

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
REGION IV

Report No. 99900325/80-01

Program No. 51400

Company: Brand-Rex Company
Electronic and Industrial Cable Division
Main Street
Willimantic, Connecticut 06226

Inspection Conducted: May 20-22, 1980

Inspector:

W. E. Foster
W. E. Foster, Contractor Inspector
Components Section II
Vendor Inspection Branch

6/4/80
Date

Approved by:

D. M. Hunnicutt
D. M. Hunnicutt, Chief
Components Section II
Vendor Inspection Branch

6-4-80
Date

Summary:

Inspection on May 20-22, 1980 (99900325/80-01)

Areas Inspected: Implementation of 10 CFR 50, Appendix B criteria, and applicable codes and standards; including follow-up on inspector identified problems and unresolved items; follow-up on items of noncompliances/deviations; manufacturing process control; and change control. The inspection involved twenty-four inspector-hours on site by one NRC inspector.

Results: In the four areas inspected, the following four deviations and one unresolved item were identified:

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Deviations: Manufacturing Process Control - practices were not consistent with Criterion V of Appendix B to 10 CFR 50; paragraphs 5.0 and 5.1 of Section V, Revision 1, dated August 1976, of the Quality Assurance Manual and Manufacturing Procedure No. 030, Revision 0, dated April 1978 (See Notice of Deviation, Item A); and Operating Memo No. 317-00-1, Issue 1, dated September 9, 1975 (See Notice of Deviation, Item B).

Change Control - practices were not consistent with Criterion V of Appendix B to 10 CFR 50; paragraphs 5.3.2 and 5.3.5 of Engineering Procedure No. XII-0, dated August 17, 1979 (page 4) (See Notice of Deviation, Item C); and an unnumbered procedure entitled, Procedure For Repairs, dated October 1979 (See Notice of Deviation, Item D).

Unresolved Item: Manufacturing Process Control - time is not recorded when reels of cable are immersed; consequently, it was not apparent how the submerged time was determined (See Details Section, paragraph D.3.b).

DETAILS SECTIONA. Persons Contacted

- *A. Airola, Engineer, Quality Assurance
- E. E. Ashton, Supervisor, Production Control
- D. Breault, Clerk Typist, Purchasing
- *C. J. Crawford, Manager, Purchasing
- *I. N. Dwyer, Manager, Product Development
- *G. Glynn, Director, Manufacturing
- *G. Graeber, Director, Marketing and Engineering
- N. Kitchen, Technician, Calibration
- L. F. Lee, Coordinator, Utility Orders
- *A. E. Landry, Manager, Marketing and Production Services
- J. F. Osborn, Superintendent, Third Shift
- *P. Petruchik, Vice President and General Manager
- *L. B. Roberts, Manager, Quality Assurance
- *S. Sandberg, Engineer, Senior Product
- E. M. Walton, Manager, Industrial Market

*Attended Exit Interview

B. Follow-up on Items of Noncompliances/Deviations1. Objectives

The objectives of this area of the inspection were to verify that the vendor had taken the corrective actions and preventive measures stated in their correspondence to IE regarding items of noncompliance/ deviations.

2. Methods of Accomplishment

The preceding objectives were accomplished by:

- a. Reviewing the following documents to verify that authority and duties of persons and organizations had been delineated in writing: Section 1, Revision 3, dated August 1978 of the Quality Assurance Manual; General Department Responsibilities dated May 24, 1978, for Product Development - Process Engineering; Departmental Objectives, dated April 19, 1978, for Production Planning and Control; Departmental Objectives, dated May 15, 1978, for Marketing and Engineering; objectives, dated May 1978, for Purchasing; and Job Description Sheet dated June 16, 1978 and November 15, 1979, for Process Engineer.

- b. Reviewing Insulation Resistance Procedure No. 130, Revision 0, dated May 1980, and DC Resistance Procedure No. 131, Revision 0, dated May 1980, at the large and small Tank Test areas to verify procedures had been distributed.
- c. Reviewing Calibration Procedure No. 223, dated May 1979, for counters to verify that counters are adequately controlled.
- d. Reviewing Quality Audit Procedure (Internal), Revision 2, dated May 1978, and Quality Audit Procedure (Internal) No. 802, Revision 4, dated April 27, 1979, to verify that reporting requirements had been revised. Also, Audit Records, QA-801A dated May 1978, May 1979 and May 1980, to verify that the Storage and Shipping areas had been audited.

3. Findings

- a. (Closed) Deviation (Inspection Report No. 78-01): The inspector verified that authority and duties of persons and organizations had been delineated in writing.
- b. (Closed) Deviation (Inspection Report No. 78-01): The inspector verified that procedures for Insulation and DC Resistance had been distributed.
- c. (Closed) Deviation (Inspection Report No. 78-01): The inspector verified that counters are adequately controlled.
- d. (Closed) Deviation (Inspection Report No. 78-01): Audit records for May 1978, did not substantiate that shipping areas had been audited. However, the inspector verified that shipping areas had been audited in May 1979 and May 1980.

C. Follow-up on Inspector Identified Problems and Unresolved Items

1. Objectives

The objectives of this area of the inspection were to verify that inspector identified problems and unresolved items; during previous inspections, had been corrected and resolved satisfactorily.

2. Methods of Accomplishment

The preceding objectives were accomplished by:

- a. Reviewing Section XI, Revision 3, dated August 1978, of the QA Manual, to verify that it had been revised to address Test Control.

- b. Reviewing Calibration Procedure No. 223, dated May 1979, to verify that it accurately reflected the practice of calibrating counters.
- c. Reviewing Audit Report No. 1.0, dated September 18, 1978, to verify that the Quality Department had been audited by Engineering.

3. Findings

- a. (Closed) Unresolved Item (Inspection Report No. 78-01): The inspector verified that Section XI of the Quality Assurance Manual had been revised to address Test Control.
- b. (Closed) Unresolved Item (Inspection Report No. 78-01): The inspector verified that the procedure for calibrating counters accurately reflects the practice.
- c. (Closed) Unresolved Item (Inspection Report No. 78-01): The inspector verified that the Quality Department had been audited by Engineering.

D. Manufacturing Process Control

1. Objectives

The objectives of this area of the inspection were to verify that measures had been established and documented to control manufacturing, inspection and test activities. Also, to verify these activities had been accomplished in accordance with the established and documented measures. Additionally, verification of indication of mandatory hold points in appropriate documents.

2. Methods of Accomplishment

The preceding objectives were accomplished by:

- a. Reviewing the following documents to verify measures had been established and documented to control manufacturing, inspection and test activities:
 - (1) Quality Assurance Manual, Section Nos. -
 - (a) V, Revision 1, dated August 1976 - Instruction Procedures and Drawings,
 - (b) VIII, Revision 1, dated August 1976 - Identification and Control of Material, Parts and Components,

- (c) X, Revision 3, dated August 1978 - Inspection,
 - (d) XI, Revision 3, dated August 1978 - Test Control,
and
 - (e) XIV, Revision 1, dated August 1976 - Inspection,
Test and Operating Status.
- (2) Order Entry Flow Chart, Undated.
 - (3) Quality Instructions, Nos. -
 - (a) QC-100, Revision 9, dated February 12, 1979 -
In-Process Inspection Procedures,
 - (b) QC-101, Revision 7, dated September 16, 1976 -
Primary Extrusion,
 - (c) QC-105, Revision 8, dated January 18, 1978 -
Cabler, Cable Assembly,
 - (d) QC-600, Revision 1, dated February 1976 - Final
Inspection Procedure, and
 - (e) QA-820, Revision 4, dated April 27, 1979 -
Control of Stamps.
 - (4) Manufacturing Procedure No. 030, Revision 0, dated April
1978 - Primary Extrusion Operating Guides.
- b. Observing the following activities to verify that tasks were being
accomplished in accordance with established and documented measures:
Primary Extrusion, Jacketing, Cabling, and Testing.

3. Findings

a. Deviations From Commitment

- (1) See Notice of Deviation, Item A.
- (2) See Notice of Deviation, Item B.

b. Unresolved Item

A requirement exists to conduct a high voltage test on reels of cable while they are immersed in water and have been for six hours. There is no requirement to record the time when the

reels are immersed. Consequently, it was not apparent to the NRC inspector how the actual submerged time was determined.

E. Change Control

1. Objectives

The objectives of this area of the inspection were to verify that measures had been established to control changes to software and hardware. Also, to verify the measures for software changes included provisions for review, approval, and distribution to and usage at the location where the prescribed activity is performed. An additional phase was to verify the measures had been implemented.

2. Methods of Accomplishment

The preceding objectives were accomplished by:

- a. Reviewing the following documents to verify measures had been established to control changes to software and hardware:
 - (1) Quality Assurance Manual, Section Nos. -
 - (a) III, Revision 1, dated August 1976 - Design Control,
 - (b) VI, Revision 1, dated August 1976 - Documentation Control, and
 - (c) XV, Revision 2, dated August 1977 - Nonconforming Materials, Parts or Components.
 - (2) Engineering Procedures, Nos. -
 - (a) XII-0-1, Revision 0, dated January 1978 - Control of Engineering Master File, and
 - (b) XII-0, Revision Level 1, dated September 14, 1976 (page 4, revised August 17, 1979) - Operating Procedure for the Electronic and Industrial Product Engineering Departments.
 - (3) Quality Instruction No. QC-121, Revision 9, dated February 12, 1979 - Control of Nonconforming Material Procedure.
 - (4) An unnumbered document dated October 1979 - Procedure for Repairs.

- b. Observing the following to verify that established and documented measures had been implemented:
- (1) Material identified as nonconforming on Rejected Material Tag Nos.: 18662, dated May 21, 1980; 18663, dated May 21, 1980; 18659, dated May 20, 1980; 18633, dated April 17, 1980; and 18273, dated May 8, 1980.
 - (2) Raw Material Rejection Reports for Reject Tag Nos: 18272 on Purchase Order (P. O.) No. 30243; 18011 on P. O. No. 36292-3; 18332 on P. O. No. 26456; 18612 on P. O. No. 36598; and 18139 on P. O. No. 26884.
 - (3) Engineering Revisions, dated - November 14, 1979, for Part No. (P/N) T-7355; June 21, 1979, for P/N T-7243; April 29, 1980, for P/N T-7243-3PR/19; February 18, 1980, for P/N T-458-1/16; and an Inter-Office Correspondence dated December 28, 1979, for a change to numerous Part Numbers; T-7301-4P/16 among them.

3. Findings

a. Deviations From Commitment

- (1) See Notice of Deviation, Item C.
- (2) See Notice of Deviation, Item D.

b. Unresolved Item

None

F. Exit Interview

1. The inspector met with management representatives denoted in paragraph A. above at the conclusion of the inspection on May 22, 1980.
2. The following subjects were discussed:
 - a. Areas inspected.
 - b. Deviations identified.
 - c. Unresolved Item identified.
 - d. Contractor response to the report.

The contractor was requested to structure his response under headings of corrective action, preventive measures, and dates for each deviation.

Additionally, management representatives were requested to notify the Commission in writing if dates require adjustment, commitments require modification, etc.

3. Management representatives requested clarification of the deviation relating to the Production Control Department. Also, the inspector was informed that Extruding Machine No. 49 was new and being prepared for full operation. The inspector provided the clarification and stated that comments about Extruding Machine No. 49 would not appear in the report. However, a subsequent review of notes revealed that wire of an active order was being processed on Machine No. 49. On May 27, 1980, the inspector informed the QA Manager via telephone, that comments on Machine No. 49 would appear in the report inasmuch as an active order was being processed at the time of the inspection.