

224
RELATED CORRESPONDENCE

SHAW, PITTMAN, POTTS & TROWBRIDGE

A PARTNERSHIP OF PROFESSIONAL CORPORATIONS

1800 M STREET, N. W.
WASHINGTON, D. C. 20036
84 OCT -3 11:04

October 2, 1984
OFFICE SECRETAR
DOCKETING & SERVICE
BRANCH

TELECOPIER
(202) 822-1099 & 822-1199

TELEX
89-2693 (SHAWLAW WSH)
CABLE "SHAWLAW"

TELEPHONE
(202) 822-1063

JAY E. SILBERG, P.C.

Peter B. Bloch, Chairman
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. Jerry R. Kline
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. Glenn O. Bright
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

The Cleveland Electric Illuminating Company
(Perry Nuclear Power Plant, Units 1 and 2)
Docket Nos. 50-440 and 50-441 OC

Gentlemen:

During a conference call on September 28, 1984, the Chairman asked for further information concerning a Notice of Violation dated August 14, 1984. The Notice accompanied NRC Inspection Report Nos. 50-440/84-07(DRS); 50-441/84-07(DRS). The Chairman inquired whether the Staff had reached a conclusion whether Violations 1.b and 1.c were accidental or willful.

For the Board's information, there is attached the entire Inspection Report together with Applicants' September 13, 1984 Reply to the Notice of Violation. As shown in Applicants' reply, neither Violation can be considered to be of major significance. The discrepancies in dates which are the subject of Violation 1.b were inadvertent errors (1982 instead of 1983; November 22 instead of November 23). The issue on hold point dates (Violation 1.c) was based on the inspector's questioning of a procedure which called for certain documents to be dated upon completion of secondary review, rather than on the date of installation. As set forth in the September 13 reply, the procedure has now been revised to remove the inspector's concern.

8410030553 841002
PDR ADCK 05000440
G PDR

0502

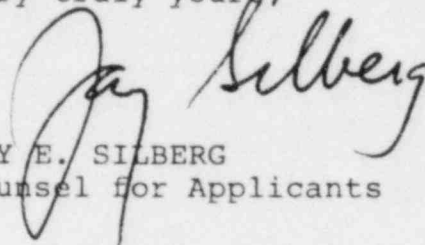
SHAW, PITTMAN, POTTS & TROWBRIDGE

A PARTNERSHIP OF PROFESSIONAL CORPORATIONS

Further indication of the level of significance of the two violations is that Region III believed that the cumulative seriousness of those two -- plus two others -- rated only a single Severity Level V (Supplement II) violation. While Applicants take any violation seriously, it is nevertheless worth noting that a Severity Level V (Supplement II) violation is defined as one having "minor safety or environmental significance." 10 C.F.R. Part 2, App. C. The NRC's inspector was quoted in the attached newspaper article as stating, "There really was nothing of consequence."

As for the willfulness of the violations, Applicants would point out that Region III has within its arsenal of enforcement powers the ability to characterize violations as "falsification of records," "deliberate falsifications" and "falsifications." See 10 C.F.R. Part 2, App. C, Severity Levels I, II and III (Supplement VII). Applicants agree with Region III's implicit determination not to categorize Violations 1.b and 1.c in those terms. Region III's choice of Severity Level would be inconsistent with a deliberate misdating of the documents.

Very truly yours,



JAY E. SILBERG
Counsel for Applicants

JES:lam
Attachment
cc: To Attached Service List



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

RECEIVED

CMS
RECEIVED
USNRC

AUG 14 1984

'84 OCT -3 A11 :04

Docket No. 50-440

Docket No. 50-441

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

The Cleveland Electric Illuminating
Company

ATTN: Mr. Murray R. Edelman
Vice President
Nuclear Group

Post Office Box 5000
Cleveland, OH 44101

Gentlemen:

This refers to the routine safety inspection conducted by Messrs. K. R. Naidu, Z. Falevits, A. Gautam, K. Tani, and E. Christnot of this office on April 9-12 and June 4-7, 1984, of activities at Perry Nuclear Power Plant, Units 1 and 2, authorized by NRC Construction Permits No. CPPR-148 and No. CPPR-149 and to the discussion of our findings with Mr. C. Schuster 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 non-compliance with NRC requirements, as specified in the enclosed Appendix. A written response is required.

We are concerned that your inspection reports contain various discrepancies such as erroneous dates of review and other inaccurate information. We point out that these are permanent records and as such should not contain significant discrepancies in information and dates. As part of your corrective action regarding the noncompliance identified, we expect you to audit your records to ascertain whether your inspection reports contain adequate information regarding the identification of the item inspected, the results of the inspection, and the date and identification of the initial reviewer.

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.

AUG 14 1984

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. L. Spensard
W. S. Little, Chief for
Engineering Branch

Enclosures:

1. Appendix, Notice of Violation
2. Inspection Reports
No. 50-440/84-07(DRS);
No. 50-441/84-07(DRS)

cc w/encls:

J. Waldron, Plant Manager
L. Beck, General Supervisor
Licensing and Fuels Management
DMB/Document Control Desk (RIDS)
Resident Inspector, RIII
Harold W. Kohn, Ohio EPA
Terry J. Lodge, Esq.
James W. Harris, State of Ohio
Robert H. Quillin, Ohio
Department of Health

Appendix

NOTICE OF VIOLATION

The Cleveland Electric Illuminating
Company (CEI)

Docket No. 50-440
Docket No. 50-441

As a result of the inspection conducted on April 9-12 and June 4-7, 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 X, as implemented by CEI Corporate Nuclear Quality Assurance Program Manual, Section 1000, Revision 3, requires that a program for inspection of activities affecting quality shall be 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. The following examples were contrary to the above:
 - a. Inspection Reports documenting inspections performed on rework done on the Power Generation Control Console are in some instances not clear and do not specify what was inspected and what was acceptable. Examples include inspection reports on FDI-WNBE and Engineering Changes Notices 245B.
 - b. Inspection Reports verifying corrective action taken on LKC Nonconformance Report 2375 contained discrepancies such as the date of review being a day earlier than the date of inspection and the date of calibration of crimping tools used to crimp the termination lugs.
 - c. Inspection Reports verifying corrective action on LKC Nonconformance Reports 2568 and 2569 contained misleading CEI "Hold" point stamps which were signed and dated several days after the actual inspection was performed. Such a practice renders it difficult to readily verify whether the hold point was honored.
 - d. General Electric Product Quality Certificates (PQC) certifying the compliance of Namco Limit Switches intended for mounting on the Control Valves for the steam turbine, were accepted during receipt inspection even though the serial numbers of the limit switches were not furnished on the PQC to establish traceability.

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

2. 10 CFR 50, Appendix B, Criterion III, as implemented by CEI Corporate Nuclear Quality Assurance Program Manual, Section 0300, requires that, CEI perform a design coordination function consisting of selected reviews and design control monitoring programs verifying that these procedures

shall assure that design activities are conducted in a planned and systematic manner; that the Perry Safety Analysis Report requirements have been appropriately addressed in design documents; and that design requirements can be controlled and inspected and/or tested to specified acceptance criteria.

Contrary to the above, CEI failed to assure that Gilbert Associates, Inc. (GAI) adequately reviewed and verified that safety related schematic and wiring diagrams relating to Standby Liquid Control, Residual Heat Removal and Process Radiation Systems were correct in that numerous design errors and inconsistencies were identified.

This is a Severity Level IV 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.

AUG 14 1984

Dated _____

R. L. Spessard

W. S. Little, Chief
Engineering Branch *for*

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-440/84-07(DRS); 50-441/84-07(DRS)

Docket Nos. 50-440/50-441

License No. CPPR-148; CPPR-149

Licensee: Cleveland Electric Illuminating Company
Post Office Box 5000
Cleveland, OH 44101

Facility Name: Perry Nuclear Power Plants, Units 1 and 2

Inspection At: Perry Site, Perry, OH

Inspection Conducted: April 9-12, June 4-7, 1984

Inspectors: *K. R. Naidu*
K. R. Naidu 8/14/84
Date

E. Christnot
E. Christnot 8/19/84
Date

Z. Falevits For
Z. Falevits For 8/19/84
Date

K. Tari Kesuma Tauri 8/14/84
Date

A. Gautam *A. Gautam* 8/14/84
Date

Approved By: *C. C. Williams*
C. C. Williams, Chief 8/14/84
Plant Systems Section Date

Inspection Summary

Inspection on April 9-12, and June 4-7, 1984 (Report No. 50-440/84-07(DRS); 50-441/84-07(DRC))

Areas Inspected: Licensee action on 50.55(e) items; noncompliances; unresolved items; review of corrective action taken on nonconformance reports initiated in the electrical construction activities; installation of instrumentation and review of their records; receipt inspection of safety-related limit switches for mainsteam stop valves and pressure switches for mainsteam control valves; independent design verification of instrumentation loops; separation of class 1E cables and qualification of safety-related equipment. The inspection involved 168 onsite inspection hours by five NRC inspectors.

Results: Of the nine areas inspected two items of noncompliance with multiple examples were identified (inadequate design review - Paragraph (8.b)(8.d)(8.f); inadequate inspection records - Paragraph (4.a)(4.b)(5)(11.b.(4)(h)).

DETAILS

1. Persons Contacted

Cleveland Electric Illuminating Company (CEI)

*C. M. Schuster, QA Manager
*P. O. Martin, General Supervising Engineer
*R. G. Solt, Quality Engineer
*E. C. Christiansen, Electrical Engineer
*B. P. Walrath, General Supervising Engineer
*K. C. Kaplan, Senior Engineering Technician
*E. Riley, General Supervisor
*G. Parker, Unit Supervisor
*D. E. Duff, QC Inspector
*V. K. Higaki, Unit Supervisor
*K. J. Cimmonelli, Quality Engineer
*J. L. Lesnick, Quality Engineer
*R. Matthys, Lead Piping I&C Engineer
E. Bullelli, Licensing Engineer
D. R. Green, Senior Project Engineer
J. H. Bellack, General Supervising Engineer
K. H. Matheny, Senior Engineer
G. R. Leidich, General Supervising Engineer

L. K. Comstock Company (LKC)

R. Bower, QA Manager
C. Hart, Assistant QC Manager
L. Pfenningworth, QC Supervisor
R. Whithead, QC Inspector

Johnson Controls Incorporated JCI

J. A. Buschnell, Project Manager
S. Young, QA Manager
G. Christiansen, QC Inspector
D. P. Baynes QA Auditor
D. Lynch, Purchasing
D. Gupta, Assistant Manager, Engineering
J. Beddow, Project Engineer
E. E. Gasti, Manager, Engineering
M. W. Jefferis, Quality Control Inspector

Gilbert Associates Incorporated (GAI)

A. Killian, Field Engineer, I&C

General Electric Company (GE)

J. J. Larsen, Resident Site Manager
J. Bucka, QAE E&I Representative

*Denotes the persons who attended the exit meeting on June 7, 1984. In addition to the above, other licensee and contractor personnel were contacted during this inspection.

2. Licensee Action On 50.55(e) Items

(Closed) Overtorquing of electrical cable tray splice plate bolts (DAR 68) (Reports 440/81-13-EE; 441/81-13-EE). This item is considered closed based on the review documented under closure of noncompliance 440/81-19-03; 441/81-19-03 in this report.

3. Licensee Action on Previously Identified Items

a. (Closed) Noncompliance (440/81-19-03; 441/81-19-03): Inadequate program to inspect cable tray splice bolts. The subject inspection report cited three examples of inadequate inspection programs. One of the three examples related to inadequate inspection of improperly seated cable tray splice bolts. Licensee's action included reinspection of at least 1000 cable tray splice connections and cable tray tests on worst case configuration.

(1) Bee-Line, the manufacturer of cable tray splice plates, performed destructive tests on cable trays to provide assurance of the adequacy of cable tray splice connections. The tests evaluated the following as-installed inadequacies identified in the field:

- (a) Bolt head dimensions were observed to be reduced by grinding to provide clearance during installation.
- (b) Some bolts were supplied with "incomplete roll" of the bolt head.
- (c) The possible installation of A307 type bolts rather than the higher grade 5 bolts.

(2) The test specimen had a worst case configuration with 25% of the bolts attaching the splice bolts deleted.

The test results indicated no adverse results with the use of or possible installation of "defective" bolts in small quantities. The test concluded that the present installation would not degrade the strength of the cable tray below the level required for the Perry site.

(3) Approximately 1000 cable tray splice joints were reinspected. The NRC inspector selectively reviewed the results of the reinspection reports and determined that the observations documented therein were not significant.

This example of noncompliance is considered closed. One more example concerning the installation of the electrical containment vessel penetrations remains open pending review.

- b. (Open) Unresolved Item (440/83-37-05; 441/83-35-05): (R:III-83-A-0122): An alleged individual identified as individual "A" contacted the NRC with some concerns. A few days later on November 23, 1983, his concerns were documented in the Plain Dealer newspaper. On November 27, 1983, the alleged met with CEI personnel in the presence of the NRC site resident inspector and expressed his concerns. Refer to Paragraph 11.a for details.
- c. (Closed) Unresolved Item (440/83-37-06; 441/83-35-06): (R:III-83-A-0093): This item resulted from the followup on allegations by Individual "B" described in Report No. 440/83-37 and 441/83-35 and relates to inadequate inspection reports on rework activities in the main control room. This item is escalated to an item of noncompliance (440/84-07-01a/441/84-07-01a(DRS)) and is discussed in paragraph 11.b.(4).(h) of this report.

4. Review of Nonconformance Reports

The inspector reviewed several nonconformance report (NCRs) initiated in the area of electrical installation activities to determine whether the corrective action taken was adequate. Of approximately (10) NCRs reviewed, the following were observed to have discrepancies:

- a. NCR 2375 initiated on September 26, 1983, identified some unacceptable terminations on circuits 1B21F753B, 1M51F7B, and 1B2F767B. Recommended corrective action was to replace the lugs with new ones. The step taken to prevent recurrence was to retrain the craft. Corrective action was verified on November 23, 1983. Training records indicate that the craftsmen were retrained on November 9, 1983. Individual crimping inspection reports (CIR) were included. In two CIRs, the Level II reviewer's signature was dated November 22, 1983 which preceded the inspector's signature, dated November 23, 1983. The calibration due date of the crimping tool used, was also in error. The NRC inspector discussed the details of the inspection results with the concerned individuals in the LKC organization and determined that the signatures and dates were in error and that the actual inspection results were not. The NRC inspector informed the licensee that reviews of inspection reports were not being performed adequately as reflected in the discrepant dates. The inspector informed the licensee that this is an example of noncompliance contrary to the requirements of 10 CFR 50 Appendix B Criterion X (440/84-07-01b; 441/84-07-01b(DRS)).
- b. LKC 2568/PO 33-2424, Revision 0, dated November 17, 1983, identified cables violating the minimum bend radius. Corrective action recommended retraining the cables, and adjusting the supports to eliminate the bend radius violation. Cables were to be meggered to ascertain damage. If the megger tests were unacceptable, the NCR was to be returned for further disposition. The CEI Construction Quality Section (CQS) stamped the NCR (Owner QA "Hold" point-Released). The licensee explained that this stamp was intended to implement a requirement in Paragraph 1.04.b of the specification SP-709-4549-00 to review an NCF prior to closure. CEI imposed a mandatory "hold"

point for CQS on the closure of all interface Nonconformance Reports. The CEI CQS inspector signed the LKC QC inspection reports, which included the Insulation Resistance/Continuity Test Reports for various cables and the (IR/CRE) Inspection Reports and cable tray installation checklists, several days after the actual individual LKC QC inspections were performed. One IR/CTR on cable 1D23R116B had two inspection dates on it, namely 1/5/83 and 1/4/84. Some inspection dates were not legible. The CEI/CQS inspector signed this report on 1/24/84 as acceptable.

Paragraph 3.3.9 of LKC procedure 4.11.1 states, "Interface NRs received by LKC for corrective action shall be completed in accordance with the prescribed disposition of the NR with the final verification and closeout of CQC. Note: (CQS Hold point) CQS must be notified prior to closure of all interface Nonconformance Reports."

The inspector informed the licensee that the dates of CQS "hold" point signatures on the inspection report did not reflect that CQS witnessed the reinspection on the day the reinspection was performed. Other discrepancies in the dates of the LKC QC inspector's signoffs were not detected and corrected by the CQS inspector who reviewed the inspection reports. The intent of Paragraph 3.3.9 of LKC Procedure 4.11.1 was not properly implemented. The NRC inspector informed the licensee that this was another example of an item of noncompliance contrary to 10 CFR 50 Appendix B Criterion X identified in the previous paragraph (440/84-07-01c; 441/84-07-01c(DRS)).

- c. NCR 2569 also contains misleading discrepancies in dates and does not reflect that inspections were performed in a timely manner. The NRC inspector stressed that inspection reports should be self-supporting and should not need additional documents to confirm that actual inspections were performed on one date and the actual closure was signed on a different date.

5. Review of Receipt Inspection of Components

The inspector reviewed the receipt inspection process for pressure and limit switches which are mounted on the control valves and stop valves of the main steam lines.

The inspector selected reactor protection input pressure switches 1C71-N005A thru D which actuate when the control valve is less than 90% open, and limit switches 1C71-N006A thru H which actuate when the stop valve is less than 90% open.

Interconnection Wiring Diagram D-209-040 Sh. 1-4 indicates that 1C71-N006A-H are Namco type EA-170-5111 limit switches. Receipt Inspection Report (RIR) dated February 22, 1984 and G. E. Project Quality Certificate dated February 14, 1984 indicated that 8 switches were received on site on February 24, 1984, that they have been manufactured under a controlled QA program and are in conformance with the procurement quality requirements. No adverse findings were identified.

Review of RIR for 1C71-N005A-D dated March 16, 1978, indicated that four pressure switches were received and due to a fire in the warehouse had to be replaced with new switches. The new switches were sent out on November 6, 1980, along with G. E. Domestic Memo of Shipment, dated November 6, 1980. Neither the G. E. Product Quality Certificate (G.E. PQC) dated November 4, 1980, nor the CEI RIR dated November 18, 1980, identified the serial numbers of the switches; only the MPL number was identified.

Failure to verify the serial number is contrary to Paragraph 1.2.2.B of CEI procedure NQI-0711 which requires that receipt inspections verify that the supplier has positively identified all parts/materials by vendor's number and corresponding CEI stock number code, MPL, serial number, and/or engineering BM number as applicable. The inspector informed the licensee that the receipt inspector failed to verify that the vendor documents met all the applicable requirements delineated in the procedure NQI-0711 as reflected in the RIR and the G. E. PQC, and that a failure to perform and document inspections adequately is another example of an item of noncompliance contrary to the requirements of 10 CFR 50 Appendix B, Criterion X (440/84-07-01d(DRS)).

6. Observation of Instrumentation Work and Work Activities Unit 1 (520538)

The inspector observed the installation of instrument sensing lines for the reactor pressure vessel (pressure and level) located inside the reactor building (RB). The applicable specification is SP-90-4559-00(SP90). Gilbert Associates Incorporated (GAI) performed the design work for the instrument line supports and hangers inside the RB. Johnson Controls Incorporated (JCI), the instrumentation installation contractor, fabricates and installs the hangers to support the sensing lines. Each support/hanger was designed for a specific location, designated with a unique number and assigned specific drawing numbers. Work performed on the installation is assembled in Installation/Fabrication (I/F) packages. The inspector observed the work performed for the following lines and examined the following I/F packages:

1H22 - P004	Lines A1 and A2
1H22 - P005	Lines A1 and A2
1H22 - P026	Lines A1 and A2
1H22 - P027	Lines A1 and A2

B21 - N12/ Azimuth 195°

The inspector determined the following:

- a. The slope of the installed sensing lines as well as the installation of line supports met the applicable drawing requirements.
- b. All components were adequately identified.
- c. Instrument lines were routed in accordance with the drawings and appeared to be adequately separated.

- d. QC inspections were performed on the welds, installation of hangers/ supports and were documented in the I/F packages.
- e. Reviewed activities in the JCI fabrication shop and the storage and handling of safety-related material were found apparently in accordance with procedures.

No items of noncompliance were identified in the above area.

7. Review of Instrumentation Installation Records Unit 1 (52055B)

- a. The inspector reviewed the following records:
 - (1) Five (I/F) packages for sensing line supports/hangers, as mentioned in Paragraph 6.
 - (2) Welder qualification records for two JCI welders.
 - (3) Two JCI procurement order packages including receipt inspections for support tube steel and support plate steel. The inspector determined that the material was purchased from JCI approved vendors.
 - (4) Qualification records for one JCI Level II receiving inspector.
- b. The inspector reviewed the following records available at JCI on the installation of the instrument panels supplied by General Electric, the NSS supplier.
 - (1) The installation of the main steam isolation valve leakage control panel was in accordance with Document No. 1H22-P073. The rack is installed at elevation 599'-0 in the Auxiliary Building.
 - (2) Drawing 18 requires 1/2" diameter 13 Universal Nation Co., 2" long Nelson Studs to be welded to the embedded steel plate. The panel is placed on these bolts and the nuts are tightened. A lock nut has been provided.
 - (3) Field Material Requisition (FMR) 0899 dated July 6, 1981 indicates that 18 pieces of 1/2" x 2" ASTMA-108 Grade 1010-1020 Nelson Studs were requisitioned along with other material.
 - (4) Daily Production Qualification and Inspection Report, dated July 7, 1981 indicates that the Nelson Stud Welding procedure QAS-1007/2 was qualified to weld 2 Nelson Studs with the TRW NS-30 type welding machine. The machine was set for 800 amps and 75 seconds. Two Nelson Studs were bend tested and determined acceptable. After installing 18 Nelson Studs, one nut was torque tested to 37 ft lbs and determined acceptable.
 - (5) Installation/Fabrication Planner (I/F) for the rack #1 indicates the various steps followed during the installation of the rack

and the various inspections performed. The drawing indicates that the 18 holddown nuts (ASME SA 194 Grade 2H) were torqued to 37 ft lbs and a lock nut was tightened.

- (6) Nonconformance Report NR JCI 627 Revision 1 dated February 2, 1984 indicates that SA 307 Grade B nuts were replaced with SA-194 Grade 2H nuts to meet the specification requirements.
- c. The inspector reviewed the following records relative to the RCIC rack (drawing No. 1H22-P017P).
- (1) The installation of the reactor core isolation cooling (RCIC) Section B, Division 1 rack was in accordance with IIP drawing 1H22-P017P. The rack is installed at elevation 568' in the auxiliary building.
 - (2) The records indicated that additional shim plates type A-36 were welded to the embedded steel (installed by the civil contractor). Nelson Studs were welded to the shim plates. The racks were set on the Nelson Studs and SA192 Grade 2H type nuts were used to holddown the racks. All other records were similar to those in the above paragraph and were considered acceptable.
- d. The inspector reviewed the records related to the procurement of the flow restricting orifices installed in the instrument lines. These were as follows:
- JCI placed purchase order (PO) X87961 with the Mutual Manufacturing & Supply Company (MMSC), Cincinnati, Ohio for 200 pieces of restricting orifice, 3/4" socket weld (SW), 3000 lbs., SA-479, Type 304. The PO stipulated that the material met the requirements of ASME Section IIA, 1974 Edition through Winter of 1975 Addenda and ASME Section IIA 1974 Edition through Winter 1975 Addenda Subsection NC. Additional quality requirements were attached to the PO. JCI Receipt Inspection Report (RIR), dated May 27, 1981 indicates the receipt of 60 pieces of ASME-SA 479, Type 304, 3/4", 3000 lb socket weld fittings without any shipping damage. RIR dated June 5, 1981 acknowledged the receipt of the remaining 140 pieces. CAMCo Fitting Company (manufacturer) certified that the fittings would withstand a hydrostatic test of one and one-half times the fittings maximum permissible working pressure without bulging, cracking or leaking. MMSC issued certificates of compliance that the fittings with heat number EEC met all the applicable requirements. MMSC holds the ASME Quality Systems Certificate #QSC 279, expiring on April 29, 1983. CAMCo provided a material certificate which included the chemical analysis, results of tensile tests and heat treatment.
- e. The inspector reviewed the records related to the weld rod traceable to the Heat Number 431E3931. 500 lbs of 1/8" diameter, E-7018 type weld rod from Lot 21924 was purchased to meet the requirements of AWS A 5.1-69 and ASME Section II, Part c, SFA 5.1 (1974 Edition) with Winter 1975 Addenda. Teledyne-McKay supplied the weld rod and provided

the chemical analysis and results of the mechanical test performed on a specimen weld produced from weld rod with this heat number. Results included Charpy V-Notch impact tests at -20°F, filler weld usability test, radiographic test and actual concentricity.

No items of noncompliance were identified in the above area.

B. Independent Design Verification of Installed Process Instrumentation Loops

a. The inspector reviewed a residual heat removal (RHR) system instrument loop selected at random. The schematic for RHR "C" flow is shown on G.E. Dwg. 828E34CA, Sh. 9, Rev. 13. The inspector reviewed the following documents associated with the selected loop, and verified the installation by performing a field walk down of installed equipment associated with the following records:

- (1) Pull card for cable circuit No. 1E12R-10B dated November 5, 1980.
- (2) Pull card for cable circuit No. 1E12R-13B dated January 15, 1981.
- (3) Conduit layout drawing No. D-215-658, Rev. W.
- (4) Conduit layout drawing No. D-215-212, Rev. A.A.
- (5) Interconnection wiring diagram No. D-209-055, Sh. 9, Rev. B.
- (6) Interconnection wiring diagram No. D-209-055, Sh. 12, Rev. A.
- (7) Interconnection wiring diagram No. D-209-100, Sh. 87, Rev. G.

b. The inspector identified the following discrepancies between drawings and as-built equipment:

- (1) Circuit No. 1E12-R13B on the wiring diagram (item (5) above) indicated cable routed to rack 1H22-P021 while it was actually routed to rack 1H22-P055 as required.
- (2) GAI drawing B-208-055 Sh A10, Rev. J, indicated that this drawing had been updated to G.E. Dwg. 828E354CA, Rev. 13. However, the NRC inspector's review of G.E. 828E354CA, Rev. 13 indicated that the GAI drawing had omitted the designation of device SRU3B and termination points on terminal block DD at panel H13-P642.
- (3) Two different wires on panel H13-P642 TBDD-52 & 53 indicated the same wire code (E12A1015C).
- (4) Lifted lead to device SRU2B on panel H13-P642 indicated that the loop was being calibrated since September of 1983. This record is incorrect.
- (5) One of the wire markers was erroneous in Item a(6) above. On TBCC point 1 wire marker as installed is E12A1557R, but should be E12A1557A.

No other deficiencies were identified during field walk down and drawing review for this instrument loop. The racks and cables inspected appeared to be installed in accordance with the applicable drawings. Items 8.b.(1), (2), (3), (4), and (5) above, are additional examples of the noncompliance summarized in paragraph 8.f. (440/84-07-03a(DRS)).

- c. The inspector selected the RHR System Steam Supply Pressure Instrument Loop Schematic for Valve 1E12-F051A shown on GAI Drawing B-208-055, Sh. A11, Rev. H. The inspector performed a field walk down to ascertain whether the installation met the requirements of the following related documents:

- (1) GAI elementary diagram B-200-055, Sh. A11, Rev. H.
- (2) GAI interconnection wiring diagram D-209-055, Sh. 10, Rev. C.
- (3) GAI interconnection wiring diagram D-209-055, Sh. 9, Rev. B.
- (4) GAI interconnection wiring diagram D-209-100, sh. 113, rev. E.
- (5) GAI conduit layout drawing D-215-211, rev. Y.
- (6) GAI conduit layout drawing D-215-655, rev. U.
- (7) GAI conduit layout drawing D-215-221, rev. V.
- (8) GAI conduit layout drawing D-215-652, rev. Q.
- (9) Pull cord for cable circuit No. 1E12R-4A, dated January 4, 1981.
- (10) Pull cord for calbe circuit No. 1E12R-54A, dated June 26, 1981.

- d. The inspector identified the following discrepancies between drawing and as built equipment:

- (1) In item (2) above, circuit 1R25-B62A on drawing was found as 1R25B5664A on equipment.
- (2) Circuit 1R61-A846A was identified as 1R61A1218A on the equipment.
- (3) TBBB-16 wire designation on drawing as E12A1123C was marked as E12A1123A on the equipment.
- (4) TBBB-3 indicated shielded wire while equipment did not have shielded wire.
- (5) TBCC-7,8 indicated cable on 1C71-R7XA to be terminated, while equipment had cable de-terminated.

Items d.(3), (4), and (5) are additional examples of the noncompliance identified at the end of Paragraph 8 (440/84-07-03b(DRS)).

No other adverse items were identified during field walk down and drawing review of this instrument loop. The racks and cables inspected appeared to be installed in accordance with the applicable drawings. The licensee indicated that ECN-18882-33-3129 dated February 22, 1984 was written to resolve items (1) & (2) above.

- e. The inspector reviewed process radiation monitoring systems elementary diagram drawing B-208-054, Sh. A02, Rev. F, which indicated that the fuse protecting off gas pre-treatment and post-treatment recorders 1D17-R604 & 1D17-R601 respectively, and emergency service water recorder 1D17-R602, was removed on a previous G.E. revision. GAI engineers indicated that they are not required to review G.E. design changes before they transfer them to GAI design drawings. The only review performed is on interface circuits between G.E. and GAI design.

The inspector requested the G.E. field office to indicate the reason for removing the protective fuse to the recorders; G.E. review indicated that the fuses should not have been removed and they initiated FDDR-KL1-3258 dated June 5, 1984 to add the fuse back into the circuit.

- f. The inspector reviewed the standby liquid control systems elementary diagram Drawing B-208-030 Sh. 2, Rev. K. The following discrepancies were identified:
- (1) Status lights (DS17) circuit in MCB for "1C41-C001B or F001B overload trip or loss of power" indicated actuating devices as 74 N.C. contact relays from starters of valves. Review of the drawing showing coils for initiating devices indicated that the relays are designated as 27 on S/D B-208-030, Sh. 4 & 5, rather than 74.
 - (2) Status lights (DS14) circuits in MCB for "SLCS injection loop "A" manual valve position closed or system manually out of service" contained actuating contact from injection valve 1C41-F036. P&I diagram D-302-691 Rev. c indicated that valve 1C41-F036 is located in the common header line inside the drywell and therefore, is common to loop A & B. Loop "B" circuit did not contain an interlock from valve 1C41-F036, and therefore, status lights for loop B will not come on as required when valve is closed. Also, LS3 contact from the limit switch on valve 1C41-F036 was shown in loop A circuit as N.O. contact when per development it should have been shown as a N.C. contact.
 - (3) Circuit showing switches S1A & S1B contact 1-2 as N.C. contacts, should be shown as N.O. contacts.
 - (4) Limit switch development for valves 1C41-F031 Div. I & Div. II does not correlate with development shown on connection diagram D-209-030 Sh. e, Rev. F.
 - (5) The licensee could not locate the connection diagram for valve 1C41-F036 in the existing design drawings. No reference was found to any document showing the connections to limit switches of the valve. The licensee indicated that an ECN 21080-33-3436 dated June 1, 1984, had been written to show the connections, however, the ECN was not referenced on any of the design drawings, apparently indicating that it does not exist.
 - (6) Drawing B-208-030, Sheet 3, Rev. k did not indicate the 120VAC distribution panel number, feeding Division 1 power to 1C41-K600A instrument loop.
 - (7) While reviewing the design drawings at the GAI engineering office, the inspector identified instances where drawings were incorrectly filed, superseded drawings were still filed in the main controlled set and were not marked superseded. One drawing was issued in January 1984 but not filed till June 1984. These drawings are the design reference drawings used by design and field engineers. At the NRC inspector's request, the licensee performed an audit on the control of drawings in the electrical

area. The audit confirmed the inspectors' concern and the licensee subsequently initiated Action Request (AR) 0043 dated June 6, 1984 to implement steps to assure appropriate maintenance of current design drawings.

The inspectors discussed the above findings with the licensee's staff. The licensee informed the inspectors that GDS Associates, Inc., an independent design reviewer, had been contracted by the licensee to review all safety related design drawings relating to G.E. and GAI. GDS Associates had completed their review and had only identified Items 8.f.(1) and 8.f.(6) above prior to the NRC inspection.

The licensee was informed that findings outlined in paragraph 8.b.(1),(2), (3), (4), (5); 8.d.(3), (4) & (5); 8.f.(2), (3), (4) & (5) indicated a failure to establish adequate design control measures to prevent numerous discrepancies among design documents. This is considered an apparent example of noncompliance contrary to the requirements of 10 CFR 50, Appendix B, Criterion III (440/84-07-03(DRS)).

9. Physical Separation of Class 1E Cable

The inspector reviewed Class 1E cable installation for conformance to separation requirements outlined in IEEE 384-1974, Reg. Guide 1.75, Perry 1 FSAR Page 8.1-82, Spec. SP-33-4549-00 2/11/77 and L. K. Comstock raceway and cable installation procedures.

The inspector identified five apparent cases of lack of raceway separations during walkdowns in essential areas of the plant. Each case was subsequently justified through documents showing barriers to be installed at a later date. See Table 1 for details. No apparent deficiencies were found.

Class 1E and balance of plant cables were reviewed for installation in common enclosures. It was observed that in the PGCC room, where adjacent General Electric Cabinets had 1E and non-1E circuits, wiring was touching the separating barriers. Paragraph 8.3.1.4.1.6(a) of the FSAR requires 1" between wiring and barriers - on both sides of barriers.

The licensee reported that an engineering analysis shall be performed to resolve this discrepancy. Pending review and resolution of this matter this item remains open. (440/84-07-04(DRS))

TABLE I

Raceways Having Separation Conflicts			Area/El.	Drawing	Justification
X1167	Separation + 8" +		Cable	D214-141 Rev. E	Barriers shown on drawing
X1136		A1680	Spreading		
X1137		A1688	Room		
X1138		A1681	El. 638		
X1168	Separation + 9½" +		Cable	D214-141 Rev. E	Barriers shown on drawing
X1146		B1824	Spreading		
X1147		B1825	Room		
X1148		B1820	El. 638		
X1169		B1830			
X964	Separation + 6½" +	A618	Cable Chase El. 638	D214-143 Rev. N	Barriers shown on drawing
	<div style="text-align: center;"> <hr/> B1830 ↑ Separation 1" ↓ <hr/> X1146 </div>		Cable Spreading Room El. 638	D214-141 Rev. E D214-143 Rev. N	Barriers shown on drawing
A654 & A636, IR33R906D			Cable Chase El. 638		NCR LKC-2305 08/30/83

10. Review of Class 1E Qualification of Equipment

The inspector reviewed equipment from three suppliers, Rockbestos, Cutler-Hammer and General Electric for Class 1E qualification of supplied equipment.

One item was reviewed for each supplier. The following exceptions were found:

- a. During review of the qualification of Rockbestos reel SKA-109 2C#14, it was observed that there was no evidence of a dielectric test being performed on the cable prior to cabling. This is a requirement per spec. SP-560-4549-00, Rev. XX and ICEA S-68-524, Rev. 9

The licensee reported that this test report exists at the supplier location and that it will be made available for NRC review.

During review of the qualification of Cutler Hammer MCC 1R24 50018, it was observed that test reports and Procedures 5890D & 5842, required per Spec. 557-4549-00, Sec. 2.08.2, had not been submitted by the supplier. In lieu of this the licensee presented an inprocess inspection report as evidence of testing. The licensee was advised that IEEE 323, Sec. 8 and 10 CFR 50, Appendix B, Criterion XVII requires a test report to contain data that demonstrates the qualification of the equipment. The licensee reported that these test reports will be retrieved from Cutler Hammer for NRC review.

Pending review of test reports from Rockbestos and Cutler-Hammer, this is an unresolved item. (440/84-07-05(DRS))

- b. The inspector reviewed the Class 1E qualification of General Electric Rosemount 1152 pressure transmitters. The licensee reported that due to prior contractual agreements, all G.E. supplied equipment and qualification documentation was maintained at the G.E. San Jose Office in California. Due to limitations of frequency and scope, the licensee's audits of G.E. in San Jose could not provide evidence of Class 1E qualification of these instruments. Due to a lack of documentary evidence the inspector could not determine if the Rosemount transmitters were qualified to Class 1E requirements or if G.E. had monitored Rosemount during manufacture of these items. Pending further review of this matter, this remains an unresolved item. (440/84-07-06; 441/84-07-06(DRS))

11. Review of Allegations

The inspectors reviewed and examined the allegations received from various individuals as identified in previous NRC inspection reports as follows:

Individual A (R:III-83-A-0122)
Paragraph 9a in report 440/83-37(DRS); 441/83-35(DRS)
(Details Par. 11.a in this report)

Individual B (R:III-83-A-0093)
Paragraph 9b in report 440/83-37(DRS); 441/83-35(DRS); 440/84-05(DRS);
441/84-05(DRS)
(Details Par. 11.b in this report)

Individual C (R:III-83-A-0121)
Paragraph 9c in report 440/83-37(DRS); 441/83-35(DRS)

Individual D (R:III-83-A-0108)
Paragraph 9d in report 440/83-37(DRS); 441/83-35(DRS)

Individual E (R:III-83-A-0048)
Paragraph 9e in report 440/83-37(DRS); 441/83-35(DRS)

Individual F (R:III-83-A-0062)
Paragraph 9f in report 440/83-37(DRS); 441/83-35(DRS)
(Details Par. 11.f in this report)

The allegations and results of investigation are discussed in the following paragraphs as referenced above.

- a. Individual A (R:III-83-A-0122) Contacted the NRC with some concerns. A few days later, on November 23, 1983, his concerns were documented in the Plain Dealer Newspaper. On November 27, 1983 the alleged met with CEI personnel in the presence of the NRC site resident inspector and expressed his concerns. Pending review of the CEI's corrective action on these allegations, this item was identified as an Unresolved Item 440/83-37-05; 441/83-35-05.

CEI documented the alleged's concerns and the NRC inspector verified the licensee's investigation/corrective action as follows:

- (1) Allegation: The alleged identified a specific instance where a cable tray was filled with debris, including electrical wiring and welding material.

Licensee's Corrective Action: LKC NRs 2419 and 2570 were written to clean cable tray 622 in Reactor Building #1 at elevation 634'6". The debris was removed and the tray was reinspected for damage. No adverse findings were identified.

Conclusion: The allegation was substantiated and corrective action taken by the licensee appears to be adequate.

- (2) Allegation: Conduit installations by the craftsmen are not meeting the acceptance criteria. The alleged had brought this to the attention of LKC management in May, 1982.

Licensee's Corrective Action: The LKC Corporate QA organization performed an audit and initiated Corrective Action Request (CAR) 008 on May 10, 1982. LKC hired a full time training coordinator. Subsequently, on April 25, 1983 LKC QC initiated CAR 011 to the LKC Project Manager informing him that conduit installation did not meet the acceptance criteria. CEI Lead electrical construction engineer in a letter (PY/SO-33-18112) dated June 13, 1983 informed LKC that due to field installed non-class IE raceways and accumulations of installation tolerances, the actual design of class IE divisional raceways may indeed violate the established separation criteria. He informed LKC that the Conduit Design Group has been instructed to review the specified detailed drawings more closely. Based on this letter CAR 011 was closed.

Conclusion: The allegation was substantiated and corrective action taken by the licensee appears to be adequate in that the existing conditions were corrected and the program governing these activities was improved.

- (3) Allegation: The alleged identified examples where he was asked to write Inspection Reports (IRs) instead of Nonconformance Reports (NCRs).

NRC Action

The inspector reviewed the documents identified by the alleged and determined that in all instances, IRs were appropriate, as follows:

- (a) NCR LKC 2434 dated October 12, 1983 identifies examples of inadequate information on a drawing and references a Field Variance Authorization (FVA). This NR was rejected on the basis that there was no conflict with the FVA which would invalidate and/or question the field installation and QC inspection requirements.
- (b) NCR LKC 2264 dated October 11, 1983 identifies a conduit installed to Engineering Change Notice (ECN) 2454. This NCR was rejected because QC inspected the installation to Revision A of the ECN instead of Revision B. IR dated December 13, 1983 was correctly issued instead of the NCR.
- (c) NCR LKC 2412 dated October 7, 1983 identifies some problems with design drawings. The NCR was rejected because they were not hardware problems. IR 8210 was correctly initiated on December 8, 1983 to clarify drawing correlations.

- (d) Review of Inspection Reports (IRs) 5537, 6767, 5639 and 5784 indicated that various discrepancies, minor in nature, were identified and corrected. IR 5784 has not been officially closed out.

Conclusion: The allegation is not substantiated.

- (4) Allegation: The alleged complained of harassment from production and stated that quality control concerns were ignored if they slowed production. He suggested that interviews with other LKC inspectors be used to assure that this situation does not exist.

Licensee's Corrective Action: The licensee has conducted interviews with other LKC inspectors. Additionally, the licensee interviews every QC inspector who leaves the Perry site. The licensee stated that they are unaware of LKC production personnel intimidating QC inspectors.

Conclusion: The NRC inspector concluded that this allegation is not substantiated based on the results of the licensee's efforts and the NRC inspectors' discussions with other LKC personnel.

Based on the above activities by the licensee and results of the NRC investigation, portions of individual "A's" concerns have been adequately addressed. NRC will continue its evaluation of these issues in subsequent reports. This item remains unresolved. (440/83-37-05; 441/83-35-05)

- b. Individual B (R:III-83-A-0093) contacted the NRC with his concerns. Subsequently, he contacted the press. CEI officials interviewed him and documented his concerns. The NRC inspectors identified one item of noncompliance (440/83-37-04; 441/83-35-04) after reviewing the inspection reports and nonconforming reports generated by Individual B. The item of noncompliance identifies inadequate procedural requirements for initiating a nonconformance report on equipment supplied by General Electric, the nuclear steam supplier. NRC inspection reports (IR) 440/84-05(DRS) and 441/84-05(DRS) document the NRC inspection performed on Individual B's concerns. The licensee's review of work performed on the Main Control Room panel, also known as the Power Generation Control Console was not complete. The following information summarizes the results documented in the above inspection reports and the results of this inspection.

- (1) Allegation 1: Individual B alleged that L. K. Comstock craft performed work to implement field disposition instructions (FDI) without the benefit of work procedures. He further alleged that inspections may not be completed and test equipment used may not be traceable. He furnished a list of FDIs. The NRC inspector reviewed the allegation and concluded (440/84-05(DRS); 441/84-05(DRS)) that individual B's concerns were valid but were approximately two years old. During this period, work procedures and inspection requirements were revised and upgraded. Furthermore, even though the work was completed, the licensee had not reviewed and accepted the documentation.

- (2) Allegation 2: Individual B stated that he wrote a memo to the LKC QC Manager on December 17, 1981 listing outstanding engineering change notices (ECNs). He was concerned that the work may not be complete and the inspections performed on ECNs may not have been adequately documented. The NRC reviewed this concern and concluded (441/84-05(DRS); 441/84-05(DRS)) that Individual B's concerns were approximately two years old. During this period, work procedures and inspection requirements were revised and upgraded. Even though the work was completed and the document packages have been considered complete, the licensee has not yet received and accepted the document packages.
- (3) Allegation 3: Individual B provided a list of adverse findings. The NRC inspector reviewed these adverse findings and determined that these adverse findings are documented in various LKC inspection reports and have since been corrected, verified and accepted. Details of this review are discussed in Inspection Report No. 440/84-05(DRS); 441/84-05(DRS).
- (4) Investigation: During the current inspection, NRC inspectors reviewed additional Field Disposition Instructions (FDIs) and Field Deviation Disposition Requests (FDDRs) initiated by General Electric Company (GE) for the modification of the Power Generation Control Center (PGCC). This review is a continuation of the review documented in NRC Report 440/84-05(DRS); 441/84-05(DRS), and Unresolved Item 440/83-37-06; 441/83-35-05 is escalated to an item on noncompliance 440/84-07-01; 441/84-07-01 as discussed in subparagraph (h) below.

The inspectors selected a number of FDIs and FDDRs related to Unit 1 which were alleged to have been performed without the benefit of approved procedures. The inspector reviewed the FDIs and FDDRs for adequacy of implementation and to determine whether the inspection reports (IR) reflect the verification of the completed work. The following documents were reviewed:

- (a) FDI-WNEL, Rev. 0 issued on March 31, 1981, required that ship-short items be properly installed in the field; this FDI was returned to G. E. for lack of applicable documents and was reissued on February 1, 1982 with all required documents. Work Request 233E was written to implement this FDI, and KLI-711, Rev. 0 dated March 15, 1982, was issued to correct cable number errors on Rev. 0 of the FDI. Inspection reports on visual and continuity tests indicated that results were satisfactory. G. E. site office transmittal letter indicated that the work performed was reviewed and approved by G. E. and the item was closed.
- (b) FDI-WNDY, Rev. 0 dated February 19, 1980, was issued to assure that items that were shipped short from the manufacturer were properly identified and installed in the field (cables, duct covers) on panel H13-U735. LKC QC

inspection reports IR1510, 1003, 1004, 1005, and 6285 document the inspections performed to verify work on this FDI. They indicate that visual and continuity tests were performed per LKC Procedure 4.3.30 and QA requirements, and that no unacceptable findings were identified. FDDR KLI-638, Rev. 0 was written to correct errors in routing of cable N41-023 in the FDI.

- (c) FDI-WNGQ, Rev. 0 dated July 28, 1980, required replacement of old trip units B21-N673C, G, L and R with new ones. IR1409 indicated that the work performed was visually inspected and determined to be satisfactory.
- (d) FDI-WNGW, Rev. 0 dated July 28, 1980, required that old legend plates be replaced with new ones. IR1047 indicated that a visual inspection was performed and found acceptable.
- (e) FDI-WNCK, Rev. 0 dated January 4, 1980 and Rev. 1 dated April 23, 1980, required changes in termination and connection to match 7916 cable data base in termination cabinet H13-P712. IRs 6602, 5830, 5872, and 5873 indicated that visual inspections and continuity checks were performed and determined acceptable.
- (f) FDI-WNCO, Rev. 0 dated January 4, 1980, required changes in termination and connection modules to match 7916 cable data base in termination cabinet H13-P717. Part of the work was performed by LKC, and IR 1037 indicated that visual continuity tests were satisfactory. The rest of the work was completed by G.E. using traveler No. TI-97-148. The FDI had been used as the procedure for installation. Compliance and verification indicated that inspections were performed and accepted. Also, visual and point-to-point continuity checks were performed and signed off by QC.
- (g) FDI-WNJF, Rev. 0 dated July 30, 1980, required that termination and connection modules be installed and tested visually and point-to-point continuity checks made. IR 1052 indicated that installation had been completed; however, continuity checks were not performed on the connection modules and will be performed when pins are installed per a new FDI in the future. Discussions with G.E. personnel indicated that a FDI will be written when the assigned cable is installed.
- (h) FDI-WNBE, Rev. 0, dated January 4, 1980, required that old termination modules be replaced with new ones and that specified jumpers be added. The checklist for Insulation Resistance and Continuity Test Report lists the module TM 057 on the top, but does not indicate in the continuity check column whether any pins failed the continuity test. The LKC QC inspector, however, signed the test report.

This test report, which was included in a package, was reviewed and accepted by G.E. even though it was incomplete. The NRC inspectors informed the licensee that the inspection report was incomplete and did not reflect inspection activities or results of the inspection. The NRC inspectors also informed the licensee that this was an additional example of noncompliance contrary to 10 CFR 50 Appendix B, Criterion X (440/84-07-01a(DRS); 441/84-07-01a(DRS)).

- (i) FDI-WNJN, Rev. 0 dated August 28, 1980, required wiring changes to panel H13-P680. IR 1563 indicated that visual inspection and continuity checks were performed and found acceptable. Errors found on this FDI were corrected by FDDR KLI-697, Rev. 0, dated February 18, 1982.
- (j) FDI-WNGZ, Rev. 0 dated July 30, 1980, required modifications to some panels. IR 1104 indicated that visual and continuity inspections were performed and found acceptable.
- (k) The inspectors reviewed the following FDIs and FDDRs related to Unit 1: FDIs, WRBP, WRBN, WRED, WRHE, WRBD, WRDS and WREP; FDDRs KL2, 559, 556, 546, 537, 551, 554, 565, 532, 544, 526. All FDRs with the exception of KL2 concerned routing of cables in the control room. The inspector reviewed three nonconformance reports and determined that they were adequately dispositioned. The LKC QC inspection reports reference the applicable LKC QC procedure for verifying work completed on FDDRs. The inspector determined that the G.E. FDI served as a procedure for accomplishing the work. The NRC inspector observed LKC QC inspectors performing reverifications on FDIs which were considered complete.

Conclusion: The allegation that the procedures were inadequate could not be substantiated because the inspection reports (IR) written while implementing the FDIs and FDDRs contained references to various applicable LKC procedures such as Procedure 4.3.18, LKC/GE-24, LKC/GE25, which relate to continuity checks and implementation of FDI and FDDR requirements. G. E. had used the FDI itself as the procedure for implementing it. The NRC inspectors determined that the inspection reports did not specifically state activities inspected and scope of acceptance. This matter has been identified as an item of noncompliance in Paragraph h above.

- (5) Allegation 4: Individual B stated that two cables with no black ID tags entered Compartment YE in Motor Control Center 1R24-S018 and were not supported in any way.

The NRC inspectors reviewed compartments YH & YE and identified two #6 black wires which had been prewired by the vendor from

power distribution transformer EFB-1-A2 (1R25-S033) at compartment YH, to disconnect switch in compartment YE. Since these are vendor wired, no black ID tags are required by the licensee's program. Cables were tie wrapped and supported in both compartments. While the allegation was substantiated, the absence of the tags is appropriate and acceptable.

Conclusion: This allegation was not substantiated.

- (6) Allegation 5: Individual B stated that a wire leaves the cable at 90 degrees on Cable 1R61A-843a to compartment HH.

The NRC inspector visually inspected Cable 1R61A-843a and determined that this deficiency does not exist, and the allegation was not substantiated.

Conclusion: This allegation was not substantiated.

- (7) Allegations 6 and 7: Individual B stated that in Compartments K, N, F and G of MCC 1R24-S018, various cables violated the training radius.

The inspector visually inspected all cables in above compartments and in 24 additional compartments, and could not identify any cable training violations. One loose termination was identified; the licensee indicated that an NR would be written to correct the deficiency.

The inspector reviewed NR OQC394, dated December 5, 1983, which documents that four cables in the above MCC had training radius violations. This was corrected and signed as acceptable by the QC inspector.

The inspector also reviewed IR 3845 dated October 4, 1982, which identified nine cables in MCC 1R24-S018 that were not properly supported. Corrective action was taken to support these cables properly and QC inspection was performed and found acceptable.

CEI Quality Section "OQC" performed an overall inspection of 1R24-S018. All items were accepted with the exception of those documented on NR #OQC394.

Conclusion: This allegation was substantiated. However, all items identified by individual B appear to have been taken from incomplete inspection reports on which corrective action was being taken. All of his concerns have been corrected in the normal course of corrective action. The NRC inspectors looked at other Motor Control Centers and determined that there were no similar problems and that the licensee/contractor inspection program was effective in this specific area.

- (8) Allegation 8: Individual B furnished the names of five individuals who he stated "were never tested for knowledge of a full power termination, during the testing of individuals not one was tested for full power termination involving Raychem kits."

During this inspection, the NRC inspector reviewed the training and certification records of the five individuals mentioned. Four of the five were certified as Level II termination inspectors. One of the five did not pass the practical exam and therefore was never certified.

The inspector reviewed the written test given to the above individuals which contained twenty questions. Six of the twenty were power cable termination questions; one of the twenty specifically related to Raychem heat shrink terminations. All training for terminations was performed in accordance with LKC Procedure 4.3.6 which includes power terminations and Raychem kit installations.

All five passed the written exam with a grade higher than 80%, which is the minimum passing grade. Four passed the practical exam and were certified in April, May, and June of 1983.

The inspector noted that Individual B conducted some of the training sessions for the above individuals, and that a newly certified individual would train his co-worker. Consequently some of the five individuals mentioned would conduct training sessions for each other.

It appears that the training requirements, including on-the-job training, as recommended by ANSI N45.2.6 "Qualification of Nuclear Power Plant Inspection, Examination, and Testing Personnel," were met prior to these inspectors being certified.

Conclusion: This allegation was not substantiated.

- c. Individual F (R:III-83-A-0062). Individual F was an ex-employee of Johnson Controls (JCI).

Items 1, 2 and 3 of the allegation were discussed in inspection report 440/83-37; 441/83-35. The following paragraphs summarize items 1 and 2 and document the results of investigating items 1, 3, 4, and 5 during this inspection.

- (1) Individual F alleged that JCI had inadequate procedures. Examples are procedures: QAS-1001 (visual weld inspection), IF/Planner inspection control, Hilti-Bolt, welding and QAS-1601 (nonconformance). This item was identified as unresolved in report 440/83-37-06a; 441/83-35-06a.

During this inspection, the NRC inspector reviewed the above procedures. These procedures have been revised since 1983, and appear to be adequate. Selective review of the implementation of these procedures indicate no unacceptable findings.

This item remains unresolved (440/83-37-06a(DRS); 441/83-35-06a (DRS)).

- (2) Individual F alleged work package travellers were left unattended. The inspector determined that unattended travellers do not violate any NRC regulations.
- (3) Individual F alleged that JCI had poor work procedures. During this inspection, the NRC inspectors reviewed the implementation of several work procedures and identified no unacceptable findings. This item cannot be substantiated.
- (4) Individual F alleged that the pipe support standard issued from document control is not stamped "release for construction"; however, JCI QC inspectors inspect to this document.

The inspector discussed this concern with cognizant members of the JCI management and determined that in the past there had been verbal directives from supervisors to override Gilbert 818 drawings. The NRC inspector determined that during 1983 drawings were not stamped "release for construction."

These drawings contained tolerances that JCI QC inspection personnel used to perform inspections. Considerable delays were experienced in the issue of drawings requiring this stamp. Since late 1982, the drawings were stamped. During the review of the preparation, review and issue of drawings for the installation of instrument sensing lines and their supports, the NRC inspector determined that an on location design group was established to design the routing of instrument sensing lines and their supports. Designers would look at the location of the sensing lines and consider the physical obstructions surrounding the lines due to work performed by other disciplines such as large bore piping and their supports. The designers would then go back to their trailer and design the routing of the sensing lines and their supports. However, when the final drawings were issued to JCI for installation, JCI personnel determined that the design could not be implemented either due to interference or due to the description of welds. In most cases, an Engineering Change Notice (ECN) was issued to revise the design. The NRC inspectors collected a number of such drawings and discussed the contents of these with the licensee. The licensee agreed to evaluate the examples to determine the adequacy of the design review process for the on location design and drafting. This portion of the allegation was substantiated, however, the practice described is acceptable. Pending review of the results of the licensee's evaluation, this item is considered unresolved. (440/84-07-02(DRS); 441/84-07-02(DRS))

- (5) Individual F alleged that an "N" stamped 3/8" valve was found in the trash area. A nonconformance report was written with a disposition to down-grade the valve to non-safety.

Discussions with various JCI personnel indicated that in May 1983, a "N" stamped valve was inadvertently left lying on the floor and that the cleaning craft placed it in the trash can. This valve was recovered, JCI NCR 2340 was initiated on May 2, 1983, and "Hold Tag" 746 was applied to the valve as required by Paragraph 5.9 and 5.11 of JCI procedure QAS-1402. The disposition was to scrap the valve. It was further stated that similar occurrences will be tracked via trend analysis as required by JCI procedure QAS-1701.

This portion of the allegation was substantiated, however, the incident was adequately controlled.

Based on the above results of the investigation into alleged F's concerns, except as noted, these items are closed. The remainder of Individual F's allegations will be reviewed during subsequent inspections.

12. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance or deviations. Unresolved items disclosed during this inspection are disclosed in paragraphs 10.a, 10.b. and 11.c.(4).

13. 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. Open items disclosed during the inspection are discussed in Paragraph 9.

14. Exit Interview

The inspector met with the licensee representatives (denoted in Persons Contacted) at the conclusion of the inspection on June 7, 1984. The inspectors summarized the purpose and findings of the inspection, which were acknowledged by the licensee.



DOCKETED

Serving The Best Location in the Nation

'84 OCT -3 AM 1:04

MURRAY R. EDELMAN
VICE PRESIDENT
NUCLEAR

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

September 13, 1984

Mr. W. S. Little, Chief
Engineering Branch
Division of Reactor Safety
USNRC, Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Re: Perry Nuclear Power Plant
Docket Nos. 50-440; 50-441

Dear Mr. Little:

This letter is to acknowledge receipt of Inspection Report Number 50-440/84-07; 50-441/84-07 attached to your letter dated August 14, 1984. This report identifies areas examined by Messrs. K. R. Naidu, Z. Falevits, A. Gautam, K. Tani and E. Christnot during their inspection conducted April 9-12 and June 4-7, 1984, at the Perry Nuclear Power Plant.

Attached to this letter is our response to the Notice of Violation dated August 14, 1984. This response is in accordance with the provisions of Section 2.201 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations.

Our response has been submitted to you within thirty days of the date of the Notice of Violation as you required. If there are additional questions, please do not hesitate to call.

Very truly yours,

Murray R. Edelman
Vice President
Nuclear Group

MRE:nb
DW165/G/1
Attachment

cc: Mr. J. A. Grobe
USNRC Site

USNRC
c/o Document Management Branch
Washington, DC 20555

Mr. R. F. Warnick, Chief
Projects Branch I
Division of Reactor Projects
USNRC, Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

RESPONSE TO ENFORCEMENT ITEMS

Below is our response to the Notice of Violation appended to United States Regulatory Commission I.E. Report 50-440/84-07; 50-441/84-07.

I. Noncompliance 440/84-07-01; 441/84-07-01

A. Severity Level V Violation

10CFR50, Appendix B, Criterion X, as implemented by CEI Corporate Nuclear Quality Assurance Program Manual, Section 1000, Revision 3, requires that a program for inspection of activities affecting quality shall be 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. The following examples were contrary to the above:

- a. Inspection Reports documenting inspections performed on rework done on the Power Generation Control Console are in some instances not clear and do not specify what was inspected and what was acceptable. Examples include inspection reports on FDI-WNBE and Engineering Changes Notices 245B.
- b. Inspection Reports verifying corrective action taken on LKC Nonconformance Report 2375 contained discrepancies such as the date of review being a day earlier than the date of inspection and the date of calibration of crimping tools used to crimp the termination lugs.
- c. Inspection Reports verifying corrective action on LKC Nonconformance Reports 2568 and 2569 contained misleading CEI "Hold" point stamps which were signed and dated several days after the actual inspection was performed. Such a practice renders it difficult to readily verify whether the hold point was honored.
- d. General Electric Product Quality Certificates (PQC) certifying compliance of Namco Limit Switches intended for mounting on the Control Valves for the steam turbine, were accepted during receipt inspection even though the serial numbers of the limit switches were not furnished on the PQC to establish traceability.

B. Response

The following responses correspond to each of the subitems a through d that are listed above:

1. Corrective Action Taken and Results Achieved

- a. The inspection reports which the inspector reviewed had been generated prior to October 1983. In-process Audit 990 was performed to review the documentation generated after that date. Results of the audit were favorable and greater clarity has been provided since October 1983. This audit was performed in response to the NRC recommendation

as stated in the cover letter to I.E. Inspection Report 440/84-07; 441/84-07.

A review of the inspection reports generated prior to October 1983 has also been completed and a comprehensive list of reports which may lack clarity has been compiled. Because each of these documents reflects only a portion of the history of an installation, they may appear unclear if the document is not reviewed in context with the balance of the record package. Currently, a review with the balance of the record package is being conducted to determine the adequacy of these inspection reports.

- b. There were two discrepancies that appeared within the documentation attached to Nonconformance Report LKC 2375. The first discrepancy was that the inspection checklist was generated and signed by an inspector on November 23, 1983, but the reviewer's signature and date was November 22, 1983.

It was explained that this occurred during a period when the reviewer was working extended hours and inadvertently signed the previous day's date.

The second discrepancy was that the calibration date for a tool was incorrectly recorded as September 14, 1983, instead of September 14, 1982.

Both of these discrepancies have been corrected.

- c. The CEI Hold Point stamp was placed on documents only after the document was considered complete. Documents were not considered complete until a secondary review was performed by an L. K. Comstock supervisor or lead inspector. This review may occur several days or more after the actual date on which the inspection was performed.

Since this practice was a concern to the Region III Inspectors, the Electrical Unit's Surveillance Inspection Plan SIP 33 has been revised. The Plan now states that the documents are to be stamped and signed at the time of the installation. All unit personnel have been apprised of the change of procedure.

- d. The basis for this finding was presented in Section 5 of Inspection Report 50-440/84-07; 50-441/84-07, in which the inspector discussed his review of the receipt inspection process for pressure and limit switches mounted on control valves and stop valves of the main steam lines. As a result of our review of the inspector's concerns the following responses are provided:

1. Relative to NAMCO Limit switches, Master Parts List Numbers (MPL) 1C71-N006A-H, these items were not

required to be individually serialized by procurement requirements. NAMCO, therefore, identified the switches with their date code and the Master Parts List number only. Adequate traceability of the C71 limit switches is maintained by the Master Parts List number which is referenced in the applicable Material Receipt package.

2. Relative to the pressure switches MPL C71-N005A-D, as referenced on Receiving Inspection Report (RIR) for Material Receipt Number 14201, it was determined that no serial numbers were present on these pressure switches. Further investigation identified that the supplier, General Electric, had furnished pressure switches of an incorrect part number. Field Deviation Disposition Request KL1-3208 was initiated on April 16, 1984 to return these switches to GE and to authorize shipment of the correct pressure switches to the site. No additional action regarding the lack of serial numbers on C71-N005A-D was performed as these switches are being returned to GE. Upon receipt of the correct switches, receiving inspection will be performed as required and the new Material Receipt package will provide adequate traceability of the switches.

2. Corrective Action Taken to Prevent Recurrence

- a. The inspector's concerns have been discussed with the contractor and the In-process Audit 990 has been performed verifying that this condition has been corrected since October 1983.

The current program requires a series of documentation reviews, one of which is a comprehensive review of completed work packages by the Contractor prior to turnover to the owner. Subsequent to the turnover another required comprehensive review of completed work packages is performed by the Project Organization prior to acceptance of the work. It is important to note that the records which the inspector reviewed had not yet received the contractor's turnover review.

- b. The document reviews performed in series serve to identify these discrepancies on a case by case basis.
- c. The CQS Electrical Surveillance Inspection Plan SIP 33 has been revised to apply the CEI Hold Point stamp on the contractor's documentation immediately after completion of the construction activity. CQS Electrical Unit personnel have been informed of this change of procedure.
- d. A memo was circulated to receiving inspection personnel on April 23, 1984, to reinforce understanding of the

requirements in NQ1-0711 relative to ensuring that documentation in the Material Receipt Package provides a unique method of traceability for items received, as appropriate.

3. Date of Full Compliance

All the above actions have been completed with the exception of the review of the inspection reports which may lack clarity referenced in 1.a. The assessment of these inspection reports will be completed by November 15, 1984.

II. Noncompliance 440/84-07-03

A. Severity Level IV Violation

10CFR50, Appendix B, Criterion III, as implemented by CEI Corporate Nuclear Quality Assurance Program Manual, Section 0300, requires that, CEI perform a design coordination function consisting of selected reviews and design control monitoring programs verifying that these procedures shall assure that design activities are conducted in a planned and systematic manner; that the Perry Safety Analysis Report requirements have been appropriately addressed in design documents; and that design requirements can be controlled and inspected and/or tested to specified acceptance criteria.

Contrary to the above, CEI failed to assure that Gilbert Associates, Inc. (GAI) adequately reviewed and verified that safety related schematic and wiring diagrams relating to Standby Liquid Control, Residual Heat Removal and Process Radiation Systems were correct in that numerous design errors and inconsistencies were identified.

B. Response

1. Corrective Action Taken and Results Achieved

The basis for this finding was presented in Section 8 of Inspection Report 50-440/84-07; 50-441/84-07. A review was conducted of the individual items referenced in the final paragraph of Section 8 on page 13. An evaluation of each follows:

Inspection Report
paragraph ref.

Evaluation

8b(i)

Drawing error was a cross-reference note to provide additional drawings clarification. Cable routing and termination are correct in panel 1H22-P055. The prescribed cable routing is identified on approved construction cards (i.e., pull slips). Drawing D-209-055, Sheet 9 will be revised to correct this cross-reference.

This is a minor discrepancy that does not affect construction nor compromise system design.

8b(2) The elementary drawing B-208-055 Sheet 10, Revision J, is incorrect. The designation for SRU3B was not shown on this drawing revision. The missing designation is minor and does not reflect a lack of design coordination between General Electric and Gilbert Engineering.

An Engineering Change Notice (ECN) will be developed to replace this designation and terminal board point assignments on TB-DD.

8b(3) Elementary diagram B-208-055 Sheet 10, Revision J is incorrect in designating two wires with the same wire markers. The drawing will be revised through the issuance of an Engineering Change Notice.

8b(4) This item concerns the status of lifted leads to a device and is not associated with Gilbert Engineering's design control.

Device SRU2B does not have any lifted lead tags dated September 1983 as stated in the NRC Inspection Report.

Device SRU3B was found to have lifted lead tags dated September 1983. The lifted lead log indicates these tags as still being active. Leads are lifted in support of a functional check and a loop calibration for the E12 system.

No design or programmatic problems could be identified with respect to this item.

8b(5) There was no discrepancy with drawing D-209-055 Sheet 12, Revision A, as stated in the Inspection Report. The wire markers were incorrect and have been identified on Nonconformance Report CQC-3493.

No design discrepancy could be identified with respect to this item.

8d(3) The vendor wire marker designation in the field is correct as it currently exists. The vendor used the B-208 elementary drawings to designate internal wire mark identification. During the transfer of

information from the B-208 to the D-209 wiring diagrams, transfer of this one wire designation was inadvertently omitted.

Earlier this year, Project Internal Audit 84-27 was conducted at Gilbert Engineering offices in Reading, Pennsylvania to review the interface between the two respective engineering groups working on the B-208 and D-209 drawings. Results of the audit were positive and reflected that a controlled interface is established. Based upon this assessment, an occurrence of this type of error is isolated and not considered indicative of a systematic problem.

Drawing D-209-055, Sheet 10, will be revised to correct the wire marker designation.

8d(4)

Engineering Change Notice 12734-33-2405 issued July 20, 1983 against drawing D-209-055, Sheet 10, Revision C, indicates a floating shield at TB-BB-3 in panel 1H22-P018. A shielded twisted pair cable was installed. In accordance with the installation procedure, the shield jacket was cut back and taped. This configuration conforms to design requirements.

There is no design or installation discrepancy with this item.

8d(5)

The reference to circuit 1C71R7XA in the Inspection Report was incorrect. The circuit identification number should have been 1C61R7XA. This circuit was determined at the time of the inspection due to work being performed to correct a nonconforming condition. The work was being performed in accordance with the engineering disposition provided on Nonconformance Report P033-931.

There is no design or program violation associated with this item.

8f(2)

This item, had also been previously identified during the Safety System Functional Capability review performed by GDS Associates. The initial response from General Electric was received in January 1984.

Subsequently, General Electric provided

further response on this item in August 1984. Their response stated that during the last revision of the Standby Liquid Control elementary it was decided that the valve position lights, in conjunction with the administrative controls, were sufficient to indicate C41-F036 position.

This item, therefore, has been identified and was being addressed.

8f(3)

The switch development shown on B-208-030, Sheet 1 depicts switches in the "stop" position which is their normal operating position. Contacts 1-2 of S1A and S1B should therefore be normally closed as shown.

No design error could be identified with respect to this item.

8f(4)

Based upon the observations in the Inspection Report, an Engineering Change Notice for this drawing is being issued to correct the identified discrepancy.

8f(5)

Engineering Change Notice 21080-33-3436 was being processed at the time of the inspection. At completion of its processing the ECN was posted on the appropriate drawing. The ECN does address the technical concerns of the Inspection.

No design concerns or errors could be identified with respect to this item.

Corrective Actions Taken to Prevent Recurrence

All Engineering groups are being apprised of the concerns raised from this inspection. The thoroughness of design reviews will be re-emphasized.

Date of Full Compliance

All engineering actions described in the above response to 440/84-07-03 will be completed by September 26, 1984.

DW165/G/9/dlh

Perry cited for 2 minor violations

By James Lawless

Cleveland Electric Illuminating Co. has been cited for two violations of federal construction standards at its \$6 billion Perry nuclear power plant, but a federal inspector said the violations do not amount to much.

"We found some problem areas, but for a plant of this magnitude, that is not significant," said Kamal R. Naidu, a Nuclear Regulatory Commission inspector from Chicago.

"We are concerned that your inspection reports contain various discrepancies such as erroneous dates of review and other inaccurate information," an NRC report said. "We point out that these are permanent records and as such should not contain significant discrepancies in information and dates."

CEI was cited for a level four and a level five violation of NRC regulations, the two least severe levels in NRC's ranking systems. The violations concerned either procedural problems in inspections or errors in paperwork.

In the more serious violation, CEI was criticized for not making sure that a contractor had reviewed and verified safety related diagrams. The report said numerous design errors and inconsistencies were identified.

"Most of the problems seemed to be just human error but we wanted to tell the licensee (CEI)

to pay more attention to detail," Naidu said. "There really was nothing of consequence."

NRC was conducting both a routine review of numerous systems at Perry and investigating several allegations raised by former workers at Perry. One of the allegations, which Naidu said was confirmed, involved an electrical cable tray which was reported filled with garbage.

Naidu said, "It was filled with garbage but we find that all the time. It is a convenient place to store stuff, like lunch buckets and equipment. Some people even sleep in them."

Naidu said many of the allegations raised by former workers were several years old and as a result have already been corrected through the normal review process in nuclear construction.

CEI spokesman J. Lee Bailey refused to answer any questions on the report or to arrange an interview with a CEI executive familiar with the report.

Instead, he offered a written statement. "The Perry Project has never had a problem area classified more severe than Level 4.

"These two areas of concern are being corrected. Our full response will be made to the NRC within 30 days as required by law. Perry has had only four such findings (violations) this year."