

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

Report No. 99900713/80-01 Program 51300

Company: York Electro-Panel Control Company, Inc.
York Courty Industrial Park
Post Office Box 1702
York, Pennasylvania 17405

Inspection
Conducted: April 29-30, 1980

Inspector: *for* *D M Hunnicutt* *5/13/80*
R. E. Oller, Contractor Inspector Date
Components Section II
Vendor Inspection Branch

Approved BY: *D M Hunnicutt* *5/13/80*
D. M. Hunnicutt, Chief Date
Components Section II
Vendor Inspection Branch

Summary

Inspection on April 29-30, 1980 (99900713/80-01)

Areas Inspected: Implementation of 10 CFR 50, Appendix B criteria, and other applicable NRC requirements including initial management meeting, general review of vendor activities, QA program review, and follow-up to assess the substance of concerns expressed to NRC regarding possible handling damage to instrumentation furnished for use in Bellefonte Units 1 and 2. The inspection involved 16 inspector-hours on site.

Results: In the four (4) areas inspected, no deviations or unresolved items were identified.

DETAILS SECTION

A. Persons Contacted

G. Bailey, Manager - Contract Administration
R. Dietz, Senior Project Engineer
*D. Eckert, President
*J. Myers, Manager - Quality Assurance

*Attended the Exit Meeting.

B. Initial Management Meeting

1. Objectives

The objectives of the Initial Management Meeting were to meet with York Electro-Panel Control Company (hereafter identified as York) management to establish communications, discuss the purpose and intent of the Vendor Inspection Branch (VIB) direct inspection program and to learn the basic functions of the plant.

2. Method of Accomplishment

The preceding objectives were accomplished by the inspector's presentation and the resulting discussions covering the following:

- a. NRC policies and organization
- b. VIB program objectives and how these objectives are to be accomplished.
- c. VIB organization
- d. Inspection areas to be covered
- e. Basic inspection techniques of the VIB
- f. Enforcement procedures applicable to vendors, including Section 206 of the Energy Reorganization Act of 1974 and Part 21 of 10 CFR.
- h. The White Book
- i. Questions.

3. Results

No unusual questions or discussions developed or occurred during the initial management meeting. The objectives, of this area of the inspection, were accomplished.

C. General Review of Vendor's Activities

1. Objective

The objective of this area of the inspection was to assess York's activities and their impact on future NRC inspections.

2. Method of Accomplishment

The preceding objective was accomplished by:

- a. Discussions with cognizant personnel.
- b. Verbal review of principal contracts involving IEEE IE equipment.
- c. Review of York's ASME NPT and NA Certificates of Authorization.
- d. Review of York's Standard QA program manual, and York's "NPT and NA" QA program manual.
- e. Observation of Plant No. 1 facilities used in fabrication and welding of control panels, boards and racks.
- f. Observation of Plant No. 2 painting, assembly and test facilities used for final production of control panels, boards and racks.

3. Findings

- a. York's manufacturing activities include electro-mechanical control panels, boards and racks for use in nuclear power plants and for various non-nuclear manufacturing and power plants.

- b. Currently there are six (6) active contracts for nuclear plants, which involve IEEE Class 1E equipment. This equipment is being manufactured under York's controlled Standard QA Program.
- c. York also holds valid ASME Code Symbol Authorizations; No. 2168 "NA" for shop assembly of stamped Class 1, 2, and 3 components, appurtenances, and piping subassemblies, and No. 2169 "NPT" for Class 1, 2, and 3 piping subassemblies. Both of these certificates expire in September 1981. None of the work in the plant requires the use of these authorizations.
- d. The panels, boards and racks are fabricated and welded at Plant No. 1. Activities at Plant No. 2 include painting, assembly, testing, shipping, engineering and administration.

D. Initial QA Program Review

1. Objectives

The objectives of this area of the inspection were to verify that the QA program has been documented in writing and has been implemented to control quality related activities. Also, to ascertain whether the program provides for the following:

- a. Management's policy statements concerning QA,
- b. The QA organization structured to achieve organizational independence and freedom to:
 - (1) Identify quality problems
 - (2) Initiate appropriate resolutions
 - (3) Verify corrective actions.
- c. The QA staff with the authority, and access to a level of management that ensures effective implementation of the QA program elements, and to enforce positive and timely corrective action.
- d. The duties, responsibilities and the authority of the QA staff are clearly delineated in writing.
- e. Detailed written procedures, properly reviewed and approved, are available to control quality activities.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of the Standard QA Manual and "NPT-NA Code Symbol Stamped" QA Manual.
- b. Discussions with cognizant personnel.
- c. Review of Standard and Modified Operating Procedures located in the shop work areas.
- d. Review of in-process Standard Project Inspection Travelers and Process Inspection Report Travelers.
- e. Review of records of nonconformances and corrective action consisting of Receiving Inspection-Disposition Reports, in-process Deficiency Reports, Rejection Tags and Inspection-Test Punch lists.
- f. Review of York's 10 CFR Part 21 reporting procedure, S.O.P. No. 128.

3. Findings

- a. Within this area of the inspection, no deviations or unresolved items were identified.
- b. Other Finding - Comment

York has two (2) comprehensive documented QA programs consisting of a Standard QA Manual for control of the manufacture of IEEE Class 1E equipment, and "NPT-NA Code Symbol Stamped" QA Manual for equipment which requires code stamping. Both of these QA Manuals are implemented by approved Standard and Modified Operating Procedures.

E. Follow-Up Inspection on Allegations Concerning Rack Mounted Instrumentation Furnished for Bellefonte Units 1 and 2

1. Introduction

On July 31, 1979, an NRC IE Region I inspector was contacted by telephone by a former employee of York Electro-Panel Control Company, who expressed concerns regarding the seismic quality of instrumentation

racks furnished by York for TVA/Bellefonte Units 1 and 2. This contact was followed by an undated letter from the allegor who provided details of his concerns. The letter was sent to the Region IV Vendor Inspection Branch for follow-up action. A special inspection of the allegation was performed at the York plant concurrently with the routine inspection of the QA program implementation on April 29-30, 1980.

2. Objective

The objective of this area of the inspection was to ascertain whether or not the allegation contained safety significance with regard to the rack mounted instrumentation furnished by York for use in Bellefonte Units 1 and 2.

3. Method of Accomplishment

The preceding objective was pursued by:

- a. Discussions with cognizant personnel.
- b. Observations of an unpainted rack in the welding and fabrication shop.
- c. Observations of partial and full instrument equipped racks in the assembly and test shop.
- d. Observation of the internal parts of a Foxboro differential pressure transmitter complete with shipping packing.
- e. Review of applicable parts of "TVA Specification 2290 for Controls and Metering for Bellefonte Nuclear Plant Units 1 and 2."
- f. Review of TVA purchase order Release No. 3, Revision No. 2, Release Item No. 12, covering the Foxboro transmitters and wall racks identified in the allegation.
- g. Review of the York shipment packing list dated May 9, 1979 for the above two (2) racks, shipped without transmitters.
- h. Review of the York shipment packing list dated January 23, 1980 for the above two (2) transmitters shipped separately.
- i. Review of York's TVA approved procedures: MOP No. 211-16872, Revision 1, "Modified Operating Procedure for Preparation for Shipment of Open Type Local Panels - TVA/Bellefonte", and

MOP No. 213-16872, Revision 1, "Preparation for Shipment of Closed Type Local Panels - TVA/Bellefonte."

- j. Review of York supplied seismic vibration reports for three (3) types of instrument loaded racks for Bellefonte, and review of TVA's approval letter dated June 27, 1978.
- k. Review of a Foxboro supplied seismic vibration test report on E-10 Series transmitters for Bellefonte, and review of TVA's approval letter dated March 23, 1978.
- l. Review of TVA's Change Order No. 45 dated July 2, 1979, covering deletion of Custom Component Switch Company as a supplier of pressure-temperature switches for the Bellefonte 1 and 2 racks, and substitution of Automatic Switch Company as the supplier of these switches.

3. Findings

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

- b. Other Findings - Comments

(1) The written concerns of the allegor were as follows:

- (a) The Foxboro Model E13DM, electronic differential pressure transmitters, supplied as part of instrument control racks for Bellefonte Units 1 and 2, under TVA Purchase Order Release No. 3, Revision 2, Release Item 12, were required to meet IEEE Standard Class 1E equipment 3G seismic requirements. However, this equipment might not be able to meet this requirement in service due to undetected damage caused by shocks in excess of 3Gs received during handling, shipping and storage.
- (b) There was one case in which an instrument rack shipment to the Bellefonte site, contained an "Impact-O-Graph" shock recorder which later investigation showed had an off scale reading apparently due to vibrations or shock in excess of 3Gs. This may have been due to failure to meet packaging and shipping specifications.

- (c) During fabrication of instrument mounting brackets and plates, some brackets developed stress cracks on bending.
 - (d) An original supplier of pressure-temperature switches (Custom Component Switch Company) could not meet customer specifications and was replaced with Automatic Switch Company.
- (2) Through independent verification, observations and discussions by the NRC inspector, the following information was obtained with regard to the above concerns:
- (a) Two (2) Foxboro transmitters and two (2) 30" wall racks were identified in the referenced TVA purchase release. The transmitters and racks were shipped at different times as shown by the packing lists dated May 9, 1979, for the racks and January 23, 1980, for the two (2) transmitters. Preparation for rack shipment was in accordance with TVA Specification No. 2290 and TVA approved procedure No. MOP 211-16872. The equipment was received, inspected and tested by TVA. York did not have a representative at the Bellefonte site, and had not been notified by TVA of any damaged transmitters.
 - (b) Observation by the NRC inspector, of similar Foxboro transmitters verified that there is packing on the inside to protect the internals during handling and shipping. The York representative indicated that the packing is removed at the site after installation and prior to testing.
 - (c) Observations by the NRC inspector of open type floor racks prepared for shipment, verified that procedure MOP 211-16872 was being followed.
 - (d) By review of records and discussions, the NRC inspector verified that each truck shipment of instrument racks has an "Impact-O-Graph" shock recorder mounted on a rack located at the rear of the truck. The rack having the recorder is identified and photographed. Along with the shipment packing lists, York sends a copy of operating instructions for the "Impact-O-Graph" which includes

instructions for TVA to analyze and retain the chart record and return the device to York. York management indicated that TVA has not advised them of any case where the chart record showed that the shipments had received excessive shock.

- (e) Observation of floor racks under construction, verified that they are of all welded construction. There did not appear to be any parts which were formed by bending which could result in stress cracking.
- (f) Review of separate seismic vibration test reports for transmitters and three (3) types of racks, and TVA correspondence, verified that the tests were accepted and approved by TVA.
- (g) Review of records and discussions with York personnel verified that initially the Bellefonte contract was quoted to include pressure-temperature switches to be furnished by Custom Component Switch (CCS) Company. However, this was changed. The CCS Company switches were deleted and Automatic Switch Company (ASCO) switches were added. This change was approved by TVA.
- (h) Since the instrumentation racks are inspected and tested by TVA after receipt at the Bellefonte site, the NRC inspector could not verify that damage does not occur during shipment to the site.

E. Exit Meeting

1. The inspector met with management representatives denoted in paragraph A. above, at the conclusion of the inspection on April 30, 1980.
2. The following subjects were discussed:
 - a. Areas inspected.
 - b. Findings identified in this report.
3. The manufacturer's representative's questions related to clarification of the inspection findings.