

VENDOR INSPECTION REPORT

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

Report No. 99900002/78-01

Program No. 44010

Company: Combustion Engineering, Inc.
1000 Prospect Hill Road
Windsor, Connecticut 06096

Inspection Conducted: August 14-18, 1978

Inspector:

Wm McNeill
W. M. McNeill, Contractor Inspector
Vendor Inspection Branch

9/4/78
Date

Approved by:

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

9/5/78
Date

Summary

Inspection on August 14-18, 1978 (99900002/78-02)

Areas Inspected: Implementation of 10 CFR 50, Appendix B, and applicable codes and standards including; action on previous inspection findings; procurement procedures; control of special processes; enrichment and impurity controls and calibration. The inspection involved twenty-seven (27) inspector-hours on site.

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

Deviations: None.

Unresolved Items: None.

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DETAILS SECTION

A. Persons Contacted

M. R. Babeau, Welding Foreman
P. A. Ferwerda, Supervisor, Quality Control Engineering
S. L. Flatley, Quality Control Engineer
*M. M. Glotzer, Quality Assurance Engineering Manager
J. E. Milcolajczak, Quality Control Engineering
*C. W. Rackliffe, Quality Control Manager
V. P. Roy, Quality Control Engineering
W. H. Simonsen, Production Controller
*M. J. Thomas, Quality Control Manager
*J. E. Wahler, Quality Assurance Manager
J. T. Winn, Production Controller
C. M. Yuscavitch, General Forman Inspection

*Denotes those attending the Exit Interview.

B. Action on Previous Inspection Findings

(Closed) Deviation (Report No. 78-01). There was no system for training of audit personnel. Section 16 of the QA Manual has been revised to address training of audit personnel. The requirements of this section, to qualify personnel to N45.2.23 have been implemented. Four recent audits were verified to have used qualified personnel.

C. Procurement Procedures

1. Objectives

The objectives of this area of the inspection were to verify that the fuel fabricator's procurement activities are being implemented in accordance with the requirements of Criteria IV and VII of 10 CFR 50, Appendix B, as expanded and documented in it's QA Manual.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Reviewing the QA Manual (East Windsor Plant), Revision 3, Section 3, Procurement Control, and the QA Manual, dated May 24, 1978, Sections 3, Procurement Document Control, and four (4), Control of Purchased Material, Equipment, and Services, to verify that procedures had been prepared, and approved, to control and document procurement activities.

- b. Reviewing Purchase Orders and associated Requisitions for four (4) East Windsor orders and four (4) Windsor orders. These orders were for flanges, grippers, latches, machining, castings, tubing, and stamping.
- c. Verifying that the above orders were reviewed and approved in accordance with the manual requirements. Verifying that the above orders contain the appropriate QA and technical requirements.
- d. Verifying that the above orders were issued to qualified vendors, by review of the Approved Vendor's List, dated June 27, 1978. Also reviewing the most recent audit of each of the successful vendors to verify that they had been correctly qualified.
- e. Verifying that the above parts were inspected in accordance with the QA Manual requirements for source inspections, by review of the Surveillance Trip Reports, Material Test Reports, Receiving Reports, and Releases for the items included in the above orders.
- f. Verifying that nonconformances are documented, reviewed, and appropriately dispositioned in accordance with the requirements established by the QA Manual; by review of approximately three (3) Deviation of Contract Requirements on the above orders.
- g. Verifying that vendor submittals (NDE and Welding Procedures) are reviewed and approved in accordance with the QA Manual by review of the Requests for Approval or Review, approximately five (5), on the above orders.

3. Findings

a. Deviations

None.

b. Unresolved Items

None.

D. Control of Special Processes

1. Objectives

The objectives of this area of the inspection were to verify that special processes are properly qualified and controlled in

accordance with Criterion IX, Appendix B, 10 CFR 50, as expanded and documented in his QA Manual.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Reviewing the QA Manual (East Windsor Plant), Revision 3, Section 5, Welding Quality Assurance, to verify that measures are established to control welding, and that such measures are consistent with the NRC and Code rules.
- b. Reviewing General Welding Procedure, No. Mfg-20-04, Revision 4, the standard and current project design specifications for the control element drive mechanisms, to verify that the welding procedures specified the welding parameters to be used for production welding.
- c. Witnessing two welding operations, Motor Housing Assembly and Upper Pressure Housing Assembly, Welds P-139 and P-157, to verify that the welding parameters specified by the WPS were being followed.
- d. Verifying that the welders performing the above welds were qualified in accordance with Section IX ASME Code.
- e. Verifying that the welding procedures were properly qualified in accordance with Code, and that these qualifications were properly documented. Also to verify that the procedure qualifications identified the specific essential and non-essential variables used in making the qualification welds, were consistent with the parameters specified in the procedure being qualified.
- f. Verifying that the above qualifications were correctly performed in accordance with the General Welding Procedure by review of the procedure and its certified qualification record.
- g. Verifying that the above welding conformed to the Shop Travelers, Operation Sheets, and Welding Process Data Sheets. Verifying that all essential and nonessential variables were complied with and that the procedures were at the work stations by review of the welding being performed at two work stations.

- h. Verifying that the filler metal used had been issued and controlled in accordance with the General Weld Procedure. Also verifying that this material was properly identified, released, and logged in the Daily Dispersing Log.

3. Findings

a. Deviations

None.

b. Unresolved Items

None.

E. Enrichment and Impurity Controls

1. Objectives

The objectives of this area of the inspection were to verify that these activities were controlled in accordance with the QA Manual and applicable NRC requirements:

- a. To ascertain that material flow procedures and practices cover manufacturing operations for all inputs of material in any form from UF6 to completed pellets.
- b. That enriched material is controlled, inspected and checked at each stage during manufacturing and processing to prevent enrichment mixup or contamination.
- c. That sufficient final enrichment checks and chemical analyses are made on pellets or rods to detect any significant enrichment deviations or contamination and to give reasonable assurance that the pellets and rods meet specifications and contractual requirements.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Reviewing procedures, Chemistry Sampling, O.S. 1487, Revision 4, Enrichment Clean-Up Sampling Procedure, O.S. 1085, Revision 2, and O.S. Fuel Rod Assay, O.S. 992, Revision 17, which established the procedure requirements.

- b. Verifying that color codes, tags, and labels were used to separate and identify enrichments by inspection of the processing area.
- c. Verifying that chemistry sampling was performed in accordance with the procedure and the Specification for Uranium Dioxide Fuel Pellets, 00000-FMOT-110, Revision 1, by review of the Analytical Reports for two recent lots.
- d. Verifying that fuel rod assays were performed in accordance with the procedure by inspection to ascertain whether the calibration and setup was proper.

3. Findings

a. Deviations

None.

b. Unresolved Items

None.

F. Equipment Calibration

1. Objectives

The objectives of this area of the inspection were to verify that the control of measuring and test equipment (M&TE) assures that only properly calibrated M&TE is utilized in the manufacturing and inspection of fuel, and that the measures are consistent with the NRC rules and QA Manual commitments.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Reviewing the QA Manual, dated May 24, 1978, Section II, Calibration, to verify that measures are provided to ensure that all measuring and test equipment is periodically calibrated to ensure the maintenance of the prescribed precision.
- b. Reviewing Procedure for Maintaining Control and Calibration of Measuring Equipment, QC-14-07, Revision 18, which established the procedure requirements.

- c. Verifying that procedures are implemented on the schedules, tolerances, and identification of tools and gages by review of a sample of ten (10) gages and three (3) standards.
- d. Review of the Tool Index Cards, and Measuring Equipment Cards, to verify that the calibration history and status of the test and measuring equipment is properly documented.
- e. Verifying that the above equipment was properly labeled to indicate their status by inspecting the gages and tools being used in the various tests and laboratory work.
- f. Review of calibration certifications to verify that the standards used were traceable to national standards.

3. Findings

a. Deviations

None.

b. Unresolved Items

None.

G. Exit Interview

The inspector met with management representatives (denoted in paragraph A) at the conclusion of the inspection on August 18, 1978. The inspector summarized the scope and findings of the inspection. The management representatives had no comment in response to each item discussed by the inspector.