not require that only materials listed in the code be utilized, other materials are allowed at the discretion of the "Engineer" and can be qualified by weld procedure qualification (PQR). The PQRs for Weld Procedure 4.3.3 fulfill the requirements for qualification of A-36 to A-446 material in accordance with AWS D1.1, Section 5.5, which states in part: "Qualification of a welding procedure established with a base metal included in 10.2 and not listed in 5.5.1.2, having a minimum specified yield point less than 50,000 psi (345 MPa) shall qualify the procedure for welding any other base metal or combination of those base metals included in 10.2 that have a minimum specified yield point equal to or less than that of the base metal used in the test." The weld procedure was in error in that the A-446 base material was not listed as required and that technique sheet "0" was referenced with rejected test results within the procedure. The inspector reviewed the revised procedure and the NCR and found them to be acceptable. This item was satisfactorily resolved.

b. Allegation

The alleger contended the L. K. Comstock Weld Procedure No. 4.3.14 was qualified to the 5G weld position, but the procedure was used to weld all positions. The alleger also stated that language inconsistencies exist within the procedure (e.g., instruction to use magnetic particle testing on stainless steel).

NRC Review

The NRC inspector reviewed the referenced Weld Procedure 4.3.14 and determined that the procedure was qualified to the 5G position as the alleger stated. Some welds were performed in the horizontal welding position (2G) for which the procedure was not qualified. This nonconformance was identified by the electrical contractor in nonconformance report (NCR) No. 3145 dated August 24, 1984. The corrective action disposition of this NCR was to requalify the weld procedure and welders to include the 2G (horizontal) position for welding, and to remove the previously installed horizontal welds and replace them after requalification. The qualification performed to the 5G position qualifies the procedure for positions 1G, 3G, 4G, and 5G.

The language inconsistencies cited by the alleger was the use of a paragraph from the American Welding Society (AWS) D1.1-1975 code, Paragraph 3.7.2.4 concerning, "Cracks in Weld or Base Metal." The statement in this paragraph which caused the concern was: "Ascertain the extent of the crack by use of acid etching, magnetic particle inspection (MT), or other equally positive means." Since weld procedure 4.3.14 is for austenitic stainless steel, magnetic particle examination would not have been effective. The inspector reviewed a sample of quality documentation, in conjunction with allegation RIII-85-A-0005 in Paragraph 3 of this report, to verify the proper utilization of NDE procedures.

Conclusion

The first part of this concern was substantiated. Welds were made utilizing weld procedure 4.3.14 which was not qualified for the horizontal welding position. This nonconformance was identified by the alleger, and L. K. Comstock initiated NCR 3145. The corrective action taken, removal of noncomplying welds and replacement after requalification of the weld procedure and welders was adequate to assure compliance to the AWS D1.1-1975 code.

The alleged language inconsistencies had no detrimental effect to the quality of the welds made with this weld procedure. The quote from AWS D1.1 is a general workmanship requirement for examination of all types of welds, and not specific to stainless steel. Although the statement is misleading, it is not in error. The paragraph states a "suitable method" to assure removal of the crack. MT is not suitable for stainless steel as it is nonferromagnetic; therefore, other suitable means (i.e., liquid penetrant would be utilized). Personnel who perform MT on safety-related components are required to be qualified to perform this examination. Also included as part of the qualification requirements is that the inspector must be knowledgeable of the type of materials that can be examined by the magnetic particle process. The NRC did not find any case where the incorrect NDE method was utilized in the review of the contractor's quality documentation.

c. Allegation

A procedure was used to make bimetallic welds, but the procedure is not a bimetallic procedure. Bimetallic welds have been made, but L. K. Comstock does not have a procedure to qualify its welders for bimetallic welds. Therefore, welders are not qualified to make bimetallic welds.

NRC Review

The NRC inspector interviewed (March 12, 1985) the alleger for specifics in regard to the bimetallic welds. The alleger informed the inspector that the welds he was referring to were stainless steel (SS) junction boxes within the reactor building. The alleger contended the junction boxes were being welded to carbon steel (CS) conduit. The NRC inspector located the junction boxes per the alleger's description and verified that they were stainless steel (out of core neutron detector junction boxes); however, the CS conduit attachment to the junction box is not welded but mechanically attached (Uniseal Hub Appleton). There is, however, an 8" Schedule 40 SS pipe welded within the junction box for supporting cables and thermocouples. All base metal within or attached to the junction boxes by welding is stainless steel, no bimetallic welds were made. (Reference the Architect Engineers [Sargent&Lundy] Drawing 20E-0-3550, Revision R.) The NRC inspector physically examined the refererced junction boxes and verified no carbon steel was welded to ther. The

NRC inspector's further inquiry of the Level III welding supervisor and Level II weld inspectors stated they knew of no stainless to carbon steel welds performed by the electrical contractor. The alleger also made reference to welder qualifications being made to SA-312 to SA-312 when SA-240 to SA-312 was being performed in the field. This concern was found to be true; however, this is not a violation of code requirements. The base metals SA-240 and SA-312 are both SS P-8 Group 1 (ASME Section IX) material. SA-240 is plate and SA-312 is pipe. AWS D1.1-1975, paragraph 5.23.2.4 states "Qualification in the 6G (inclined fixed) position qualifies for all positions groove and all positions fillet welding of pipe, tubing, and plate."

Conclusion

No stainless steel to carbon steel welds (bimetallic) were performed by the electrical contractor. The electrical contractor had qualified welding procedures and welders for stainless to stainless steel as required by AWS D1.1-1975.

d. Allegation

In general, the L. K. Comstock weld procedures are filled with errors and inconsistencies (e.g., decimal fraction conversion tables show 0.750 = 32/32).

NRC Review

The NRC inspector reviewed the contractor's weld procedures which were generally accurate and adequate. Minor typographical errors as referenced by the alleger were encountered, but were not prevalent. Further discussion with the alleger (March 12, 1985) disclosed that this allegation was not critical of the weld procedures adequacy but that clerical errors within the procedures needed to be corrected.

Conclusion

The contractor has revised and corrected the clerical errors in subsequent revisions of the weld procedures. The type of errors encountered in the past revisions were minor and did not affect the overall adequacy of the weld procedures or the quality of the welding. Reference allegation b. above for other "inconsistencies," as well as NRC Inspection Reports No. 50-456/84-36(DRS); 50-457/84-34(DRS), Section 3.

e. Weld Filler Material Allegations

Allegation 1

L. K. Comstock Company does not have any weld filler material controls, as the procedure is only now being written.

NRC Review

The L. K. Comstock Procedure 4.3.10, Revision C, dated December 8, 1983, titled, "Storage, Issue and Control of Welding Material," was in effect at the time of the alleger's employment at Braidwood. The alleger may have been referring to weld filler material control problems which were identified in L. K. Comstock nonconformance report (NCR) 3275, which was issued September 12, 1984 as a result of the alleger's concern addressed to L. K Comstock. The NRC inspector reviewed this NCR which identified violations of the referenced procedure. The corrective action taken by this NCR included revision of the procedure to enforce additional requirements in the weld material control area.

Conclusion

The L. K. Comstock Company had adequate weld filler material controls in place. NCR 3275 identified some violations to this procedure which were adequately dispositioned and appropriate corrective action implemented. The revision of the procedure did require additional weld material control measures as corrective action to prevent recurrence as required by 10 CFR 50, Appendix B, Criterion XVI. These controls and corrective actions were found to be acceptable to the NRC inspector.

Allegation 2

Filler material withdrawal forms have inconsistent heat numbers. The alleger could not find any paperwork to backup heat numbers in the possession of either L. K. Comstock or Phillips-Getschow. Phillips-Getschow, the Braidwood Mechanical Contractor, furnishes the filler materials to L. K. Comstock.

NRC Findings

The NRC inspector selected a random sample of weld filler material withdrawal forms (FMWF) from three different time periods, covering a three year time frame. Included in this sample were withdrawal forms for E-7018, E-6013, and E-309-16 weld material of various sizes. The inspector reviewed 50 FMWFs and traced the referenced heat numbers to the appropriate weld material certifications (CMTR). The alleger identified three heat numbers for which he could not locate the applicable CMTRs (reference LKC NCR 3275, Sheet 4). The NRC inspector research for these heats disclosed the following: 40157441 CMTR was located and conformed to the specified material requirements for E-7018 welding electrode; 40159011 was not located but 40259011 for 7018 was on file. The 40159011 is undoubtedly a typing or clerical type error in recording of the heat number on the weld rod issue slip; 3520261 was located as 3S20261 for 6013 weld rod. The "S" was obviously misidentified as a 5.

Conclusion

The NRC inspector's review of FMWFs over a three year period did not disclose a deficiency in this area. In some cases, it was necessary for the NRC inspector to trace the heat numbers to the licensee's quality records vault as the contractor did not have the CMTR in their records vault. The three heats of weld rod which the alleger could not locate were found, two with obvious variations of the recording or interpretation of the numbers/letters of the identifying heat numbers.

f. Allegation

The alleger has found that L. K. Comstock Company (LKC) does not have any control of construction materials in terms of heat numbers or other traceability.

NRC Review

The NRC inspector selected a random sample of LKC construction material to verify traceability. The material inspected was marked with a material receipt number (MRR). LKC performs receiving inspection of all material received (reference LKC Procedure 4.10.2, "Receiving and Storage") and submits the MRR to the licensee's Quality Assurance Department (CECo QA) who is responsible to verify the material meets the requirements of the applicable purchase order. The Quality Assurance group reviews the adequacy of the documentation such as: certified material test reports, certificates of conformance, or any other required documentation. The licensee QA group also performs a physical inspection of the material as required by procedure SQI-06, "Material Receiving Report (MRR) Processing." Upon completion of acceptable review by the CECo QA group, the contractor is authorized for release for installation in safety-related areas. The MRR number is traceable to the applicable purchase order and quality records are initiated and maintained by the licensee. Only safety-related components/material were required to be marked with the MRR identification number and is required to be so identified for use in safety-related construction.

Conclusion

The concern was partially correct as the alleger's contention that transfer of heat numbers is not accomplished for material traceability is accurate. However, transfer of heat numbers is not a requirement to maintain traceability of materials. The use of an approved procedure and the MRR number as a basis to assure adequate material traceability is considered by the NRC to afford proper control.

Thus, the licensee's method of material traceability for the electrical contractor was found to be adequate to assure the material traceability is controlled to the point of installation. A similar concern was previously addressed in NRC Inspection Report Nc. 50-456/84-23(DRS); 50-457/84-22(DRS), Section 2, Paragraph c.

g. Allegation

Welds were made without the required preheat. A procedure was developed that did not require weld preheat, but quality control did not participate by observing the making of the weld coupon qualifying the procedure.

NRC Review

This allegation was partially correct; however, the contractor took corrective action through nonconformance report (NCR) 3423, dated October 12, 1984. NCR 3423 identified the violation of questionable preheat documentation for welds which required preheat due to the thickness of the members being joined, that is in excess of 1-1/2". The contractor developed weld procedure qualifications (PQR) for those welds from 1" to 3" thickness welded without preheat. The welds to members in the plant in excess of 3" in thickness were removed and replaced utilizing the required preheat and that rework including the preheat was documented accordingly. The alleger's contention that quality control did not participate in the making of the weld coupons qualifying the procedure was not correct. The NRC inspector interviewed the QC inspector who was responsible for surveillance of the PQRs. The QC inspector attested that he witnessed the welding of the test coupons throughout the process.

Conclusion

The concern as stated that quality control did not participate in the welding of the weld procedure qualifications was not substantiated. The implied concern that welds were made without required preheat was substantiated but this problem had been identified and adequately dispositioned by NCR 3423. The NRC found this issue had been adequately resolved.

h. Allegation

Welder qualification records have inconsistencies which make welder qualifications indeterminate.

NRC Review

The NRC inspector selected a random sample of welder qualification records for this review. The sample consisted of 75 past and current welders for the electrical contractor. Some minor discrepancies were noted in the welder qualification records such as typographical and clerical errors which have been addressed in LKC NCR 3710 dated December 8, 1984. Past welder qualification records were revised in error when the electrical contractor was replaced onsite, i.e., white out of "E. C. Ernst" replaced with "LK Comstock"; incorrect changes of material type (A36 for A106); signatures not dated; and type of electrode not documented. The NRC inspector also reviewed welder qualification records which the alleger specified inconsistencies which were not identified in LKC NCR 3710.

Conclusion

The welder qualification records did have some inconsistencies as stated by the alleger. However, none of the inconsistencies observed by the NRC inspector would have made the welders' qualifications indeterminate. The minor clerical errors observed were readily obvious, some were originally correct and had been changed in error. Some of these errors have been documented in LKC NCR 3710 dated December 8, 1984 and dispositioned adequately. There were additional inconsistencies identified by the alleger which were in violation of the LKC welder qualification procedure 4.7.1. This is considered an example of a violation of 10 CFR 50, Appendix B, Criterion V (456/85009-01(DRS); 457/85009-01(DRS)).

1. Allegation

Many of L. K Comstock field welders are qualified to L. K. Comstock Procedure 4.7.1. However, this procedure is not traceable to L. K. Comstock AWS D1.1 weld procedure qualification records. Some welders were originally tested on Schedule 80 pipe, but the current procedure refers to test on plate. Welder qualification cards stated the welder was qualified to LKC 4.7.1 but the welders were actually qualified to E. C. Ernst Procedure 9.2.

NRC Review

L. K. Comstock Procedure 4.7.1, Revision 6, dated June 22, 1982, titled, "Manual Shielded Metal Arc Welding (SMAW) for Structural Steel and Stainless Steel Qualification Procedure," was reviewed by the NRC inspector. The purpose of this procedure is to qualify welders per AWS D1.1-1975 for groove and fillet welding using the SMAW process. The procedure need not be traceable to L. K. Comstock welding procedures as it is not utilized for construction. The procedure is written to the requirements dictated in Section 5, Part C of AWS D1.1-1975. Accordingly, this procedure was intended for welders' qualifications only. These qualification tests are not intended to be used as a guide for welding during actual construction, but are specially devised tests to determine the welder's ability to produce sound welds.

The NRC inspector reviewed the welder qualification records as described in allegation h. above. During this review it was observed that the welder qualifications were performed on Schedule 80 pipe when E. C. Ernst (ECE) was the electrical contractor (ECE 9.2). L. K. Comstock subsequently revised the procedure to utilize plate in lieu of pipe for welder qualifications. The use of pipe or plate for welder qualifications meets AWS D1.1 for the welding applications by LKC.

Conclusion

This concern was correct in that Weld Procedure 4.7.1 is not traceable to L. K. Comstock weld procedure qualification records. This, however, is not a deficiency. AWS D1.1-1975, Section 5, Part C, describes the welder's ability to produce sound welds. L. K. Comstock Weld Procedure 4.7.1 is the contractor's method of qualifying the welders which is taken from the requirements listed in AWS.

Welders who qualify on Schedule 80 pipe are also qualified to weld plate within the thickness and positions for which they qualify, reference AWS D1.1-1975, Paragraph 5.23.2, Table 5.23 and 5.26.1. Therefore, those who qualified per ECE 9.2 also qualified for LKC 4.7.1 (also reference paragraph 2.j, allegation 2 of this report).

j. Welder Qualification Records Allegations

The alleger submitted a list of welder qualification record deficiencies which was utilized in addition to the referenced random samples.

Allegation 1

Welders were tested on 1/2" thick material, but records showed the welder with an unlimited thickness range.

NRC Review

The NRC inspector reviewed a random sample of 75 welder qualification records for current and past welders. Within the sample reviewed the welder qualifications records defined the limits of the welder's qualification, which referenced fillet weld only for those qualified on 1/2" thick material.

Conclusion

The NRC inspector did not identify any deficiencies as described by the alleger. The alleger could possibly have misinterpreted the qualification of fillet welders on 1/2" plate which complies with AWS D1.1-1975, Table 5.26.1. This test for fillet welder qualification only is performed on 1/2" plate and qualifies the welder to weld fillet welds of unlimited thicknesses. In addition, some welders whose qualifications had expired performed requalification on 3/8" plate but had previously qualified on 1" plate. This requalification on 3/8" plate qualifies the welder to perform welds of unlimited thickness, reference AWS D1.1, Paragraph 5.30 and L. K. Comstock procedure 4.7.1, Revision C, dated November 26, 1984, "Welder Performance Qualification Test."

Allegation 2

Welders were tested on 6" Schedule 80 pipe, but welder records showed an unlimited thickness range. AWS D1.1 shows a lower range of 0.187" thick, but actual welding is down to 0.105".

NRC Review

This finding had been previously identified in NRC Inspection Report No. 50-456/84-21(DRP); 50-457/84-20(DRP) as an unresolved item (456/84-21-05; 457/84-20-05). The NRC inspector interviewed (March 12, 1985) the alleger for additional details in regard to this concern. The alleger stated the thickness of unistrut was approximately 0.105". Review of the AWS D1.1-1975 code identified that Table 5.26.1 does limit the minimum thickness to be qualified with 6" Schedule 80 pipe as .187". However, the AWS D1.1-1976 code added the footnote which qualified the welder for unlimited thickness for fillet welds. This was an obvious oversight in the 1975 code which was subsequently added in the 1976 code, as a welder who demonstrates the ability to weld pipe groove welds would also be capable to weld fillet welds of any thickness. Furthermore, AWS D1.1-1975, Section 5.23.2, "Groove Pipe Test Welds," and Table 5.23 designates welders qualified to weld pipe-groove welds are qualified to weld fillet welds for the position qualified.

The welds utilized on unistrut material in the installation of cable pan are fillet welds.

Conclusion

This concern was correct in that the AWS D1.1-1975 code did specify a minimum thickness qualification for welders who qualify on 6" Schedule 80 pipe. However, this limitation was not intended to include fillet welds as the 1976 code revision clarified by addition of the footnote. The purpose of the welder qualifications is to assure the welder is capable to produce sound welds within a welding process, position and thickness. A welder who qualifies on 6" Schedule 80 piping groove weld demonstrates this ability to perform fillet welds as specified in AWS D1.1, Section 2, Table 5.23. The exclusion of the footnote [3] in Table 5.26.1 1975, in the inspector's opinion, was an obvious oversight which was corrected in the 1976 edition of the code.

Allegation 3

Welders with "rejected positions" only took one test on retesting. The alleger contended that the code required two retests, not one.

NRC Review

The NRC inspector reviewed the AWS D1.1-1975 code. Paragraph 5.29.1.2 of the code states, "A retest may be made provided there is evidence that the welder has had further training or practice. In this case a complete retest shall be made." It is not required by LKC Procedure or the AWS code that the further training or practice be documented, or how much training is required to qualify for this option. This determination is at the discretion of the contractors. The NRC inspector reviewed a random sample of welder qualification records, including those welders referenced by the alleger, for retest of welders who had previously failed the test. No violations of the AWS D1.1 or contractor procedure was apparent.

Conclusion

The AWS code gives two options when a welder fails to meet the requirements of one or more test welds. The first option is stated in Paragraph 5.29.1.1, "An immediate retest may be made consisting of two test welds of each type on which the welder failed. All retest specimens shall meet all the specified requirements." The other option is as stated above in Paragraph 5.29.1.2. Therefore, if this practice was utilized as stated by the alleger it would not necessarily violate the code. The NRC inspector did not find any violations involving the retesting of any welders who had failed a welding test during review of welder qualification records.

Allegation 4

Records showed that an identified welder had a rejected test on a 1" thick plate and that the welder performed two additional tests on the same day. The alleger thought it was impossible and the record was wrong.

NRC Review

The NRC inspector performed a random sample review of welder qualification records, and reviewed one welder's qualification record identified by the alleger with this deficiency. Welder No. 735 identified by the alleger as the welder who, according to the welder qualification records, had welded three 1" coupons in one day. The inspector's review of this person's welding qualification record revealed the following data: A weld test was performed by the welder on February 26, 1981 on 1" plate (LKC Form 88). The lab test for this test coupon was performed on March 5, 1981 per the Pittsburgh Testing Lab (PTL) test report. (PTL is the independent testing lab who performs the physical test [bend test, machros, etc.] of the welder's test coupons for LKC's welders' qualifications.) These test reports dated March 5, 1981, identified as Lab Report BST 5676 testing of coupon for 3G position (failed test), Lab Report BST 5677 for testing of coupon for 4G position was acceptable. PTL Lab Test Reports BST 5683 and 5684 dated March 10, 1981, both for the

3G position retest for the same welder, was acceptable. The LKC Form 88 (welder qualification test record) was signed February 26, 1981, the same date as the original test. This was an obvious error on the Form 88 as the retest by PTL was dated March 10, 1981. The inspector's review of 75 additional welders' qualification records did not reveal any additional record errors of this type.

Conclusion

The contention that the welder's qualification record was in error was correct. However, the PTL test records which accompany the LKC Form 88 provided objective evidence that the test coupons were welded, and tested over a period of two weeks. The error was obvious that the LKC Form 88 was signed prior to the final testing of the weld coupons, which violates the LKC welder qualification Procedure 4.7.1, Revision July 18, 1980, Paragraph 3.10.4, which instructs the QC inspector to sign Form 88 after receipt of the Independent Testing Company report. This is considered an example of a violation of 10 CFR 50, Appendix B, Criterion V (456/85-009-01(DRS); 457/85009-01(DRS)); however, the welder's qualification record was adequate in that there was objective evidence to support the welder had satisfactorily completed the welder qualification in accordance with the requirements of AWS D1.1-1975, Section 5, Part C - Welder Qualification. The inspector's review of the random sample did not disclose any additional violations of this type.

k. Welder Qualification Inconsistencies

Allegation 1

The alleger believes there are many instances of record falsification; for example: An unidentified welder took three test coupons and got the results all in one day. The alleger stated that this was administratively impossible.

NRC Review

This concern was addressed in paragraph 2.j, allegation 4 of this report. However, the NRC inspector reviewed additional welder qualification records, L. K. Comstock Procedure 4.7.1, Revision C, dated November 26,1984, "Welder Performance Qualification Tests," and Procedure 4.3.20, Revision 0, dated February 29, 1980, "Manual Shielded Metal Arc Welding for Structural Steel Qualification Procedure." These procedures establish the method of qualifying welders per AWS D1.1-1975 utilizing Shielded Metal Arc Welding process (SMAW). The procedure requires the QC inspector to initiate the Form 88, "Welder and Welding Operator Qualification Test Record." This record is partially completed during the period that the welder is performing the weld test; however, no dates are required until the completion of the guided bend test or fillet weld test (whichever is required) and the LKC QC manager or his designee sign and date the form. The guided bend test and fillet weld tests are performed by an independent laboratory (Pittsburgh Testing Lab).

Conclusion

The welder qualification records do not reflect the period of time it takes to weld and test welders' coupons. It is possible that a welder performed the three tests over a period of time and were all submitted for testing to PTL on the same day, tested, reviewed, signed, and dated by the QC manager on the same day. The alleger only cited one example which was addressed in paragraph 2.j, allegation 4 of this report. No other evidence of record falsification was identified by the NRC inspector.

Allegation 2

Face bend and root bends were done on 1" thick plate material which the alleger contended was physically impossible.

NRC Review

The NRC inspector performed a random sample review of 100 welder qualification records in addition to the samples previously reviewed. No face or root bends were observed to have been performed on 1" thick plate material. The alleger found one welder with this deficiency. The NRC inspector reviewed this finding and concluded from the records that the plate thickness was actually 3/8" plate and the 1" plate thickness annotated on the Form 88 was a clerical error. This was substantiated through the review of the PTL testing data which identified the plate thickness to be 3/8".

Conclusion

The NRC inspector's review did not disclose the deficiency as stated by the alleger. The incident identified by the alleger was an obvious clerical error; however, the sample of test results observed by the NRC inspector were recorded on the Form 88 for 1" thick test coupons and were tested by PTL as required by AWS D1.1-1975, Table 5.26.1. The tests performed were the required side bend test and were found to be acceptable.

Allegation 3

Overheard that an inspector inspected 1,000 welds in one day.

NRC Review

The NRC inspector reinterviewed the alleger (March 12, 1985) who stated he had no personal knowledge of this concern, but had heard that the inspector was the same person as in paragraph 2.p and that the welds were located on the turbine floor. This concern is addressed in conjunction with the allegation documented in paragraph 2.p of this report.

1. Allegation

"Master Hammer Log" - A welder was assigned welder stamp numbers 23 and 123, but two other welders were also assigned the same stamp numbers. Other inconsistencies in the Master Hammer Log were also found.

NRC Review

The NRC inspector reviewed the welders' Master Hammer Log. The welder assigned welder stamp 23 was also identified with his "brass" or employee identification number 123 in the same record. The brass number is an employee identification number and is not used in identifying the welder's work. The stamp number 23 was used previously by another welder who worked for E. C. Ernst, the previous electrical contractor. However, the dates of stamp issue were recorded and therefore is traceable to the work the welder performed through the inspection records. The issue of a welder's stamp to another individual after the previous welder turned in his stamp (layoff, resignation, change in jobs) is acceptable provided the dates of issue and surrender are maintained and there are records to validate the date when the welds were produced. The NRC inspector sampled the control of 50 additional welders stamps with no adverse findings.

Conclusion

This concern was partially correct, but does not adversely affect the welder's identification records. Although the stamp number may be issued to more than one individual, the Master Hammer Log records the issue and surrender date with the identity of the welder. This, together with the inspection records, makes it possible to trace the individual weld to the appropriate welder. In addition, LKC Procedure 4.8.3, "Weld Inspection," Paragraph 3.11, requires the weld inspector to verify, during his inspection, that welder identification is indicated by assigned stamp near the weld joint.

m. Allegation

A Level 2 Quality Control inspector was responsible for the welder test booth. The Level 2 was also assigned to perform inspections in the fabrication shop and routine field inspections; consequently, no inspectors watched welder testing in the qualification booth. The alleger considered this to be inadequate control of the welder testing program and inadequate or no quality control involvement in the weld qualification test implementation.

NRC Review

The NRC inspector interviewed the welder test booth inspectors named by the alleger who were responsible for inspections to be performed on welder qualification tests required by LKC Procedure 4.7.1, Revision C.

The inspectors interviewed stated that, to their knowledge, in no case that they were aware of was there a welder qualification test performed without the presence of a QC inspector, as required by the referenced procedure. In addition, the NRC inspector reviewed more than 100 welder qualification records which documented that a QC inspector performed the required inspections and recorded the applicable welding data on the welder qualification record. One inspector did indicate that he voiced his displeasure of having to do inspections in the welder qualification area and in the field; however, he did not consider this a safety concern as the required inspections were completed by the QC inspector.

Conclusion

This concern was partially substantiated with no detrimental effect to the welder qualifications. That is, the QC inspectors were also assigned to perform inspections in the fabrication shop and in the field (power plant). This is common practice as welder qualifications are not usually performed 7 days a week but only on an as needed basis. When a welder was performing welder qualification testing the QC inspector was required to be present to witness the welder's performance in accordance with LKC Procedure 4.7.1.

n. Allegation

The L. K. Comstock Company's Corporate Quality Assurance Manager intimidated quality control inspectors during discussions on compensation by telling the inspectors that he had 20 people ready to take the places of the inspectors.

NRC Review

Further discussion with the alleger (March 12, 1985) concerning this allegation revealed that the source of the allegation was hearsay and that the discussions with management concerned the hiring of new inspectors at higher salaries without compensating the other inspectors.

Conclusion

This allegation was previously investigated and closed in NRC Inspection Report No. 456/84-34(DRP); 457/84-32(DRP), Allegation RIII-84-A-0119. The inspection concluded that there was no intimidation.

o. Allegation

Comstock inspection procedures do "not deal with a full penetration weld of any kind," and it's the alleger's understanding that there has been full penetration welds done on the project.

NRC Review

The NRC inspector reinterviewed the alleger (March 12, 1985) who provided further clarification; "he heard the full penetration welds only required visual inspection - no other NDE was performed." The NRC inspector's review of the full penetration welds produced by LKC revealed that the full penetration welds performed by the contractor were on riser collar support assemblies, column bars within the riser cable pans, main control board modifications, and equipment pads. The riser collars provide support for the vertical riser cable pans through floor penetrations. During a CECo audit performed on April 30, 1984, the licensee's Quality Assurance auditors discovered that some of the riser collar assemblies were not installed and fabricated to the applicable design drawings.

LKC issued nonconformance report (NCR) 2648, dated June 19, 1984, to identify the discrepant riser collars and to implement corrective action. The corrective action stated on this NCR was to rework the riser collars to conform to the latest design drawing and Engineering Change Notice (ECN) 24181. The NRC inspector reviewed the referenced NCR and ECN and confirmed the corrective action was adequate to correct the deficiencies. The alleger's contention that the full penetration welds only required visual examination was correct. However, the Architect-Engineer (S&L) specification previously required only visual examination (LKC Procedure 4.8.3, "Weld Inspection") which complies with AWS D1.1-1975. A recent amendment to the S&L specification L-2790, subsequent to NCR 2648, Paragraph 401.19.1, Amendment 42, dated November 9, 1984, requires additional nondestructive examination to be performed on full penetration welds. This change has been implemented on all new fabrication and installation utilizing full penetration welds. The use of only visual inspection for acceptance of full penetration welds prior to November 9, 1984, met the nondestructive testing requirements of AWS D1.1. Based on engineering judgement, as an added measure of assurance, additional NDE (radiographic testing) is currently (post November 9, 1984) being performed.

Conclusion

Although the electrical contractor did not perform nondestructive examination (NDE) other than visual on the full penetration welds, the architect-engineer (AE) specification (L-2790) did not require NDE other than visual examination at the time the welds were made. AWS D1.1-1975 does not require other NDE unless specified by the engineer (AE) or owner, reference Section 6.6 of the code. Discrepancies identified by the licensee in regard to the rise collars have been adequately addressed and corrective action has been implemented.

p. Allegation

The L. K. Comstock Braidwood QC Manager was previously an inspector and passed many welds which should have been rejected.

NRC Review

The NRC inspector reinterviewed the alleger (March 12, 1985) who stated his information "was hearsay and he had no personal knowledge of this concern." The alleger also stated that "he heard that the area of concern was on the turbine floor." The turbine floor is located in the turbine building, a non-safety related area.

The NRC inspector selected a random sample of the welds that had been inspected by this individual in safety-related areas to verify the adequacy of those inspectiors. The majority of these welds had been painted; therefore, it was not possible to inspect 100% of these welds. Some of the welds were not painted due to reinspection being performed by an independent laboratory (Pittsburgh Testing Lab). Those that the NRC inspector observed met the visual acceptance criteria of AWS D1.1-1975.

Conclusion

The alleger, by his own admission, had no first hand knowledge of this concern. Furthermore, the hearsay information involved a non-safety related area. The NRC inspector's sample in safety-related areas did not reveal any defective welds.

Additionally, the Pittsburgh Testing Laboratory (PTL), an independent laboratory, performed a 10% overinspection of the LKC inspections of welds. These overinspections were documented and included with the weld inspection records. A review of these records by the NRC inspector did not disclose a problem with the QC manager's previous inspections as a weld inspector.

q. Allegation

The Alleger had reviewed weld procedures for L. K. Comstock at Perry and had identified procedure inconsistencies.

NRC Review

This concern was addressed in NRC Inspection Report No. 50-440/85043. The inspector substantiated this allegation and identified the inadequacies of the procedure within the referenced report. Reference violation 440/85043-01(a), (b), (c), and (d)(DRS).

Conclusion

This concern was verified but does not apply to this licensee. The procedural violations identified in NRC Inspection Report No. 50-440/85043 were resolved.

r. Allegation

"Within three days after I started working, I noticed that there was a joint design, a weld being made in the shop that was outside the criteria of the AWS D1.1 code."

NRC Review

The NRC inspector reinterviewed the alleger for specifics (March 12, 1985). The alleger stated he had noticed a weld, 1/4" plate to unistrut, which violated AWS D1.1, Figure 8.8.5.

The NRC inspector performed field and shop welding observations and noted the joint the alleger referred to as a violation of AWS D1.1, Figure 8.8.5. AWS D1.1, Paragraph 8.8.5 states, "Fillet welds deposited on the opposite sides of a common plane of contact shall be interrupted at the corner common to both welds."

The observations the NRC inspector made, in the application of this weld, were in compliance with the Architect Engineer (S&L) Drawing 20-E-0-3393D, Revision AE. In addition, the NRC inspector inspected a sample of 50 cable pan hangers with the referenced weld orientation which complied with the S&L drawing requirements.

Conclusion

AWS D1.1, Section 8.8.5, requires the fillet weld deposited on opposite planes be interrupted at the corner common to both welds. The welds observed by the NRC inspector complied with this requirement. Some of the subject welds butted up against each other, but none of those observed were continuous. The S&L Drawing (20-E-0-3393D) specified 1/8" fillet welds for the full length on both planes. The application of this configuration does not violate the AWS code.

s. Allegation

Noncompliances had been performed by a E. C. Ernst, which was the contractor prior to Comstock, and these were still faulty problems that had not been addressed.

NRC Review

Further discussions with the alleger (March 12, 1985) disclosed that the "noncompliances" he referred to were with the welder qualification records. This concern is addressed in paragraph 2.h.

t. Allegation

L. K. Comstock Company had qualified a General Electric procedure by only doing a tensile test on the coupons when it's customary to do a bend test as well.

NRC Review

The NRC inspector reviewed the referenced procedure which was generated for use on non-safety related aluminum welding (bus bars). The welding performed utilizing this procedure was not safety-related and therefore was not subject to the requirements for qualification specified in AWS D1.1-1975 code.

Conclusion

This concern was not substantiated. The weld procedure is not utilized for safety-related welding and therefore is not required to meet the AWS D1.1-1975 code.

u. Allegation

The alleger stated that he was prevented from making a "formal finding" because he was not certified.

NRC Review

This allegation was correct in that the alleger, because he had not certified as an inspector, could not issue/sign a nonconformance report (NCR). However, during the review of the allegations the NRC inspector noted that several NCRs were prepared by the alleger and signed by a certified inspector. The alleger also supplied documents/memorandums in which he expressed concerns, and for which the contractor took action to address these concerns, i.e., stop work orders, NCRs, memorandums addressed his concerns.

Conclusion

Per the requirements of the LKC Quality program, the issuance/signing of a nonconformance report must be signed/initiated by a certified inspector. This requirement did not prevent the alleger from expressing his concerns, and as evident from the supporting documentation supplied by the alleger to the enclosed allegations, was acted on by the electrical contractor. Other documentation reviewed by the NRC inspector throughout this inspection clearly demonstrated that the alleger's concerns were addressed and resolved when the alleger made them known to the contractor's management. In addition, there were NCRs prepared by the alleger which were issued through a certified inspector (reference LKC NCRs 3099, 3137, and 3145).

One violation with two examples was identified (paragraphs 2.h and 2.j, allegation 4).

3. (Closed) Allegation RIII-85-A-0005

The document reviewer stated that the Comstock Rework Program is "full of loopholes" and that "the documentation flow through QC is not clear in the procedure." As an example, a final inspection will be done, but

"seldomly is there a basemetal inspection." The reviewer continued "the basemetal inspection is required to be done after a defective part is removed, but before the replacement is installed."

NRC Review

The NRC inspector interviewed each L. K. Comstock document reviewer and their supervisor independently. None of the personnel interviewed were knowledgeable of the alleger's concerns. The NRC inspector reviewed L. K. Comstock Procedure 4.13.1.1 titled, "Turnover Document Review." This procedure "prescribes the guidelines for the review of quality control inspection documents to be followed by all Document Review personnel."

The procedure provides a checklist for all quality documents reviewed. The Document Reviewers are required to review the quality document to the applicable checklist in the procedure. None of the checklists reviewed specified a review for base metal inspection but rather to ensure that all records were complete and properly approved in accordance with ANSI N45.2.9. The NRC inspector reviewed a random sample of quality documents with no adverse findings.

Conclusion

This allegation was not substantiated. The Document Reviewers do not review the quality documentation for base metal inspection as it is not part of the procedural requirement. However, base metal inspection is required to be performed as stated by the alleger, when a (defective) part is removed and before the replacement is installed. This is a requirement of LKC Procedure 4.3.12, Revision C, dated February 6, 1985, Paragraph 6.6, which states that QC will be notified to perform a base metal inspection if at any time a hanger/component is to be moved or cut down during or after installation. This is documented on LKC Form 244 and signed by a Level II inspector. Document reviewers are not Level II inspectors and would normally not be knowledgeable of when a base metal inspection is required. This concern was also addressed in NRC Inspection Reports No. 50-456/85044(DRS); No. 50-457/85043(DRS) in conjunction with this review.

No violations or deviations were identified.

4. Exit Interview

The inspector met with site representatives (denoted in Persons Contacted Paragraph) at the conclusion of the inspection. The inspector summarized the scope and findings of the inspection noted in this report. 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.

Meeting / Hearing Dept
Ex. No. 8 3/13/86

Attachment D

NOV 4 1985

Docket No. 50-456
Docket No. 50-457

Commonwealth Edison Company
ATTN: Mr. Cordell Reed
Vice President
Post Office Box 767
Chicago, IL 60690

Gentlemen:

This refers to the special safety inspection conducted by Messrs. J. Neisler and R. Mendez of this office on April 30 through September 5, 1985, of activities at Braidwood Station, Units 1 and 2, authorized by NRC Construction Permit No. CPPR-132 and CPPR-133 and to the discussion of our findings with Mr. D. L. Shamblin on August 30, 1985.

The enclosed copy of our inspection report identifies areas examined during the inspection. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations, and interviews with personnel.

During this inspection, certain of your activities appeared to be in violation of NRC requirements, as specified in the enclosed Appendix. A written response is required.

In accordance with 10 CFR 2.790 of the Commission's regulations, a copy of this letter and the enclosure will be placed in the NRC's Public Document Room.

The responses directed by this letter (and the accompanying Notice) are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96-511.

We will gladly discuss any questions you have concerning this inspection.

Sincerely,

Original Signed by J. J. Harrison

J. J. Harrison, Chief
Engineering Branch

Enclosures:
1. Appendix, Notice of Violation
2. Inspection Reports
No. 50-456/85021(DRS);
No. 50-457/85022(DRS)

Distribution

cc w/enclosures:
D. L. Farrar, Director
of Nuclear Licensing
M. Wallace, Project Manager
D. Shamblin, Construction
Superintendent
J. F. Gudac, Plant Manager
C. W. Schroeder, Licensing and
Compliance Superintendent
DMB/Document Control Desk (RIDS)
Resident Inspector, RIII
Braidwood
Resident Inspector, RIII Byron
Phyllis Dunton, Attorney
General's Office, Environmental
Control Division
D. W. Cassel, Jr., Esq.
J. W. McCaffrey, Chief, Public
Utilities Division
H. S. Taylor, Quality Assurance
Division
E. Chan, ELD
J. Stevens, LPM, NRR
The Honorable Herbert Grossman, ASLB
The Honorable A. Dixon Callihan, ASLB
The Honorable Richard F. Cole, ASLB

RIII
Mendez/jk
10/07/85

RIII
COW
Williams
10/29

RIII
Weil
for 10/29

RIII
Little
11/4/85

RIII
Harrison
10/29

Appendix

NOTICE OF VIOLATION

Commonwealth Edison Company

Docket No. 50-456
Docket No. 50-457

As a result of the inspection conducted on April 30 through September 5, 1985, and in accordance with the General Policy and Procedures for NRC Enforcement Actions, (10 CFR Part 2, Appendix C), the following violations were identified:

1. 10 CFR Part 50, Appendix B, Criterion V, as implemented by the CECo Quality Assurance Manual, Quality Requirement Section 5 requires that Quality Assurance carried out for construction activities be described by instructions and procedures.

   Commonwealth Edison in its Quality Assurance Manual, Section 10 and L. K. Comstock in its Procedure 4.1.3, "Qualification Classification and Training of QC Personnel", commit to ANSI N45.2.6-1978. ANSI N45.2.6-1978, Paragraph 4, states, in part, "Personnel who are assigned the responsibility and authority to perform functions covered by this Standard shall have, as a minimum, the level of capability shown in Table 1." Table 1 requires that evaluating the validity and acceptability of inspection, examination and testing results be at least a Level II. L. K. Comstock (LKC) Procedure 4.1.2, Revision B, Paragraph 3.30, "Position Delineation," states, in part, "Quality Control Lead Inspectors...must be certified Level II in designated areas...." LKC's "Master Qualification List by Discipline for Level II Inspectors," classifies 11 functional areas for Level II capability, two of which are calibration and concrete expansion anchors (CEAs).

   Contrary to the above, the following instances of failure to qualify personnel in accordance with procedures were identified:

   a. On May 25, 1984, a LKC QC inspector signed the Level II review column on two LKC inspection checklists, form 23A, "Variable Instrument Calibration," for torque wrenches A-531 and A-828, although the inspector was not a certified Level II inspector in calibration.

   b. From August 1984 to March 1985 the same QC inspector identified above was designated by LKC to be a Quality Control Lead Inspector in calibration and CEAs, although the inspector had no certification in those areas.

   c. From March 1985 to May 1985 a second QC inspector was designated lead in calibration but was not certified as a Level II in that area.

   This is a Severity Level V violation (Supplement II).

2. 10 CFR Part 50, Appendix B, Criterion XVII, as implemented by the CECo Quality Assurance Manual, Quality Requirement Section 17 requires that records be retained and maintained to furnish evidence of activities affecting quality.

   Contrary to the above, the licensee could not provide documented evidence that welds rejected by Pittsburg Testing Laboratory (PTL) on hangers CC-23, CC-36, CC-87 and CC-34 were reworked, repaired, used-as-is, or reinspected.

   This is a Severity Level V violation (Supplement II).

Pursuant to the provisions of 10 CFR 2.201, you are required to submit to this office within thirty days of the date of this Notice a written statement or explanation in reply, including for each violation: (1) corrective action taken and the results achieved; (2) corrective action to be taken to avoid a further violation; and (3) the date when full compliance will be achieved. Consideration may be given to extending your response time for good cause shown.

NOV 4 1985
Dated

J. J. Harrison, Chief
Engineering Branch

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report Nos. 50-456/85021(DRS); 50-457/85022(DRS)

Docket Nos. 50-456; 50-457 License Nos. CPPR-132; CPPR-133

Licensee: Commonwealth Edison Company
P.O. Box 767
Chicago, IL 60690

Facility Name: Braidwood Station, Units 1 and 2

Inspection At: Braidwood Site, Braidwood, IL

Inspection Conducted: April 30-May 3, May 7-10, June 24-25, August 28-30, and September 5, 1985

Inspectors: R. Mendez — 10/29/85 Date

J. H. Neisler — 10-29-85 Date

Approved By: C. C. Williams, Chief
Plant Systems Section — 10-29-85 Date

Inspection Summary

Inspection on April 30 through September 5, 1985 (Report No. 50-456/85021(DRS); 50-457/85022(DRS))

Areas Inspected: Special, unannounced inspection of allegations; and licensee actions on allegations. The inspection involved a total of 152 inspector-hours by two NRC inspectors including 18 inspector-hours of in-office inspection and 30 inspector-hours during off-shifts.

Results: Two violations were identified (failure to follow procedures - Paragraph 2.a(2); failure to provide documentation of activities affecting quality - Paragraph 2.d(4)).

DETAILS

1. Persons Contacted

Commonwealth Edison Company (CECo)

*M. J. Wallace, Project Manager
+D. L. Shamblin, Project Construction Superintendent
+C. W. Shroeder, Project Licensing and Compliance Superintendent
#T. E. Quaka, QA Superintendent
*R. M. Preston, Director-Quality First
#E. F. Wilmere, QA Supervisor
+E. E. Fitzpatrick, Assistant Manager QA
#G. E. Groth, Assistant Construction Supervisor
+L. M. Kline, Project Licensing and Compliance Supervisor
#C. Mennecke, Project Construction Department Supervisor
*W. E. Vahle, Project Field Engineering Manager
#E. Netzel, QA Supervisor, Electrical
+J. Gieseker, Project Field Engineer

L. K. Comstock and Company (LKC)

#R. Simms, QA Supervisor
*J. J. Klena, Project Engineer
+I. F. Dewald, QC Manager

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

*Denotes those personnel attending the May 10, 1985, exit interview.

#Denotes those personnel attending the August 30, 1985, exit interview.

+Denotes those personnel attending the May 10 and August 30, 1985, exit interviews.

2. Followup on Allegations

On March 29, 1985, 24 L. K. Comstock (LKC) QC inspectors went to the NRC Resident Inspectors' office at Braidwood Station with allegations concerning quality issues. These allegations (NRC Tracking No. RIII-85-A-0072) were subsequently sent by NRC Region III to the licensee for its review and resolution. This action was acceptable to the licensee and the LKC inspectors.

Prior to going to the NRC Resident Inspectors' office, some of the QC inspectors had expressed some concerns to NRC Region III regarding LKC's QA program. These concerns were received by Region III and tracked as allegation numbers RIII-85-A-0062, RIII-85-A-0067 and RIII-85-A-0068. Several of those concerns were similar to the allegations (RIII-85-A-0072) received on March 29, 1985.

During this inspection, discussions were held with LKC personnel including 16 randomly selected QC inspectors and other personnel to review the LKC inspectors' concerns and allegations. The inspectors interviews included some of the inspectors who provided the allegations and concerns. The NRC inspector also reviewed the licensee's actions regarding the issues expressed by the QC inspectors as documented in allegation No. RIII-85-A-0072. The allegations and concerns expressed by LKC inspectors are addressed below in the order they were received by the Regional Office.

a. (Closed) Allegation (RIII-85-A-0062)

On March 13, 1985, the Senior Resident Inspector received information regarding lack of qualification of LKC personnel.

(1) Concern

The alleger cited an example where one QC supervisor was not certified as a Level II inspector in the areas of cable tray, concrete expansion anchors, and receipt inspection. The alleger also named two other QC supervisors who were not certified in the areas they supervised. The alleger cited LKC Procedure 4.1.2, Section 1.21, which states in part, "Quality Control Supervisor...shall be trained and knowledgeable in the assigned areas of responsibility and certified to Level II capability in those areas."

NRC Review

During interviews of the 16 randomly selected LKC QC inspectors, many expressed the opinion that almost all of the QC supervisors were neither qualified nor certified as Level IIs in the areas they supervised. The LKC inspectors felt that they could not depend on the QC supervisors to answer questions in the areas where QC inspectors were uncertain of QC related matters.

Deficiencies in the LKC QC supervisors' certifications had been previously identified in the licensee's Braidwood QA Audit Report #QA-20-84-556 dated December 19, 1984. The audit report identified certain LKC QC supervisors as not having sufficient work experience. The report also concluded that some supervisors lacked certification as Level II inspectors in all the areas they supervised. The audit report finding required that training and experience be provided as appropriate and that supervisors be knowledgeable in the assigned areas of responsibility. LKC Procedure 4.1.2, Revision C, was reworded such that a QC supervisor is required to obtain certification as a Level II inspector after they attain the position of QC supervisor. However, supervisors do not perform Level II reviews prior to receiving certification in their areas as specified by the governing procedures and regulations. Formerly, the procedure required that the employee be a Level II inspector before becoming a QC supervisor.

This Braidwood audit finding had not been closed out and requires that the subject supervisors receive the required training to become certified Level II inspectors in the areas they supervise.

Conclusion

The allegation regarding supervisor qualification was substantiated in that some of the QC supervisors were not certified as Level II inspectors in all areas they supervised. While this lack of certification is not contrary to any explicit NRC certification requirement, it is contrary to the licensee's procedure and therefore 10 CFR 50, Appendix B, Criterion V. The CECo Braidwood Site QA had identified the lack of qualification and/or certification of Supervisors in an audit report on December 19, 1984, before the allegation was made on March 29, 1985, and adequate corrective actions had been initiated. Therefore, for enforcement purposes this is considered to be a licensee identified item.

(2) Concern

The alleger cited as an example two QC inspectors who were selected as lead inspectors but were not qualified and were therefore, unable to perform their assigned duties adequately. The alleger stated that one of the lead inspectors did not have any qualifications and that the second lead inspector had qualifications only in receipt inspections. (During the onsite interviews of the 16 randomly selected QC inspectors, an additional six lead QC inspectors were alleged to be improperly qualified.) The alleger cited LKC Procedure 4.1.2, Section 1.22, which he indicated stated that "QC inspectors be certified as Level II's in the area the inspector has lead responsibility".

NRC Review

The inspector reviewed the qualification records of the eight LKC lead QC Level II inspectors who were alleged to have less than the required qualifications/experience. The results of the review indicated that the inspectors had the required background and training with the exception of those mentioned below:

- There was one instance where an individual (this QC inspector was alleged to not have any certifications) was assigned as a lead inspector in concrete expansion anchors (CEAs) on March 10, 1985, but did not receive his Level II certification until March 21, 1985, due to administrative delays. This individual had passed the written and practical inspection tests for CEAs on March 5, 1985, and

was previously certified as a Level II CEA inspector at another site. Although assigning this individual as a lead before being certified as a Level II violated procedures, a review of about 2,000 CEA travelers/inspection reports completed before March 21, 1985, indicated that this QC inspector did not sign/approve any CEA quality documents.

- A QC inspector was alleged to have been certified only for receipt inspections but was a lead inspector in other areas for which he was not certified. This inspector was assigned as a lead inspector in concrete expansion anchors (CEAs) and calibration from August 1984 until March 1985. The effective revision of LKC Procedure 4.1.2, "Position Delineation," during the period August 1984 to March 1985 was Revision B that stated, in part, "Quality Control Lead Inspector...is responsible for immediate direction of fellow QC inspectors in their designated area(s) (i.e., cable pulling, welding configuration, etc.)...must be certified Level II in designated area(s)...." While the individual was certified for hanger configuration, there was no documented evidence that this lead inspector was certified in CEAs and calibration during the period August 1984 to March 1985.

  LKC personnel stated that although the QC inspector was assigned as a "lead" in CEAs and calibration, their review of a sample of calibration and CEA documentation did not reveal any quality documents where the inspector had signed as a Level II reviewer.

  ANSI N45.2.6-1978 states that personnel who are assigned the responsibility and authority to evaluate the validity and acceptability of inspection, examination and testing results shall be certified as Level II. LKC's "Master Qualification List" classifies 11 functional areas for Level II capability, one of which is calibration. However, the NRC inspector determined that, contrary to LKC's belief that the QC inspector did not sign any quality documents, on May 25, 1984, this QC inspector signed two "Variable Calibration Records" under the column "Level II Review" for torque wrenches as A-531 and A-828, although the QC inspector was not certified in calibration.

- A second QC inspector who was designated as lead inspector in calibration from March 1985 to May 1985 was not certified as a Level II calibration inspector. The NRC inspector determined during the records review that this QC inspector did not sign quality records in areas where he was not certified. This issue was identified by the NRC inspector.

Conclusion

This allegation was substantiated. There was one example where due to an administrative error, an individual became a lead inspector in a specified area without first being certified as a Level II inspector in violation of the LKC procedure however, there was no evidence that this individual signed/approved any quality documents in that area before he was formally certified. Two other lead inspectors were not certified Level II in violation of the LKC procedure. Additionally, contrary to ANSI N45.2.6 one of these QC inspectors signed two calibration inspection checklists under Level II review although he was not a certified Level II in calibration. These failures of the licensee to assure that activities affecting quality be accomplished in accordance with instructions and procedures is a violation of 10 CFR 50, Appendix B, Criterion V (456/85021-01; 457/85022-01).

b. (Open) Allegation (RIII-85-A-0067)

This allegation consisted of three parts, two of which were reviewed by the NRC inspector during this inspection. The third issue involving welding will be addressed during a separate NRC inspection.

(1) Concern

One part of the allegation related to the alleger who was an LKC QC inspector being reprimanded for absenteeism and poor work performance. The alleger felt that LKC quality control was under production pressure and that his reprimand was based on his failure to meet quotas set by LKC management.

NRC Review

The alleger had been given verbal warnings regarding excessive absences on September 27, 1984, and January 27, 1985, and a written warning on February 20, 1985. On March 19, 1985, the alleger received a second written warning for absenteeism and poor work performance. The LKC action on the alleger's absenteeism was prompted by the alleger taking a total of 16 sick/personal days from June 1, 1984, through March 18, 1985. From January 28, 1985, through March 19, 1985, the alleger had performed an average of 1.6 inspections per day while the average for his particular speciality (welding inspections) was 9.3 inspections per day.

With respect to the allegation regarding production pressure to meet quotas, the inspector interviewed the alleger and other selected QC inspectors. All of the QC inspectors stated that LKC management appeared to be more interested in production rather than the quality of the inspections. Some of the inspectors indicated that LKC management was probably concerned

about losing the electrical contract with the licensee. Additionally, it was stated by the QC inspectors that one of the QC Supervisors vigorously conveyed the message that management was more interested in production rather than quality by pressuring QC inspectors to perform more inspections. However, none of the LKC inspectors indicated that they would accept discrepant work under any conditions. LKC management and the licensee met with LKC QC personnel on May 13, 1985, to resolve the QC inspectors' concerns and reaffirm the licensee's and LKC's commitment to quality and to discuss improving communication between LKC's management and their inspectors.

Conclusion

This portion of the allegation could not be substantiated. Some of the QC inspectors expressed opinions about a QC supervisor who projected a production oriented attitude that some QC inspectors felt would affect quality; however, there was no evidence that this led to procedure violations or to LKC inspectors accepting discrepant work.

(2) Concern

One part of the allegation was that QC inspectors were not being properly trained in conduit specifications. The individual cited Procedure 4.3.13, "Installation of Junction Box and Equipment", which referenced the conduit specifications for grounding of junction boxes.

NRC Review

Section 3.5.6.1 of LKC Procedure 4.3.13, states that, "Junction boxes...will be grounded in accordance with the conduit specifications." Procedure 4.3.13 also references S&L Standards and approved drawings. Currently, QC inspectors who are certified Level II QC inspectors in the area of "Equipment/Junction Box Installation" are required to have knowledge of Procedure 4.3.13. A review of training records of 5 of the 12 QC Level II conduit inspectors indicated that they attended lectures and demonstrations on Procedure 4.3.13. Additionally, records indicated that the QC inspectors had been trained to Specification L-2790 and S&L drawings 20E-0-3391A and 20E-0-3000D which are the specifications for grounding.

During the discussions with the 16 LKC inspectors addressed in Paragraph 2.a above, none of the inspectors could provide an example where junction boxes were not grounded per the applicable conduit drawing or specification.

NRC Review

The alleger's statements based on NRC examination and discussion have not been corroborated by the lead or the supervisor during interviews. That is, there is no corroboration that the alleger was told not to concern himself with the base metal reduction problem and that he would be taken off overtime. The alleger had originally identified the base metal reduction problem on December 8, 1984, and documented the discrepancy in a memo to the QC manager. On December 18, 1984, the QC manager sent the memo through the proper channels to the G. K. Newberg, the civil/structural contractor, for resolution. The alleger also referred the base metal reduction problem to a LKC Field Engineer. At the time the alleger brought the base metal reduction concern to the LKC Field Engineer, LKC's procedures and specifications did not allow them to repair structural steel. Subsequently, S&L Specification L-2790 was changed to allow LKC to repair or rework base metal reduction problems on structural steel when caused by electrical rework. This change was incorporated per Amendment 46 and Engineering Change Notice 25862 into S&L Specification L-2790.

On July 30, 1985, Inspection Correction Report (ICR) No. 10991 was issued to correct the base metal reduction problem identified by the alleger.

Conclusion

This allegation could not be substantiated. Based upon review of documentation relative to this allegation, the inspector determined that the base metal reduction issue was properly referred to the responsible contractor for disposition. With respect to the alleged threat that the alleger's overtime would be taken away, his overtime has not been taken away based on discussions with the alleger.

(3) Concern

The LKC QC inspectors alleged that many new electrical inspectors are being qualified and certified in the areas of welding and configuration in one week. The allegers felt that it was impossible to be adequately knowledgeable in all of the detailed reference tables and drawings necessary to perform the inspections in one week, and that the quality of inspections by inspectors qualified in one week was questionable.

NRC Review

Many of the LKC QC inspectors interviewed expressed concern about other inspectors being certified expeditiously. Some of the inspectors indicated that they had knowledge of unqualified inspectors and supervisors (This is also discussed in more detail in Paragraph 2 for lead inspectors.)

The NRC inspector reviewed the certification and qualifications of 10 new LKC QC welding inspectors. (This group does not include the eight lead inspectors reviewed in Allegation RIII-85-A-0062.) The review included the background experience as a QC inspector and/or as a craftsman under a quality program at previous places of employment, and the results of written and practical exams prior to certification as a QC Level II inspector for LKC. The records indicated that nine of ten new inspectors had the proper background and training to be certified Level IIs per ANSI N45.2.6 and LKC Procedure 4.1.3, "Qualification and Training of QC Personnel."

One QC inspector did not have the required experience for certification as a welding inspector. This individual was hired on November 21, 1983, and was certified as a Level II welding inspector on January 4, 1984. This person's background was electrical and he had no prior weld inspection experience. His lack of qualification was identified by the licensee's Braidwood QA surveillance in report no. 3372 on February 5, 1984. Initially, Braidwood QA found problems with the certification of this individual since the person's certification package only contained documentation of previous electrical experience. There was no documentation of welding or welding inspection experience. Braidwood site QA accepted the individual's certification based on the person's background as a QC supervisor in the use of vernier calipers, scales and torque wrenches. Final acceptance by Braidwood Site QA was accomplished by including the individual's welding experience acquired as a Level II welding inspector at Braidwood. The use of his experience acquired while apparently improperly certified as a Level II welding inspector requires further NRC examination. This significant issue is that the acceptability of his inspection activity during the period when his certification/qualification was questionable remains to be assessed and is considered an unresolved item (456/85021-02; 457/85022-02).

Conclusion

This allegation was partially substantiated in that one instance was identified where a new LKC inspector with no previous experience either as a craftsman or as a QC inspector in welding became a Level II welding inspector within six weeks of being hired by LKC.

d. (Closed) Allegation (RIII 85-A-0072)

On March 29, 1985, six LKC electrical quality control inspectors presented allegations to the Braidwood NRC resident inspectors regarding the quality of QC inspections, QC supervisor qualifications, intimidation and harassment of QC inspectors, and closing nonconformances without field verification. A second meeting between the NRC resident inspectors and 24 LKC QC inspectors was held later in the day. The concerns as presented to the NRC resident inspectors were submitted to the licensee for resolution. The licensee agreed to interview the LKC inspectors and attempt to resolve their concerns. In addition to meeting with individual LKC inspectors, the licensee removed a QC supervisor from his position until the allegations were resolved and scheduled a meeting between the licensee and LKC QA/QC and management personnel to re-emphasize the licensee's QA policies and commitments.

A summary of the LKC inspectors' concerns as expressed to the licensee and the licensee's subsequent actions are documented in Commonwealth Edison's Quality First Group as Braidwood Record of Concerns numbers QF-85-1188, 1229, and 2026. On April 25, 1985, the licensee completed its reviews of the LKC QC inspectors' concerns and allegations. The concerns and allegations of the QC inspectors are addressed below.

(1) Concern

A QC inspector alleged that "L. K. Comstock is asserting the quantity of inspections rather than the inspection quality. Therefore, the quality of the L. K. Comstock inspections is suffering."

Licensee Review

The licensee found that some of the QC inspectors felt that the QC manager pushed production after the Construction Manager let it be known that inspections had to be done. However, the licensee also determined from the LKC inspectors that quality was appropriately emphasized. The LKC QC inspectors indicated that one QC supervisor vigorously pushed inspections but if QC inspectors questioned quality the QC supervisor would refer to the procedures so that quality was not sacrificed. In certain instances the licensee determined that this supervisor had been unduly abrasive in his professional relationships with the QC inspectors.

NRC Review

The NRC inspector examined licensee trend analyses of quality assurance deficiencies identified during audits and surveillances of LKC activities. None of the analyses indicated that the quality of the LKC quality control inspections had deteriorated as a result of the alleged emphasis on increased inspector

productivity in that the percentage of inspection findings per report had remained about the same as before. In addition, review of three of LKC's quarterly trend analysis reports showed no adverse trends in the quality of inspections as evidenced by no observed decline in the numbers of inspection findings.

Review of quality control manning tables revealed that the contractor increased the number of inspectors as workload increased. For the month preceding receipt of this allegation the inspector compared the number of inspections performed and the number of inspectors in the field and determined the average inspector performed approximately 21 inspections per week which in the NRC inspector's view was not excessive. None of the inspectors interviewed stated that they had personally performed inspections where they had asserted quantity rather than quality.

Conclusion

Based on review of trend analyses, personnel manning tables, inspection records and interviews with quality control inspectors, this allegation could not be substantiated since there was no evidence that production pressure affected the quality of inspections.

(2) Concern

QC inspectors alleged that "a Comstock QC supervisor was not qualified for his position, as he was not certified in all of the inspection areas which he supervised."

Licensee Review

The licensee investigation identified one instance wherein a LKC QC inspector related an incident in which a QC supervisor wanted an NCR written in a discipline where he lacked certification. The licensee found that the LKC inspector refused to write the NCR until he went out and observed the situation in the field at which time the QC inspector agreed to write the NCR. The licensee's review also included the adverse audit finding in which site QA identified the LKC supervisors who did not hold certifications in all the areas they supervise.

NRC Review

Neither NRC regulations nor ANSI Standards require quality control supervisors to be certified in all inspection areas they supervise. However, this is required by LKC procedures. The NRC inspectors identified an instance where a supervisor/ lead inspector did not have the certifications required by procedures. This finding is described in the NRC Review of Allegation RIII-85-A-0062 above.

Conclusions

Based on NRC review of personnel certifications this allegation is substantiated in that one individual was not certified in all areas in which he supervised inspectors. See the conclusion for Allegation RIII-85-A-0062 above for further explanation.

(3) Concern

QC inspectors alleged that one QC supervisor was constantly intimidating/harassing the LKC inspectors to sign off NCRs and ICRs.

Licensee Review

The licensee investigation substantiated the QC inspectors' allegations against the QC supervisor. The licensee stated that on March 31, 1985, LKC indefinitely suspended the subject QC supervisor. On April 2, 1985, LKC concluded that the accused QC supervisor should be removed from the job site, the licensee concurred and the QC supervisor was removed.

NRC Review

The NRC inspectors interviewed QC inspectors, including the allegers. The QC inspectors each stated that the supervisor had an abrasive and aggressive personality and was very quick to lose his temper when inspectors' findings or interpretations were counter to his interpretations of procedures or requirements. At that time, it was alleged that he would become abusive and berate and threaten the inspector with dismissal; however, none of the inspectors could remember an instance where an inspector had actually been dismissed nor did any inspector remember an instance when he had signed off an inspection as a result of pressure from his supervisor. Some of the individuals interviewed stated that some of the inspectors would goad the supervisor into losing his temper since they enjoyed his outbursts.

The supervisor was dismissed as a result of his ordering a QC inspector to close out an inspection report before the inspector received the documentation authorizing the closeout and final disposition. The disposition of the inspection had been reviewed by engineering and the documentation had been sent to, but not yet received by, the QC inspector.

The licensee has initiated a training program for LKC QC control supervisors in basic management techniques to prevent a recurrence of the intimidation/harassment issue.

Conclusion

The allegation that the supervisor intimidated, harassed and berated QC inspectors was substantiated. However, this occurence has not impacted the QC inspector's performance of quality related activities. The action to dismiss the supervisor and implement the supervisor training program are adequate corrective actions for resolution of this issue.

(4) Concern

QC inspectors alleged that 93 hanger inspections on one checklist containing 1100-1200 welds were signed off in one day by an identified inspector. The allegers considered this to be too many inspections for a single inspector to make in one day without the quality of the inspections suffering.

Licensee Review

This concern was not addressed by the licensee. None of the QC inspectors interviewed by the licensee provided an example where an individual accepted hanger inspections without going out to the field to verify the work.

NRC Review

The QC inspectors interviewed identified the person alleged to have performed 93 hanger inspections in one day. The identified person was questioned regarding this issue and he responded that to his knowledge this did not occur. The LKC inspectors could not provide an inspection report or date of the alleged occurrence. Consequently, the inspection checklist where 93 hangers were accepted by the QC inspector who is the subject of the allegation was not located during QC records reviews by the NRC inspector.

A similar concern was examined regarding another QC inspector as follows. On November 12, 1980, a LKC inspector documented the acceptance of 129 hangers and 1,215 welds on one inspection checklist. According to LKC management, QC welding inspectors kept daily logs of the hanger inspections. When all of the hanger inspections for an area were complete, the QC inspector would sign off for all of them on one inspection checklist and send the hanger numbers to PTL. This record therefore reflected a number of days of inspection effort. Subsequently, PTL would perform nondestructive tests on 10% of the welds and would accept or reject the welds. In this instance, PTL reviewed 122 (10% of the total) welds and rejected 16 welds on 10 hangers. The LKC QC inspector reviewed the 1,215 welds and found them all acceptable. It is not clear why additional PTL nondestructive tests were not performed to include a larger sample since about 13% of the welds were rejected by PTL. The licensee stated that there was no instruction to require additional nondestructive

test based on any identi. failure of the sample tested. That is, PTL would reject tne welds when required based on the NDE tests and identify the rejected welds to the contractor. The contractor would rework or repair the welds, but the current procedures do not require nondestructive testing of more of the welds submitted for test. Additionally, no record exists which specifically documents acceptance of the individual welds associated with a hanger. The licensee stated that the inspector's inspection logs were not filed with the inspection report. This program area requires further review and evaluation and is considered to be an unresolved item (456/85021-03; 457/85022-03).

A related issue identified during this inspection involved the disposition of the 16 hanger welds mentioned above. On November 19, 1980, PTL completed its report of visual inspection of structural welding on the subject ten hangers. As mentioned before, 16 of the 122 welds reviewed by PTL were rejected and the report was sent to LKC for dispositioning. However, at the time of the exit interview on August 30, 1985, the licensee could not provide documented evidence that the 16 welds had been dispositioned or whether corrective action had been implemented to repair the identified discrepant welds. On September 5, 1985, the NRC inspector was informed that two of the ten hangers were deleted by S&L and three of the hangers were repaired; however, the licensee could not provide documented evidence that would indicate whether the remaining five hangers (CC-23, CC-36, CC-87 and two type CC-34) were reworked, repaired or accepted-as-is. ANSI N45.2-1977, Section 18, states, in part, that "Sufficient records shall be prepared as work is performed to furnish documenting evidence of the quality of items and of activities affecting quality." The licensee has committed to reinspect welds on the remaining five hangers to provide inspection documentation.

Conclusion

This allegation could not be substantiated. However, examination of a similar issue involving another QC inspector showed that the record of inspection identifies many welds that were inspected on different days. It is not clear from the existing record(s) whether any specific weld was inspected, only when it was reported. The issue identified above wherein the quality records for the rejected welds on five of the ten hangers were unavailable constitutes a violation of NRC requirements. That is, the failure to assure that sufficient records be maintained to furnish evidence of activities affecting quality is a violation of 10 CFR 50, Appendix B, Criterion XVII (456/85021-04; 457/85022-04).

(5) Concern

A QC inspector alleged that an LKC QA Engineer was assigned to the records vault for the sole purpose of closing nonconformance reports. The alleger stated that this individual never went into the field to verify the condition (work to be accomplished per the NCR) before closing the nonconformance reports. Additionally, this individual was alleged to be both a QC inspector and a QA auditor who would inspect first, then do the QA audit. Some LKC inspectors also indicated that QC inspection reports were being signed without the inspector going into the field to verify completed work.

Licensee Review

The LKC QC inspectors interviewed by the licensee indicated that they had no knowledge of inspectors signing off QC inspection reports in the office or vault without going out into the field to verify the condition.

NRC Review

The NRC inspector interviewed the alleger and the individual who allegedly closed the reports and performed the audits, reviewed the closed out reports and audits, and discussed the issue with the QC manager and the LKC site QA manager.

The alleger stated that he had no first hand knowledge that the other individual had closed nonconformance reports in the vault and performed audits of inspection activities in which he was involved, but that he had heard that this had happened. He stated that this had occurred over a period of about two weeks or maybe two days, but was not sure.

The NRC inspector's interview with the other individual was conducted by telephone since the individual was no longer at Braidwood. He stated that he had been detailed to work for quality assurance to assist in the preparation of a report for submission to the licensee. His duties in the vault were to research nonconformance and inspection reports for material to be included in the report. He further stated that he had closed no reports during that period. He further stated that he had never participated in an audit involving LKC at Braidwood. The QA and QC managers agreed that the individual did not close reports or perform audits during this period.

The NRC inspector's examination of the nonconformance report log did not reveal any reports that had been closed by the individual during the two weeks he was working in the records vault.

Conclusion

Based on interviews with the alleger, the individual, the quality managers, and the NRC inspection of nonconformance logs, this allegation could not be substantiated.

(6) Concern

The QC inspectors stated that they had spoken to the Braidwood Quality First Team without gaining any satisfactory response to their concerns.

Licensee Review

The licensee interviewed LKC inspectors starting on February 13, 1985. These interviews were completed on March 11, 1985. As a result, on March 4, 1985, the Quality First organization documented a LKC QC inspector concern dealing with the adequacy of training. As a result of ongoing investigations by the licensee, some of the concerns were combined into investigations 1188, 1229 and 2026. At this time the licensee had not completed its investigation of all the concerns. The most recent Quality First concern (QF 85-2026) was documented to track the concerns of the LKC QC inspectors who met with the resident inspectors on March 29, 1985. The licensee is investigating the comprehensiveness of the initial Quality First response to these inspector concerns.

NRC Review

The NRC inspector examined Quality First documentation relative to this allegation and interviewed Quality First Team personnel. The inspector determined that the LKC QC inspectors had been interviewed by the Quality First Team in February 1985. These interviews were part of a program to establish baseline data for the Quality First Team and included all QC inspectors from all contractors. The LKC QC inspector's concerns were reviewed within the Quality First group and assigned for investigation on March 4, 1985. At the time the allegation was made to the NRC resident inspectors, the investigation into QC concerns had not been completed.

The NRC inspector examined the completed report dated April 25, 1985, of the investigation of the QC inspector concerns. The report addresses the concerns expressed during the Quality First Team interviews and the allegations made to the NRC on March 29, 1985.

Conclusion

The allegation was substantiated in that the QC inspectors had not received a response from the Quality First Team; however, the NRC inspector determined that the QC concerns were properly

addressed and adequate corrective action had been initiated by the licensee.

(7) Concern

One QC inspector stated that hangers are not inspected, just as-built. No inspection report or nonconformance reports were written. Walkdowns were being done and drawings made to show as-built configuration.

Licensee Review

The licensee determined that NCRs 708 and 709 were issued to document and provide direction for the overall program to walk down (inspect) hangers that were not installed in accordance with design drawings.

NRC Review

The inspector reviewed the hanger reinspection program based on Commonwealth Edison NCRs 708 and 709 and the inspection documentation generated through the disposition of these NCRs.

The inspection activity referred to in the allegation is being performed pursuant to NCR 708 and NCR 709. Since the inspection is performed to correct the situation described in an NCR, no other NCR would be issued since the problem has already been identified. The inspector determined that inspection reports are being written for the inspection activities according to approved procedures.

Conclusion

Based on the inspector's review of NCRs 708 and 709 and inspection reports related to the NCRs, this allegation could not be substantiated.

(8) Concern

A LKC QC inspector alleged that he was constantly watched by his supervisor. This LKC inspector visited the NRC office and according to him was transferred without reason from field inspections to a job in the records vault.

Licensee Review

The licensee determined that the subject of this concern was a QC inspector whose personnel certification package is being held by Braidwood QA. The QC inspector in question copied the same inspection checklist several times and later filled in some of the blank spaces in violation of procedures. The QC inspector's work is being re-evaluated.

NRC Review

The NRC inspector examined a licensee surveillance report that identified deficiencies attributed to the alleger's weld inspections. He was observed with copies of the same inspection checklist on which he could fill in blank spaces, in violation of procedures. The licensee ordered LKC to remove him from field inspection in October 1983. Items inspected by the alleger using the copied checklists were reinspected by other inspectors. The NRC inspector determined that the alleger has not been permitted to perform weld inspections since October 1983 when he was transferred to the records vault.

Conclusion

Based on the inspector's review of documentation relating to the alleger's transfer from the field to the records vault, this allegation could not be substantiated.

(9) Concern

It was alleged that an inspector cannot remain proficient in all of the certified areas without a decrease in the quality of the inspections, and that LKC management promised more money to inspectors who were certified in multiple areas.

Licensee Review

The licensee determined from discussions with the LKC inspectors that they would be more comfortable if they could remain in a specified area rather than to move around the site. However, no inspector felt that his request for additional refresher training would be turned down.

NRC Review

During the NRC inspector's interview of LKC QC inspectors the QC inspectors stated that they agreed that it was difficult to maintain proficiency in more than one inspection area, but they also stated that when an inspector was moved from one inspection area to another area that they could ask for retraining if they felt it was needed. None had been denied retraining when they had requested it. No QC inspector felt that the quality of the inspections he performed had decreased because of his multiple certifications.

In interviews with the LKC QC manager and QA manager they stated that it was LKC policy to provide retraining to their personnel at the request of the QC inspector. In addition, changes in procedures and specifications affecting an area of inspection are transmitted to all inspectors certified in that area whether or not they are working in their certifications.

Conclusion

Based on interviews with inspectors and managers that revealed that persons may be retrained to maintain their certification proficiency upon that person's request, the allegation could not be substantiated.

(10) Concern

QC inspectors alleged that lead QC inspectors are being picked based on who would sign off the most quality documents (NCRs and ICRs).

Licensee Review

The LKC inspectors interviewed by the licensee indicated that some of the QC inspectors were picked as leads based on who was signing off the most NCRs or ICRs. However, the licensee concluded that leads were never picked on the basis of who would sign off the most documents.

NRC Review

Some of the inspectors interviewed by the NRC inspector stated that the selection of lead QC inspectors may have been based on who signed off the most quality documents; however, none could give an example where this actually occurred. No examples were provided regarding improper signing of inspection reports or violations of procedures. NRC examination of personnel records did not disclose any irregularity in this regard.

Conclusion

The allegation could not be substantiated. There was no evidence that LKC picked QC lead inspectors on the basis of who signed the most NCRs or ICRs.

(11) Concern

It was alleged that some NCRs have been dispositioned by LKC Engineering as "retrain inspectors". Also, some NCRs have been initiated and dispositioned by Field Engineering without an involvement of QC inspectors.

Licensee Review

The licensee did not address this concern in its investigation.

NRC Review

Some of the LKC inspectors interviewed by the NRC inspector

thought that NCRs were being initiated and dispositioned by Field Engineering without any involvement of QC inspectors. However, none could provide an example. With respect to NCRs being dispositioned by LKC as "retrain inspectors", the QC inspectors mutually agreed that if there was an issue where the finding clearly violated procedures or specifications they could prevail upon LKC Engineering to change their positions. No LKC inspector indicated he or she knew of one instance where a NCR was improperly dispositioned. NRC review of NCR's has not disclosed any significant deficiencies in this regard.

Conclusion

The allegation could not be substantiated.

(12) Concern

It was alleged that if inspection quotas were not met, overtime was not given to individuals.

Licensee Review

The licensee determined that there was one occasion when overtime was not given because the person was not getting work done. It was reported that the inspector bragged about how little work he was doing. The QC manager stated that "Busy people work overtime. Don't give overtime to people who sit around."

NRC Review

Some of the allegers indicated that LKC was more concerned with production rather than quality, but none knew of an example of quality being compromised or inspection quotas being established by LKC quality management. The licensee issues a Daily Status Report which trends inspections. It is possible the inspectors thought that the report was used to stress production.

Some of the inspectors indicated they were reprimanded for not producing enough inspections. These inspectors stated that some inspections take more time than other inspections, and consequently their number of inspections were low. A review of the records of three inspectors who had been reprimanded indicate that all of them had a history of absenteeism and had received written warnings regarding their absenteeism; however, they had not received any written warnings for failure to meet any inspection quotes.

Conclusion

The allegation that overtime was not given to inspectors who did not meet inspection quotas could not be substantiated.

However, one related instance was identified by the licensee where an individual was denied overtime because the individual was not as productive as was desired.

(13) Concern

It was alleged that three inspectors at LKC were supposed to be terminated, and if they were terminated LKC inspectors were going to walk.

Licensee Review

The licensee reviewed the situation that led to the LKC QC inspectors threatening to walk out if three inspectors were fired. The licensee concluded that the situation was caused in part by LKC's practice of giving every individual on permanent payroll 8 days of personal time plus two weeks vacation a year. Before individuals used up all their personal days in an apparently improper manner, verbal warnings were given. The licensee determined that three individuals had been given verbal and written warnings for absenteeism. The licensee concluded that if the individuals continued their practices, dismissal was possible.

NRC Review

The NRC inspector ascertained that the three inspectors were not terminated.

Conclusion

This matter is a management and not a regulatory issue. No violations of NRC requirements were identified.

(14) Concern

It was alleged that NCR 1616 and ICR 2900 were inappropriately dispositioned.

NRC Review

The NRC inspector examined the disposition of NCR 1616 and ICR 2900. The corrective action relative to NCR 1616 and ICR 2900 was reviewed and approved by both the contractor's engineering department and the design engineer. Final close out of the NCR and ICR was accomplished by a certified Level II QC inspector on August 8, 1985.

Conclusion

The NRC inspector determined that the final disposition of the NCR and ICR was proper and that the closeout of both reports was accomplished in a timely manner. Based on the NRC inspector's review, this allegation could not be substantiated.

(15) Concern

It was alleged that one QC supervisor continually violated procedures during inspector certifications.

NRC Review

The NRC inspector reviewed the procedure for training and certification of QC inspectors. According to the procedure, inspectors are not certified or recommended for certification by QC supervisors. Review of randomly selected inspector certifications show that personnel are certified by management after recommendation by the training department and the Level II inspector who conducts the on-the-job training test for inspectors.

Conclusion

Based on the inspector's review of certification procedures and records that revealed that QC supervisors do not certify inspectors, this allegation could not be substantiated.

(16) Concern

The allegers stated that there were no certified calibration inspectors.

NRC Review

The inspector reviewed inspector manning charts and tables and determined that there have been certified calibration inspectors on site since LKC began work at Braidwood in 1979.

Conclusion

This allegation could not be substantiated.

(17) Concern

It was alleged that a QC supervisor lied to get a QC inspector fired.

Licensee Review

The licensee did not review this allegation since it was never brought to the attention of licensee management.

NRC Review

During discussions with the alleger, he stated that the circumstances surrounding the incident in which he was threatened with dismissal involved a lost company owned tape

measure. According to the alleger he was asked by the QC supervisor (who was later removed from his position but not for this incident) if he had a tape measure that had been in the QC inspector's possession. The alleger stated that he did not - at which point the QC supervisor made a "profane" statement. The QC supervisor stated (according to the alleger) that the QC inspector was negligent with his equipment and continued to use profanity and told the QC inspector to get out of his office. The alleger told the QC supervisor that he didn't have to take the abusive language. On January 13, 1983, the QC supervisor initiated action to fire the QC inspector. The letter of dismissal states, in part, the QC inspector "has shown remiss and insubordinate actions in performing those duties assigned by his supervisor along with not being responsible for company tools he was issued." The alleger was not fired and did not identify any quality concerns. The QC supervisor involved is the supervisor discussed in Paragraph 2.d.(3) above who was dismissed for inspector harassment/ intimidation reasons.

Conclusion

This allegation could not be substantiated. However, no quality issues pertaining to this incident were identified.

e. Licensee's Summary of the Allegations and Concerns Discussed Above (Paragraphs 2.d.(1) through 2.d.(17)

Regarding the LKC organization, the licensee concluded that certain areas such as administration, communications, training and supervision need additional management attention. The licensee also stated in its summary report of LKC QC inspector concerns and allegations that a labor union issue divided management and inspectors. It was the licensee's conclusion that except for the situation which resulted in the removal of one QC supervisor, no serious quality related problems exist. The licensee stated that many issues were resolved with the termination of the subject QC supervisor.

f. NRC Inspector Summary

The inspectors determined that the licensee's examinations and conclusions regarding the allegations that the licensee reviewed were appropriate. The two unresolved items identified by the inspector are not directly involved with the allegations. The first instance involves an inspector who was certified as as a Level II in welding within six weeks of being hired but had no prior welding experience. The licensee and LKC later certified the QC inspector based on his experience at Braidwood. However, the QC inspector's previous work was never re-inspected to determine his original capability. It is in this context that the unresolved issue was raised by the NRC inspector. This is an isolated instance

and no other individuals were determined to lack the required experience. The second instance involves the lack of instructions and procedures to direct what actions should be taken regarding additional nondestructive testing of hanger welds when a significant percentage of the test sample of welds is rejected by PTL.

Two adverse issues were identified by the NRC inspectors which were related to allegations made by the QC inspectors. One involved lead inspectors who were not certified as Level IIs in their designated disciplines. This violated L. K. Comstock's procedures. The second issue involved lack of documented evidence to indicate that discrepant welds on 5 hangers were repaired or properly dispositioned. Both of these issues are characterized as violations in this report. The problems between LKC management and the QC inspectors generally stemmed from a lack of communication between management and employees, and the bullying tactics of one QC supervisor who was removed from the construction site. These concerns have been resolved or are in process of resolution by the licensee.

3. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of violations or deviations. Unresolved items disclosed during this inspection are discussed in Paragraphs 2.c.(3) and 2.d.(4).

4. Exit Interview

The inspector met with representatives (denoted in Paragraph 1) at the conclusion of the inspection. The inspector summarized the scope and findings of the inspections noted in this report. 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.