

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

Report No. 99900369/79-01

Program No. 51400

Company: Automatic Switch Company  
50-56 Hanover Road  
Florham Park, N. J. 07932

Inspection Conducted: July 10-13, 1979.

Inspector: *J. Barnes* 7-24-79  
*for* W. E. Foster, Contractor Inspector  
Components Section II  
Vendor Inspection Branch  
Date

Approved by: *J. Barnes* 7-24-79  
*for* D. M. Hunnicutt, Chief  
Components Section II  
Vendor Inspection Branch  
Date

Summary

Inspection on July 10-13, 1979 (99900369/79-01)

Areas Inspected: Implementation of 10 CFR 50, Appendix B criteria, and applicable codes and standards, including organization; quality assurance program; manufacturing process control; and change control. The initial management meeting was also conducted. The inspection involved twenty-seven (27) inspector-hours on site.

Results: In the four (4) areas inspected, no deviations or unresolved items were identified in one area. The following deviations and unresolved items were identified in the remaining three (3) areas:

Deviations: Quality Assurance Program - practice was not consistent with Criterion V of Appendix B to 10 CFR 50, paragraph 13.1.1 of the Quality Control Manual and page 13 of the Printed Forms Book (Notice of Deviation, Item A.).

Change Control - Practices were not consistent with Criterion V of Appendix B to 10 CFR 50, paragraph 4.2 and its subparagraph a. of Production Planning and Control Procedure No. 468, and Quality Control Procedures No. MP-I-011 (Notice of Deviation, Items B. and C.).

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Unresolved Item: Manufacturing Process Control - "Construction Used" and "Coil Data" had not been completed on the back of several completed Shop Orders (Details Section, paragraph E.3.b.).

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## DETAILS SECTION

A. Persons Contacted

- J. A. Brishcar, Customer Engineering
- W. M. Brown, Supervisor - Government and Nuclear Sales
- R. C. Carter, Assistant Manager - Production Planning and Control
- \*E. C. Dommermuth, Assistant Manager - Quality Control
- \*\*E. R. Ehrhard, President
- G. A. Franklin, Vice President - Industrial Relations
- \*\*H. H. Kaemmer, Vice President - Valve Department
- \*\*L. S. Olsen, Manager - Quality Control
- W. Palace, Inspector - Senior Tool
- G. Penny, Analyst - Scrap and Salvage
- W. Prudden, Inspector
- G. P. Sperun, Technician - Calibration
- D. J. Vollmer, Assistant Chief Engineer

\*Attended exit interview.

\*\*Attended initial management meeting and exit interview.

B. Initial Management Meeting1. Objectives

An initial management meeting was conducted to acquaint the vendor's management with the NRC responsibility to protect the health and safety of the public and to inform them of certain responsibilities imposed on vendors by the "Energy Reorganization Act of 1974" (Public Law 93-438). Those in attendance are denoted in paragraph A.

2. Methods of Accomplishment

The preceding objectives were accomplished by:

- a. Describing the historical events that indicated the need for the Vendor Inspection Program (VIP).
- b. Explaining the inspection base and how the inspections are conducted.
- c. Describing how inspection results are documented and how proprietary items are handled, including the vendor's opportunity to review the report for the purpose of identifying items considered to be proprietary.

- d. Describing the vendor's responsibility in responding to identified enforcement items relating to:
  - (1) Correction of the identified deviation.
  - (2) Action to be implemented to prevent recurrence.
  - (3) The dates when (1) and (2) above will be implemented. or completed.
- e. Explaining that all reports and communications are placed in the Public Document Room (PDR).
- f. Explaining the publication and function of the "White Book."

### 3. Findings

Solenoid valves supplied to nuclear power plants are identified by a Catalog Number and supplied to such customers as, Fisher Controls; Bettis Corporation; and Honeywell, Incorporated. Recently, orders were received from Long Island Lighting Company and General Electric Company for Class 1E switches.

The Switch and Valve Departments have separate Vice Presidents, Sales, and Engineering groups.

The percentage of production activity devoted to nuclear is less than one.

## C. Organization

### 1. Objectives

The objectives of this area of the inspection were to verify that authority and duties of persons and organizations performing activities affecting safety-related functions (achievers and verifiers) had been clearly established and delineated in writing. Also, to verify that performers of the quality assurance functions had sufficient authority and freedom to identify quality problems; to initiate, recommend or provide solutions; and to verify implementation of solutions. Further, the individual(s) responsible for assuring effective execution of any portion of the quality assurance program had direct access to such levels of management necessary to perform this function.

## 2. Methods of Accomplishment

The preceding objectives were accomplished by:

Review of the following documents to verify authority and duties of persons and organizations had been clearly established and delineated in writing:

- (1) Quality Control Manual, dated September 1, 1978; Sections 2 and 3.
- (2) Quality Control Procedures, Numbers MP-I-046, Change Letter B, dated October 13, 1976; ER 24, Change Letter B, dated August 26, 1977; ER 63, dated June 6, 1973; and ER 79 dated August 29, 1975.
- (3) Organization Charts for: Manufacturing, dated August 16, 1978; Valve Engineering, dated January 15, 1979; and Switch Engineering dated October 19, 1978.
- (4) Job Descriptions for: Assistant Quality Control Manager, dated February 8, 1977; Chief Inspector, dated February 8, 1977; Material Planner, dated January 18, 1977; Production Supervisor, dated January 18, 1977; and Chief Draftsman, dated October 23, 1978.

## 3. Findings

Within this area of the inspection, no deviations or unresolved items were identified.

## D. Quality Assurance Program

### 1. Objectives

The objectives of this area of the inspection were to verify that the program had been documented, controls had been established and the program had been implemented.

### 2. Methods of Accomplishment

The preceding objectives were accomplished by:

- a. Review of the following documents to verify the program had been documented by written policies, procedures, or instructions:

- (1) Quality Control Manual, dated September 1, 1978; Sections 6, 12, and 13.

(2) Quality Control Procedures, Numbers ER 84, Change Letter C, dated October 15, 1977; ER 51, dated March 5, 1969; ER 79, dated August 29, 1975; ER 78, dated August 27, 1975; and ER 84, Change Letter C, dated October 15, 1977.

- b. Review of hardware covered by the program to verify identification had been established.
- c. Review of the following activities to verify the program had been implemented: Procurement Document Control; Control of Measuring and Test Equipment; and Audits.

### 3. Findings

#### a. Deviation From Commitment

See Notice of Deviation, Item A.

#### b. Unresolved Items

None.

## E. 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. Review of the following documents to verify measures had been established and documented to control manufacturing, inspection and test activities:
  - (1) Quality Control Manual, dated September 1, 1978; Sections 8, 11, and 15.
  - (2) Quality Control Procedures, Numbers ER 41, Change Letter A, dated July 13, 1976; ER 96, dated October 4, 1978; and ER 57, Change Letter A, dated May 13, 1971.
  - (3) Assembly Procedures, Numbers AP-NP 8316-1, Change Letter B, dated January 20, 1979; and AP-NP 8316E--1, dated January 20, 1979.

(4) Test Procedure Number, TP-NP 8316, Change Letter A, dated September 29, 1978.

- b. Review of the following activity and attendant documents to verify task accomplishment in accordance with established and documented measures:

Preassembly inspection of parts to assemble eight (8) solenoid valves, Part Number NP 206-381-6F.

- c. Review of the following completed Shop Orders for nuclear solenoid valves, to verify established and documented measures had been implemented: Numbers 46850H; 65666H; 56418H; 56533H; 56528H; and 56525H.

### 3. Findings

#### a. Deviations From Commitment

None.

#### b. Unresolved Item

Paragraph 2.7 of Quality Control Procedures, Number ER 41, Change Letter A, dated July 13, 1976, requires that the final inspector verify the back of the shop order had been signed or stamped by the respective assembler, tester, and inspector to verify conformance to applicable assembly, manufacture, test procedure, and/or drawings. The NRC inspector observed that "Construction Used" and "Coil Data" had not been completed on the back of several completed shop orders for nuclear solenoid valves. Consequently, the NRC inspector was unable to determine how the final inspector verified conformance to applicable assembly, manufacture, and/or drawings.

### F. 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:

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- a. Review of the following documents to verify measures had been established to control changes to hardware and software:
- (1) Production Planning and Control Procedure Number 468, dated October 5, 1978.
  - (2) Procurement Department Procedure G, dated January 1, 1972.
  - (3) Engineering Department Procedures, Numbers 1, Change Letter G, dated May 10, 1979; 20, Change Letter F, dated October 10, 1978; and 92, Change Letter A, dated April 23, 1975.
  - (4) Quality Control Manual, dated September 1, 1978; Section 17, 18, and paragraphs 7.1.7, 7.1.8 and 7.1.9.
  - (5) Quality Control Procedures, Numbers Er 85, Change Letter A, dated June 26, 1978; ER 24, Change Letter B, dated August 26, 1977; and MP-I-011, Change Letter D, dated October 28, 1975.
- b. Review of the following documents to verify changes had been controlled in accordance with established measures:
- (1) Manufacturing Procedures, Numbers B-004, Change Letter Y, updated by Engineering Release Valve (ERV) 88285, dated February 26, 1979; B-011, Change Letter Q, updated by ERV 86656, dated September 19, 1978; and C-002, Change Letter E, updated by ERV 80098, dated January 28, 1977.
  - (2) Assembly Procedures, Numbers 2-8022, Change Letter B, revised by ERV 13281, dated June 27, 1957; 2S-006, issued by ERV 18445, dated July 13, 1959; and 3S-001, Change Letter B, reissued by ERV 32845, dated March 12, 1964.
  - (3) Test Procedures, Numbers 2-082, Change Letter B, revised by ERV 81035, dated April 11, 1977; 3-012, Change Letter D, reissued by ERV 34218, dated August 10, 1964; and PS-012, Change Letter A, revised by ERV 80100, dated February 8, 1977.
- c. Review of the following non-conforming material to verify control had been in accordance with established measures: Part Number 208-995-1; 182-440-8; 178-036-2; 180-795-4; 179-965-1; FV-103-085-1; and 178-073-2.



3. Findingsa. Deviations From Commitment

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

Regarding Notice of Deviation, Item B, eight (8) solenoid valves (NP 831654E) for nuclear application were near completion of the assembly phase on Shop Order Number 44044H. Information posted on the front of the Shop Order indicates Drawing 206-384, Revision B and Parts List 206-384 Revision C are the documents dictating construction. Preassembly inspection was performed on June 9, 1979. The NRC inspector noted that Engineering Release Number ERV 87697, dated January 25, 1979 indicates the Drawing is Revision C and the Parts List is Revision E.

b. Unresolved Items

None.

G. Exit Interview

1. The inspector met with management representatives denoted in paragraph A. at the conclusion of the inspection on July 13, 1979.
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 acknowledged the comments made by the inspector.