VENDOR INSPECTION REPORT

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

Report No. 99900058/80-01 Program No. 51300

Company: Rockwell International
Flow Control Division
1700 South Saunders Street
Raleigh, N. C. 27603

Inspection Conducted: June 25-27, 1980

Inspectors: Wm. D. Kelley 7/30/80
Wm. D. Kelley, Contractor Inspector Date
Components Section I,
Vendor Inspection Branch

Approved by: D. E. Whitesell 7/31/80
D. E. Whitesell, Chief, Components Section I, Date
Vendor Inspection Branch

Summary

Inspection on June 25-27, 1980 (99900058/80-01).

Areas Inspected: Implementation of 10 CFR 50, Appendix B and applicable codes & standards including, procurement, control-procedure, document, and drawing control; manufacturing process control; audits-internal mangement; and training. Also, performed a review of vendors activities and conducted an exit interview. The inspection involved nineteen (19) inspector-hours on site by one (1) NRC inspector.

Results: In the five (5) areas inspected, no deviations or unresolved items were identified in three (3) areas. The following were identified in the remaining two (2) areas.

Deviations:

A. Procurement Control - Procedure, Document, and Drawing Control (Details, paragraph C.3.b) contrary to Criterion V of Appendix B to 10 CFR 50, paragraph NCA-4134.5 of Section III to the ASME Code, and paragraph 2.2.5 of RI-FCD Procedure No. 36-40-27-05 the required audits were not performed. (Notice of Deviation, enclosure, Item A).

B. Manufacturing Process Control. (Details, paragraph D.3.b) Contrary to Criterion V of Appendix B to 10 CFR 50, paragraph NCA-4134.5 of Section III to the ASME Code, and laboratory calibration sticker the nondestructive testing personnel continued to use the ultrasonic testing equipment past the recalibration date. (Notice of Deviation, enclosure, Item B.)

Unresolved Item - Manufacturing Process Control (Details paragraph D.3.c) An actuator had a flange welded to a cylinder and the inspector did not have time to review the stress calculation to determine whether the calculated stress values met ASME Code requirements.

DETAILS

A. Persons Contacted

Rockwell International - Flow Control Division (RI-FCD)

*R. A. Bandukwala, Manager Quality Assurance
*B. E. Carothers, Supervisor Metallurgical Control
*D. Creech, Senior Quality Assurance Engineer
*J. V. Grasso, General Manager
*F. D. Johnson, Supervisor Materials Engineering

*T. Kunkle, Supervisor, Gate Valve Design
*R. D. Norden, Production Engineering Manager
*W. G. Rains, Supervisor Quality Assurance Engineering

Hartford Steam Boiler Inspection & Insurance Company

D. B. Ashley, Authorized Nuclear Inspector

*Denotes those persons who attended the Exit Interview (See paragraph G).

B. General Review of Vendor's Activities

1. The ASME resurveyed RI-FCD and reissued the following Certificates of Authorization to them to use their symbol:

Certification No.	Symbol	Product
N-1562	N	Class 1, 2, & 3 valves
N-1563	NPT	Class 1, 2, & 3 valve appurtenances

These certificates expire on November 26, 1982.

2. The RI-FCD has signed a contract with Hartford Steam Boiler Insurance and Inspection Company as their authorized inspection agency. The authorized nuclear inspector is a resident inspector.

3. RI-FCD's contribution to the nuclear industry represents approximately fifteen percent (15%) of its total workload.

C. Procurement Control - Procedure, Document, and Drawing Control

1. Objectives

The objectives of this area of the inspection were to ascertain,

a. Whether procurement control procedures had been developed to control the review, approval, release and issuance, of procedures, documents and drawings in a manner consistent with NRC rules and regulations, and the vendors ASME accepted Quality Assurance Program.

b. That the procurement control procedures were being properly and effectively implemented by the vendor.

2. Method of Accomplishment

The objectives of this area of the inspection were accomplished by:

a. The review of the ASME accepted Quality Assurance Manual, Revision 8,

(1) Section 4.0, "Procurement Document Control,"
(2) Section 6.0, "Document Control," and
(3) Section 7.0, "Control of Purchased Materials, Items, and Services;"

to verify that the vendor had established procedures to prescribe a system for controlling procedures, documents, and drawings.

b. Review of the following RI-FCD Plant Internal Operating Procedures

(1) Number 46-23-15-08, "Placement Distribution, and Functional Use of Purchase Orders for QAP Materials and Services."
(2) Number 36-23-07-03, "Purchase Order Revisions,"
(3) Number 36-41-01-06, "Procedure for Performing Vendor Audits," and
(4) Number 36-23-19-02, "Vendor Certification Submittals;"

to verify that they had been prepared by the designated authority, approved by management and reviewed by quality assurance.

c. Review of the documents referenced in paragraph a. and b. to verify that they provide for the identification of personnel responsible for preparing, reviewing, approving, and issuing procedures, documents, and drawings; and that the review and approval of significant changes are performed by the same personnel, also to ascertain whether minor changes to design drawings, that do not require design approval, are identified.

d. Review of the following documents

(1) Three (3) Document Receipt Forms - "Method Specification," and
(2) Three (3) Document Receipt Forms - "QAP Number . . . ;"

to verify that the distribution lists are current and that the proper documents are identified, accessible, and are being used.

e. Interviewed personnel to verify whether they are knowledgeable in the procedures applicable to procedure, document, and drawing control.

3. Findings

a. The inspector verified that procurement control procedures had been developed to control the review, approval, release and issuance of procedures, documents and drawings in a manner consistent with NRC rules and regulations and the vendor's ASME accepted Quality Assurance Program.

b. Deviation -

See Item A, Enclosure - Notice of Deviation. Contrary to requirements audits were not performed as prescribed. The corrective action to prevent recurrence was implemented, documented, and verified prior to the conclusion of the inspection, and the deviation closed. No response from the vendor is required.

c. Within the area of the inspection no unresolved items were identified.

D. Manufacturing Process Control

1. Objectives

The objectives of this area of the inspection were to verify that the vendor's manufacturing processes were:

a. Performed under a controlled system which meets the NRC rules and regulations, and the vendor's commitments in his ASME accepted Quality Assurance Program.

b. Effective in assuring product quality.

2. Method of Accomplishment

The objectives of this area of the inspection were accomplished by.

a. Review of the ASME accepted Quality Assurance Manual, Rev. 8,

(1) Section 8.0, "Identification and Control of Materials and Items."
(2) Section 9.0, "Control of Processes," and
(3) Section 10.0, "Examination, Tests, and Inspections;"

to verify that procedures had been established which prescribes a control system of the manufacturing processes.

b. Review of the following Plant Internal Operating Procedures

(1) Number 36-80-10-07, "Preparation, Issuance, Approval, and Revision of Manufacturing Route Cards."
(2) Number 36-40-13-07, "Controlling Materials for "N"/"U" Stamp and Traceable Components, Valves, or Actuators," and
(3) Number 36-70-10-04, "Structured Bill of Material Development and Issue;"

to verify that the control system requires shop travelers, (Route Card) or process control check lists, to be prepared which identifies the document numbers and revisions to which the process must conform. Also to verify that all processes and tests are to be performed by qualified personnel using qualified procedures.

c. Review of the shop traveler, or process control check lists, to verify that spaces are provided for reporting the results of specific operations, or reference to other documents where the results are maintained. Also that it includes space for the sign-off by the vendor, indicating the date on which the operation or test was performed, and space for signoff and date, by the authorized nuclear inspector, to document his acceptance of activities that he has selected as madatory hold points.

d. Review of shop travelers (Route Cards) of the following parts

(1) 00196133-10066-01, Cylinder Weldment
(2) 00274630-14000-05, 28x24x28 F1911 (WGC) Body
(3) 00720384-90168-01, Actuator a-180BX-13

to verify their compliance with the above referenced procedures, and the overall QA program documentation requirements, including the establishment of mandatory hold points by the authorized nuclear inspector.

e. Interviews with personnel to verify they are knowledgeable in the procedures applicable to manufacturing process control.

3. Findings

a. The inspector verified that the vendor's manufacturing processes are performed under a controlled system which is consistent with the NRC rules and regulations and the vendor's commitments, and that the system is effective in achieving the specified product quality.

b. Deviation -

See Item B, Enclosure - Notice of Deviation

The inspector observed a Krautkramer Model USlP11 (Rockwell Tag No. 36-757) ultrasonic test equipment with a recalibration date of February 1, 1980. It was subsequently learned the instrument had been sent to an outside laboratory for linerial calibration, and the laboratory had mistakenly placed their calibration sticker on the equipment that established a calibration due date, which was not consistent with the calibration frequency established by the vendors program.

The quality assurance personnel requested a new certification from the laboratory which established a calibration frequency consistent with program requirements ;however, the calibration sticker was not reissued with the new recalibration date and the nondestructive testing personnel continued to use the equipment past the recalibration date, contrary to program requirements.

The obsolete calibration sticker on the ultrasonic test equipment was replaced and a training session was held on June 26, 1980 and the nondestructive testing personnel were instructed that equipment used for acceptance inspection should be checked for its calibration status prior to use, and any conflicts reported to their supervisor.

Deviation closed. No response from the vendor is required.

c. Unresolved

The inspector observed that an actuator (a-180BX-13) had a flange welded to the cylinder. The flange had been back faced and had a radius in accordance with ASME Code requirements; however, the weld directly above the radius had not been blended into the cylinder and flange. The observation was discussed with the supervisor (gate valve design) and the inspector informed him time did not permit the review of the design and stress calculations to determine if the weld geometry would affect the calculated values; therefore, this item would be reviewed during the audit of design on the next inspection.

E. Audits (Internal Management)

1. Objectives

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

a. Procedures had been prepared and approved by the vendor to prescribe a system for auditing (Internal Management) which is consistent with NRC rules and regulations, and the vendor's commitments in the ASME accepted Quality Assurance Program.

b. The audit procedures are being properly and effectively implemented by the vendor.

2. Method of Accomplishment

The objectives of this area of the inspection were accomplished by:

a. Review of the ASME accepted Quality Assurance Manual, Revision 8, Section 18.0, Audits, to verify that the vendor had established procedures which prescribe a system for internal management audits.

b. Review of the following documents:

(1) Standard Operating Procedure SOI-40-26-02, "Qualification and Training of Auditors Performing Quality Assurance Internal Audits," and
(2) Internal Plant Operating Procedure No. 36-40-23-06, "Quality Assurance Internal Audit and Corrective Action;"

to verify that they had been prepared by the designated authority, approved by responsible management, and reviewed by the quality assurance function.

c. Review of the documents reference in paragraph a. and b. to verify that they identify the organization responsible for auditing, establishes the audit personnel qualifications, provides for training and indoctrination of audit personnel, establishes the essential elements of the audit system, provides for audit schedules to assure coverage of all elements of the quality assurance program, and requires reporting to and follow-up corrective action by both the audited and the auditing organizations.

d. Review of six (6) audit reports to verify whether the procedures and the necessary audit system documents, are available to the auditing personnel; and whether the procedures are being properly and effectively implemented.

e. Interviews with personnel to verify they are knowledgeable in the procedures applicable to internal audits.

3. Findings

a. The inspector verified that:

(1) Procedure had been prepared and approved by the vendor which prescribes a system for auditing consistent with NRC rules and regulations, ASME Code and contract requirements, and the vendor's commitments.
(2) The audit procedures are being properly and effectively implemented by the vendor.

b. Within this area of the inspection no deviation or unresolved items were identified.

F. Training

1. Objectives

The objectives of this area of the inspection were to ascertain:

a. Whether procedures had been developed and approved by the vendor prescribing a system for training personnel whose activities affect the quality of their products in a manner consistent with NRC rules and regulations, and the vendor's commitments, in the ASME accepted Quality Assurance Program.

b. That the training procedures were being properly and effectively implemented by the vendor.

2. Method of Accomplishment

The objectives of this area of the inspection were accomplished by;

a. Review of the ASME accepted Quality Assurance Manual, Revision 8,

(1) Section 2.0, "Quality Assurance Program," and
(2) Section 10.0, "Examination, Test, and Inspection;"

to verify the vendor had established procedures to prescribe a system for training personnel whose activities affect the quality of their products.

b. Review of the following Plant Internal Operating Procedures;

(1) Number 36-60-28-01, "New Employee Training,"
(2) Number 36-40-02-05, "Training Qualifications, and Certification of Nondestructive Testing Personnel," and
(3) Number 36-40-05-02, "Training and Certification of Test Personnel,"

to verify that they had been prepared by the designated authority, approved by management, and reviewed by QA. Also that provisions are made for formal training and retraining of new employees, inspection and testing personnel, personnel performing special processes, audit personnel, and personnel involved in quality related design and procurement activities.

c. Review of documents referenced in paragraph a. and b. to verify that they provided for the indoctrination with the technical objectives of the product, codes and standards to be used, and the quality assurance/control elements that are to be employed. Also, to verify that they provided for the testing of the capability and proficiency of nondestructive testing personnel and retraining and recertification if evaluation of performance shows individual capabilities are not

in accordance with specified acceptance limits.

d. Review of training records of inspectors, nondestructive testing, personnel, auditors, designers, and quality assurance and procurement personnel to verify the procedures and necessary training documents were available to the personnel performing the training and the training procedures were being properly and effectively implemented and appropriately documented.

e. Interviewed personnel to verify whether the training performed was commensurate with the persons assigned quality related activities.

3. Findings

a. The inspector verified that the vendor had developed and approved procedures that prescribed a system for the training of personnel whose activities affected the quality of their product in a manner consistent with NRC rules and regulations and the vendor's commitments in the ASME accepted Quality Assurance Program.

b. The inspector verified that the training procedures were being properly and effectively implemented by the vendor at the time of this inspection.

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

G. Exit Interview

On June 26, 1980, the inspector met with the company's management, identified in paragraph A, for the purpose of informing them as to the results of the inspection. During this meeting each identified deviation was discussed and the evidence which supported the findings were identified.

The company's management acknowledged the findings and supporting evidence as being understood, but had no additional comments.