U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-346/82-21(DETP)

Docket No. 50-346 License No. NPF-3

Licensee: Toledo Edison Company
Edison Plaza, 300 Madison Avenue
Toledo, OH 43652

Facility Name: Davis-Besse Nuclear Power Station, Unit 1

Inspection At: Oak Harbor, OH

Inspection Conducted: June 14-18, 22-25, July 6-9, 20-23, 27-30, and August 3, 11-13, 1982

Inspectors: R. Mendez 9/23/82

R. N. Gardner 9/22/82

Approved By: C. C. Williams, Chief 9/22/82
Plant Systems Section

Inspection Summary

Inspection on June 14-18, 22-25, July 6-9, 20-23, 27-30, and August 3, 11-13, 1982 (Report No. 50-346/82-21(DETP))

Areas Inspected: Special unannounced inspection to review the as-built electrical construction activities to design requirements regarding post Three Mile Island modifications. The areas of electrical construction inspected were cable pulling and terminations, panel installation, conduit and raceway installation, conduit fire/boundry seal penetrations, raceway supports instrument installation and the electrical QA/QC program. This inspection involved a total of 180 inspector-hours onsite by two NRC inspectors, including 20 inspector-hours onsite during off-shifts.

Results: Of the seven areas inspected, no items of noncompliance or deviations were identified in three areas. Three apparent items of noncompliance were identified in one area; failure to provide traceability of materials-paragraph 5; failure to provide adequate acceptance criteria-paragraph 8; and failure to control design changes-paragraph 6. One apparent item of noncompliance was identified for each of the remaining three areas; failure to follow procedures-paragraph 15; failure to identify nonconforming materials and take corrective actions-paragraph 5; and failure to perform adequate inspections-paragraph 9.

DETAILS

1. Persons Contacted

Licensee Employees

*T. Murray, Station Superintendent
*J. Werner, Administrative Coordinator
*R. Brown, Construction Supervisor
*J. Grier, QA Supervisor
*B. Beyer, Assistant Station Superintendent
*G. Bradley, Nuclear Licensing
*F. Point, QA Auditor
*D. Toage, QA Auditor
*P. Carr, Maintenance Engineer
*C. Daft, QA Director
*D. Monimee, QE Supervisor
*D. Rhodes, QC Supervisor

United Engineers and Contractors

*T. Chowdhary, QC Supervisor

*Denotes those attending the exit interviews during one or more of the following days on June 25, July 9, July 30 and August 13, 1982.

The inspectors also interviewed other licensee employees, including members of the technical, operations, maintenance, I&C, and construction staff.

2. Functional or Program Areas Inspected

The purpose of this inspection was to verify selected electrical construction activities at the Davis-Besse site during the current refueling and maintenance outage regarding Three Mile Island (TMI) modifications. The inspector reviewed specifications, records and drawings pertaining to selected conduit installation, cable pulls, cable terminations, panel installation, raceway supports, instrument and instrument sensing line installation, raceway fire/boundary penetration seals and the electrical QA/QC program. Within the electrical activities, the inspector verified separation, isolation, redundancy and the requirements for separate channels installation. In addition, the inspector examined the Field Change Request (FCR) packages for each of the TMI modifications. These systems and equipment were reviewed using the commitments and requirements of NUREG-737, "Clarification and Licensee Procedures." The following items and associated documents were reviewed.

3. Safety Grade Anticipatory Turbine Trip (FCR 79-184)

a. Areas of Inspection

Cable Pulls Verified

3CART1N3C
3CART1N3A
3C4312A

Cable Terminations Verified

3CY312A
1CARTSX1B
1CARTIN1D

Raceway Supports Verified

13490
13493
13620
13827
13830

Drawings Reviewed

E-1012, Revision OB, "Connection Diagram ARTS Cabinets C5784C and D"

7749, Revision OE, "Anticipatory Reactor Trip Systems Diagram"

3394-1001, SH. 1 of 2, Revision 3, "Anticipatory Reactor Trip System (ARTS)"

3394-1004, SH. 1 of 3, Revision E, "Anticipatory Reactor Trip System (ARTS)"

3394-1004, SH. 2 of 3, Revision E, "Anticipatory Reactor Trip System (ARTS)"

Reports

Noncompliance Report 89-81, dated May 19, 1981.

Inspection of Electrical Equipment and/or Instrument, dated February 4, 1982.

Post Inspection Construction Authorization, Supp. 27, dated March 31, 1982.

Post Inspection Construction Authorization, Supp. 19, dated March 31, 1982.

Seismic Qualification Report No. 3394-1, dated March 1, 1982.

Engineering Order Number 46739, dated June 28, 1982.

b. Findings

Open Item (50-346/82-21-01): NUREG-737 outlines the requirements for post TMI implementation. Within the NUREG, there is a requirement for the licensee to provide a seismic analysis of sensors located in nonseismic areas which have not previously contained reactor protection systems (RPS) inputs. The turbine building is a nonseismic area that now contains components of the Anticipatory Reactor Trip System (ARTS). The licensee is required to perform and submit an analysis which shows that the installation is designed such that the effects of credible faults or failures in these areas will not degrade the RPS operability. The licensee has stated that the analysis has been performed, but was not available at the site. Pending an assessment of the seismic analysis, this item will remain open.

Open Item (50-346/82-21-02): The present ARTS design contains a block push button that can override the anticipatory feature below 20% reactor power. This feature needs to be disabled or eliminated before the plant is operational. The licensee is in the process of eliminating this override characteristic. Pending correction of the change, this item will remain open.

c. Discussion

During inspection of the ARTS cabinets, the inspector observed that drawing No. 3394-1004, SH. 1 of 3, Revision E, did not include the correct type of relays or the specified number of relays. Additionally, DC voltage was specified in lieu of AC voltage type relays. The inspector later determined that the licensee had properly documented this deficiency on a Design Change Notice (DCN) and was in the process of issuing a revised drawing.

4. Containment Hydrogen Analyzer (FCR 79-373)

The licensee used their two existing hydrogen analyzers and modified the scale from 0-5% to the required 0-10%. Specification 12501-M-345Q pertaining to the hydrogen analyzers indicated three possible ranges which includes the two previously mentioned. The hydrogen analyzers are located in the Radiation Access Controlled Area (RACA) and are housed in one cabinet with the redundant channels separated by a rigid metal barrier. The instruments are energized from separate redundant class 1E power supplies.

a. Reports

ST5065.01 - "Containment Vessel Atmosphers Hydrogen Analyzer Calibration Ch. 1, dated February 23, 1982."

ST5065.01 - "Containment Vessel Atmosphere Hydrogen Analyzer Calibration Ch. 2, dated February 10, 1982.

b. Findings

Unresolved Item (50-346/82-21-03): As mentioned earlier, the two hydrogen analyzers were originally of a 0-5% hydrogen concentration range, but were adapted and modified to the required 0-10% range as a result of the requirements of NUREG-737.

The analyzers were calibrated at a single point with a known hydrogen source at the full 10% range and subsequently tested at a single point of 2.5%. Since these instruments must provide continuous readings under emergency conditions, it is the concern of the inspector that a one point calibration and a one point test may not sufficiently take into account non-linearities and, therefore, the instruments may not operate with sufficient accuracy. The inspector advised the licensee that it will be necessary to obtain from the vendor a written qualifying statement or assurance that the instruments will perform properly over their range given one calibration and test point. Pending review of vendor assurance, this item will remain unresolved.

Open Item (50-346/82-21-04): NUREG-737 outlines qualifications of the containment hydrogen monitors. Within these qualifications, the licensee is required to provide an instrument which has measurement capabilities under both positive and negative ambient pressure. The licensee has not provided supporting documentation to justify operability of their two hydrogen analyzers, but is in the process of obtaining the appropriate documentation. Pending review of the licensee's response, this item will remain open.

5. Containment Narrow Range Water Level (FCR 79-408)

a. Areas of Inspection

Cable Pulls and Termination Verified

2LLE4617C
1LLE4618C

Drawings

M-508, SH.1, Revision OB, "LE-4617 and LE-4618 Mounting and Installation Details"

J-824, Revision OB, "Instrument Mounting Details Containment Sump - Narrow Range LIT-4617, LIT-4618"

J-100, Revision OD, "Containment Vessel Normal Sump Narrow Range"

Reports

Noncompliance Report (NCR) 2-82, dated January 5, 1982. Inspection of Essential Hangers and Supports dated September 25, 1981. General Material Inspection Checklist, requisition No. 178108, dated December 4, 1980.

b. Findings

Noncompliance (50-346/82-21-05): During inspection of transmitter LIT 4618, the inspector observed conduit 38080C supported on a non-seismic hanger. This conduit had been previously inspected by the licensee and determined to be supported from hanger 13514-502SE. The licensee produced a photograph of the area showing the conduit was at one time supported by the correct hanger. However, it appears that during work involving NCR 82-374 to modify the bare cables connecting the transmitter to a flexible type conduit, the conduit 38080C was replaced on the wrong hanger. It should be noted that the scope of work involved with NCR 82-374 did not include placing the subject conduit on a non-seismic hanger. The following instances of failure to follow procedures were identified:

(1) Safety related conduit No. 38080C was observed to be supported from a non Class 1E hanger with other non-safety pipes and ducts.

(2) Support and mounting hardware for the Class 1E conduit identified above in (1), was not in accordance with Bechtel Standard F-302A. In addition, no drawing or instructions had specifically allowed the observed installation.

This failure to accomplish activities affecting quality using documented procedures is considered to be in noncompliance with the Davis-Besse Technical Specification Section 6.8.1 as described in the Appendix of the report transmittal letter.

Noncompliance (50-346/82-21-06A): Although the inspector had already identified the apparent nonconforming condition as a result of mounting conduit 38080C on a non-seismic hanger, the licensee took corrective action but failed to do so in accordance with documented procedures. The following violations were observed:

(1) The licensee presented photographic evidence to demonstrate that at one time conduit 38080C had been properly installed. However, it was apparently reworked. The activity performed to rework conduit 38080C from its support was apparently not documented.

(2) After the inspector, identified the circumstances outlined in (1) above, the licensee took corrective action. However,

the restoration of conduit 38080C to its proper hanger 13514-402 SE, was not accomplished in accordance with documented and approved procedures or instructions.

This failure to take corrective action and accomplish activities affecting quality using documented procedures is considered to be in noncompliance with 10 CFR 50, Appendix B, Criterion XVI as described in the Appendix of the report transmittal letter.

Noncompliance (50-346/82-21-6B): During a selected review of QC records the inspector determined that sixteen cables did not have traceability to a unique and specific quality document, such as a Purchase Order number. The licensee has apparently failed to implement corrective action or analyze the potential problem of determining traceability of safety related class 1E cables cut from reels before March of 1982. During this time the resident inspector had impressed upon the licensee to closely document the cable reel number for each cable pulled. Consequently, on March 29, 1982, the licensee issued revision 3 of Nuclear Construction Procedure (NCDP) 6080.01 to include cable reel identification for each cable cut. Although cable traceability no longer appears to be a problem, the licensee has not identified the number of cables involved nor has the licensee evaluated the significance of the identified lack of traceability as it relates to a Part 21 or a Part 50.55(e). Since cables cut before March 1982 were issued under FCR numbers and since cables are generally not pulled until months later, the problem of identifying specific cables to a specific Purchase Order number and associated quality documents becomes apparently impossible. For example, Cable scheme 2LLE4617C for this FCR, was determined not to have direct traceability to a specific Purchase Order number nor specific quality documentation.

This is a second example of failure to take corrective action of the aforementioned item by appropriate means and records traceable back to the item and is considered to be in noncompliance with 10 CFR 50, Appendix B, Criterion XVI as described in the Appendix of the report transmittal letter.

Open Item (50-346/82-21-07): NUREG-737, Appendix B, outlines requirements for the seismic portions of environmental qualifications of post-TMI instrumentation. Qualification of the components applies to the complete instrumentation channel from sensor to display. However, the licensee has not provided the proper seismic safety grade equipment qualification data or analysis for the Containment Narrow Range Water Level Indication. The licensee is presently in the process of obtaining the pertinent seismic documentation and is adequately tracking this item with Noncompliance Report (NCR 2-82). Pending review of the seismic analysis, this item will remain open.

6. Containment Wide Range Water Level (FCR 79-409)

a. Areas of Inspection

Cable Pulls and Terminations

1LLT4595C
2LLT4594D

Raceway Supports

13904-502-SW
13905-502-SW
13912-502-SW

Drawings

J-803, Revision OC, "W.R. x mtr. LIT 4594 and LIT 4595 Mounting and Installation Details"

E-996B, Revision OB, "Conduit Isometric 2-7755G-7-2".

Reports

Noncompliance Report 82-464, dated August 12, 1982.
General Material Inspection Checklist, requisition no. 200021.

b. Findings

Noncompliance (50-346/82-21-08): The licensee deleted applicable regulatory and design basis requirements for three post TMI modifications from the procurement documents without proper documentation and disposition or reason for the change. The seismic specification of the containment Wide Range Water Level Indication was removed from the original purchase order package. Additionally, no provisions were established to track the nonconforming condition until the inspector identified the concern. NCR 82-464 was subsequently written on August 12, 1982, for FCR 79-409.

This failure to identify and accomplish activities affecting design specifications using documented procedures is considered to be in noncompliance with 10 CFR 50, Appendix B, Criterion III as described in the Appendix of the report transmittal letter.

Noncompliance (50-346/82-21-6B): Cables issued under FCR numbers, in contrast to those issued under cable scheme numbers apparently lack traceability to the P.O. number. The licensee failed to analyze the potential problem for determining traceability of the following cables: 1LLT4594B, 1LLT4595A and 1LLT4595C.

This failure to establish measures to assure that the aforementioned nonconforming conditions are promptly identified and corrected is a further example of noncompliance as cited in section 5.b of this report.

7. Power Operated Relief Valve and Safety Valve Indication (FCR 79-410)

a. Areas of Inspection

J-102, SH. 53A, Revision OB, "RC PR2R PORV and Safety Valve Flow"
J-102, SH. 53B, Revision OB, "RC PR2R PORV and Safety Valve Flow"

Report

NCR 208-80, issued June 30, 1980.

b. Findings

Open Item (50-346/82-21-09): NCR 208-80 was written as a result of several components contained within the PORV and Safety Valve Indication system not qualified to IEEE 323-1974. The licensee was in the process of obtaining qualified class 1E equipment, but has not as yet received the environmental or seismic test data. This item and FCR 79-408, mentioned previously will remain open until the proper seismic data is reviewed.

8. Containment Wide Range Pressure Indication FCR 79-425

a. Areas of Inspection

Cable Pulls

1LPT4587A
1LPT4587B
2LPT4588A

Cable Terminations

1LPT4587A
1LPT4587B
2LPT4588A
2LPT4588B

Drawings

J-801, SH. 1, Revision OB, "PT-4587 and PT-4588 Wall Mount Assembly"

J-801, SH. 2, Revision OB, "Stand Fabrication for PT-4587 and PT-4588"

J-105, SH. 1, Revision OA, "Containment Pressure Wide Range Ch. 1"

J-105, SH. 2, Revision OA, "Containment Pressure Wide Range Ch. 1"

M-501, Revision OB, "PT-4587 and PT-4588 Wall Mount Assembly"

M-501A, Revision OA, "Stand Fabrication for PT-4587 and PT-4588"

Reports

Core/Drill/Cutout Report, Report No. 1-772, dated February 6, 1981.

VCDN M329-624-1-3, Revision 2, page 1 of 2 and page 2 of 2.

Field Change Notice (FCN) 2022, Supp. 9, dated January 19, 1981.

General Material Inspection Checklist, requisition no. 194358.

b. Findings

Noncompliance (50-346/82-21-10): Satisfactory qualitative or quantitative criteria such as slope requirements were not properly delineated on drawings procedures or instructions (which were readily accessible to QC inspectors) for verifying instrument tubing installation. On May 6, 1982, a QC inspector verified that instruments PT-4587 and PT-4588 were installed in accordance with drawings J-801 sheets 1 and 2 and FCN 2022 but since the drawings omitted slope requirements, the QC inspector could not perform an adequate inspection. Additionally, the licensee had issued VDCN M329-624-11 and FCR 416-82 to correct discrepencies and dimensions of the drawings to reflect the field installation but slope specifications were not included.

This failure to provide adequate acceptance criteria of activities affecting quality is considered to be in noncompliance with 10 CFR 50, Appendix B, Criterion V as described in the Appendix of the report transmittal letter.

Noncompliance (50-346/82-21-06B): Cables issued under FCR numbers, in contrast to those issued under cable scheme numbers lack traceability to the P.O. number. The licensee failed to analyze the potential problem for determining traceability of the following cables: 1LLPT4587A, 1LLPT4587B, 2LLPT4588A and 2LLPT4588B.

This failure to establish measures to assure that the aforementioned nonconforming conditions which could impact on safety are promptly identified and corrected is a further example of noncompliance as cited in section 5.b of this report.

Noncompliance (50-346/82-21-08): The licensee failed to take appropriate measures to assure that applicable regulatory requirements were specified and that deviations from such standards were documented and controlled. The seismic requirement for the containment wide range pressure indication was deleted from the purchase order without proper documentation or controls.

This failure to identify and accomplish activities affecting design specifications using documented procedures is a further example of noncompliance as cited in section 6.b of this report.

9. Safety Grade Auxiliary Feedwater Flow Indication (FCR 79-430)

a. Areas of Inspection

Cable Pulls and Terminations

1LF4630A
2LFH631A

Drawing

J-904, SH. 1, Revision OB, "Auxiliary Feedwater Flow FT-4631 FT-4630"

Report

Post Inspection Construction Authorization for FT-4631 and FT-4630, dated May 4, 1982.

General Material Inspection Checklist, requisition No. 194358.

b. Findings

Noncompliance (50-346/82-21-11): The inspector observed the completed installation of the instrument sensing lines associated with the Auxiliary Feedwater Flow Indication Instruments FT-4630 and FT-4631. The as-built condition of the installed lines was compared with Bechtel tubing isometric drawing J-904, SH. 1, Revision OB. The inspector physically measured the instrument sensing line installations and determined that less than half of the dimensions were within the ± 1/2 inch tolerance allowed by the drawing specifications. Furthermore, the field installation of Flow Transmitter FT-4630 did not resemble the isometric drawing configuration. In addition, the nonconforming conditions were not identified, despite a Post Inspection Construction Authorization (PICA) that was signed off by QC on May 4, 1982.

The failure of inspection activities to verify the conformance of instrument sensing line installations to instructions, procedures, and drawings is considered to be in noncompliance with 10 CFR 50, Appendix B, Criterion X, as described in the Appendix of the report transmittal letter.

Noncompliance (50-346/82-21-06B): Cables issued under FCR numbers, in contrast to those issued under cable scheme number lack traceability to the P.O. Number. The licensee failed to analyze the potential problem for determining traceability of cable 2LF4631A.

This failure to establish measures to assure that the aforementioned nonconforming condition which could impact on safety is promptly identified and corrected is a further example of noncompliance as cited in section 5.b of this report.

Noncompliance (50-346/82-21-08): The licensee failed to take appropriate measures to assure that applicable regulatory requirements were specified and that deviations from such standards were documented and controlled. The seismic requirement for the Auxiliary Feedwater Indication was deleted from the purchase order without proper documentation or controls.

This failure to identify and accomplish activities affecting design specifications using documented procedures is a further example of noncompliance as cited in section 6.b of this report.

10. TSAT Meter (FCR 79-439)

a. Areas of Inspection

Cable Pulls and Terminations

1PRC2B4B
1LTRC3A5C
1LTRC3A5B

Drawings

J-107, SH. 5, Revision OB, "Reactor Coolant Temperature Monitor Ch. 1 TSAT Channel 1 RPS"

J-107, SH. 7, Revision OA, "RC Press. TSAT Meter Channel 1"

Reports

Field Change Notice (FCN), No. 1999, Supp. 18
B&A Instruction Manual 01-1119040-01
Noncompliance Report (NCR) 269-82, dated April 8, 1982
Noncompliance Report 148-82, dated March 4, 1982.

Findings

Noncompliance (50-346/82-21-06B): Cables issued under FCR numbers, in contrast to those issued under cable scheme number lack traceability to the P.O. number. The licensee failed to analyze the potential problem for determining traceability of cables 2LTRC3B6B and 2LTR3A6B.

This failure to establish measures to assure that the aforementioned nonconforming condition which could impact on safety is promptly identified and corrected is a further example of noncompliance as cited in section 5.b of this report.

Open Item (50-346/82-21-12): The licensee has provided two redundant temperature saturation meters energized from separate class 1E power sources as part of the NUREG-737 requirements. Each meter has two analog to digital (A/D) converter units that are required by vendor specifications to be calibrated by a precision voltage source capable of producing 0.000 to 10.000 volts, ± .001 volts. The licensee could not produce the calibration data or, the instrument used to calibrate the A/D converter units to the inspector. The licensee is in the process of obtaining the calibration data or certification of the temperature saturation meters and the voltage source used for calibration. Pending resolution of these two issues this item will remain open.

Unresolved Item (50-346/82-21-13): The licensee has obtained the seismic qualifications off all the components of the Saturation Temperature Indication instrumentation except the TSAT meter units. The licensee has maintained that the TSAT meter cannot be seismically qualified and cannot obtain one that meets the requirements of IEEE 323-1974. They have discussed the circumstances with NRR but could not provide documentation to the inspector that exempts the TSAT meter from seismic requirements. The inspector has discussed the seismic issue with NRR and was informed that the meter must be a safety grade instrument. Pending resolution, this item will remain unresolved.

11. PORV Block Valve Power Change (FCR 81-049)

a. Areas Inspection

Cable Pulls and Terminations

1CBE1602E
1PBE1602A

Raceway

38097D-2"
38603-2"
39289A-1 1/2"

Drawings

E-950A, SH. 5, Revision OC, "RC Prgr. Pwr. Rlf Shutoff Valve"

E-312, SH. 1, Revision OB, "Disconnect Switch Cabinet CDE16A, CDE16B"

Reports

Design Change Notice E200B-349, Revision 54
Seismic Structural Analysis of Disconnect Switch Cabinets CDE-016A and 16B, CDF-16A and 16A and 16B, job no. 12501

b. Discussion

There was a considerable amount of condensation accumulating inside MCC cabinet BE16B where water is dripping from the cables. This cabinet is kept in a room that is significantly cooler than the adjacent rooms and consequently, moisture is readily accumulated. During a return inspection at Davis-Besse the licensee had implemented corrective action by energizing the heater circuit of the cabinet thereby ridding the effects of condensation.

12. Post Accident Monitoring Panels (FCR 80-050)

a. Areas of Inspection

Raceway Supports

13936-502-SW
13937-502-SW
13938-502-SW

Drawings

E-1009, Revision OF, "Post Accident Indicating Panel C5798"

E-1010, Revision OF, "Post Accident Indicating Panel C5799"

M5814, SH. 1, Revision OD, "Post Accident Indicating Panels"

M5814, SH. 2, Revision OD, "Post Accident Indicating Panels"

E-998B SH. 1, Revision OC, "Conduit Isometric 1-57098A-2"

Reports

Field Change Notice (FCN) 2491, dated May 28, 1982
Seismic Structural Analysis of Post Indicating Panel, job no. 12501

b. Discussion

The inspector reviewed panel installation, conduit installation and raceway supports. No problems were identified in this area.

13. Incore Thermocouples (RCF 80-115)

a. Areas of Inspection

Cable Pull

2CY2A205A

Cable Terminations

2CY2A205A
1CICRTMPD

Raceway Supports

13908-502-NW
13922-502-NW
13923-502-NW
13924-502-Nw
13925-502-NW

Drawings

J-101, SH. 1, Revision OE, "Incore Temperature Monitoring Channel 1"

E-997B, SH. 1, Revision OB, "Conduit Isometric 5790A-3"

E-997B, SH. 2, "Conduit Isometric 57907B-3"

Reports

Field Change Notice 2491, dated May 28, 1982

Drawing Change Notice C-751-12, Revision 20

Field Change Notice 2063, Supp. 7, dated January 29, 1982.

Quality Control Inspection Report E445

Surveillance/Inspection Report H82-773B

Maintenance Work Order No. 42-6102-1

b. Findings

Noncompliance (50-346/82-21-06B): Cables issued under numbers, in contrast to those issued under cable scheme number lack traceability to the P.O. number. The licensee failed to analyze the potential for determining traceability for cables 2CINCRTMA and 2CINCRTMG.

This failure to establish measures to assure that the aforementioned nonconforming condition which could impact on safety is promptly identified and corrected, is a further example of noncompliance as cited in section 5.b of this report.

c. Discussion

The inspector viewed conduit installation, cable termination, cable pulls, raceway supports, as-built drawings, and installation and design changes. Design changes were noted to be controlled by established procedures; proper isolation devices were installed to separate class 1E and non class 1E components; and cables, raceway and their supports were properly installed.

14. Reactor Coolant System Hi Point Vents (FCR 80-120)

a. Areas of Inspection

Cable Pull Verified

2PBF1285J

Raceway

38097F-2"
46379D-3"
7078B-3"

Reports

General Material Inspection Checklist, requisition No. 188273
Qualification Test Report for IEEE Class 1E Solonoid Valves, No. QR 52600-5940-2

b. Findings

Noncompliance (50-346/82-21-06B): A review of QC records for cable pulls and terminations verification revealed that certain cables lacked traceability directly to the purchase order number. Although the licensee was aware of this situation, no corrective action was taken to analyze or resolve the potential problem of determining traceability of cables cut that referenced only the FCR number. The following cables were determined not to have direct traceability to the P.O. number: 1CV4608AA, 2CBF1285J and 2CBF1285M.

This failure to establish measures to assure that the aforementioned nonconforming conditions are promptly identified and corrected is a further example of noncompliance as cited in section 5.b of this report.

15. Other Areas of Inspection

Noncompliance (50-346/82-21-14): During the week of July 12-16, 1982, four Class 1E cables 2CVL4264A, 2CVL4264B, 2CVL4264C and 2CPARE3K were observed to be lying on the cable spreading room floor without proper support or protection to prevent damage to the partially pulled cables. In addition, on July 14, 1982, the inspector observed coiled cable 1CYL115AA not properly supported in the control room following the end of work activities for that day.

This failure to follow procedures and accomplish activities affecting quality using documented procedures is considered to be in noncompliance with Technical Specification 6.8.1 as described in the Appendix of the report transmittal letter.

Open Item (50-346/82-21-15): The licensee's FSAR states that loads required for operation during the event of a loss of coolant accident (LOCA) are below the continuous rating of an emergency diesel generator (EDG). The new loads imposed by the addition of the TMI instrumentation and electrical components no longer assures that one EDG can handle all the LOCA load requirements. The licensee informed the inspector that a load study had been performed to determine if an EDG could still provide the necessary electrical power. Pending review of the load analysis, this item will remain open.

Exit Interview

The inspector met with licensee representatives (denoted in the Persons Contacted paragraph) at the conclusion of the inspection on August 13, 1982. The inspector summarized the scope of the inspection and discussed the findings.