

September 23,

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKETED
USNRC

BEFORE THE COMMISSION

'85 SEP 26 A11:21

In the Matter of)
COMMONWEALTH EDISON COMPANY)
(Braidwood Station, Units 1)
and 2))

Docket Nos. 50-456 OFFICE OF SECRETARY
50-457 DOCKETING & SERVICE
BRANCH

COMMONWEALTH EDISON COMPANY'S PETITION
FOR REVIEW OF APPEAL BOARD DECISION AND PETITION
FOR EXEMPTION FROM COMMISSION REGULATION

Applicant, Commonwealth Edison Company, petitions the Commission for review of the decision of the Atomic Safety and Licensing Appeal Board issued on September 6, 1985. The Appeal Board denied Applicant's motion that it direct certification with respect to the procedures adopted by the Atomic Safety and Licensing Board in this proceeding that led to the admission of a late-filed quality assurance contention submitted by Intervenors Bridget Little Rorem, et al. Specifically, the Licensing Board allowed Intervenors to amend and resubmit what the Board found to be a defective late-filed contention after obtaining discovery from the NRC Staff in contravention of 10 CFR § 2.740, thus affording Intervenors a second opportunity to submit a late-filed contention in accordance with rules fashioned ad hoc by the Board without regard to the admissibility standards of 10 CFR § 2.714.

B509270037 B50923
PDR ADDCK 05000456
G PDR

I. The Appeal Board's Decision.

Applicant moved the Appeal Board to direct certification of the Licensing Board's action and the NRC Staff supported the motion. The Appeal Board denied directed certification by a divided vote. The majority did not attempt to justify the Licensing Board's conduct. They assumed the correctness of Applicant's argument that the Licensing Board had violated 10 CFR § 2.740 in permitting discovery on a rejected contention. They concluded, however, that under the Appeal Board's usual standard for granting directed certification, the violation had not affected the basic structure of the proceeding in a pervasive or unusual manner. Public Service Company of Indiana (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-405, 5 NRC 1190 (1977). The majority reasoned that "the net effect of the Board's rulings is simply to admit one additional contention to a proceeding that already involves litigation of various matters." (Order at 6.) They noted that such an action seldom has a pervasive or unusual effect on the basic structure of a proceeding.^{1/}

^{1/} The Appeal Board did not discuss Applicant's argument that the Licensing Board had also violated 10 CFR § 2.714(a) in a way that pervasively affected the proceeding by freely opening the door for Intervenor to file a new, detailed, late-filed quality assurance contention to the prejudice of Applicant.

II. The Appeal Board Decision Is Erroneous

The majority holding that the Licensing Board's action would not have a pervasive effect on the proceeding was erroneous, as Judge Moore set out persuasively in his dissenting opinion. As Judge Moore recognized, the majority dismissed the Licensing Board's transgression as merely resulting in the admission of "one more contention", without pausing to consider the breadth and complexity of the contention admitted or the significance of the regulations involved. (Order at 11.) As he pointed out, the rules of practice establish the basic structure of a licensing proceeding and the Licensing Board's action directly contravened the basic tenet of the rules that strictly prohibits "the filing of a vague, unparticularized contention, followed by an endeavor to flesh it out through discovery against the applicant or staff."^{2/} This violation significantly prejudiced the Applicant by making it bear the burden of proof on a highly detailed and complex contention.

The majority's conclusion that the admission of the contention would not pervasively affect the proceeding is based on a false premise. The quality assurance contention (attached hereto as Exhibit A) is 31 pages long, alleges multiple violations of 12 of the Commission's 18

^{2/} Duke Power Company (Catawba Nuclear Station, Units 1 and 2), ALAB-687, 16 NRC 460, 468 (1982), aff'd in pertinent part, CLI-83-19, 17 NRC 1041 (1983). See Appeal Board Order at 14-15 and Applicant's Motion for Directed Certification, pp. 13-16.

quality assurance regulations and requires an examination of the adequacy of Applicant's extensive corrective action programs. (Order at 14.) The majority's casual characterization of such a contention as routine exhibits either extreme naivete or a remarkable unawareness of the time-consuming litigation associated with quality assurance contentions.^{3/} The affidavit of Michael J. Wallace, Applicant's Project Manager for the Braidwood Station, graphically demonstrates that the litigation of the quality assurance contention has and will seriously disrupt Applicant's project construction activities, delaying completion of several critical path construction items. Mr. Wallace's affidavit (attached hereto as Exhibit B) clearly dispels the majority's notion that the contention is merely another run-of-the-mill issue.^{4/}

Not only did the Board's action result in the admission of a quality assurance contention of almost unprecedented complexity, but this proceeding will consist almost entirely of litigation of this issue. The Appeal Board failed to note that while the appeal was pending

^{3/} See generally Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-763, 19 NRC 571, review denied, CLI-84-14, 20 NRC 285 (1984); and the ongoing saga in the Comanche Peak case.

^{4/} The specific effect on project construction of litigating the QA contention was not raised with the Appeal Board because it only became reasonably quantifiable at the end of August 1985, as Applicant completed its responses to Intervenors' first set of interrogatories.

before it the only other intervenor in this case, Neiner Farms, Inc., ceased to participate in the proceeding and that of the three emergency planning issues -- the only issues in contest besides the quality assurance contention -- one was dismissed on summary disposition. For all these reasons, it is erroneous to characterize the QA contention as merely one additional contention in a proceeding where various other matters are being litigated.

The Appeal Board majority also failed to consider the significance of the regulations involved. By violating both 10 CFR § 2.740 and 10 CFR § 2.714(a), the Licensing Board distorted the basic scheme of the regulations governing the admission of contentions. (Applicant's Motion for Directed Certification, pp. 15-20.) 10 CFR § 2.714(a)(3) allows a licensing board to admit late-filed contentions that satisfy the basis and specificity requirements and prevail on a balance of the five factors applicable to late-filed contentions. The regulation does not permit a board to fashion the ad hoc procedure developed by the Licensing Board below. The Licensing Board dismissed the late-filed QA contention as lacking in basis and specificity, but allowed Intervenor to resubmit an amended contention in accordance with ground rules fashioned by the Board. The Board permitted Intervenor to depose a named Staff witness

on a rejected contention in contravention of 10 CFR § 2.740.^{5/} Finally, the Board then treated the new contention as a supplement to the original, as evidenced by its not requiring Intervenors to demonstrate anew that the amended contention satisfied the late-filed factors analysis. Thus, in assisting Intervenors by giving them a second bite at the apple, the Licensing Board abused its discretion and violated 10 CFR §§ 2.714(a) and 2.740 in a way that pervasively and impermissibly altered the basic structure of the proceeding, to the Applicant's prejudice.

This skewing of the process by which contentions are admitted is even plainer if one examines the Licensing Board's stated motive for fashioning the procedures that it did. (Applicant's Motion for Directed Certification, pp. 16, 18-20.) The Board acknowledged that its action in allowing the Intervenors to depose James G. Keppler, the NRC's Region III Administrator, was premised on satisfying its own concern about Mr. Keppler's testimony given in a

^{5/} The Licensing Board exercised great care in its Special Prehearing Conference Order of April 17, 1985, to avoid any suggestion that it was, in contravention of *Catawba, supra*, conditionally admitting Intervenors' first effort at a late-filed quality assurance contention. In its motion for reconsideration, Applicant observed that because under 10 CFR § 2.740(b)(1) discovery is only available after a contention is admitted, the Licensing Board's grant of discovery rights was necessarily predicated on a conditional admission of the contention. This argument was rejected by the Licensing Board in its order denying reconsideration where it reiterated that the original late-filed contention had been rejected, thereby admitting that the ordering of the Keppler deposition constituted a knowing violation of 10 CFR § 2.740.

different proceeding. LBP-85-20, 21 NRC 1732, 1737n, (1985). The Board violated the Commission's regulations and assisted Intervenors in framing an admissible contention in order to satisfy this concern of its own. The Board's action is thus clearly based on a misperception of the scope of its authority. A licensing board is not clothed with the general supervisory powers of the Commissioners and their technical and enforcement staffs. Where a licensing board has not raised a serious issue itself under its sua sponte powers, the board is empowered to consider only matters properly contested by the parties.^{6/} For a licensing board to make an intervenor its surrogate to satisfy its own concerns contravenes its jurisdictional limits and circumvents the express direction of the Commission for the exercise of its sua sponte powers.^{7/}

III. Commission Review Is Warranted.

Applicant submits that Commission review is warranted in this case. Applicant is aware that its request for review herein is inconsistent with 10 CFR § 2.786(b)(1), which excludes Appeal Board decisions on directed certification from the decisions which a party may petition the Commission to review. Applicant therefore petitions the Commission to

^{6/} See 10 CFR § 2.104(c).

^{7/} Memorandum, "Raising of Issues Sua Sponte in Adjudicatory Proceedings." June 30, 1981.

grant a waiver or exception to this regulation pursuant to 10 CFR § 2.758(b). That provision allows a party to seek such a waiver on the ground that due to special circumstances, application of the regulation would not serve its intended purpose.^{8/} Applicant submits that the conduct of the Licensing Board which was not supported by either the majority or dissenting members of the Appeal Board and which clearly exceeded its authority constitutes such special circumstances. The purpose of 10 CFR § 2.786(b)(1) is to insulate the Commissioners from review of interlocutory matters, apparently on the ground that such matters normally do not merit the Commission's attention. That is not the case here.

As discussed above, the Licensing Board's violation of the Commission's regulations has pervasively affected this proceeding and requires the Commission's intervention to protect the integrity of the hearing process. Otherwise, licensing boards will be free to fashion ad hoc procedures to secure the admission of a contention and will be free from appellate review on the ground that such an action can never have a pervasive effect on the conduct of a proceeding.

Notwithstanding disposition of the Applicant's petition for waiver of the provisions of 10 CFR § 2.786(b)(1), the Commission, of course, can review the Appeal Board's

^{8/} Section 2.758(b) applies to the rules of practice, as well as to other Commission regulations. See Pacific Gas and Electric Company (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-81-22, 14 NRC 598, 600 (1981).

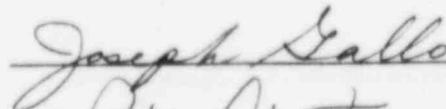
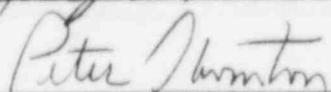
denial of certification on a sua sponte basis. In United States Energy Research and Development Administration (Clinch River Breeder Reactor Plant), CLI-76-13, 4 NRC 67 (1976), the Commission reviewed, sua sponte, the Appeal Board's denial of directed certification on the issue of whether a licensing board had properly admitted certain contentions. The Commission explained that its decision to review the correctness of such a decision was comparable to the United States Supreme Court's decision to grant a writ of certiorari. The Commission stressed its inherent supervisory authority over the conduct of adjudicatory proceedings, including the authority to step in and rule on the admissibility of a contention before a Licensing Board. 4 NRC at 75. The Commission dismissed the contentions in question.

Applicant believes that the need for the Commission to exercise its supervisory authority over the conduct of licensing proceedings is also apparent in this case. The Licensing Board's disregard of the rules of practice and the lack of an effective remedy otherwise available to the Applicant raises a serious question of law and policy. The same reason that warrants waiver of the normal appellate review regulation also warrants that the Commission step in and determine that the Licensing Board erred in admitting the QA contention.

IV. Conclusion

The Commission during the past few years has sought ways to improve the licensing process. Several suggestions have been made and are being considered by the Commission to revise the Commission's Rules of Practice to reduce hearing delays. One idea involves a revision of Section 2.714 to make more stringent the requirements for the admissibility of contentions. This effort, indeed any attempt to reform the hearing process, will be frustrated unless the Commission accepts review of and rectifies this matter. Regulatory reform will never bear fruit if atomic safety and licensing boards are free to ignore and circumvent the Commission's Rules as the Braidwood Board did, and fashion their own more lenient rules to facilitate the admission of late-filed contentions. The Commission should accept review of this matter; find the Braidwood Board in error; and dismiss the amended late-filed QA contention, including the QC inspector harassment issue, and strike the Keppler deposition from the docket.

Respectfully submitted,

Two of the Attorneys for
COMMONWEALTH EDISON COMPANY

Joseph Gallo
Peter Thornton
Isham, Lincoln & Beale
1120 Connecticut Avenue, N.W.
Suite 840
Washington, D.C. 20036
(202) 833-9730

DATED: September 23, 1985

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
COMMONWEALTH EDISON COMPANY)
)
(Braidwood Station, Units 1 and 2))

Docket Nos. 50-456 SEP 26 11:21
50-457

DOCKETED
OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

CERTIFICATE OF SERVICE

I hereby certify that copies of COMMONWEALTH EDISON COMPANY'S PETITION FOR REVIEW OF APPEAL BOARD DECISION and PETITION FOR EXEMPTION FROM COMMISSION REGULATION was served on the persons listed below by deposit in the United States mail, first-class postage prepaid, this 23rd day of September 1985.

Nunzio J. Palladino
Chairman
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Thomas M. Roberts
Commissioner
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

James K. Asselstine
Commissioner
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Frederick M. Bernthal
Commissioner
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Lando W. Zech, Jr.
Commissioner
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Gary J. Edles, Esq.
Chairman
Administrative Law Judge
Atomic Safety and Licensing
Appeal Board
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Thomas S. Moore, Esq.
Administrative Law Judge
Atomic Safety and Licensing
Appeal Board
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Dr. Reginald L. Gotchy
Administrative Law Judge
Atomic Safety and Licensing
Appeal Board
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Lawrence Brenner, Esq.
Chairman
Administrative Law Judge
Atomic Safety and Licensing
Board
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Herbert Grossman, Esq.
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

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

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

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

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

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

Charles Jones, Director
Illinois Emergency Services
and Disaster Agency
110 East Adams
Springfield, IL 62705

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

Ms. Lorraine Creek
Route 1
Box 182
Manteno, IL 60950

C. Allen Bock, Esq.
P.O. Box 342
Urbana, IL 61801

A handwritten signature in cursive script, reading "Joseph Gallo", is written over a horizontal line.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKETED
USNRC

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

'85 SEP 26 A11:21

In the Matter of:)
COMMONWEALTH EDISON COMPANY)
(Braidwood Nuclear Power)
Station, Units 1 and 2))

Docket Nos. 50-456
50-457

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

[Applicant has retyped Intervenor's contention to delete the portions not admitted by the Licensing Board.]

IV. THE CONTENTION

Applicant Commonwealth Edison Company has failed to establish and execute an effective quality assurance program for the Braidwood Nuclear Power Station, Units 1 and 2 as required by 10 C.F.R. Part 50, Appendix B. The breakdown in quality assurance procedures and pervasive failure to carry out the required quality assurance program raise significant doubt as to whether safety-related components, structures and systems have been designed, fabricated and installed in accordance with applicable codes, specifications and procedures such that they will perform satisfactorily in service. The as-built quality of construction of the Braidwood Nuclear Power Station is indeterminate. Because of the failure by Commonwealth Edison and its contractors to carry out effective quality assurance programs, there is insufficient confidence that all deficiencies at Braidwood will be identified and corrected. Actual hardware deficiencies have gone unidentified and uncorrected by the quality assurance program. Because of the failures by Commonwealth Edison and its contractors to

carry out an effective quality assurance program it cannot be concluded that the Braidwood Nuclear Power Station has been constructed in conformity with the construction permit, and the application as amended, the provisions of the Atomic Energy Act, and the rules and regulations of the Commission; nor is there reasonable assurance that that facility will be operated in conformity with applicable requirements and without endangering the public health and safety. No operating license may be issued. 10 C.F.R. § 50.57(a).

. . . .

Applicant has failed to carry out an effective quality assurance program in the following particulars:

1. Contrary to Criterion I, "Organization" of 10 C.F.R. Part 50, Appendix B, Commonwealth Edison has failed to effectively oversee the quality assurance activities of its site contractors for which it retains responsibility. Widespread deficiencies have occurred in the quality assurance activities and workmanship of the principal Braidwood site contractors including the mechanical (piping and supports/restraints) equipment and instrumentation installation contractor Phillips, Getschow Company; the electrical contractor, L. K. Comstock Company; the heating, ventilation and air conditioning (HVAC) contractor, Pullman Sheet Metal Company; and the concrete contractor, G. K. Newberg Company.

- A. On February 2, 1983, Commonwealth Edison Company was cited a \$100,000 Civil Penalties for severity level III violations at Braidwood "evidenced by a breakdown

of your quality assurance (QA) program as it relates to the installation and installation inspection of mechanical safety-related equipment." (Keppler (NRC) to O'Connor (CE Co.) transmitting Notice of Violation and Proposed Imposition of Civil Penalties, Exh. 3.) The serious quality assurance deficiencies involved activities by the site mechanical equipment installation contractor, Phillips, Getschow Company, and related to the installation of the four Unit 1 Steam Generators, the four Unit 1 and 2 Residual Heat Removal Pumps and the four Safety Injection Pumps. Edison failed to take timely and effective corrective action after identifying related significant problems that occurred at its Byron station. Edison failed to report this significant breakdown in the quality assurance program to the NRC as required by 10 C.F.R. 50.55(e)(1), although it had identified the problems with Phillips, Getschow Company over two years earlier. (Exh. 3.)

B. On May 7, 1984, NRC Region III Administrator James G. Keppler cited Commonwealth Edison for serious quality assurance violations involving Braidwood site mechanical contractor Phillips, Getschow Company; HVAC contractor, Pullman Sheet Metal Company; electrical contractor L. K. Comstock Company and Architect/Engineer Sargent & Lundy. "A major factor contributing to the deficiencies were inadequate contractor programs and workmanship, inadequate licensee reviews of the contractor programs, and inadequate licensee quality assurance overview to ensure contractor activities met all requirements. The violations indicate the need for more

aggressive CE Co. management involvement in and support of the CE Co. QA program to ensure that all safety-related activities performed by contractors' personnel are in accordance with regulations, codes, standards, and license requirements." (Keppler (NRC Region III) to O'Connor (CE Co.), transmitting Inspection Report 83-09, Exh. 5.)

These QA deficiencies resulted in stop work orders and construction deficiency reports in the areas of small bore piping hangers, HVAC welding activities and piping material control. Deficiencies concerning piping material control resulted in the quality of some installed piping being indeterminate and resulted in some material being installed that did not meet design requirements. (Inspection Report 83-09, Exh. 5.)

C. Deficiencies noted by the NRC CAT inspection in a number of hardware installations indicate a need for more management attention. The deficiencies included examples of inadequate hardware inspection and examples of inadequate quality assurance and engineering review of deficiencies for general application. The major areas of concern to the NRC CAT are: 1) the dependence on final walkdown inspections late in the construction program to identify and resolve problems; and 2) the ability to manage the large number (over 20) of ongoing major corrective action programs and ensure that current work is correctly performed. (CAT Inspection Report 84-44/40, Exh. 10.)

D. The NRC CAT identified a number of construction program weaknesses that require increased management attention. These are:

- * The effectiveness of first level quality control (QC) inspection activities needs to be improved, particularly in the pipe support/restraint and welding areas.

- * A large number of final inspection activities are being included in a final walkdown, when greater difficulty will be encountered in identifying deficiencies because of interferences, accessibility and the pressure of schedule.

- * The identification and resolution of cable tray and conduit electrical separation deficiencies is inadequate.

- * An excessive number of incidents of damage to installed equipment has been caused by current construction activities.

The foregoing identified weaknesses require additional management attention to assure that completed installations meet design requirements. (CAT Inspection Report 84-44/40, Exh. 10.)

E. The NRC CAT inspection found that contractor QC inspections and site QA programs have not been effective in assuring that installed pipe supports/restraints meet design requirements. The inspection and acceptance criteria provided for activities such as QC inspection and document review and control need to be strengthened and clarified. (CAT Inspection Report 84-44/40, Exh. 10.)

F. The NRC CAT inspeciton concluded that additional management attention is required to improve contractor performance in the areas of contractor deficiency trending, and craft and quality control inspector training.

2. [Section 2, which addressed alleged incidents of harassment and intimidation of QC inspectors, was in part rejected by the Licensing Board. The Board deferred ruling on the other part, and it was subsequently admitted by stipulation.]

3. Contrary to Criterion II, "Quality Assurance Program," of 10 C.F.R. Part 50, Appendix B, Commonwealth Edison Company has failed to establish a quality assurance program which complies with the requirements of Appendix B and which is documented by written policies, procedures, and instructions and is carried out in accordance with those instructions. Edison has failed to assure that its QA program provides controls over activities affecting quality and that such activities are accomplished under suitably controlled conditions and are appropriately verified for quality by inspection.

A. A special NRC QA inspection reported May 7, 1984 that:

* Instructions were not appropriate to the circumstances in that welding procedures specifying the essential variables were not prescribed on drawings or welding sequences (travelers) for each specific HVAC installation, and Quality Control inspections during the welding process were not of adequate scope and frequency to assure the use of correct welding variables.

*. Quality Control was not required to examine the HVAC components for fit-up prior to welding on those components where fit-up tolerances cannot be determined after welding, such as all-around fillet welds and full penetration welds. Consequently, there was a lack of records documenting the conformance with the requirements of AWS D1.1-1977, Section 3, and the Edison QA Manual. Additionally, instructions to the quality control inspectors regarding fillet weld gaps after welding were not appropriate to the circumstances in that the HVAC contractor Visual Weld Inspection Procedure, B10.2.F, stated that a 3/16" gap was acceptable whereas AWS D1.1-1977, Section 3.3, states that a 3/16" gap is allowed only if the leg of the fillet weld is increased by the amount of the separation or the contractor demonstrates that the required effective throat has been obtained.

* Quality Control was not required to examine the base metal prior to welding to assure that surfaces and edges were free of discontinuities. Consequently, there was a lack of records documenting conformance with the requirements of AWS D1.1-1977, Section 3, and the Edison QA Manual.

* Edison's control of site designed small bore (2" and under) process and instrumentation piping systems was considered inadequate and ineffective based on the following deficiencies:

-- The programs and procedures established by Edison and the Architect-Engineer Sargent and Lundy prior to October 1983 did not provide sufficient assessments and verifications of Phillip, Getschow Co. design capabilities

prior to authorizing field routing of Class 2 and 3 small bore piping and field design of supports/restraints. The lack of assessments and verification resulted in inadequate understanding of the S&L specifications by Phillips, Getschow to ensure the field routing of small bore piping was performed within the design requirements. Furthermore, the field routing of Class 2 and 3 small bore pipes, without detailed drawings being issued by S&L or Phillips, Getschow, resulted in the Applicant's established QA Program requirements being bypassed and prevented the timely identification of nonconforming conditions.

-- The Phillips, Getschow small bore pipe routing procedures lacked specific quantitative field design, installation, and inspection criteria to provide clearance and/or separation from equipment and components as required by S&L specification, F/L-2739, Paragraph 301.11.

-- Procedure Phillips, Getschow CP 22 requirements had not been completely followed for small bore piping calculations performed by Phillips, Getschow for lines 1CCE3AA-1/2", 1CCE3BA-1/2", 1DOD8BC-2", and 1DOD8BA-01.

-- Field Engineer authorities, duties, and qualifications were not fully delineated in the Phillips, Getschow QA Manual, Rev. 0, dated September 26, 1983, in that some of the specific work functions being performed by field engineering, such as pipe hanger design and calculation, were not adequately described.

-- The Phillips, Getschow training programs was considered to be inadequate and ineffective based on the numerous errors identified in the Phillips, Getschow hanger calculations.

-- The use of the Information Request System by Phillips, Getschow, in lieu of the Field Change Require (FCR) system, compromised the final design change acceptance review and approval. (Inspection Report 83-09, Exh. 5.)

B. Phillips-Getschow piping crews failed to adequately control the modifications of beams. The Applicant had not established an inspection program for structural beams that were modified during piping installations, and had not established an adequate craft training program with regard to nonsafety-related piping installation activities resulting in field design modifications to safety-related structural steel. (Inspection Report 85-15/16, Exh. 17.)

C. The Applicant's electrical contractor (Comstock) utilized Level I Quality Control Inspectors for inspection and acceptance of electrical welds. This involved 14 different Level I inspectors over four years. (Inspection Report 85-06, Exh. 11.)

4. Contrary to Criterion II, "Quality Assurance Program," of 10 C.F.R. Part 50, Appendix B, Commonwealth Edison Company has failed to effectively provide for the indoctrination and training of personnel performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained.

A. Comstock failed to establish program for identifying the required reading for weld inspectors and conducting practical tests. G. K. Newberg failed to implement the personnel indoctrination and training for QC inspector tests. (Inspection Report 84-07, Exh. 18.)

B. Four Comstock weld inspectors were not proficient in American Welding Society Structural Welding Code. (Inspection Report 84-07, Exh. 18.)

5. Contrary to Criterion III, "Design Control," of 10 C.F.R. Part 50, Appendix B, Commonwealth Edison Company has failed to establish measures to assure that applicable regulatory requirements and design bases are correctly translated into specifications, drawings, procedures, and instructions including provisions to assure that appropriate quality standards are specified in design documents and that deviations from such standards are controlled. Applicant has also failed to requirement that measures are established for the identification and control of design interfaces and for the coordination among participating design organizations, that the measures include the establishment of procedures among participating design organizations for the review, approval, release, distribution, and revision of documents involving design interfaces; and that the design control measures provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a suitable testing program.

A. The NRC CAT inspection concluded that in the area of the most significant finding was the failure to annotate unincorporated design changes on controlled design documents. The most significant finding in the area of design change control was design change documents written against superseded revisions of the approved design drawings. In at least one instance, this deficiency resulted in a pipe support being installed and inspected to other than the latest approved design. (CAT Inspection Report 84-44/40, Exh. 10.)

B. Repairs to coatings by Midway Industrials in the Unit 1 and 2 containments were performed utilizing a coating system not qualified for the Design Basis Accident in accordance with Section 5 of ANSI N101.2 (1972). (Inspection Report 85-15, Exh. 17.)

C. Edison employed designs for safety related HVAC duct supports based on chapter E36.0 of S&L's Structural Standard Document which did not limit the slenderness ratio for ceiling mounted duct supports. (Inspection Report 84-43/39, Exh. 19.)

6. Contrary to Criterion V, "Instruction, Procedures and Drawings," of 10 C.F.R. Part 50, Appendix B, Commonwealth Edison Company has failed to ensure that activities affecting quality are prescribed by documented instruction, procedures, or drawings, and are accomplished in accordance with these instructions, procedures, or drawings.

A. Approved procedures for the installation or installation inspection of mechanical safety-related equipment did not exist until July 16, 1980, although numerous pieces of this equipment were finally or partially installed prior to this date. Equipment installed prior to July 16, 1980, included the four Unit 1 Steam Generators, the four Unit 1 and Unit 2 Residual Heat Removal pumps and the four Safety Injection Pumps. Further, the procedure developed by the installation contractor, Phillips, Getschow Company, subsequent to July 16, 1980, was not consistently implemented in that the four Unit 2 Steam Generators and seven of the eight Primary Reactor Coolant Pumps were installed without use of the installation procedure. This violation was in part the basis for the imposition of the 2/2/83 civil penalty for "a breakdown of your Quality Assurance (QA) program." (Exhibit 3)

B. A special NRC QA inspection reported May 7, 1984 that:

* Phillips, Getschow Company, Field Drawing M-2539C-4, Revision D, was not stamped with Field Change Request No. L-9194 and Field Drawing M-2542C-121, Revision A, was not stamped with Field Change Request No. 9988.

* Edison's Quality Assurance Manual, Revision 77, Q.P. No. 7-1, "Control of Procured Material and Equipment - Receiving and Inspection," Section 5.2.1.5.7, "Dimensional," requires visual checks be performed on a random basis to assure that interface dimensions conform to drawings and/or specifications. However, random visual checks of interface dimensions of piping components were not being done.

* Contrary to Phillips, Getschow Company Quality Procedure, there was no documented record or log specifying that a calibrated instrument was used to measure numerous pipe bends for ovality requiring inspection measurements to the thousands of an inch. Examples include the bends on Drawings M-2546C-72, M-2546C-44, MC-2546C-42, and M-2546C-31.

* Contrary to Phillips, Getschow Company Construction Procedure, Field Change Orders were not written for revisions involving ASME Section III, Subsection NF welds for component support Drawings M-1RH02017R, Revision E, and M-1SI16021X, Revision B.

* Contrary to L. K. Comstock Quality Assurance Manual, drawings located in site document Station No. 5 were voided in that they were up to four revisions old and were neither returned to Document Control as voided drawings nor marked as being voided drawings for information only. (Inspection Report 83-09, Exh. 5.)

C. The piping contractor, Phillips, Getschow, did not have a procedure or documented instruction stipulating a systematic method for producing an accurate In-service Inspection drawing, including determining the number and location of all field welds and ship welds. (Inspection Report 85-07, Exhibit 14.)

D. Support plates were installed between the concrete pedestal base and the anchor bolt hold down plate for the Unit 1 and 2 containment spray pumps. However, they were not specified on the drawings and therefore these plates, including the size, type or grade of material, were

not analyzed for design basis. Furthermore, these additional plates were not identified during quality control installation inspections. (Inspection Report 85-07, Exh. 14.)

E. Cables 2AF307 and 2AF154 were not routed by Comstock per pull cards, and the QC inspector accepted the cable pulls documenting that the cables were pulled in accordance with the pull cards. (Inspection Report 84-31/29, Exhibit 13.)

F. In July, 1984, Phillips-Getchow, piping contractor, found piping that violated minimum wall requirements. This defect was not reported to owner in accordance with 10 C.F.R. 21.21. (Inspection Report 84-21/20, Exhibit 20.)

G. Applicant placed purchase orders with an unapproved bidder, H. H. Howard Corp. of Chicago, that did not have an approved QA program. Purchase orders were for cleaning of 206,744 feet of safety-related piping. (Inspection Report 84-17, Exhibit 21.)

H. Sargent and Lundy did not prescribe clearance criteria for safety-related HVAC components or safety related large bore piping and electrical items in relation to other items such as equipment, conduit, etc. (Inspection Report 84-09, Exhibit 22.)

I. Material installed for the pipe whip restraint plate was not of proper specifications. (Inspection Report 84-09, Exh. 22.)

7. Contrary to Criterion VI, "Document Control," of 10 C.F.R. Part 50, Appendix B, Commonwealth Edison Company has failed to ensure that measures are established to control the issuance of documents and these measures assure that changes to those documents are reviewed for adequacy and approved for release by authorized personnel and are distributed to and used at the location where the prescribed activity is performed.

A. A special NRC QA inspection reported May 7, 1984 that adequate measures had not been established to control field changes to drawings being made during the installation of ASME Boiler and Pressure Vessel Code, Section III, Class 2 and 3, 2" and under piping. Craft personnel had been making field changes to the drawings by rerouting lines, assigning weld numbers, and adding material which resulted in a lack of necessary control of approving, updating, and releasing drawings. (Inspection Report 83-09, Exh. 5.)

8. Contrary to Criterion VIII, "Identification and Control of Materials, Parts and Components," of 10 C.F.R. Part 50, Appendix B, Commonwealth Edison Company has failed to ensure that measures are established for the identification and control of materials, parts and components including partially fabricated assemblies in order to prevent the use of incorrect or defective material, parts or components.

A. Identification of traceability records were not maintained as required for some of the large cap screws

used to secure the steam generator to its supporting column. At least 19 of 192 screws were cut off and the identifying numbers were neither transferred nor marked on tags and records traceable to the screws. Further, adequate traceability records were not maintained for several hundred of these screws which were transferred back and forth between the Byron Station, the Braidwood Station, Rockwell Engineering (for QC checks) and Teledyne Brown Engineering (the installation contractor). This violation was in part the basis for the imposition of the 2/2/83 civil penalty for "a breakdown of your Quality Assurance (QA) program." (Exhibit 3)

B. 10,500 feet of General Electric "VULKENE" switchboard wire was received at Braidwood. Some of this wire has been installed without appropriate qualification to IEEE 383-1974. (CAT Inspection Report 84-44/40, Exh. 10.)

C. Phillips-Getschow hangers in lower cable spreading room did not utilize ASTM A307 fasteners per S&L standard. Also, battery racks had bolting material that did not meet the requirements of ASTM A307. (CAT Inspection Report 84-44/40, Exh. 10.)

D. Shoe covers were not worn by personnel entering the recirculation sump area during BWPT EF-11 and some debris was noted in the sump water during preoperational test. (Inspection Report 85-08, Exhibit 23.)

E. Permanent spool pieces for Residual Heat Removal Suction Lines and Containment Spray Pump Suction Lines were found with inadequate or non-existent coverings

for protection against damage or deterioration of these components. (Inspection Reprot 85-08, Exh. 23.)

F. During tours of the 1A positive displacement charging pump room, the following was observed: empty cans in the room cooler, plastic sheeting strewn about the area, partially eaten food items, accumulation of flammable material and a layer of dust on all equipment in the room. (Inspection Report 85-08, Exh. 23.)

9. Contrary to Criterion IX, "Control of Special Processes," of 10 C.F.R. Part 50, Appendix B, Commonwealth Edison Company has failed to ensure that measures be established to assure that special processes, including welding are controlled and accomplished in accordance with applicable codes, standards, specifications, criteria and other special requirements.

A. 127 safety-related structural steel fillet welds were painted prior to acceptance of the work and the welds were subsequently visually inspected for acceptance, with 79 accepted in the painted condition. In addition, visual weld inspections were not performed on safety-related full penetration welds completed under the jurisdiction of Structural Specifications F/L-2735 and F/L-2722 prior to May 1, 1984. The welds were accepted based on other methods of nondestructive examination, but were not accepted in accordance with the requirements of Section 8.15, Quality of Welds, Visual Inspection. (Inspection Report 84-21/20, Exh. 20.)

B. A newly designed reactor coolant pump lateral support anchorage was installed in Units 1 and 2 without records to establish the material heat number, charpy impact tests, lamination tests, welder identification, weld procedure, weld filler material, in-process inspections and other quality related records. (Inspection Report 84-21/20, Exh. 20.)

C. Nine L. K. Comstock filler metal withdrawal authorization forms documented the release of E7018 welded rod for cable pan welds between May 25, 1982 and July 28, 1982. (Inspection Report 84-13, Exhibit 24.)

D. Quality structural steel was not approved for use by the Architect-Engineer, Sargent & Lundy, but was released for use in installation by the structural steel contractor and documented as being used for cover plate welds. Furthermore, the welder documented as performing the welding was not qualified. In addition, RPS Division loop B, reactor coolant flow, completed socket weld joints, have no piping records identifying the welder or weld filler metal utilized. (Inspection Report 84-17, Exh. 21.)

E. Napoleon Steel Contractors, Inc. QA program did not require fit-up inspections for safety-related structural steel members joined by welds and therefore, QC personnel did not inspect and insure acceptable gaps for weld joints. (Inspection Report 84-08, Exh. 25.)

10. Contrary to Criterion X, "Inspection," of 10 C.F.R. Part 50, Appendix B, Commonwealth Edison Company has failed to ensure that a program for inspection of activ-

ities affecting quality was established and executed by or for the organization performing the activity to verify conformance with the documented instructions, procedures and drawings for accomplishing the activity.

A. An inspection program was not developed to verify the proper installation, including bolting, of the main steam generators in either Braidwood Unit 1 or 2. Although the manufacturer's procedure for setting major nuclear steam supply system (NSSS) components, including bolt installation, was available and suggested that the installation contractor provide a detailed setting procedure for the manufacturer's review, such a procedure was not developed. No records exist indicating that travelers, or process sheets, were used or reviewed by the quality control department to establish either surveillance or hold points. As of August 1982, installation inspections of the majority of mechanical safety-related equipment were either not conducted, were inadequate, were incomplete or were not documented. This violation was in part the basis for the imposition of the 2/2/83 civil penalty for "a breakdown of your Quality Assurance (QA) program" (Exhibit 3)

B. A special NRC QA inspection reported May 7, 1984 that deficiencies concerning piping material control resulted in the quality of some installed piping being indeterminate and resulted in some material being installed that did not meet design requirements. A documented inspection program had not been implemented to assure correct material installation for 2"-and-under safety-related piping

prior to July 1983; therefore, inspection records verifying correct material installation prior to that date do not exist. A documented inspection program has not been implemented to assure correct material installation for safety-related piping over 2" prior to November 1982; therefore, inspection records verifying correct material installation prior to that date do not exist. During the March 7, 1984, enforcement conference Edison described a verification program which will include a 100% inspection of all installed piping and associated records. The results of that program and the completion of any necessary corrective actions that might result are required to ensure that all installed piping material meets design requirements. Since the NRC will need to evaluate the results of this verification effort in order to fully assess the significance of the programmatic deficiencies, enforcement action was not being taken on this violation at that time. Following the NRC's review of Edison's efforts, it will determine the appropriate enforcement action. Until that time, this matter is being classified as Unresolved Items. This violation is extremely serious and has been classified as a potential severity level II depending upon the extent of deficient hardware identified in the on-going corrective action program. (Exh. 6.)

C. Applicant's QA inspectors failed to identify areas where Phillips-Getschow seismic category I and other pipe supports/restraints have not been constructed in accordance with design requirements. (CAT Inspection Report 84-44/40, Exh. 10.)

D. Applicant failed to provide an adequate inspection program in that electrical separation criteria were not sufficient to identify installations of raceway and cables by Comstock violating design requirements for separation. (CAT Inspection Report 84-44/40, Exh. 10.)

E. Program for inspection of activities affecting quality was not effectively implemented in that weld sizes in structural pipe support/restraints were not identified to be proper weld configurations. (CAT Inspection Report 84-44/40, Exh. 10.)

F. Electrical contractor, Comstock, inspected and accepted a junction box which was later determined to have deficiencies in the location of the anchors used for mounting of the junction box. Anchors were accepted even though they were 3" from the required location specified by S&L drawing 20E-1-3571.

11. Contrary to Criterion XV, "Nonconforming Materials, Parts or Components," of 10 C.F.R. Part 50, Appendix B, Commonwealth Edison Company has failed to ensure that measures were established to control materials, parts, or components which do not conform to requirements in order to prevent their inadvertent use or installation.

A. Seventy to 72 Steam Generator support bolts (exact number not known by Edison or the contractor) were received in January 1979 and identified as nonconforming. No record exists to show the disposition of these bolts and no Nonconformity Report was issued as required by Phillips, Getschow Company's Quality Assurance Manual, Section 15.

This violation was in part the basis for the imposition of the 2/2/83 civil penalty for "a breakdown of your Quality Assurance (QA) program." (Exhibit 3)

B. For Penetration Nos. E2 and E51, L. K. Comstock Inspection Reports were found which documented loose crimps at the determination blocks. No corrective action documents were written to identify and track these nonconforming conditions. Additionally, the dable from Comstock were not termianted and were tagges with orange out-of-service cords which are not controlled by the QA program. (Inspection Report 84-39/36, Exhibit 26.)

C. 337,500 feet of safety-related pipe was recieved in 1977 and rejected on April 9, 1979 due to rust, scale, and failure to cap pipe ends. Some of pipe was installed in plant. In addition, the rejected pipe was not properly dispositioned in that only 206,744 feet of pipe was chemically cleaned. (Inspection Report 84-17, Exh. 21.)

D. Comstock weld inspectors allowed craft personnel to repair/work weld defects identified during final QC inspections. (Inspection Report 84-07, Exh. 18.)

12. Contrary to criterion XVI, "Corrective Action," of 10 C.F.R. Part 50, Appendix B, Commonwealth Edison Company has failed to ensure that measures were established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. And in the case of significant conditions adverse to quality, Applicant failed to ensure that the cause of the

condition is determined and corrective action taken to preclude repetition.

A. Edison did not assure that a matter potentially adverse to quality was promptly identified and corrected at the Braidwood Station. Edison identified a significant problem with bolting of the steam generator supports that occurred at its Byron Station. Timely or adequate corrective action was not taken by Edison to prevent the same or a similar problem from occurring at Braidwood Units 1 and 2. It should be noted that Byron and Braidwood have a common FSAR, a common construction specification, a common system for drawings, ECNs and FCRs and a common architect engineer. Thus, the construction problem at Byron should have indicated a need for a more thorough evaluation for Braidwood. Nonconformity Report No. 332 concerning this bolting problem was issued at Braidwood on December 2, 1981, yet effective corrective action was not taken until August 1982.

In addition, effective corrective action was not taken by Edison relative to Phillips, Getschow Company's failure to implement and utilize installation procedures (identified during Edison audits conducted June 30-July 9, 1980 and June 23-25, 1981), concerning installation and installation inspection of mechanical safety-related equipment. The same deficiencies were again identified during a surveillance conducted by Phillips, Getschow Company on February 19, 1982. This violation was in part the basis for the imposition of the 2/2/83 civil penalty for "a breakdown of your Quality Assurance (QA) program." (Exhibit 3)

B. A special NRC QA inspection reported May 7, 1984 that:

* 1/2" S/80, SA-312, Type 304, ASME Boiler and Pressure Vessel Code, Section III, Class 1, NB pipe heat number 745107 were discovered in Section III installations without material test reports or records of receiving and receipt inspections by either Commonwealth Edison Company or Phillips, Getschow Company as identified by Phillips, Getschow Co. on September 17, 1982, on Nonconformance Report No. 789. The disposition of the Nonconformance Report resulted in accepting the pipe, after only obtaining material test reports, without examining the pipe, initiating and maintaining receipt inspection records, or determining the total quality of the pipe in storage and installed.

* The HVAC contractor, Pullman Sheet Metal Co., had not established a corrective action program to assure that conditions adverse to quality such as deficiencies and deviations were analyzed for significance and subsequently that the causes of any significant conditions were determined and corrective action taken to preclude repetition. Through August 4, 1983, 2,513 Correction Notices had been written by the HVAC contractor for deficiencies and deviations, including numerous welding deficiencies and deviations, but the contractor's Quality Assurance Program did not require that Correction Notices be analyzed for significance.

* Corrective action was not adequate concerning Nonconformance Report No. BR-08, dated June 15, 1981, since the nonconforming welds completed by unknown welders

were "accepted-as-is" after only a visual examination. The acceptance of the weld by visual examination pursuant to AWS D1.1 is based on the fact that a qualified welder performed the welding in accordance with the qualified process. (Inspection Report 83-09, Exh. 5.)

C. The Applicant's site QA organization inappropriately closed Nonconformance Report No. 600 and as a result did not assure that conditions adverse to quality were corrected. The inspector subsequently identified two supports detailed in Report 600 and one support not detailed which were not procured and examined in accordance with AS, E Section III, section NF. (Inspection Report 85-15/16, Exh. 17.)

D. Applicant's corrective actions for NCR's were found to be inadequate: 1) no documentation supporting statement that corrective action concerning defective welds was "N/A", and 2) based on numerous weld deficiencies after rework, the corrective action for this NCR was ineffective. (CAT Inspection Report 84-44/40, Exh. 10.)

E. Although BCAP had identified that Level I QC inspectors had inspected and accepted construction activities, this nonconforming condition was not documented as a BCAP observation. (Inspection Report 85-06, Exh. 11.)

F. In addition, 37 BCAP observations were invalidated by S&L even though the documented basis for the invalidations of the observations did not support the invalidations. (Inspection Report 85-06, Exh. 11.)

G. After an NRC inspection (82-05) identified that the Applicant failed to implement a QA program for the

erection of mechanical safety-related equipment, Phillips-Getchow contractor identified numerous pieces of equipment that had been installed without QC verification of internal cleanliness. (Inspection Report 84-21/20, Exh. 20.)

H. Edison did not take appropriate corrective action with regard to Audit QA-20-80-22, in that an assessment of AC inspectors qualifications were not performed to address the potential impact on work performed prior to the audit finding. (Inspection Report 84-07, Exh. 18.)

I. Edison QA identified inspection deficiencies but failed to take corrective action with respect to Napoleon Steel Contractors' past welding inspection activities to assure that defects do not exist in multi-pass welds. (Inspection Report 84-08, Exh. 25.)

J. In two areas, supports/restraints and piping runs, deficiencies were identified by the NRC CAT that were not identified by the BCAP inspectors. On the basis of the limited sample overinspected, it appears that BCAP inspection effort needs to be improved in areas of supports/restraints and piping runs.

13. Contrary to Criterion XVII, "Quality Assurance Records," of 10 C.F.R. Part 50, Appendix B, Commonwealth Edison Company has failed to ensure that sufficient records were maintained to furnish evidence of activities affecting quality. The records are to include at least the following: results of reviews, inspections, tests, audits, monitoring of work performance, and materials analyses. Applicant has failed to make such records identifiable and retrievable.

A. With few exceptions, official records were not generated or maintained relative to the installation of mechanical safety-related equipment by either Edison or their erection contractor, L. K. Comstock Company. Records that failed to show compliance with quality assurance, design, and code requirements included: (1) equipment releases to engineering for installation, (2) travelers or process sheets to identify required installation activities and inspections, (3) installation inspections, (4) pretensile loads for bolting, and (5) data on final equipment settings. This violation was in part the basis for the imposition of the 2/2/83 civil penalty for "a breakdown of your Quality Assurance (QA) program." (Exhibit 3)

B. Sargent & Lundy Engineers calculations which provided the original justification for the factor design methodology and magnitude were not retrievable. (Inspection Report 84-43/39, Exh. 19.)

14. Contrary to Criterion XVIII, "audits," of 10 C.F.R. Part 50, Appendix B, Commonwealth Edison Company has failed to ensure that a comprehensive system of planned and periodic audits is carried out to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program. The Applicant also failed to ensure followup action, including reaudit of deficient areas.

A. Inadequate audits were performed by Edison prior to June 30-July 9, 1980 relative to mechanical equipment erection and inspection activities of Phillips, Getschow Company. This important activity involved the installation

of most of the critical nuclear steam supply system and other mechanical safety-related equipment. Significant amounts of this equipment, including Steam Generators, Residual Heat Removal Pumps and Safety Injection Pumps, had either been finally or partially installed prior to this date. Further, no followup audit was conducted by Edison until June 23-25, 1981, to determine the effectiveness of the Phillips, Getschow Company's quality assurance program for these installations, or to verify that proper quality records were being generated and maintained as required, although a major finding during the June-July 1980 audit was that Phillips, Getschow Company had not implemented an approved procedure for installing equipment and inspecting that installation. This violation was in part the basis for the imposition of the 2/2/83 civil penalty for "a breakdown of your Quality Assurance (QA) program." (Exhibit 3)

B. A special NRC QA inspection reported May 7, 1984 that:

* Mechanical contractor Phillips, Getschow Co. has not established and executed a plan for auditing the implementing procedures of the quality assurance program on a period basis to determine the effectiveness of the program in accordance with the Phillips, Getschow QA Manual.

* Electrical contractor L. K. Comstock Co./ L. K. Comstock Engineering Company auditing activities neither conformed with the comprehensive annual schedule of planned

and periodic audits established as required by QA Program Manual Section 4.14.1, nor did they verify compliance with all aspects of the Quality Assurance Program.

* HVAC contractor Pullman Construction Industries, Inc., did not meet their yearly schedule for audit activities required by their QA Manual, Section 18, in that the following implementing procedures were not audited:

- B 3.1.F, Design Control
- B 5.1.F, HVAC Repair Adjustment
- B 9.3.F, Expansion Anchor Installation
- B 10.2.F, Visual Weld Inspection

* Edison's audits of the installation of small bore instrumentation and process piping were inadequate in that contractor hanger design calculation problems were not identified for more than two years. (Inspection Report 83.09, Exh. 5.)

* * *

ATTACHMENT B TO BRAIDWOOD PREHEARING CONFERENCE ORDER
(AUGUST 1, 1985)

QC INSPECTOR HARASSMENT CONTENTION

Contrary to Criterion I, "Organization" of 10 C.F.R. Part 50, Appendix B, and 10 C.F.R. Section 50.7, Commonwealth Edison Company and its electrical contractor, L. K. Comstock Engineering Company have failed to provide sufficient authority and organizational freedom and independence from cost and schedule as opposed to safety considerations to permit the effective identification of and correction of quality and

safety significant deficiencies. Systematic and widespread harassment, intimidation, retaliation and other discrimination has been directed against Comstock QC inspectors and other employees who express safety and quality concerns by Comstock management. Such misconduct discourages the identification and correction of deficiencies in safety related components and systems at the Braidwood Station.

Instances of harassment and intimidation include at least the following:

1. At various times since at least August 1984, including in March 1985, more than twenty five (25) Comstock QC inspectors have complained to the NRC about harassment and intimidation by Comstock supervisors. Such harassment and intimidation has been carried out or participated in by QC Manager Irv DeWald, Assistant QC Manager Larry Seese, QC Manager Bob Seltman and QC Supervisor R. M. Sakalac.

Such harassment included widespread pressure to approve deficient work, to sacrifice quality for production and cost considerations and to knowingly violate established quality procedures. Harassment and retaliatory treatment included threats of violence, verbal abuse, termination of employment, transfer to undesirable jobs or work in areas where quality deficiencies could not be noted, assignments to perform burdensome or menial "special projects" and other adverse treatment. Such discriminatory action was taken because of the victim's expression of quality or safety concerns. Former Level II QC inspector John D. Seeders has

knowledge of these widespread instances of harassment. By letter of August 17, 1984, Seeders complained to the NRC, Edison and Comstock management regarding instances of harassment directed against him. Subsequently, Mr. Seeders was involuntarily transferred to the position of Engineering Clerk in retaliation for his expression of quality concerns. Such assignment was intended by Comstock to keep Mr. Seeders away from sensitive work areas. Although QC Supervisor R. M. Sakalac 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 existence of widespread harassment impugns the integrity and effectiveness of on-going corrective action programs designed only to address other widespread QA failures at Comstock.

2. Comstock management, including QC Manager Irv DeWald and Corporate QA Manager Bob Marino harassed, discriminated and retaliated against, and ultimately terminated Level III QC Inspector Worley O. Puckett because Mr. Puckett made numerous complaints about safety and quality deficiencies which he identified in the course of his duties at Braidwood.

Mr. Puckett was hired by Comstock in May 1984 in the newly created position of Level III QC Inspector whose duties included conducting a review of Comstock procedures, tests requirements for the more than 50 Level II QC Inspectors, review of the Level II's inspection work, and the resolution of inspection disputes. Mr. Puckett was highly qualified

with 20 years' nuclear Navy and nine years' nuclear power experience. See, Resume, Exhibit B. During the course of his employment with Comstock Mr. Puckett was shocked by the widespread deficiencies in procedures, qualifications and workmanship. He identified numerous instances of improper construction procedures, improper qualification of welders, and material traceability deficiencies. He ultimately recommended a complete stop work order for all welding activity to permit effective correct action. See, Memos of August 10 and August 17, 1984, Exhibits C and D.

Finally, he warned QC Manager Irv DeWald that "we are approaching a complete breakdown in our QC program." August 22, 1984 Memo, Exhibit E. Puckett was subjected to harassment and retaliation because he raised these safety and quality concerns and was terminated on August 27, 1984 by DeWald on the pretext that he should have scored higher than his 86% on a qualification test. He filed a complaint with the U.S. Department of Labor, alleging violation of the employee protection provisions of the Energy Reorganization Act, 42 USC 5851. Letter, September 5, 1984, Exhibit F. The U.S. Department of Labor Area Director sustained Mr. Puckett's complaint finding unlawful discrimination by Comstock against Pucket and ordered relief. Notes of Decision, November 6, 1984, Exhibit G. Mr. Puckett presented his case at a hearing before an Administrative Law Judge on Comstock's appeal. See, Complainants' Pre-Hearing Exchange, Exhibit H. Comstock settled Mr. Puckett's claim before putting on its

case. The terms of settlement are subject to a non-disclosure agreement between Comstock and Mr. Puckett.