

ORGANIZATION: ROTORK CONTROLS, INCORPORATED
ROCHESTER, NEW YORK

REPORT NO.: 99900839/89-01	INSPECTION DATE: September 12-13, 1989	INSPECTION ON-SITE HOURS: 17
CORRESPONDENCE ADDRESS: Rotork Controls, Incorporated 19 Jet View Drive Rochester, New York 14624		
ORGANIZATIONAL CONTACT: Mr. Doug Matla, QA Manager TELEPHONE NUMBER: (716) 328-1550		
NUCLEAR INDUSTRY ACTIVITY: Electric and hydraulic actuators for valves.		
ASSIGNED INSPECTOR: <u>Edward T. Baker</u> <u>9/27/89</u> Edward T. Baker, Reactive Inspection Section No. 1 Date		
OTHER INSPECTOR(S):		
APPROVED BY: <u>E. William Brach</u> <u>10/2/89</u> E. William Brach, Chief, Vendor Inspection Branch Date		
INSPECTION BASES AND SCOPE: A. <u>BASES</u> : Appendix B to 10 CFR 50, 10 CFR 21 B. <u>SCOPE</u> : Review QA program elements applicable to design control, procurement, and dedication of commercial grade items.		
PLANT SITE APPLICABILITY: Fitzpatrick (50-333)		

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A. VIOLATION:

None.

B. NONCONFORMANCES:

1. Contrary to Criterion III of Appendix B to 10 CFR 50 and Paragraphs 4.2 and 4.2.1 of Section 3 of Rotork's QA Manual, on Anchor Darling Valve Company Purchase Order (PO) G-1942 and Revision 1 to the PO, Rotork personnel failed to route Nonstandard Product Request Forms 916 and 1087 to the QA Manager for review and approval. (89-01-01)
2. Contrary to Criterion III of Appendix B to 10 CFR 50 and List of Parts, LOP 050, Rotork used 3/8" diameter, 1" sockethead capscrews purchased commercial grade to hold down thrust rings without verifying that the capscrews met the 70 tons/square inch requirement listed on LOP 050 for the item (Item 69). (89-01-02)
3. Contrary to Criterion IV of Appendix B to 10 CFR 50 and Paragraph 5 of ANSI N45.2., Paragraph 3.4 of Appendix A to Section 7 of Rotork's QA manual does not require that suppliers to Rotork pass QA requirements down to their suppliers under any circumstance. (89-01-03)
4. Contrary to Criterion IV of Appendix B to 10 CFR 50 and Paragraph 3.6 of Section 4.0 of Rotork's QA Manual, two POs to ASCO for solenoid valves qualified to IEEE-323 and 344 were not approved by the QA manager and did not include appropriate QA requirements. (89-01-04)
5. Contrary to Criterion V of Appendix B to 10 CFR 50, Rotork had no documented instruction or procedures on how items returned from customers were to be handled, resulting in replacement ASCO solenoid valves being ordered without appropriate QA requirements.

C. UNRESOLVED ITEMS:

During the inspection, Rotork's Part 21 procedure was reviewed and the inspector reviewed the changes which were made to the procedure as a result of a previous NRC inspection and guidance. The procedure described the actions to be taken when a defect was determined to exist, i.e., report it to the NRC. However the revised procedure did not cover actions to be taken when a deviation exists that Rotork

cannot perform the evaluation to determine if the deviation could create a substantial safety hazard, i.e., report the deviation to their customer. In discussing these concerns with Rotork's QA Manager, he informed the inspector that the current Part 21 procedure was rewritten during the last NRC inspection and was found acceptable as rewritten. It is recognized that NRC comments on the procedure inadequacies during the previous inspection were inadequate or incomplete. As a result this issue is categorized as an Unresolved Issue, 89-01-06, and corrective action will be reviewed during a future inspection.

D. STATUS OF PREVIOUS INSPECTION FINDINGS:

There were no findings during the previous inspection.

E. INSPECTION FINDINGS AND OTHER COMMENTS:

1. Entrance and Exit Meetings

The NRC staff informed Rotork's management representatives of the scope of the inspection during the entrance meeting on September 12, 1989, and summarized the inspection findings and observations during the exit meeting on September 13, 1989.

2. QA Program

Rotork has a single QA program written to meet Appendix B and ANSI N45.2, which is applied to their three actuator lines, the nuclear qualified electric motor driven A-series, the quarter-turn electric motor driven AQ-series, and the pneumatic P-series. Suppliers to Rotork may be qualified by audit, review of the supplier's QA manual, or historical performance.

3. Design Control

According to Rotork's QA Manual, anyone can suggest a product modification through the product modification system. The inspector reviewed the modifications listed in the Engineering Design Mods Report Log for the period 1984 to present. Two modifications were selected for detailed review. The modifications had been evaluated for affect on the actuator's qualification and found not to affect qualification. The appropriate parties had reviewed and approved the modifications.

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During discussions with Rotork personnel concerning the sources of parts for the valve actuators, it was determined that all parts for the nuclear qualified electric operators are ordered from Rotork Limited, Bath, England, with the exception of fasteners, which are procured locally from a supply house. When asked which fasteners are considered critical to the functioning of the operator, Rotork's Engineering Manager stated only the 3/8" diameter, 1" long sockethead capscrews that hold down the thrust ring are considered critical. When asked for a copy of a PO for the fasteners, Rotork personnel provided a PO to Rochester Screw & Bolt Company that included this fastener which was ordered commercial grade. When the inspector asked to see the design requirements for the capscrew, Rotork personnel provided List of Parts, LOP 050. The capscrew was listed as Item 69 and described as a 3/8" x 1" UNC sockethead capscrew, 70 tons/square inch tensile strength. When questioned by the inspector, Rotork personnel stated that no action was taken to assure that the capscrews purchased as commercial grade met the tensile strength requirement. This was identified as Nonconformance 89-01-02.

b. Procurement Document Control

The inspector's review of the QA Manual revealed that Rotork's Supplier Quality Assurance Policy, Appendix A to Section 7 of the QA Manual, did not require Rotork's suppliers to pass applicable QA requirements down to sub-tier suppliers. This was identified as Nonconformance 89-01-03.

c. Control of Purchased Material Equipment and Services

Rotork's QA Manual allows suppliers to be qualified based on product quality history, audits, or review and approval of the suppliers' QA manual. For all purchased material, Rotork maintains a computerized data file, by supplier and part number, on the quality of items supplied. For all items produced domestically under a Rotork part number, Rotork performs a receipt inspect of all dimensions and drawing notes on a sample of parts received. The sample size is based on a Mil-Std-105D single sampling plan. Every three months the QA department calculates a Vendor Rating based on the number of parts supplied and the number accepted. The rating is mailed to the vendor and includes

a request for corrective action for a rating of 4 percent or greater rejected parts. If a company has a reject rate of 5 percent or greater for three consecutive quarters, the company is removed from the approved suppliers list.

For the nuclear qualified line, there are only two qualified vendors, Rotork, Ltd. and Carboline Company, the paint manufacturer. Both companies are audited on a three year cycle and Rotork tracks the quality history of the parts received. Products from these two companies are accepted based on Certificates of Conformance.

d. Control of Returned Equipment

In reviewing the QA Manual the inspector noted that control of equipment returned for repair, replacement, or any other reason was not covered by the QA Manual. Rotork personnel explained that all returns are handled by the service department. However, there are no written instructions or procedures covering the service department's activities. This finding is identified as Nonconformance 89-01-05.

All returns are listed in a log book, Service Request/Returned Material Request Log. The inspector selected 13 packages for review. Of the 13 packages selected for review, only 2 were for actuators for nuclear power plants, and of those 2, 1 had a discrepancy. SE-4820 was written to modify a pneumatic actuator ordered by Anchor Darling, PO G-1942 and Revision 1, for use at the Fitzpatrick nuclear plant on a feedwater nonreturn checkvalve. Part of the modification involved changing out two ASCO solenoid valves for the same model valve, but with 6-foot leads. The modification was documented on Nonstandard Product Request Form 1087, dated March 16, 1989. PO 32079 was placed with ASCO on May 9, 1989 as a commercial grade order. The inspector reviewed Anchor Darling's order to Rotork and noted that the PO required the ASCO solenoid valves be certified to IEEE-323 and 344. The inspector then asked to see the paperwork for the original actuator. The inspector reviewed Nonstandard Product Form 916 and Rotork's original PO to ASCO, PO 30878, dated September 8, 1988. This PO was also a commercial grade order. Additional review of the nonstandard product forms and the POs revealed that the QA Manager had not reviewed or approved any of them. The failure to have QA review the nonstandard product forms resulted in Nonconformance 89-01-03 and the failure to include appropriate QA requirements

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in the POs to ASCO and have the QA Manager review the POs resulted in Nonconformance 89-01-04. Rotork took prompt corrective action and issued a modification to the PO to ASCO, requiring the valves be manufactured under ASCO's QA program. The revised POs were reviewed by the QA Manager.

F. PERSONS CONTACTED:

Robert Arnold, President
Daniel Brown, Manufacturing Manager
Doug Matla, QA Manager
Mark Saltzer, Purchasing Manager
Fredric Washburn, Engineering Manager

All parties listed above attended the exit meeting.