

APPENDIX B

U. S. NUCLEAR REGULATORY COMMISSION  
REGION IV

NRC Inspection Report: 50-482/84-22

Construction Permit: CPPR-147

Docket: 50-482

Category: A2

Licensee: Kansas Gas and Electric Company (KG&E)  
P. O. Box 208  
Wichita, Kansas 67201

Facility Name: Wolf Creek Generating Station

Inspection At: Wolf Creek Site, Coffey County, Burlington, Kansas

Inspection Conducted: June 11 through September 28, 1984

Inspectors:

R. G. Taylor

R. G. Taylor, (Team Leader) Reactor Inspector  
Project Section A, Reactor Project Branch 2

10/18/84  
Date

L. E. Ellershaw

L. E. Ellershaw, Reactor Inspector  
Project Section A, Reactor Project Branch 2

10/19/84  
Date

A. R. Johnson

A. R. Johnson, Reactor Inspector  
Project Section B, Reactor Project Branch 1

10/24/84  
Date

R. P. Mullikin

R. P. Mullikin, Reactor Inspector  
Project Section A, Reactor Project Branch 2

10/19/84  
Date

J. E. Bess  
J. E. Bess, Reactor Inspector, Project Section B  
Reactor Project Branch 2

10/19/84

Approved:

L. E. Martin  
L. E. Martin, Chief, Project Section A  
Reactor Project Branch 2

10/24/84  
Date

Inspection Summary

Inspection Conducted June 11 through September 28, 1984 (Report 50-482/84-22)

Areas Inspected: Routine, unannounced inspection of electrical separation, electrical cable tray and conduit as-built installations, structural steel as-built welding installations, electrical craftsman qualifications, procedures for penetration fire seals, and followup on previous NRC findings. The inspection involved 246 inspector-hours onsite by five NRC inspectors.

Results: Within the areas inspected, two violations were identified (failure to assure conformance of safety-related structural steel welds with requirements, paragraph 3, and failure to maintain adequate electrical separation, paragraph 4). In addition, one new unresolved item is identified in paragraph 4.

DETAILS

1. Persons Contacted

Principal Licensee Employees

- \*F. J. Duddy, Construction Manager
- \*W. M. Lindsay, Supervisor - Quality Systems
- \*P. Dyson, Field Engineering Supervisor
- \*R. Grant, Director - Quality
- \*R. L. Stright, Licensing
- \*N. W. Hoodley, Nuclear Plant Engineer

Daniel International Construction, Inc. (DIC)

- \*J. Berra, Vice President
- \*J. Fletcher, Construction QC

Bechtel Corporation

- \*C. M. Herbst, Assistant Project Engineer
- \*G. D. Brown, Engineer

The NRC inspectors also interviewed other licensee, DIC and Bechtel personnel.

\*Denotes those attending the exit interview.

2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (50-482/77-05-01) This item involved the batching of concrete for "mud mats" underlying the nuclear safety-related building. Based on an interview with the reporting NRC inspector, this NRC inspector determined that the major issue involved was a lack of desire on the part of the applicant to utilize a certified batch plant for mixing the concrete. The NRC inspector was provided a Certificate of Conformance for Concrete Production Facilities" for the Penny Ready Mix plant in New Strawn, Kansas signed by a licensed professional engineer on May 9, 1977. The certificate is sufficient to satisfy the requirements of the LWA-2, the NRC authorization for the work involved.

(Closed) Unresolved Item (50-482/78-04-05) Containment Base Mat Ninety-Day Cylinder Breaks. This item was superceded by Notice of Violation, Item B of Appendix A to Inspection Report 50-482/78-13.

(Closed) Infraction (50-482/78-04-B) Failure to Meet Concrete Acceptance Criteria for Containment Base Mat. This item was transferred to NRR for evaluation. The NRR evaluation and conclusion is contained in the Safety Evaluation Report for the Wolf Creek station (NUREG-0881) at paragraph 3.8.4.

(Closed) Unresolved Item (50-482/78-15) Pre-Planning For Concrete Placement. This unresolved item was superceded by Appendix B Notice of Deviation included with Inspection Report 79-03.

(Closed) Unresolved Item (50-482/78-15) Placing Limitations for Concrete. This unresolved item was superceded by Appendix A Notice of Violation included with Inspection Report 79-03.

(Closed) Unresolved Item (50-482/79-01) Concrete Practices. This unresolved item was superceded by Appendix A, Notice of Violation, included with Inspection Report 50-482/79-03.

(Closed) Unresolved Item (50-482/79-01) CFR Weld Deficiency of Unistrut Material. The 50.55(e) report was discussed in Inspection Report 79-07 which satisfied the unresolved item.

(Closed) Infraction (50-482/79-03) Failure to Adhere to Concrete Placement Limitations. This infraction was issued for record purposes with corrective action implicit within the licensee's response to Inspection Report 78-15. This conclusion is consistent with statements contained within paragraph 5, Report 50-482/79-03.

(Closed) Unresolved Item (50-482/79-07) Observation of Concrete Testing Procedures. Although not specifically documented, the inspection effort described in Inspection Report 50-482/79-09, paragraph 11, by the inspector of record in report 79-07 is considered as resolving the matter.

(Closed) Unresolved Item (50-482/80-13-01) Review of Work Hold Agreement Number 11. The work hold involved a conflict between the Daniel International Corporation procedure for coating application inspection and the applicable Bechtel specification. Bechtel letter BLKE 600 dated August 27, 1980, provides information on the resolution of the matter sufficient to warrant cancellation of the Work Hold Agreement in September 1980.

(Closed) Unresolved Item (482/8335-01) This item required the licensee to determine whether the Bechtel requirement that flexible electrical conduit not be greater than 5 feet includes total length where the conduit is supported. There were five safety-related instrument transmitters found in this category. The licensee furnished the Bechtel design drawings for these transmitters which showed that a support was allowed for each. This item is considered closed.

### 3. Welding of Structural Steel

During a review of QA/QC and Quality First personnel qualifications and subsequent interviews, the NRC inspector became aware of potential problems with corrective action reports CAR 29 and 31. The NRC inspector subsequently obtained copies of the two documents. CAR 1-W-0029 (initiated on March 22, 1983) states, in part, "Subsequently to the issuance of CAR 1-W-0019, quality has instituted a random reinspection of accessible structural steel fillet welds in all Q buildings. It has been determined by the results of this reinspection that an unacceptable percentage of these welds are deficient in the auxiliary, control, and fuel buildings." Attached documentation revealed that in the auxiliary building, 60 welds were inspected with 53 being rejected. In the control and fuel buildings, 50 welds were inspected with 43 rejected, and 53 inspected with 35 rejections, respectively. Revision 2 to CAR 1-W-0029 stated in the disposition that the defective welds would be transferred to a Nonconformance Report (NCR). The NRC inspector obtained a copy of NCR ISN 10381PW which was used as the vehicle to carry out the direction provided by CAR 1-W-0029. It appears that DIC Project Welding Engineering personnel again reinspected the welds to more clearly define the nature and extent of the defects on a weld-by-weld basis. A majority of the defective welds were categorized as having "cosmetic" defects. The DIC recommended disposition was use-as-is for welds identified containing "cosmetic" defects. The NCR states that "cosmetic" defects include arc strikes, convexity, cold roll (understood to be synonymous with overlap), porosity, and acceptable amounts of undercut. The NRC inspector noted with respect to these defects that overlap is prohibited by the governing AWS D1.1-75 Code and specific acceptance criteria for the other defects are also defined by this Code. The engineer accepted the DIC recommendation stating, "This disposition is based on the understanding that the cosmetic defects outlined . . . of this NCR do not constitute violations of AWS D1.1-75." A written-in note labeled "SNUPPS comment" states that DIC had confirmed the engineer's understanding. NCR ISN 10381PW was completed as indicated above on August 30, 1983.

On August 16, 1983, DIC personnel issued CAR 1-C-0031 which indicated that approximately 16.4 percent of the miscellaneous structural steel welding records for "Q" welding could not be located. After corresponding back and forth, DIC and the engineer concluded that it was acceptable for some amount of these records to be missing, provided that the quality inspection program was acceptable. Senior licensee QA management expressed to the NRC inspector that the program had obviously been fully successful since very few welds had been found to require repair after a substantial reinspection effort associated with CAR 29. The NRC inspector expressed concern with this approach to resolution and suggested that the licensee reevaluate their position.



On September 11, 1984, the licensee, in conjunction with senior DIC management personnel, made a presentation to the NRC Task Force Director and other NRC staff personnel, including the NRC inspector. The presentation was aimed at the DIC effort to provide adequate records of inspection of the structural welds. This effort involved the inspection at that point in time of 319 weld joints in the reactor building for which there appeared to be no records. Of these, 48 were found to not meet code/design original requirements. Several had been reanalyzed by the engineer and found to provide adequate structural strength and were deemed to be "use-as-is."

The NRC Task Force Director and the NRC inspector met with the KG&E Project Director on September 14, 1984. The NRC personnel informed the project director that the NRC position was that NCR ISN 10381PW had not been properly dispositioned and that, therefore, the underlying premise for the closure of CARs 29 and 31 was faulty. The NRC personnel stated that it appeared that the quality status of the majority of all structural steel welds was at best indeterminate. The project director proposed to have the engineer identify a group of structural members with the highest design loads or the lowest design strength safety margin and to have these joints inspected. The NRC personnel indicated that might be one possible approach to resolution of the matter.

During the week of September 17, 1984, a reinspection of the identified structural members with the highest design loads or the lowest design strength safety margin was initiated. The reinspection identified a number of welds which do not meet drawing requirements. This information was presented to the NRC staff during a meeting conducted on September 25, 1984. In an effort to confirm certain of the identified conditions, the NRC inspector accompanied DIC welding inspectors into the reactor building to observe specific, identified weld joints. This observation confirmed the welding inspectors' findings; e.g., welds that are undersized and of insufficient length, lack of fusion, and missing welds.

The missing welds are from the same location in each of six pressurizer support connections. Certain of the other welds in the pressurizer support connections were undersized and of insufficient length. Drawing No. C-OS 2904 shows that various length 5/8-inch welds are required in 14 specific locations. Four locations required a 5/8-inch fillet weld of 8 inches in length. The actual welds in two of the locations measured between 3/8-inch and 1/2-inch by 5 inches in length, and 1/2-inch by 3 inches in length. The missing welds and the undersized, insufficient length welds are clearly not in compliance with the requirements of the drawing or AWS D1.1-75. The initial weld inspection records for these connections could not be located.

The NRC inspector accompanied two DIC welding inspectors for reinspection of nine structural steel connections in the auxiliary building. Drawing

No. K6720, applicable to these connections, shows 12 weld locations per connection with certain of the welds requiring returns. Reinspection of the welds and returns involved provided the following summarized data:

--	Missing welds	2
--	Welds with insufficient length	9
--	Undersized welds	6
--	Undersize welds with insufficient length	2
--	Overlength returns	44
--	Undersize returns	25
--	Undersize returns with insufficient length	1

The NRC inspector requested the initial weld inspection records for these welds and returns in the 9 reinspected connections. As of September 28, 1984, the only inspection records that were located pertained to 10 welds and 6 returns in one connection, and 8 welds and 4 returns in each of 3 other connections. These records did not indicate that the welds were anything other than acceptable. The licensee informed the NRC inspector of a situation where one inspection record for connection 524B2, clearly indicated by an attached sketch, the existence of the a weld that reinspection found not to exist. This problem will be followed up in conjunction with the other structural steel problems.

The NRC inspector made a comparison between the existing initial inspection records and the results of the reinspection effort in order to determine the validity of the initial records. The initial records show that the 10 welds with 6 returns in one connection were inspected and accepted on December 11, 1978. The reinspection identified one undersized weld, other undersized and overlength returns, and three overlength returns. The initial records for the other three connections show that eight welds with four returns per connection were inspected and accepted on September 8, 1979. The reinspection of these welds and returns identified two returns which were overlength and undersized and two returns which were overlength per connection.

The failure to execute the required welding inspection program is a violation of Criterion X of Appendix B to 10 CFR Part 50. (482/8422-01)

#### 4. Observation of Electrical Separation (Class IE Cables)

The NRC inspectors observed the completed electrical cable work for conformance to the separation criteria specified in the FSAR, IEEE standards and site procedures. The specific areas inspected were the physical separation between redundant safety groups and between safety and non-safety groups. The plant areas inspected were the following:

- North Electrical Penetration Room
- South Electrical Penetration Room
- Control Room
- Centrifugal Charging Pump Rooms A and B
- Safety Injection Pump Rooms A and B
- Lower Cable Spread Room
- Upper Cable Spread Room
- Standby Diesel Generator Room B
- Main Steam Isolation Valve Room

The following documents were examined during this inspection:

- Bechtel Drawing E-IR8900, Revision 1, dated July 11, 1984, "Raceway Notes, Symbols & Details"
- Bechtel Drawing E-01013(Q), Revision 11, dated December 20, 1983, "Installation, Inspection, and Testing Details for Electrical Equipment and Cable"
- Bechtel Specification 10466-E-0(Q), Revision 11, dated June 25, 1981, "Electrical Design Criteria for the Standardized Nuclear Unit Power Plant System (SNUPPS)"
- Bechtel Drawing E-01006, Revision 8, dated December 7, 1982, "Single Line and Schematic Diagram Standards, Notes and Symbols"
- Daniel Procedure WP-X-303, Revision 9, dated September 22, 1982, "Installation of Cable"
- Daniel Procedure WP-X-304, Revision 14, dated February 9, 1984, "Termination of Cable"

Bechtel Drawing E-IR8900, Revision 1, states in paragraph 3.36.4 that:

"Minimum separation between different Class IE conduit systems and minimum separation between Class IE conduit systems & non-IE conduit systems shall be 1". Separation shall be measured between the outside edges of the conduit."



Contrary to the above, the following observations were noted where the required minimum separation was less than 1":

- Flex conduit 4J1039 (Class IE) crosses within 1 inch of flex conduit 6J1175 (Non-Class IE) in the Centrifugal Charging Pump Room B.
- Flex conduit 4U3FIT (Class IE) crosses within 1 inch of junction box 1U1201 (redundant Class IE group) in Safety Injection Pump Room B.
- Flex conduit 4U3E7A (Class IE) crosses within 1 inch of flex conduit 1U3K4B (redundant Class IE group) in the North Electrical Penetration Room.
- Flex conduit 1U1288 (Class IE) crosses within 1 inch of flex conduit 5J1124 (Non-Class IE) in the Main Steam Isolation Valve Room.
- Flex conduit 1U1281 (Class IE) crosses within 1 inch of flex conduit 5J1125 (Non-Class IE) in the Main Steam Isolation Valve Room.
- Rigid conduit 3C3009 (Class IE) crosses within 1 inch of rigid conduit 5C851A (Non-Class IE) in the Lower Cable Spread Room.
- Flex conduit 4J1C5B (Class IE) crosses within 1 inch of non-safety 120 volt AC outlet QA1530 in Standby Diesel Generator Room B.

Bechtel Drawing E-01013(Q), Revision 11, requires the following:

- a. Paragraph 5.8.1.b - "Within the control boards and other panels associated with protection systems, circuits and instruments of different separation groups shall be independent and physically separated horizontally and vertically by a distance of 6 inches."
- b. Paragraph 5.8.3 - "Non-safety related circuits shall be separated from Class IE circuits by the same distances applicable to Class IE circuits of different groups."

Contrary to the above, the following cables within cabinets or panels in the control room were found to have less than the required 6-inch minimum spacing:

- Cables 4SBS08AD and 4SBS08DD (Class IE) are within 6 inches of cable 5SCI01AE (Non-Class IE) at the floor penetration of cabinet RL025/026.
- Cables 1EJG09CD and 1EMG13AD (Class IE) are within 6 inches of separation group 4 vendor wiring at the base of cabinet RL017/018.
- Cable 1SBS08AC (Class IE) is within 6 inches of non-class IE cables 5SBS508CC, 5SFR16BB, 5SFS11BG, 5SFS11BF, 5SFR16BA, and 5SFY11AC in the main control board panel.

- Cable 4SB508AC (Class IE) is within 6 inches of several bundled separation group 5 non-class IE cables in the main control board panel. Two examples are cables 5SBZ07AJ and 5SBZ07AA.
- Cables 4SBS08AB, 4SBS08BB, and 4EM117BA (Class IE) are within 6 inches of cables 1SBS08AB, 1SBS08CB, and 1EM117AA (redundant Class IE group) in the main control board panel.

Bechtel sent to the NRC inspector, Startup Field Report (SFR) 1-RL-31 which details additional separation violations in the control room. This SFR, along with the examples noted by the NRC, show a widespread problem in internal panel and cabinet electrical separation.

The above examples are a violation of Criterion V of Appendix B to 10 CFR Part 50. (482/8422-02)

The NRC inspector also observed several installations of flexible electrical conduit which had the required 1 inch separation, but due to certain postulated events could violate the separation criteria. The installations noted were those where the flexible conduit dropped in air from rigid conduit to safety-related equipment. During events such as equipment vibration, transmitted hydrodynamic loads, or seismic events, the flexible conduits could come within 1 inch of redundant conduit. The following cases were observed:

- Flex conduit 1J1033 (Class IE) crosses flex conduit 5U1378 (Non-Class IE) at pumps DP-EM-01A in Centrifugal Charging Pump Room A.
- Flex conduit 1J1035 (Class IE) crosses flex conduit 5J1258 (Non-Class IE) at pump DP-EM-01A in Centrifugal Charging Pump Room A.
- Flex conduit 1UCIU (Class IE) crosses flex conduit 4U1228 (Non-Class IE) at pump DP-EM-01A in Centrifugal Charging Pump Room A.
- Flex conduit 4U1297 (Class IE) crosses flex conduit 6J1139 (Non-Class IE) at MSIV AB-HV-011 in the main steam isolation valve room.
- Flex conduit 4U1295 (Class IE) crosses rigid conduit 1U1113 (redundant Class IE group) at MSIV AB-HV-014 in the main steam isolation valve room.
- Cables from riser 1U3Z01 (Class IE) air drop to cable bushings of BOP computer cabinet RJ159A and flex conduit 6J1055 (Non-Class IE) at top entry to cabinet RJ159A in the north electrical penetration room.

These examples need to be evaluated by the licensee for safety significance and generic implications. Pending this evaluation, this item is considered unresolved. (482/8422-03)

5. As-Built Verification of Electrical Raceways

The NRC inspectors selected several Class 1E conduit and cable tray runs located in the reactor building, control building, and auxiliary building for verification of actual installation against the latest approved design drawings. The inspection was limited to an examination of the following:

- Location and routing
- Supports
- Separation
- Loading (cables - physical and thermal)
- Identification (conduit and tray)

Additional inspections will be performed by other NRC inspectors at a later time. A total of 765 feet of cable tray and 335 feet of conduit were inspected.

The following is a list of documents examined:

- Bechtel Drawing E-1R1411, Revision 0, dated April 16, 1984, "Raceway Plan - Auxiliary Building - Area 1, El. 2026'-0" "
- Bechtel Drawing E-1R1421, Revision 2, dated June 15, 1984, "Raceway Plan - Auxiliary Building - Area 2, El. 2026'-0" "
- Bechtel Drawing E-1R1441, Revision 2, dated April 26, 1984, "Raceway Plan - Auxiliary Building - Area 4, El. 2026'-0" "
- Bechtel Drawing E-1R1431, Revision 0, dated June 15, 1984, "Raceway Plan - Auxiliary Building - Area 3, El. 2026'-0" "
- Bechtel Drawing E-1R1433A, Revision 2, dated June 23, 1984, "Exposed Conduit - Auxiliary Building - Area 3, El. 2026'-0" "
- Bechtel Drawing E-1R1443C, Revision 2, dated July 11, 1984, "Exposed Conduit - Auxiliary Building - Area 4, El. 2026'-0" "
- Bechtel Drawing E-1R3711, Revision 1, dated June 28, 1984, "Raceway Plan - Control Building - Area 1, El. 2073'-6" "
- Bechtel Drawing E-1R3512, Revision 3, dated June 23, 1984, "Raceway Plan - Control Building - Area 2, El. 2032'-0" "
- Bechtel Drawing E-OR3714, Revision 6, dated October 18, 1982, "Exposed Conduit - Control Building - Area 1, El. 2073'-6" "

- Bechtel Drawing E-1R3514, Revision 4, dated October 4, 1984, "Exposed Conduit - Control Building - Area 1, El. 2032'-0" "
- Bechtel Drawing E-1R2423, Revision 0, dated May 31, 1984, "Raceway Partial Plan - Reactor Building - Area 2, El. 2026'-0" "
- Bechtel Drawing E-1R2421, Revision 2, dated August 4, 1984, "Raceway Plan - Reactor Building - Area 2, El. 2026'-0" "
- Bechtel Drawing E-1R2411, Revision 1, dated May 3, 1984, "Raceway Plan - Reactor Building - Area 2, El. 2026'-0" "
- Bechtel Drawing E-1R8900, Revision 1, dated July 11, 1984, "Raceway Notes, Symbols and Details"

The following Bechtel typical cable tray support details were reviewed:

- C-0401, Revision 14, dated January 13, 1984
- C-0402, Revision 15, dated March 6, 1984
- C-0403, Revision 19, dated February 22, 1984
- C-0404, Revision 18, dated April 26, 1984
- C-0405, Revision 9, dated April 24, 1984
- C-0408, Revision 0, dated June 28, 1984
- C-0409, Revision 13, dated April 26, 1984
- C-0411, Revision 8, dated November 4, 1983
- C-0414, Revision 9, dated April 20, 1983
- C-0420, Revision 4, dated October 13, 1983

In addition, the following Bechtel typical conduit support details were examined:

- C-0601, Revision 18, dated February 22, 1984
- C-0602, Revision 19, dated April 16, 1984
- C-0603, Revision 13, dated February 7, 1984
- C-0604, Revision 17, dated May 14, 1984
- C-0605, Revision 17, dated March 6, 1984

The NRC inspectors noted the following discrepancies during the inspection of cable trays and conduit:

- A loose bolt where the P1068 angle clip attaches the P1001 horizontal brace to the P1001 vertical brace at tray support 142-0058 at elevation 2026'-0" in the auxiliary building.
- The angle clips for trays 4U3B52 and 4J3B52 on support 143-0026 are 3½ inches in length versus the required 4 inches. These are located at elevation 2026'0" in the auxiliary building.
- Tray 4C8F87 has three out of four P-1068 angle clips missing on its two supports at elevation 2073'-6" in the control building.
- Cable IRPY10AA is unterminated, coiled, and supported by cable ties instead of required supporting material. This cable is located above tray 1C8F58 at elevation 2032'-0" in the control building.

The discrepancies were shown to Daniel QC personnel who confirmed the first two discrepancies. A work order is being issued to correct them. Daniel showed the NRC inspector that tray 4C8F87 was connected to the vertical support by direct bolting as allowed by an alternate support detail. Cable IRPY10AA was found to be a deleted cable. These discrepancies represent isolated cases considering the large number of supports inspected. No further action is required.

6. As-Built Verification of Electrical Cables

The NRC inspectors selected thirteen Class 1E electrical cables to verify that routing and separation conformed to design documents. The following cables were inspected:

<u>Cable</u>	<u>Tray</u>	<u>System</u>
1ALI03AA	Instrumentation	Aux. Feedwater
1ALG02CB	Control	Aux. Feedwater
1ALG04CB	Control	Aux. Feedwater
1BBG39AC	Control	Reactor Coolant
1BBS38AA	Instrumentation	Reactor Coolant
1GNG02CC	Power	Containment Cooling
1GNG02CG	Power	Containment Cooling
1GNG02AC	Power	Containment Cooling
1GNG02AG	Power	Containment Cooling
1NGG01AJ	Power	480V System
1NGG01BF	Power	480V System
4SBS01DA	Instrumentation	Reactor Protection
4SBS04BA	Control	Reactor Protection

There were no violations or deviations identified.



7. Review of Procedures (Penetration Fire Seals)

The NRC inspector reviewed the B&B Insulation, Inc., procedures for the installation of Radflex (flexible fire-radiation barrier) and High Density Lead Elastomer (solid fire and radiation barrier). These documents were examined to assure compliance with NRC requirements and licensee commitments.

The following B&B procedures were examined:

- 1030.112, "Installation Procedures - B&B Insulation, Inc. - Radflex Seal", Issue F, dated February 16, 1984
- 1030.114, "Installation of B&B Insulation Radflex Sealant Material Using a Mono-Pump Dispensing System", Issue 0, dated May 2, 1984
- 1030.212, "Proprietary - Proportioning, Pre-Batching and Blending B&B Radflex Components A&B for Mono-Pump Application"
- 1700.101, "Installation of Hi-Density Leaded Matrix", B Issue, dated February 16, 1984
- 1700.102, "Repair, of High Density Leaded Elastomer Penetration", D Issue, dated February 16, 1984
- 1700.121, "Installation of Hi-Density Leaded Matrix Annulus Reducing Seals"
- 1700.201, "Proportioning & Pre-Blending of B&B Hi-Density Leaded Matrix Components A&B", B Issue, dated February 27, 1984

No violations or deviations were identified.

8. Review of Nonconformance Reports, Design Change Notices and Field Change Requests (Safety-Related Conduits and Cable Trays)

The NRC inspector reviewed eight Daniel Construction Inc., Field Change Requests, three nonconformance reports and five design change notices relative to the installation of safety-related conduits and cable trays.

The documents were reviewed to determine whether the records were legible, complete, reviewed by QC personnel, readily retrievable and reflect "as-built" conditions of safety-related conduit and cable trays. In addition, the records were examined to determine whether nonconformances and changes were adequately described and included in the status of the corrective action or resolution.

The following records were examined:

<u>NCR's</u>	<u>DCN's</u>	<u>FCR's</u>
1SN17957E	C-0404(Q)15	1-5187-E
1SN17323E	C-0404(Q)14	1-5246-E
1SN4986E	C-0404(Q)10	1-5133-E
	C-0404(Q)9	1-5261-E
	C-0404(Q)8	1-5370-E
		1-5236-E
		1-5466-E
		1-5441-E

No violations or deviations were identified.

9. Interviews with Electrical Termination Personnel

The NRC inspectors interviewed two DIC personnel who performed actual terminations of Class 1E electrical cable. The two employees' training records were reviewed also. Both exhibited adequate technical knowledge as well as the understanding of procedure requirements.

No violations or deviations were identified.

10. Unresolved Items

Unresolved items are matters which require more information to ascertain whether they are acceptable items, violations, or deviations. One unresolved item is identified in paragraph 4.

11. Management Interview

The NRC personnel met with licensee and DIC management personnel as noted in earlier paragraphs of this report. The NRC personnel met with the licensee personnel noted in paragraph 1 to express the full results and conclusions pertaining to this inspection.