

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

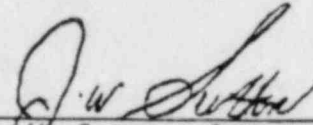
Report No. 99900704/80-C1

Program No. 51300

Company: Taylor Forge Engineered Systems  
1st & Iron St., P. O. Box B  
Paola, Kansas 66071

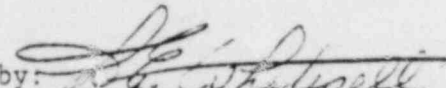
Inspection Conducted: April 23-25, 1980

Inspector:

  
\_\_\_\_\_  
J. W. Sutton, Contractor Inspector  
Components Section I  
Vendor Inspection Branch

6-10-80  
Date

Approved by:

  
\_\_\_\_\_  
D. E. Whitesell, Chief  
Components Section I  
Vendor Inspection Branch

6-10-80  
Date

Summary

Inspection on April 23-25, 1980 (99900704/80-01)

Areas Inspected: Implementation of 10 CFR 50, Appendix B and the applicable codes and standards, including initial management meeting, review of QA manual, organization, authorized nuclear inspection interface, and NDE inspection documentation.

Results: In the four (4) areas inspected no unresolved items were identified and no deviations were identified in three (3) areas. The following was identified in the remaining area. The inspection involved twenty-four (24) inspector hours on site by one (1) NRC inspector.

Deviations: NDE inspection and documentation, . . . (1) The procedure for initiating the indexing of the QA/QC records was not being followed. (See Notice of Deviation, Item A.)

(2) Final "as built" drawings did not identify the inspectors who performed the inspection. (See Notice of Deviation, Item B.)

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DETAILS SECTIONA. Persons ContactedTaylor Forge Engineered Systems (TFES)

- \*S. D. Griggs, Quality Assurance Manager
- \*J. W. Miller, General Manager (retired)
- \*E. W. Roche, Operations Manager
- G. D. VanRheen, NDE Level
- \*T. J. Walsh, General Manager

Factory Mutual Engineering

- \*R. D. McRae, Authorized Nuclear Inspector

\*Attended Exit Interview.

B. Initial Management Meeting1. Objectives

The objectives of this meeting were to accomplish the following:

- a. To meet with Taylor Forge Engineered Systems (TFES) and those persons responsible for the administration of the NNS QA Program and establish channels of communication.
- b. To determine the extent of company involvement in the U. S. commercial nuclear business.
- c. To explain the NRC direct inspection program including the Licensee Contractor Vendor Inspection Program (LCVIP) organization, Vendor Inspection Branch (VIB) inspection methods and documentation.

2. Method of Accomplishment

The preceding objectives were accomplished by a meeting on April 23, 1980.

The following is a summary of the subject matter covered:

- a. The VIB organization was described and its relationship to NRC Region IV and other components of the Office of Inspection and Enforcement.

- b. The LCVIP was described including the reasons for its establishment, its objectives, and implementation methods and criteria used.
- c. The conduct of VIB inspections was described and how inspections are documented including the report, responses to reports, how proprietary information is handled, the Public Document Room, and the White Book.
- d. The company's contribution to the nuclear industry was discussed, including current and projected manufacturing activity, status of ASME Certificates of Authorization and third party inspection arrangements.

### 3. Findings

- a. TFES management informed the inspector that TFES is currently completing or working on three (3) nuclear contracts. These nuclear contracts comprise approximately ten percent (10%) of commercial work being performed by the company.
- b. TFES QA Program has been surveyed by ASME, and "N"/"NA" and "NPT" Certificates of Authorization have been issued.
- c. TFES has a contract with Factory Mutual Engineering to act as their Authorized Inspection Agency and are presently served on a full time basis by an Authorized Nuclear Inspector.

### C. QA Program Review (Organization - Program)

#### 1. Objectives

The objectives of this inspection were to ascertain whether the QA Program has been documented in writing, and if it is correctly implemented, and will ensure that the completed components will be manufactured in compliance with code requirements and meet the prescribed quality standards. Also, to ascertain whether the program is consistent with NRC regulations, contract, and code requirements.

#### 2. Method of Accomplishment

- a. Review of TFES QA manual, Revision 1, dated August 8, 1979, and January 31, 1980.
- b. Review of appropriate organization charts to verify that the QA staff is independent from the pressures of cost and scheduling and has access to upper management.

- c. Review of the documents concerning the authority, duties, and responsibilities of the Quality Assurance staff, to verify that they have the independence to identify quality problems, and initiate appropriate corrective action, and the authority to stop work.
- d. Review of proposed training schedules and activities to date.

### 3. Findings

In this area of the inspection, no deviation or unresolved items were identified.

## D. Authorized Nuclear Inspector (ANI) Interface

### 1. Objectives

The objectives of this area of the inspection were to ascertain whether procedures had been prepared and approved, which describes the system to be implemented for the achievement of interface activities are consistent with the NRC rules, Code requirements, and the QA Program commitments.

### 2. Method of Accomplishment

The objectives of this area of the inspection were accomplished as follows:

- a. Review TFES QA Manual Sections 2-8, 11, and 13, to ascertain whether the system provides for interface with the ANI and/or the Authorized Inspection Agency (AIA) to review the Design Specification (DS), and provide the inspection services, required by code, on all code items covered by the customer's order and Design Specification (DS).
- b. Review of nonconforming reports to verify that changes in the customer's design specifications (DS) are reviewed with the ANI to inform him of the status of the inspections and tests of the items when it is removed from the manufacturing process.
- c. Review of QA Manual, to verify that measures have been provided to make available Materials Certifications and the QC Source and/or Receiving Inspection Reports, for review by the ANI, and that such reviews are documented.
- d. Review of QA Manual, to verify that a system has been provided to maintain the identification of materials, and that the identification is transferred when it becomes necessary to

divide the material, also to verify that the ANI is provided the opportunity to verify that the identification of material is properly maintained and documented.

- e. Review of QA Manual; to ascertain whether measures have been established for the ANI to witness any welding procedure, and or any welder performance qualification tests, and to request the requalification of any procedure or welder, to ensure proper qualification and/or any welder performance qualification tests, and to request the requalification of any procedure or welder, to ensure proper qualification and/or acceptable welding performance.
- f. Review of the QA Manual, to verify that the program provides for the application of the code stamp only with the authorization of the ANI after acceptable pressure testing, certification of the Manufacturer's Data Report, and stamping only in the presence of the ANI.
- g. The Daily Log Book maintained by the ANI was reviewed, to verify that TFES is making its QA/QC documents available to the ANI for his review, to provide assurance that the code requirements are complied with and that the product quality has been achieved.

### 3. Findings

The ANI activities as documented in his log book, and by documents reviewed, supports a findings that the vendor is properly implementing its interface responsibilities with the ANI in a manner consistent with the NRC rules, Code requirements, and its QA program commitments. The ANI is a full time Inspector.

## E. NDE, Inspection Personnel, Documentation/Qualifications and Training

### 1. Objective

The objective of this area of the inspection was to verify that TFES had implemented the requirements for the qualification, certification documentation and training of NDE Personnel in accordance with the QA manual and applicable NRC and ASME Code requirements.

### 2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of QA manual 9.0, "Nondestructive Examination," Section 4.0 "Document Control" and 7.8.1, "Final Inspection."

- b. Review of fifteen (15) NDE Personnel Qualification Records.
- c. Review of SNT-TC-1A, 1975, "Personnel Qualification and Certification in Nondestructive Testing."
- d. Review of NDE Inspection Personnel Training Records.
- e. Review of Radiographic Film, Reader Sheets and Examination Report for Job #802121, item 14B, weld 1-2-3-4-5.
- f. Reviewed Data Package for Piping Formations A46-12A-7A-064, SNUPPS.
- g. Reviewed Bechtel Engineering and Quality Verification Documents for Job No. 10466, PO M206. Sheets A3-A4.
- h. Reviewed Shop drawings 870064-12-B1 and 870064-7-B1, Revision 3.
- i. Review Final Documentation Checklist (FDC) for Job No. 870064.
- j. Reviewed TFES in house correspondence, re. radiographic interpretation of piping components for SNUPPS components.
- k. Reviewed Bechtel Specification 10466-M-206.
- l. Observation of Shop NDE activities.
- m. Discussion with NDE personnel.

### 3. Findings

#### a. Deviations From Commitment

See Notice of Deviation, Items A and B.

Concerning Item B, documentation clerks were transcribing inspection information from shop "as-built" drawings, (due to the fact that the Shop drawings were dirty), to clean final as-built drawings. In some instances, as verified by the inspector, the documentation clerks mistakenly signed the clean record drawing with their names and omitted the names of the NDE inspectors who had performed the final inspections. To a reviewer this would appear that the signature would be of the person inspecting the objects when in fact it would not be correct. The as-built drawings are the official inspection records which are furnished to the owner in the data package.

During the time periods of late 1978 and early 1979, NDE inspectors had not been thoroughly trained/indoctrinated to the acceptance/technique requirements of the ASME Code

sections III and V. All NDE inspectors were found to have been correctly certified to SNT-TC-1A requirements.

Acceptance by customer and third party inspectors was being considered as final acceptable concurrence of the TFES inspectors findings.

To prevent recurrence, the vendor has underway the following corrective actions:

- (1) Extensive training of Documentation Personnel to inform them of their job requirements.
- (2) Review of all final "as built" drawings to determine whether the signoffs are correct on both in-house and field documents.

Documents found to be inaccurate in the field will be retrieved and appropriate corrections made. (Original shop "as built," signed copies are available at the Vendor's plant).

- (3) Comprehensive training of all NDE Technician in ASME Code techniques and acceptance requirements. (underway)
- (4) All final inspection/acceptance will be the complete responsibility of TFES inspectors.
- (5) Piping components that have been rejected are not to be returned to the vendor for repairs if needed, but will be repaired in the field by the licensee's subcontractors. The implementation of these activities could not be verified at the Vendor's Plant.
- (6) The inspector determined, however, that the corrective action taken, and to be taken, by the vendor, is appropriate and the components now being produced are being appropriately controlled as required by the QA manual, and in a manner consistent with NRC rules and regulations.

b. Unresolved Items

None.

F. Exit Interview

The inspector met with management representatives (denoted in paragraph A) at the conclusion of the inspection. The inspector summarized the

scope and findings of the inspection. The management representatives had no comment in response to the items discussed by the inspector.