VENDOR INSPECTION REPORT

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

Report No. 99900300/78-01 Program No. 44075

Company: Colt Industries
Fairbanks Morse Engine Division
701 Lawton Avenue
Beloit, Wisconsin 53511

Inspection Conducted: October 2-6, 1978

Inspector: W. E. Foster, Contractor Inspector, Vendor Inspection Branch — Date: 10/31/78

Approved by: D. M. Hunnicutt, Chief, Components Section II, Vendor Inspection Branch — Date: 10/31/78

Summary

Inspection on October 2-6, 1978 (99900300/78-01).

Areas Inspected: Action on seven (7) previously identified inspection findings and Action Item No. H10223F4 (Part 21 Report No. 78-058-000). Also, implementation of 10 CFR 50, Appendix B criteria, and applicable codes and standards, including change control. The inspection involved thirty (30) inspector hours on site.

Results: In the three (3) areas inspected, no unresolved items were identified. The following deviations were identified.

Deviations: Action on previously identified Inspection Findings - three (3) items had not been completed as indicated in the corrective action response letter (Enclosure, Items A. and B.); Change Control - changes were not consistent with Criterion VI of Appendix B to 10 CFR 50 (Enclosure, Item C.), verification of design changes were not consistent with Criterion III of Appendix B to 10 CFR 50 (Enclosure, Item D.).

Unresolved Items: None.

DETAILS SECTION

A. Persons Contacted

*C. A. Ankrum, Manager, Quality Assurance
*R. H. Beadle, Vice President, Engineering
B. Bingham, Machine Operator
B. E. Clement, Supervisor, Engineering Services
L. W. Cooper, Project Engineer
*G. Davis, Vice President, Manufacturing
*E. L. Fay, Vice President, Contracts
E. A. Gipp, Chief Inspector, Assembly and Test
H. Gregory, Supervisor, Machine Shop
*H. R. Hartshorn, Engineer, Senior Quality Control
T. L. Milne, General Foreman, Production Control
*J. F. Morgan, President, Fairbanks Morse Engine Division
*J. M. Moriarty, Manager, Utility Sales
G. W. Olson, Supervisor, Contract Administration
S. Peterson, Engineering Clerk
*R. T. Pickos, Engineer, Senior Quality Assurance
*W. A. Schlagenhaft, Manager, Quality Assurance Engineering (Nuclear)
C. W. Shockley, Supervisor, Industrial Engineering
D. Vincent, Supervisor, Production Control
W. Weiss, Manager, Information Services
W. H. Werschin, Supervisor, Project Engineering (Nuclear)

*Attended Exit Interview.

B. Action on Previous Inspection Findings

1. (Closed) Deviation (Report No. 77-01): The inspector verified that, (1) Standard Practice 525.20A had been revised to incorporate provisions for review and approval of Process Operation Sheets, (2) Standard Practice 340.30 had been revised to allow use of Form BF3009-2, and (3) Standard Practice 712.00 had been revised to require written procedures that define requirements for review, approval, and control of documents.

2. (Closed) Deviation (Report No. 77-01): The inspector verified that verification methods are being identified in Verification Documentation.

3. (Closed) Deviation (Report No. 77-01): The inspector verified the appropriate word had been lined out on Engineering Change Request and Change Order forms.

4. (Closed) Deviation (Report No. 77-01): There was no documented evidence that additional audits, in excess of QA Manual requirements, had been performed, (See Enclosure, Item A.).

5. (Closed) Deviation (Report No. 77-01): A manufacturing order packet did not contain required drawings, (See Enclosure, Item B.).

6. (Closed) Deviation (Report No. 77-01): There was no documented evidence that additional audits, in excess of QA Manual requirements, had been performed, (See Enclosure, Item A.).

7. (Resolved) Unresolved Item (Report No. 77-01): Standard Practice 350.40 had been revised to indicate that the chief engineer must sign Engineering Change Orders for mandatory changes.

C. Part 21 Report Follow-up

1. Objectives

The objectives of this area of the inspection were to verify that:

a. The report accurately described the defect or failure to comply and satisfied the reporting requirement with respect to information provided and timing of submittal.

b. The defect or failure to comply had been evaluated as required by Part 21 and reporting organization procedures.

c. The stated corrective action is implemented or planned.

2. Methods of Accomplishment

The preceding objectives were accomplished by:

a. Review of Standard Practice Number 714.00, dated December 1977 to verify a procedure had been established to identify reporting requirements.

b. Review of Part 21 Report No. 78-058-000 to verify the report met the requirements of Standard Practice 714.00 and 10 CFR Part 21.

c. Review of correspondence between the manufacturer and customer to verify reporting/acknowledge and corrective action effort.

d. Review of corrective action and preventive measures to verify adequacy.

e. Review of Customer Service Representative Daily Progress Report regarding the inspect/repair activity at the Farley Nuclear Generating Station to determine the extent of the problems and corrective action.

3. Findings

a. Deviation

None.

b. Unresolved Items

None.

c. Comments

The Customer Service Representative Daily Progress Report covering the period August 28 - September 2, 1978, details the inspect/repair activity of the fuel line flares at the Farley Nuclear Generating Station. There was no evidence of cracks or prior leaking; however, all flares were outside dimensional requirements. As a result of this anomaly, all one and one-quarter (1¼) inch diameter fuel lines were replaced and leak tested satisfactorily. No schedule had been formalized to inspect/repair the units at Summer Nuclear Generating Station or those in storage at the manufacturer's facility in Beloit, Wisconsin. The manufacturer expects to proceed at Summer during the week of 8-14 October 1978. Units in storage at Beloit will be inspected/repaired prior to shipment.

A new tube flaring tool has been purchased. Instruction and demonstration of its usage was provided by a representative of the seller; this effort was documented in a memorandum dated October 4, 1978. The old flaring tools are inaccessible to the operators and scheduled for destruction during November 1978. Discussion with the Vice President - Engineering reveals his belief that inspection of flares should be instituted. He directed the Manager of Quality Engineering (Nuclear) to take the action necessary for implementation. This will require revision of process documentation and initiaton of a procedure to flare tubes.

Colt Industries Submitted a report to NRC dated June 23, 1978, that appears to meet the intent and reporting requirements of 10 CFR Part 21.

D. Change Control

1. Objectives

The objectives of this area of the inspection were to verify that:

a. Design changes, including field changes, had been:

(1) Subjected to design control measures commensurate with those applied to the original design, and

(2) Approved by the organization that performed the original design, or a designated responsible organization.

b. The design/test control system addressed changes or modifications made to equipment and test specifications after:

(1) The start of design tests, or

(2) Beginning of operating experience reporting period, and

(3) Completion of equipment qualification.

c. The design/test control system required an evaluation of each change or modification to determine its effect on equipment qualification.

d. Technical change(s) imposed by customer(s) had been translated into appropriate technical documents.

e. Measures had been established to control materials, parts, or components which did not conform to requirements.

f. The written procedures and established measures had been implemented.

2. Methods of Accomplishment

The preceding objectives were accomplished by:

a. Review of the following customer orders and attendant documents to verify that design control; document control; test control; and nonconforming materials, parts, or components had been invoked:

(1) Bechtel Power Corporation Purchase Order No. 10855-M-018 (Q) AC, dated October 27, 1976.

(2) Stone and Webster Engineering Corporation Purchase Orders:

(a) Number NA 3410, dated December 30, 1976,

(b) Number NA 4410, dated December 30, 1976, and

(c) Number 2447.300-241, dated June 24, 1974.

(3) United Engineers and Constructors, Incorporated Purchase Order No. 9763.006-201-1, dated September 19, 1974.

b. Review of the following documents to verify that measures had been established to control changes to software and hardware:

(1) Section 3, Revision 0, dated April 1976, of the Quality Assurance Manual.

(2) Section 4, Revision 3, dated August 1978, of the Quality Assurance Manual.

(3) Section 6, Revision 0, dated April 1976, of the Quality Assurance Manual.

(4) Section 11, Revision 0, dated April 1976, of the Quality Assurance Manual.

(5) Section 15, Revision 0, dated April 1976, of the Quality Assurance Manual.

(6) Section 5, Revision 4, dated March 1977, of the Quality Assurance Manual - Nuclear.

(7) Section 6, Revision 3, dated May 1976, of the Quality Assurance Manual - Nuclear.

(8) Section 7, Revision 3, dated May 1976, of the Quality Assurance Manual - Nuclear.

(9) Section 14, Revision 2, dated May 1976, of the Quality Assurance Manual - Nuclear.

(10) Standard Practice No. 350.40, dated March 1978.

(11) Standard Practice No. 350.45, dated March 1978.

(12) Standard Practice No. 350.60, dated May 1978.

c. Review of the following Test Procedures and related Change Orders (C.O.) to verify implementation of established measures:

(1) Number P12607418, Revision 5, dated August 24, 1978, and C.O. Nos. P8060, dated July 13, 1978, and P8129, dated August 24, 1978.

(2) Number P12606372, Revision 1, dated August 30, 1976, and C.O. No. P6435, dated August 30, 1976.

(3) Number 11871352, Revision 1, dated January 26, 1977, and C.O. No. P6785A, dated January 26, 1977.

(4) Number 11871441, Revision 3, dated February 16, 1977, and March 3, 1977, and C.O. Nos. P6822, dated February 10, 1977; P6826, dated February 12, 1977, and P6842, dated March 3, 1977.

3. Findings

a. Deviations

(1) See Enclosure, Item C.

(2) See Enclosure, Item D.

b. Unresolved Items

None.

c. Comments

Stone and Webster Engineering Corporation Purchase Order No. 2447.300-241, dated June 24, 1974, requires the use of Specification No. 2447.300-241, dated September 20, 1973. The Specification states in part, "The Seller's Quality Assurance program shall conform to . . . Exhibit I-0, Exhibit IIA-2 and Exhibit IIIA-2."

E. Exit Interview

1. The inspector met with management representatives denoted in paragraph A. at the conclusion of the inspection on October 6, 1978.

2. The following subjects were discussed:

   a. Areas inspected.

   b. Deviations identified.

   c. Contractor response to the report.

   The contractor was commended on the format and contents of his response to Inspection Report No. 77-01. He was requested to continue in that manner.

3. Management disagreed with the inspector regarding contents of the Part 21 report; specifically; nonidentification of the safety hazard created and schedule for corrective action (length of time to complete).