

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-440/84021(DRS); 50-441/84019(DRS)

Docket Nos. 50-440; 50-441

Licenses 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: August 22-24, 1984, and April 9-12, 1985

Inspectors: *Zelig Falevits* for:
K. R. Naidu

5/9/85
Date

Zelig Falevits
Z. Falevits

5/9/85
Date

J. Neisler
J. Neisler

5-9-85
Date

Zelig Falevits for:
R. Mendez

5/9/85
Date

Approved By: *C. C. Williams*
C. C. Williams, Chief
Plant Systems Section

5/9/85
Date

Inspection Summary

Special Inspection on August 22-24, 1984 and April 9-12, 1985 (Report No. 440/84021(DRS); 441/84019(DRS))

Areas Inspected: Followup on allegations. The inspection involved 128 Inspector-hours on site by 5 NRC inspectors, including 10 inspector-hours during off shifts.

Results: No items of noncompliance were identified.

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DETAILS

1. Persons Contacted

Cleveland Electric Illuminating Company (CEI)

***C. M. Shuster, Manager, NQAD
***E. Riley, General Supervisor, CQA
*P. Martin, General Supervising Engineer, PAQS
*E. C. Christiansen, Electrical Engineer
*J. P. Eppich, Senior Engineer, Mechanical
*J. Lesnick, Quality Engineer
***V. K. Higaki, Unit Supervisor, CQS
***K. J. Cimorelli, Quality Engineer, CQS
*R. P. Jadgehew, General Supervising Engineer, NCAS
*D. Graneto, Contract Manager, NCAS
*K. C. Kaplan, Senior Engineering Technician
***A. Bolesic, Contractor Manager, NCAS
*M. Cohen, Senior Project Administrator
*G. Parker, Unit Supervisor, CQS
*H. Walls, Senior NDE Administrator
***R. Matthys, Lead Piping I&C, CQS
***D. Lockwood, Responsible Engineer I&C
**J. Kline, Manager, NCS
*G. Sterle, Contracts Manager, Piping/I&C
**T. Stear, Lead Electrical Construction, NCES

L. K. Comstock and Company

*T. Woodman, Assistant Vice President
*R. Bower, QC Manager
**C. Hart, Assistant QC Manager

Johnson Controls Incorporated (JCI)

*S. C. Young, QA Manager
*L. B. Reader, Project Construction Manager
**C. Egasti, Project Manager

Raymond Kaiser, Inc.

*H. Scull, Construction Director

USNRC RIII

**J. Grobe
**D. Keating

*Denotes those personnel attending the August 24, 1984, interim exit interview.

**Denotes those personnel attending the April 12, 1985, exit interview.

***Denotes those personnel attending both the August 24, 1984, and April 12, 1985, exit interviews.

2. Licensee Action on Previously Identified Matters

(Closed) Unresolved Item (440/83037-05; 441/83035-05): Allegations made by Individual A (see Paragraph 3 of this report).

(Closed) Unresolved Item (440/83037-06; 441/83035-05): Allegations made by Individual F (see Paragraph 4 of this report).

(Closed) Unresolved Item (440/84007-02; 441/84007-02): The licensee performed an indepth review of several design drawings used by JCI for the installation of instrument piping. The licensee determined that CEI Procedure 3-0302, "Construction-Engineering Change Notices," was followed to incorporate Engineering Change Notices.

3. Investigation - Individual A

General

Individual A (RIII-83-A-0122): The concerns of Individual A first came to the attention of the NRC as a result of an article in the Cleveland Plain Dealer newspaper on November 23, 1983. On November 27, 1983, the alleged met with CEI personnel in the presence of the NRC resident inspector and expressed his concerns. Individual A was subsequently contacted by the NRC on November 30, 1983. Pending review of the CEI's corrective action on these allegations, this item was identified as Unresolved Item 440/83037-05; 441/83035-05. The results of the NRC review of CEI's corrective action is documented in Inspection Report 440/84007(DRS); 441/84007(DRS).

During the inspection period April 9-12, 1985, the NRC investigated Individual A's allegations as stated to Region III on November 30, 1983. The NRC inspectors met with LKC managers in the production and quality control areas to ascertain the facts. In the following paragraphs the allegations are stated (as they were reported on November 30, 1983, to Region III) followed by the results and conclusions from the NRC inspection of the allegations.

a. Allegation 1

(1) Allegation

Individual A stated he and other quality control inspectors were told not to contact "the site" without first speaking to Comstock management. He stated that Dick Bower (Comstock QC Manager), Clarence Hart (Comstock Assistant QC Manager), and Larry Seese (Comstock QC Supervisor) told the Comstock inspectors they would be disciplined for going directly to "the site" without first informing Comstock management. He identified another individual who is now at another construction site who would be able to verify this allegation. Individual A stated that Seese had given that individual the same warning on four or five occasions. He stated that

subsequent to his employment he spoke to CEI and the Cleveland Plain Dealer about his concerns regarding L. K. Comstock (LKC).

(2) Investigation

The inspectors interviewed several quality personnel including contractor quality management and supervisory personnel, licensee electrical quality assurance personnel, and contractor quality control inspectors. All interviewees agreed that contractor quality control management personnel had told their inspectors to bring problems to their own supervisor or management before going to the owner with the problems. The interviews with the quality control inspectors were conducted individually with no management representatives present. The quality control inspectors each stated that they had not been told that they would be disciplined if they went to the Cleveland Electric Illuminating Company with a problem before presenting the problem to their management. In addition to the NRC interviews, the licensee's quality group interviewed 40 Comstock inspectors. The NRC inspectors' review of the documentation of those interviews revealed that each of the inspectors stated that he had not been told that he would be disciplined for taking problems to the licensee organization.

(3) Conclusion

Based on personnel interviews and reviews of existing documentation, this allegation was not substantiated in that inspectors had not been told by LKC that they would be disciplined for going directly to "the site" without first informing LKC management. The LKC instructions to have LKC personnel bring problems to LKC management before going to the owner is standard practice in relationships between contractors and clients.

b. Allegation 2

(1) Allegation

Individual A stated Comstock procedures (e.g., Procedure 4.3.1, "Raceway Procedure") were being changed constantly and no reason(s) were given for the changes. Many times he, a QC inspector, was informed of a pending procedure change and told by Seese, Hart, or Bowers to inspect to the verbal change before the change was made in writing. He considered this to be "working outside of the procedure."

(2) Investigation

The established instruction governing procedure changes requires that whenever a change to a procedure is needed the LKC organization is to revise the procedure and submit a copy of

the change to the CEI document review department which is to log it and distribute one copy to the CEI Project Organization Engineering Department and one copy to the CEI Quality Control Department. The lead department is to review the proposed changes and either accept or reject it. The proposed revision is to be sent back to LKC for final disposition. If a change is accepted by CEI, LKC is to train all personnel, including craft and inspection personnel, implementing the change within five days to the new procedure change. Only then is the procedure sent to the field for use in construction activities. Minor changes could be made to the procedure by using an addendum. When five addendums were posted against a procedure, the procedure would have to be changed to incorporate all addendums against it. A Procedure Deviation Request (PDR) is also used for specific changes to a procedure and is issued by the Site Document Control Department.

The inspector reviewed the changes made to Procedure 4.3.1 during 1982 and 1983. It was during this period that the alleged was employed at the site. In 1982 there were four revisions requested for the procedure, two were accepted by the CEI Project Organization Department and two were rejected. In 1983 there were seven revision requests for the procedure, six were accepted by CEI and one was rejected. There are no regulatory requirements which stipulate how many times a procedure can be revised, or which require that QC inspectors be informed or consulted regarding reasons for revisions.

The NRC inspectors' interview with the LKC managers and inspection personnel discussed in Allegation 1 indicated that no one was given verbal orders to implement procedural changes without established interim instructions to implement the changes. The personnel interviewed also indicated that changes to procedures are made whenever improvements to procedure are needed.

(3) Conclusion

While it is true that Procedure 4.3.1 was revised a number of times, no regulatory requirements were violated. It is appropriate to revise a procedure as work progresses to incorporate improvements and to provide clarifications. None of the QC personnel indicated that verbal orders were given to implement procedural changes without an established interim instruction from QC management.

c. Allegation 3

(1) Allegation

Individual A believed that Procedure 4.3.1 was inadequate in that actual inspection requirements were not procedurally

addressed. He stated that the procedure did not give specific direction as to the inspection methods used to complete the checklists (Comstock Forms 17 and 82). Also, he noted that the checklists were changed five times in twenty months. These circumstances, in his opinion, caused differing inspection interpretations among the quality control inspectors and between the inspectors and the crafts. He stated that training was given to the inspectors and crafts but the training was inadequate and led to differing opinions between the inspectors and crafts.

(2) Investigation

The NRC inspectors reviewed Procedure 4.3.1 as it existed in 1982 and 1983 and as it is today. The procedure and Form 17 ("Cable Tray Installation Checklist") were revised twice during that period and Form 82 ("Conduit Installation Checklist") was revised four times during that period. The NRC inspectors determined that improvements were made to eliminate confusion in understanding this procedure and that checklists were changed to reflect inspection methodology or to document a new requirement. For instance, when installation of conduit or tray was performed to an Engineering Change Notice (ECN) or a Field Variance Authorization (FVA), the specific numbers would be added to the checklist by the foreman. In the past, checklists contained a Yes or No column used for acceptance of QC inspection. This led to confusion. For example, Item 14 of Form 17 calls for "no apparent damage" QC verification. A "yes" or "no" check was required but the "yes" or "no" did not explicitly indicate whether the inspector found it damaged or not. The present Form 17 contains QC initials for acceptance.

Actual inspection requirements are addressed in the procedure in that reference to the applicable drawing to be used during the inspection is contained in the procedure itself. The checklists itemize the required checking points. For instance, Form 82 contains the following items and the QC inspector's initials and date are required to indicate the acceptance of each item:

- Item 1. Installation as per drawing.
- Item 2. Evaluation correction.
- Item 3. Conduit clamps acceptable.
- Item 4. Bushing installed.
- Item 17. Supports located per drawing.

The inspectors reviewed records which indicate that QC inspectors and craft are trained to become familiar with and properly use these procedures and checklists. Furthermore, each QC inspector is administered a test on the subject and is required to pass the test before he can perform any inspections related to the specific field installation and procedure used.

The interviews with the QC managers and QC inspectors indicated that the procedure might have been subjected to misinterpretation in some instances; however, it has been revised and clarified since the time of the allegation. The QC inspectors interviewed indicated that if a differing opinion regarding the use of the procedure arises, the subject is brought to the QC manager or supervisor for resolution.

(3) Conclusion

The procedure gave adequate direction as to the inspection methods used to complete the checklists. While the alleged's statement regarding numerous changes to the checklists is true, no improprieties were identified involving checklists. The inspectors determined that sufficient records exist to show that LKC QC inspectors and craft were adequately trained.

d. Allegation 4

(1) Allegation

Individual A stated that the nonsafety seismic support procedure "did not have a procedural specifics", as did the safety-related support procedure. Therefore, he felt that the nonsafety seismic supports were not adequately inspected.

(2) Investigation

Non-safety-related supports are required to be inspected only if they are installed above safety-related supports. The reason for the inspections is that the failure of the non-safety-related supports could affect the safety-related supports under them.

The inspectors reviewed drawing series SS-215-006, sheets 1 thru 5, "Electrical Conduit Supports Seismic Threaded Rod Support Criteria Notes and Details", originally issued as Revision A, dated July 3, 1979. These are the types of supports which were the subject of the alleged's concern. The drawings contain requirements for installation of seismic threaded rod supports and provide specific notes and details for different types of installations.

LKC Procedure 4.3.1 Paragraph 3.4.5.6, Note 3 and Paragraph 3.4.5.15 specify that inspection criteria for seismic threaded rod supports shall be in accordance with SS-215-006 drawings. Paragraph 3.4.4.2, Note 1 states that "Verification of cable tray hanger welding, location and details to include non-safety seismically supported tray hangers shall be performed in accordance with procedure 4.3.11."

LKC Forms 17 and 82 contain the following note:

"When inspecting, non-safety seismic installation, inspect items with asterisk only." The items with asteriks on those forms are as follows:

Form 17 ("Cable Tray Installation Checklist")

- Item a. Tray attachment.
- Item b. Coating acceptable.
- Item c. No apparent damage.
- Item d. Bolts acceptable on hold downs.

Form 82 ("Conduit Installation Checklist")

- Item a. Conduit clamps acceptable.
- Item b. Conduit supported correctly.
- Item c. Coating acceptable.
- Item d. J.B. pull/term boxes acceptable.
- Item e. No apparent damage.

(3) Conclusion

This allegation was not substantiated. The procedures and checklists related to non-safety-related supports were adequate to assure the supports were properly inspected.

(e) Allegation 5

(1) Allegation

Individual A stated that Comstock began to formally track rework in February or March 1982 with the expressed intent to show "cost and no cost" work. The rework system was also designed to track Engineering Change Notices (ECN), Inspection Reports (IR), and Nonconformance Reports (NR). The rework cards are submitted to quality control for review and approval. The information on the work cards was either too vague (e.g., no locations or lengths given) or incomplete (e.g., production not including the materials used or the specific work done).

(2) Investigation

Discussions with licensee and LKC management representatives and review of records and instructions indicated that rework cards were and are used exclusively for cost purposes. They are not used to track Engineering Change Notices, Inspection Reports or Noncompliances.

Rework cards are initiated by ECNs, NRs, FVAs, IRs, DRs, drawing changes, etc., and the Production Department logs them for cost purposes. The Cost Department issues rework cards to the field for implementation. Rework cards are initiated and processed per requirements of L. K. Comstock Procedure 4.3.32. Rework is implemented using the specific document directly related to the change (i.e., NCR, ECN, FVA, NR) and not the rework card. Therefore, rework cards have no safety significance.

(3) Conclusion

The rework cards are not quality records and are used for commercial purposes only. LKC QC inspectors are required to verify the adequacy of work accomplished to resolve NRs, ECNs, and other required quality documentation and are required to document their acceptance. No violations of regulatory requirements were identified.

f. Allegation 6

(1) Allegation

Individual A stated each rework on the same component was treated independently of the others on the same system. He believed the lack of this information caused the final inspection package to not accurately reflect all of the completed rework. (Related to Allegation 5 above.)

(2) Investigation

The inspectors reviewed selected completed work packages to determine if they were complete in their content. No discrepancies were noted. The required quality documentation was verified to accurately reflect the configuration of the equipment. The licensee and LKC managers indicated that rework cards are used for cost purposes only (as discussed in Allegation 5 above) and have no affect on the quality or QC requirements of the work.

(3) Conclusion

The statement of Individual A that rework on the same component was treated independently of other rework on the same system is true. The licensee's practice is to issue the necessary number of reworks on the same component to accomplish the work described in the controlling quality documentation as one item. The final package inspected to does not relate directly to individual rework orders but instead to the particular ECN, NR, FVA, etc. (i.e., quality documentation). No violations of regulatory requirements were disclosed.

g. Allegation 7

(1) Allegation

Individual A stated that frequently cable trays were released for cable pulling with rework still to be completed on the trays.

(2) Investigation

The inspectors reviewed LKC Procedure 4.3.3, "Cable Pulling," Attachment 7, dated September 1, 1981, which details the requirements for pulling cable through trays requiring rework. Paragraph 3 of Procedure 4.3.3 states the prerequisites for cable pulling. For instance, cable tray identification is an example requiring rework and that example is addressed in LKC Procedure 4.3.1 Paragraph 3.4.8.1. That paragraph states that "The raceway installation crew foreman shall verify the identification by completing the top section of the appropriate raceway form for each raceway completed.It is permissible to identify conduit raceway with temporary identification when permanent identification is not available on site....QC shall initiate an inspection report (IR) denoting the temporary I.D. installed, the raceway crew foreman shall notify QC when permanent I.D. has been installed."

Further, Paragraph 3.4.8.3 states, "Conduit raceway identified temporary identification may be released for cable pulling provided all other sections of the appropriate form have been signed off by the QC Section...."

Temporary supports is another example requiring rework that is addressed in the procedure. Paragraph 3.3.2.2 states, "when installing raceway on temporary support a Form #82 or #17 shall be generated to state that condition.... A temporary support is a hanger installed on a temporary basis, the support cannot be installed due to unavailability of materials, design problems, etc....for either engineering or construction incomplete."

The licensee indicated that cable pulling is permitted when minor rework as discussed above is required providing the rework does not affect the configuration of the tray or the intent of its design, and as long as the condition is properly documented and controlled. Rework does not change the quality requirements stipulated by QC procedures.

The inspector reviewed Inspection Report 7033 dated August 31, 1983, which was generated by a person known to the alleged. This report states, "Conduit 1E22H204C is supported with temporary supports, Items 3 and 7 on Form 82 dated August 31, 1983 cannot be 100% verified." This was dispositioned by LKC engineering craft on September 7, 1983, to "turn in new Form 83 when permanent hangers are installed."

(3) Conclusion

The allegation is substantiated; however, based on the NRC inspectors' interviews with site personnel, review of procedural requirements, and completed inspection reports, related

to the pulling of cables through trays where rework has not been completed, such cable pulling was properly controlled and documented.

h. Allegation 8

(1) Allegation

Individual A stated that he had observed Seese "wad up" rework documents. He stated that he did not observe Seese discard any of the wadded up rework documents. (Mr. L. Seese was a LKC QC supervisor at Perry. He is currently employed by LKC at another Nuclear Plant).

(2) Investigation

The inspectors interviewed LKC management personnel, supervisors, and inspectors to ascertain whether they had seen anyone wad up rework documents or done it themselves. All indicated that they had never done it and had never seen anyone else do it. In any event, as previously stated, rework documents are not quality documents.

(3) Conclusion

The allegation could not be substantiated. Rework documents by themselves are not quality control documents and have no bearing on plant safety inspections.

i. Allegation 9

(1) Allegation

Individual A stated that during August 1982 he identified several conditions (e.g., conduit strap nuts were not seated and were either under or overtightened, cosmetic touch-up needed, conduits off-center, conduit locations out-of-tolerance, numerous separation criteria violations) on what he termed the "E22H Priority System." He could not further identify the system other than the statement that the conduit ran from Elevation 599 Control Complex, to Elevation 599 Intermediate Building, to Elevation 599 Auxiliary Building, and ended at Elevation 574 Auxiliary Building in Room 4. He stated that he started to write a nonconformance report on these problems, but was told by Bower and Lee Phennigwerth (a Comstock quality control supervisor) that a nonconformance report was not allowed as it involved a priority system ready for turnover to CEI. He stated that he then started to write an inspection report on the same issues but was told by Bower and Phennigwerth to stop writing any report and give the discrepancies to the production crew for immediate correction of the problems. Individual A stated that after the production crew had finished correcting

the discrepancies he reinspected the system and found that all of the deficiencies had been corrected, except for the separation criteria violation for which an ECN had been written.

(2) Investigation

The inspectors interviewed the LKC individuals mentioned above by the allegor. They indicated that they never told any inspector not to write NRs or IRs when the inspector found it necessary. Additionally, QC inspectors mentioned in Allegation 1 above who were interviewed by NRC inspectors stated that they had never been told not to write NRs or IRs when necessary. The separation criteria issue has been repeatedly inspected under various other programs. Since the allegor was not specific as to the conduit run number, the inspectors could not identify the specific conduit. Therefore, the inspectors reviewed the following E22H priority system documents which were inspected by QC:

- (a) Conduit installation checklist 1E22H-201C dated August 26, 1983.
- (b) Conduit installation checklist 1E22H-204C dated April 1, 1983.
- (c) Conduit installation checklist 1E22H-204C dated August 31, 1983.
- (d) Inspection Report 7033 Revision 0 (1E22H-204C) dated August 31, 1983.
- (e) Rework Report No. 28161 (1E22H-201C & 204C) dated May 10, 1983

The NRC inspectors did not observe any deficiencies regarding the above documents. All outstanding open items have been subsequently resolved and adequately dispositioned.

The licensee informed the NRC inspectors that a reinspection program which includes identification and final resolution of all potential separation violations in the plant is being implemented. The reinspection program includes a walkdown by the licensee construction quality section. The walkdown will implement applicable raceway separation inspection Procedure CQA21-1009 Revision 0, dated April 2, 1984, to inspect for potential electrical raceway separation violations on safety and non-safety related cable trays and conduits. It will resolve findings using raceway separation violation sheets (PNPP No. 6110), raceway separation log (PNPP No. 6109) and raceway separation inspection report guidelines (Attachment 4). This procedure and its inspection sheet were reviewed by the NRC inspectors to determine the purpose and adequacy of the procedure.

(3) Conclusion

The allegation cannot be substantiated. The specific deficiencies observed by the alleged were determined by him to either have been corrected or under control (ECN) for correction.

j. Allegation 10

(1) Allegation

Individual A stated that on numerous occasions production crews "worked through hold tags". He noted that the production crews considered a hold tag to apply only to the specific location at which it was attached and not to the particular length of the affected conduit or cable tray. He stated that conduits were not released from the hold tags in the twenty months he was employed at Perry, but the crews continued to work in spite of the hold tags. He could not provide the conduit number, but stated an example of this problem was a 2" to 2 1/2" diameter conduit in the vicinity of Columns IBI and IBA on the 599' elevation of the Intermediate Building. He stated this conduit was near the ceiling and above a foreman's desk.

(2) Investigation

The NRC inspectors interviewed production personnel and QC inspectors. The consensus was that at times work was performed on raceways at locations other than the specific location of the hold tag. For example, if a 20 foot piece of conduit is being installed any one location on the conduit may have a discrepancy (e.g., an inadequate support, separation violation, or junction box not installed) but this does not imply that work could not proceed at other locations on the conduit. In practice, the entire installation is not complete in all respects until a final walkdown inspection is conducted and determines that everything is complete and acceptable. In many cases, conduits were not released from hold tags for several months due to delays in interface engineering review. Such delays are not considered violations of regulatory requirements as long as the hold tags remain in place to indicate that the specific corrective action has not been completed.

(3) Conclusion

The alleged's statement regarding production crews working on components with hold tags is correct. The NRC inspectors do not consider this practice contrary to any established requirements. Work on other areas of components with an attached hold tag is not precluded unless the other areas are specifically addressed by the hold tag. However, there does not appear to be any irregularities in the manner that discrepancies were corrected. No discrepancies were disclosed during this inspection.

k. Allegation 11

(1) Allegation

Individual A stated that production supervisors were constantly complaining that quality control was slowing or stopping cable pulling. Comstock production supervisors (Clarence Mitchell, Wendall Gilbert, Jim Walker and Ed Luciano) would "holler and swear" at Clarence Hart (Assistant QC Manager) for QC finding too many problems. Hart would speak to the inspector concerned, but would side with production, not QC, on the issue. He named another QC inspector who was a continual target of complaints from the production supervisors; he stated that this QC inspector was "continually overridden" by Hart, Phennigwerth or Seese after production had complained. He stated that this QC inspector was usually correct, but was not backed by QC management.

(2) Investigation

The NRC inspectors' interviews with the personnel mentioned in this allegation indicated that they felt considerable delays in the installation work could have been avoided if the QC inspections had been more timely. For example, cable pulling could not commence because the assigned QC inspectors were not present. Another example was that although a QC inspector was in the area and assigned to an activity which was not in progress, he would not or could not inspect another activity which would be in progress in the same area. Mr. Hart said that to his knowledge only one or two QC inspectors raised such issues and that after reviewing the situation for safety significance and practicability he might have concurred with the production personnel. He could not recall a single instance where he sided with production in any manner which compromised safety. The production personnel stated that they never performed activities which violated QC instructions but did have problems with one or two inspectors who were not timely in their inspections or demanded an unreasonable increase in the number of inspectors in the vicinity. The NRC inspector interviewed the QC inspector identified by the alleged as having had his findings continually overridden. The QC inspector stated that he had never had his decisions overridden by his supervisors and that his concerns had always been resolved.

(3) Conclusion

Based on interviews with persons in production, quality supervision and QC inspectors identified by the alleged, this allegation is not substantiated.

1. Allegation 12

(1) Allegation

Individual A spoke of an instance involving the rework of a conduit and a junction box. He stated that after a conduit had been withdrawn from a junction box, reworked, and reinserted in the box, the inspection of the junction box was not included in the reinspection. He stated that he spoke to his supervisor about this problem and the supervisor took a production position and not a QC position and stated that the junction box did not need reinspection. His point was that the supervisor was more concerned with production than quality.

(2) Investigation

The inspectors interviewed the individual mentioned above who is the Assistant QC Manager. He did not recall this specific instance. The NRC inspectors determined that when a conduit is retracted from a junction box and reworked, the requirement would be to inspect the reworked conduit and not the junction box if the junction box was not disturbed. The installation and inspection requirements for a junction box and conduit are different. The alleged did not identify tray junction boxes damaged during installation of conduits.

(3) Conclusion

There is not a requirement for reinspection of the junction box under the circumstances alleged.

m. Allegation 13

(1) Allegation

Individual A stated that Perry was the first nuclear plant that he had worked at (he had been involved in nuclear work in excess of six years) which allowed installed and final inspected cable tray and conduits to be used to support other equipment (e.g., ladders, weld leads). He stated that many of these conditions were reported on Comstock Inspection Reports (IR), but that IRs were not sent to CEI. According to him, since IRs were not sent to CEI, CEI did not have any idea of the magnitude of this or any other problem documented in IRs.

(2) Investigation

Although it is usually prohibited and not good practice, it is not uncommon for construction workers to use completed raceways to support such items as ladders and welding cables. The licensee has surveillances in place to identify and correct such situations and they are immediately corrected when identified.

At Perry, the LKC procedures require that such deficiencies be identified on IRs. They are not written on NRs because such a condition does not violate a design criteria; therefore, CEI is not on a distribution list. The NRC inspectors' review of documentation (IRs) and observation of trays did not indicate that any damage occurred to the installed raceways.

(3) Conclusion

The alleged's statement is correct to the extent that IRs instead of NRs were used to to identify the subject construction discrepancies; however, that IR documentation practice was according to approved procedures. The LKC practice of documenting and resolving IRs within LKC and not sending IRs to CEI is consistent with the LKC QA program.

n. Allegation 14

(1) Allegation

Individual A stated that channel tray had been inspected to the same separation requirements as conduit and this was wrong. He stated that drawing No. D214-001, Sheet 4 listed the separation requirements as 6" for conduit and 5' for channel tray. According to him, these requirements were not transferred to inspection procedures. Further the procedures did not specify the inspection criteria for channel tray. He stated these deficiencies were changed about three months ago; however, a reinspection program has not been devised to reinspect the channel trays installed prior to that time.

(2) Investigation

The inspector reviewed conduit and tray separation criteria drawing D214-001, Sheet 4, Revision 2, dated May 17, 1984. This drawing has gone through three extensive revisions since 1982. Redundant conduit-to-conduit separation requirements in the general area is 1" whereas it was formerly 6". Redundant vertical tray-to-tray separation requirements in the general area is 60" (or 5').

The licensee stated that these requirements do not have to be transferred to the inspection procedure because the procedure itself references the drawings needed to perform the inspection and the drawing provides the respective acceptance criteria. The inspector reviewed raceway inspection Procedure 4.3.1 Section 3.4.5, Paragraph 3.4.5.8 which states, "Verify installed conduit has not violated the separation criteria (Ref. dwg. D-214-005 and attachment 8)." Additionally, Section 3.4.4., Paragraph 3.4.4.14 states, "Channel tray shall be inspected and documented as cable tray on Form #17 attachment 1 (Ref. D215.SS-213 and SS-215 drawing)." Also Section 3.4.4, Paragraph 3.4.4.10 states,

"Verify cable tray and channel tray has not violated the separation criteria (Ref. D-214-004 and 005)." Conduit inspection is documented on Form 82.

Based on field inspections of selected as-built configuration, the inspectors found no evidence to demonstrate that the wrong acceptance criteria were applied to channel tray or conduit.

During this inspection and unrelated to this allegation, the licensee indicated that a reinspection program to reinspect all trays including channel trays is being initiated in response to a previously established requirement in L. K. Comstock Volume 21 work procedures. The purpose is to identify and resolve all potential separation violations in the as-built Plant.

(3) Conclusion

Based on the interview with LKC QC personnel and review of drawings and procedures, and as-built configurations, this allegation could not be substantiated. The procedures and instructions adequately and properly reference appropriate acceptance criteria for channel tray and conduit separation. The reinspection of raceway separation attributes required by the licensees pre-existing QA/QC programs, provides additional assurance that requirements will be met.

o. Allegation 15

(1) Allegation

Individual A stated that common locations on approximately 10% of the Gilbert 500 series design drawings do not correlate between drawings. He advised that conduit 1R33T330C was "lost between column lines". Comstock Nonconformance Report No. LKC-NR-2055/PONR-33-1794 was written on this subject. Similarly, Nonconformance Report No. P033-1795 on Conduit No. 1R33T359A addressed the lack of correlation between locations on the several drawings involved. CEI rejected this nonconformance report and the information was transferred to Inspection Report No. 6767 on September 9, 1983.

(2) Investigation

The inspectors reviewed the preparation of Gilbert 500 series drawings and their approval during a previous inspection and the results are documented in Inspection Report 440/83037. As stated in the report, the 500 series drawings were initiated to overcome extensive conduit rework due to interferences introduced by work performed by other contractors. Designers were sent to the field to observe the obstructions and sketch a conduit run with the least number of interferences. The sketch

would then be translated to a design drawing which would follow the established review cycle. A review of the drawings by the inspectors indicated no adverse findings. With respect to the rejection of the alleged's nonconformance report, the licensee stated that NRs are written for hardware deficiencies and not for drawing errors. Therefore, in this particular instance the licensee took proper action in transferring information from the NR to IR No. 6767. During a previous inspection, the inspectors reviewed several IRs including IR 6767 and determined that a minor discrepancy was identified in this report which was corrected and subsequently verified by LKC QC.

(3) Conclusion

The alleged's contention that drawings were difficult to follow could not be substantiated. While the Gilbert 500 series drawing may be complex, the conduit drawings were found to adequately correlate installed locations.

p. Allegation 16

(1) Allegation

Individual A stated that Gilbert drawing No. D215-142-501 is quite confusing as it "splits into" drawings D215-148-501 and D215-149-501. Similarly drawing D215-658-501 and all its cross references to drawings D215-144-501 and D215-143-501 are in error.

(2) Investigation

The inspectors reviewed the following drawings:

<u>Drawing Number</u>				<u>Number of revisions to drawing since 1982</u>
D215-142-501	Revision "P"	dated	June 3, 1983	8
D215-148-501	Revision "F"	dated	June 6, 1984	6 (issued 5/10/83)
D215-149-501				7 (issued 5/3/83)
D215-658-501	Revision "R"	dated	July 5, 1984	13
D215-143-501	Revision "N"	dated	July 20, 1984	10
D215-144-501	Revision "W"	dated	July 20, 1984	13

The inspectors' review of all cross references between the mentioned drawings did not reveal errors. These drawings have been reviewed a large number of times since 1982 and have been changed in the process.

LKC production and QC inspectors are trained to understand the use of these drawings.

(3) Conclusion

This allegation could not be substantiated. The drawings were found to be sometimes complex but not confusing. No cross reference errors were identified.

q. Allegation 17

Individual A stated that L. K. Comstock does not have any inspection requirements for the inspection of nonsafety seismic supports made from threaded rod.

Refer to Allegation 4 above which addresses and resolves this allegation.

r. Allegation 18

(1) Allegation

Individual A stated that he was intimidated by Comstock management by being directed to write inspection reports in instances where he thought nonconformance reports were the proper document. He stated that having to work to verbal requirements, to work outside of written procedures at management direction, and to document hardware deficiencies on inspection reports instead of nonconformance reports forced him to change his mind. Therefore, he believed he was intimidated. Further, he believed that documenting hardware deficiencies on inspection reports rather than on nonconformance reports which he considered to be the proper document caused L. K. Comstock records to be false.

(2) Investigation

The inspectors interviewed the LKC QC management personnel to determine if they had directed any QC inspector to write inspection reports in instances where nonconformance should have been written, and if they had given verbal instructions to their inspectors forcing them to work outside written procedures. Their responses indicated that they had not.

The inspector also interviewed randomly selected LKC QC inspectors who indicated that they had not received verbal instructions to work outside a procedure, and that were never directed by management to write inspection reports when nonconformance reports were required.

The licensee was informed by the alleged regarding his concerns and investigative action was taken. The licensee conducted interviews with current LKC QC inspectors and interviews with departing LKC QC inspectors. The licensee stated and his documents conclude that LKC QC inspectors were not intimidated.

(3) Conclusion

This allegation could not be substantiated.

Based on the NRC inspectors examination, no evidence of inspector intimidation was established.

4. Investigation - Individual F

General

Individual F (RIII-83-A-0062): Individual F is an ex-employee of Johnson Controls Incorporated (JCI). He made several allegations after he was terminated by JCI. Each of his allegations was discussed in Inspection Reports 440/83037; 441/83035 and 440/84007; 441/84007. During this inspection additional review was performed.

a. Allegation 1

(1) Allegation

Individual F informed the NRC on April 28, 1983, that the previous week, he took his immediate supervisor on a tour to show him that Johnson's work was out of control with regard to established procedures. He stated that the work package control is inadequate and the required documents are not at the site of inspection, that hanger tabulation sheets are missing, that Instrumentation Fabrication (IF) planners are not in the packages, and that packages are split amongst as many as six crews.

(2) Investigation

The inspectors determined by interviews of cognizant personnel, foremen, workers, inspectors, and managers, that work packages are issued to the foreman who is responsible for control of the package. The foreman issues applicable portions of the package to the work crew which returns its portion of the package to the foreman when the portion is completed.

A typical work package consists of isometric drawing(s) identifying location of supports and their welds. Travelers are included to detail the various steps of operations and inspections including hold points. These packages are normally in the vicinity of the worker to provide access to information such as the relevant welding procedure or inspection witness/hold point. The NRC inspectors did not identify a requirement for the craftsmen to keep the work package under lock and key. Individual hanger tabulation sheets are utilized by individual craftsmen working on the hanger. A JCI QC inspector is expected to go to the hanger location and obtain the relevant hanger tabulation sheet to inspect the hanger. As such, it is possible that

documents in a single planner could be split among as many as six crews and all the documents not in the planner until all the workers had completed their tasks and returned their work packages to the foreman.

(3) Conclusion

The NRC inspectors found the work packages to be adequately controlled in the field and the planner complete when reassembled by the responsible foreman. This allegation is not substantiated as indicating any violation of procedures or regulations by contractor personnel.

b. Allegation 2

(1) Allegation

Individual F stated that he found a work package unattended in the field and that he wrote a memo to supervision documenting the incident. The same foreman left a package unattended again and the alleged wrote another memo. The alleged was told that this was none of his business and he believes that this incident led to his termination.

(2) Investigation

The JCI QC Manager showed the NRC inspector the list of QC inspectors employed by JCI. To date only three QC inspectors were terminated by JCI for disciplinary action. One of them (Individual F) was terminated for concealing a work package. The QC supervisor recalled only one instance when a QC inspector wrote a memo on unattended work packages. The memo dated April 21, 1983, indicates that on a Wednesday at 12:32 p.m. the QC inspector (Individual F) observed an unattended work package at Elevation 642 in the Units Reactor Building in the vicinity of instrument rack 1H22P002. The memo went on to say that he hid the work package and later returned it to the fitter who claimed it. The memo further stated that he warned the fitter that it was the second time in one week that he discovered unattended work packages. The QC supervisor recalled advising the QC inspector not to hide work packages and disrupt work. The QC supervisor recalled that the QC inspector was terminated when he hid a work package for the second time.

(3) Conclusion

Individual F's statements are correct; however, no deviations from regulatory requirements were identified during this inspection. The alleged's actions in hiding work packages were contrary to JCI procedures and instructions.

c. Allegation 3

(1) Allegation

Individual F stated that "everybody agrees that Johnson has poor procedures." The QC manager admits that they have a problem. The inadequate procedures that the alleged listed included QAS-1001 (visual weld inspection), IF Planner inspection control, Hilti-Bolt, welding, and QAS-1601 (IF nonconformance procedure).

(2) Investigation

The inspector reviewed the revision history of the following procedures:

(a) Visual Inspection Procedure (QAS-1001-PNPP)

<u>Revision</u>	<u>Project Manager</u>	<u>Approval Date</u>	<u>QA Manager</u>	<u>Approval Date</u>
0	J. A. Bushnell	10/18/78	J. C. Jones	10/18/78
1	J. A. Bushnell	11/09/78	J. C. Jones	11/09/78
2	J. A. Bushnell	11/21/78	J. C. Jones	11/21/78
3	J. A. Bushnell	01/19/79	J. C. Jones	01/19/79
4	J. A. Bushnell	03/12/79	J. C. Jones	03/12/79
5	J. A. Bushnell	04/06/79	J. C. Jones	04/06/79
6	J. A. Bushnell	01/08/80	J. C. Jones	01/08/80
7	J. A. Bushnell	02/25/80	J. C. Jones	02/25/80
8	J. A. Bushnell	03/24/80	J. C. Jones	03/24/80
9	J. A. Bushnell	04/01/80	J. C. Jones	04/01/80
10	J. A. Bushnell	12/08/80	J. C. Jones	12/08/80
11	J. A. Bushnell	06/30/81	J. C. Jones	06/30/81
12	J. A. Bushnell	03/11/82	D. P. Bayne	03/11/83
13	J. A. Bushnell	11/02/83	S. C. Young	11/02/83
14	J. A. Bushnell	02/03/84	S. C. Young	02/03/84
15	C. M. Egasti	08/18/84	S. C. Young	08/18/84

(b) Procedure for the Preparation and Approval of the IF Planner and IF Package (QAS-601-PNPP).

<u>Revision</u>	<u>Project Manager</u>	<u>Approval Date</u>	<u>QA Manager</u>	<u>Approval Date</u>
0	J. A. Bushnell	03/14/79	J. C. Jones	03/14/79
1	J. A. Bushnell	05/24/79	J. C. Jones	05/24/79
2	J. A. Bushnell	07/26/79	J. C. Jones	07/26/79
3	J. A. Bushnell	08/13/79	J. C. Jones	08/13/79
4	J. A. Bushnell	12/15/79	J. C. Jones	12/15/79
5	J. A. Bushnell	02/06/80	J. C. Jones	02/06/80
6	J. A. Bushnell	12/11/80	J. C. Jones	12/11/80
7	J. A. Bushnell	04/29/81	J. C. Jones	04/29/81
8	J. A. Bushnell	03/10/82	D. P. Bayne	03/10/82
9	J. A. Bushnell	02/07/84	S. C. Young	02/07/84

10	J. A. Bushnell	03/09/84	S. C. Young	03/09/84
11	J. A. Bushnell	05/23/84	K. L. Bishop	05/23/84
12	J. A. Bushnell	07/03/84	Acting QC Mgr	07/03/84

(c) Nonconformance Control Procedure QAS-1601-PNPP

<u>Revision</u>	<u>Project Manager</u>	<u>Approval Date</u>	<u>QA Manager</u>	<u>Approval Date</u>
0	J. A. Bushnell	10/18/78	J. C. Jones	10/18/78
1	J. A. Bushnell	12/28/78	J. C. Jones	12/28/78
2	J. A. Bushnell	01/30/79	J. C. Jones	01/30/79
3	J. A. Bushnell	03/02/79	J. C. Jones	03/02/79
4	J. A. Bushnell	03/14/79	J. C. Jones	03/14/79
5	E. P. Rosol	05/13/79	A. O. Kennedy	06/13/79
6	J. A. Bushnell	01/11/80	J. C. Jones	01/11/80
7	J. A. Bushnell	11/07/80	J. C. Jones	11/97/80
8	J. A. Bushnell	07/13/81	J. C. Jones	07/13/81
9	J. A. Bushnell	01/22/82	D. P. Bayne	01/22/82
10	J. A. Bushnell	03/11/82	D. P. Bayne	03/11/82
11	J. A. Bushnell	03/07/83	S. C. Young	03/08/83
12	J. A. Bushnell	03/30/83	S. C. Young	03/30/83
13	J. A. Bushnell	06/24/83	S. C. Young	06/24/83
14	J. A. Bushnell	07/19/82	S. C. Young	07/19/83
15	C. M. Egasti	08/12/83	S. C. Young	03/14/83
16	J. A. Bushnell	11/09/83	S. C. Young	11/09/83
17	J. A. Bushnell	05/31/84	S. C. Young	05/31/84
17	J. A. Bushnell	06/28/84	S. C. Young	06/28/84

(d) Installation, Inspection and Repair of Hilti Kwik Bolts,
Concrete Holes, Drywell Liner Plate Holes and Support
Baseplate (Safety-Related) (QAS-1102-PNPP)

<u>Revision</u>	<u>Project Manager</u>	<u>Approval Date</u>	<u>QA Manager</u>	<u>Approval Date</u>
0	J. A. Bushnell	03/13/79	J. C. Jones	03/13/79
1	J. A. Bushnell	08/15/79	J. C. Jones	08/15/79
2	J. A. Bushnell	09/28/79	J. C. Jones	09/28/79
3	J. A. Bushnell	02/06/80	J. C. Jones	02/06/80
4	J. A. Bushnell	07/21/80	J. C. Jones	07/21/80
5	J. A. Bushnell	05/15/80	J. C. Jones	05/15/80
6	J. A. Bushnell	06/30/80	J. C. Jones	06/30/80
7	J. A. Bushnell	10/25/82	J. C. Jones	10/25/82
8	J. A. Bushnell	01/12/83	S. C. Young	01/12/83
9	J. A. Bushnell	02/24/83	S. C. Young	02/24/83
10	J. A. Bushnell	05/03/83	S. C. Young	05/03/83
11	J. A. Bushnell	05/25/83	S. C. Young	05/25/83
12	J. A. Bushnell	06/29/83	S. C. Young	06/29/83
13	J. A. Bushnell	10/13/83	S. C. Young	10/13/83
14	J. A. Bushnell	03/06/84	S. C. Young	03/06/84
15	J. A. Bushnell	07/12/84	S. C. Young	07/12/84
16	C. M. Egasti	08/17/84	S. C. Young	08/17/84

(e) Welding (GTAW and SMAW) Procedure (P1 to P1 WP-101C-PNPP)

<u>Revision</u>	<u>Project Manager</u>	<u>Approval Date</u>	<u>QA Manager</u>	<u>Approval Date</u>
0	J. A. Bushnell	08/29/79	J. C. Jones	08/29/79
1	J. A. Bushnell	09/05/79	J. C. Jones	09/05/79
2	J. A. Bushnell	01/25/80	J. C. Jones	01/25/80
3	C. M. Egasti	09/10/80	J. C. Jones	09/10/80
4	C. M. Egasti	08/04/81	D. P. Bayne	08/04/81
5	J. A. Bushnell	03/11/82	D. P. Bayne	03/11/82
6	C. M. Egasti	03/17/82	D. P. Bayne	03/17/82
7	J. A. Bushnell	09/29/82	S. C. Young	09/29/82
8	J. A. Bushnell	10/21/82	S. C. Young	10/21/82
9	J. A. Bushnell	10/29/82	S. C. Young	10/29/82
10	J. A. Bushnell	02/15/83	S. C. Young	02/15/83
11	J. A. Bushnell	11/03/83	S. C. Young	11/03/83
12	J. A. Bushnell	11/16/83	S. C. Young	11/16/83
13	J. A. Bushnell	12/13/83	S. C. Young	12/13/83
14	J. A. Bushnell	04/07/84	B. Christensen	04/07/84
15	J. A. Bushnell	05/02/84	S. C. Young	05/02/84

Review of the above procedures indicated they were revised as necessary to provide additional guidance and requirements. Procedures were changed to provide clarifications to the QC inspectors and add details to aid the individual inspectors.

(3) Conclusion

This allegation was not substantiated. No evidence of inadequate procedures were identified during this inspection. Although the procedures were changed frequently, frequent changes to procedures does not indicate improper inspections were conducted.

d. Allegation 4

(1) Allegation

Individual F stated that the pipe support standard issued from document control was not stamped "release for construction," however, the allegor inspected to it. There have been verbal directives from supervisors to override drawings such as Gilbert 818 drawings.

(2) Investigation

The results of the investigation into this matter are documented in Inspection Reports 440/84007; 441/84007. Unresolved item 440/84007-02; 441/84007-02 was identified relative to the adequacy of the design review being performed. This unresolved item is closed in this report (refer to Paragraph 2, Licensee

Action on Previously Identified Items). The licensee reviewed approximately 25 drawings and determined that CEI procedure 3-0303, "Construction - Engineering Change Notices," was followed to incorporate Engineering Change Notices.

(3) Conclusion

The allegor is correct that the 818 series drawings were not stamped; however, stamping of these drawings was not required by approved CEI Procedure 3-0302. Although Gilbert series 818 drawings are not stamped "Released for Construction," they are used to obtain criteria for inspection. JCI drawings which are used for construction are stamped "Released for Construction" and this is in accordance with JCI Procedure QAS-701-PNPP, "Document Control."

e. Allegation 5

(1) Allegation

Individual F stated that an "N" stamped 3/8" valve was found in the trash area. He stated that a nonconformance report was written and the disposition was to "down grade to non-safety."

(2) Investigation and Conclusion

The results of the NRC investigation into this matter are documented in Inspection Report 440/84007; 441/84007. While the allegation is substantiated, the incident was adequately controlled.

(f) Allegation 6

(1) Allegation

Individual F stated that "many Nonconformance Reports (NRs) are dispositioned as an isolated case to be reviewed during trend analysis - "use-as-is"."

(2) Investigation

All NRs generated on work performed are accounted for and can be retrieved on a computer printout. The printout lists the NR number, the initiating organization (CQC or JCI), the subject matter, the date initiated, the disposition code, the QE review date, the position taken by QE, the date the NR was closed, and the number of days the NR remained open. The disposition code reflects the recommended disposition of either scrap, rework, repair, or "use-as-is". The inspector reviewed the list, selected NRs with the disposition code "use-as-is," and examined the data to determine whether the "use-as-is" disposition was justified.

The following NRs were reviewed:

(a) CQC NRs:

<u>NR Number</u>	<u>Date Initiated</u>	<u>Date Closed</u>
314500	02/09/84	03/20/84
343400	07/29/84	07/30/84

(b) JCI NRs:

<u>NR Number</u>	<u>Date Initiated</u>	<u>Date Closed</u>
0001200	05/04/81	06/02/84
0001500	06/10/81	06/15/81
0003900	12/07/81	02/03/82
0004500	12/18/81	01/20/82
0005300	02/04/82	03/15/82
0005400	02/04/82	03/16/82
0005700	01/28/82	02/24/82
0006700	03/10/82	04/21/82
0007400	03/29/82	05/20/82
0010800	07/09/82	08/04/82
0011600	07/28/82	08/03/82
0013900	10/11/82	11/10/82
0014700	10/26/81	11/29/82
0017100	01/17/83	03/28/83
0018900	03/08/83	05/05/83
0020001	03/24/83	04/13/83
0022400	04/23/83	06/03/83
0024501	05/13/83	06/17/83
0029200	06/24/83	07/29/83
0030200	07/07/83	07/21/83

The inspector determined that these randomly selected NRs were properly dispositioned. Where it was warranted, the craftsmen were given additional training to preclude repetition of the nonconforming condition. No deviations from regulatory requirements were identified.

(3) Conclusion

This allegation was not substantiated. There were instances where NRs were dispositioned "use-as-is" but they were not improperly dispositioned as isolated cases. No deviations from regulatory requirements were identified.

g. Allegation 7

(1) Allegation

Individual F stated that following an NRC inspection around April 1983 Johnson employees were told not to talk to NRC inspectors unless their immediate supervisor was present.

(2) Investigation

The NRC inspectors randomly selected and interviewed more than 10 QC inspectors, one lead QC inspector and 2 QC supervisors without JCI management being present. The inspectors were from both shifts. All of the JCI QC inspection personnel stated that they were not told by JCI management to not talk to the NRC inspectors unless their immediate supervisor was present. None of them could recall any discussion of this nature.

(3) Conclusion

This allegation was not substantiated. The allegation was not corroborated by any of the interviewed Johnson Control QC personnel.

5. Exit Interview

The NRC inspectors met with licensee and contractor representatives (denoted in Paragraph 1) at the conclusion of the inspection on April 12, 1985, and the interim exit on August 24, 1984. The inspectors summarized the purpose and findings of the investigation and discussed the likely information content of the inspection report with regard to documents or processes reviewed. The licensee representative acknowledged the findings as reported herein and did not identify any such documents or processes as proprietary.