

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

Report No. 99900003/80-01

Program No. 51500

Company: General Electric Company
Wilmington Manufacturing Department
Box 780
Wilmington, North Carolina 28401

Inspection Conducted: January 21-25, 1980

Inspectors: W. M. McNeill 3/21/80
W. M. McNeill, Contractor Inspector
Components Section I
Vendor Inspection Branch
Date

M. J. Rucker 3/4/80
M. J. Rucker, Reactor Inspector Aide
Date

Approved by: D. E. Whitesell 3-4-80
D. E. Whitesell, Chief
Components Section I
Vendor Inspection Branch
Date

Summary

Inspection on January 21-25, 1980 (99900003/80-01)

Areas Inspected: Implementation of the Topical Report including material controls; equipment calibration; records; internal audits; and action on previous inspection findings. The inspection involved sixty-four (64) inspector-hours on site by two (2) NRC inspectors.

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

Deviations: Action on Previous Inspection Findings - the nonconformance system was not fully implemented in the areas of repair planning, documentation of dispositions, tagging of parts under repair, and tagging of parts identified as nonconforming as required by procedures (See Notice of

Deviation, Item A). Material Control - the lot quantity identified on Shop Travelers did not agree with the actual quantity as required by procedure (See Notice of Deviation, Item B). Equipment Calibration - welding instruments were not tagged to be calibrated or to not be calibrated as required by procedure (See Notice of Deviation, Item C).

Unresolved Items

None.

DETAILS SECTION I

(Prepared by W. M. McNeill)

A. Persons Contacted

- V. W. Bimrose, Supervisor Gage Calibration
- L. Devane, Foremen
- *R. E. DeVaux, Manager, Component Manufacturing Engineering
- J. T. Duncan, Process Control Specialist
- *C. W. Doyle, Manager, Quality Audits and Customer Service
- L. W. Emory, Manufacturing Engineer
- J. R. Easley, Supervisor Nonconforming Material
- J. A. Ferencak, QC Planner
- *T. B. Hawkins, Manager, Welding and Special Processes
- *P. K. Hoffman, Manager, Control Rods, Jet Pumps and Control Rod Drives
- C. P. Keshner, Test Equipment Services
- *E. A. Lees, Manager, Quality Assurance
- *R. E. Lennon, QA Engineer
- *J. H. Liberman, QA Engineer
- S. C. Laufer, Manager, Fuel Component Quality Control
- K. L. Meadows, QC Planner
- J. E. Miller, Manager, Equipment Quality Programs
- R. G. Miller, Technician
- G. R. Pearson, Manager, Fuel Components
- R. L. Royalty, Fuel Component Manufacturing Engineering
- *D. Ratliff, Manager, Equipment Quality Control Engineering
- *L. A. Sheely, Manager, Fuel Quality
- *D. Starr, Manager, Equipment Quality
- *E. D. Singer, Manager, Fuel Quality Control Engineering
- *R. C. Van Duyne, Manager, Equipment Process Engineering Control
- *J. F. Wolfe, Manager, Equipment Processes and Support Operations
- *P. E. Youngmans, Manager, Equipment Products Operation

*Denotes those attending the exit interview.

B. Action on Previous Inspection Findings

1. (Closed) Deviation (Report No. 79-01): Process Specification, P50YP107, Revision 1 was inadequately enforced to show compliance to ANSI N45.2.2 and Regulatory Guide 1.38. The Specification in question has been revised, Revision 3, and now enforces ANSI N45.2.2 and Regulatory Guide 1.38.

2. (Closed) Unresolved Item (Report No. 79-01): A position statement was required from the AIA on ASME Code boundaries for casting (137C5058) in regards to NG-1122(c). A position statement has been documented by the AIA on this question. This is documented in a letter August 15, 1979 by B. L. Whitley of the State of North Carolina, Boiler & Pressure Vessel Division to the NRC, Region IV.
3. (Closed) Deviation (Report No. 79-02): The Analytical Laboratory Control Instruction was not fully implemented in the area of balance calibration. The Chemical Metallurgical and Spectro-Chemical Manual procedure 0.4.2.1., Revision 2, and Quality Information Equipment Plan B-40.1, Revision 1, are now in agreement. A review of the calibration records found the procedures to be implemented.
4. (Closed) Deviation (Report No. 79-02): The Detailed Welding Instructions were not followed by welders. Round Table discussions were held and documented. A review of welding stations found the Detailed Welding Instructions to be implemented.
5. (Closed) Deviation (Report No. 79-02): The system to control nonconformances was not fully implemented. Round Table discussions were held and documented. The Basic Shop information Manual, Quality Inspection Standard 202, and the Repair Planning Cards, were revised. A review of six (6) lots of material found on the shop floor established the following deviation.

Deviation

See Notice of Deviation Item A.

Comments

The last inspection report identified one deviation in the area of control of nonconformances. Six (6) examples were included in this deviation.

Several actions were taken on the specific parts in question. Inspection Report, RX 125, was issued on the Control Rod Guide Tube, to add the missing planning. The Fuel Support S/N 1334 was tagged. It is planned that the Quality Inspection Standard will be changed to require first piece inspection rejections to be tagged.

In regard to the Hydraulic Control Lines, reportedly the Level III Nondestructive Inspector had overruled the initial interpretation of the Level II Inspector but had not documented this on the IR. The Level II inspector changed the IR. In regard to the Control Rod Guide Tube the operations in question are part of the standard planning for this part.

C. Materials Controls

1. Objectives

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

- a. The system for identification and control of materials, parts, components and subassemblies during fabrication is sufficient to prevent the use of incorrect or defective materials, parts or components.
- b. A system is utilized which will insure that all manufacturing and inspections steps are accomplished in the prescribed sequence.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of the Topical Report, BWR Quality Assurance Program Description, NEDO-11209-04A, Section 8, titled, Identification and Control of Materials Parts, and Components; and Wilmington Manufacturing Department Quality Assurance Program, NEDE-20586, Revision 6, Section 6.8, titled, Identification and Control of Materials, Parts and Components which establishes the general requirements for material control.
- b. Review of the following Practice and Procedures (P/Ps) and Quality Assurance Section Administrative Routines (QASARs) which established the specific requirements of material control:

P/P 60-29 - Indirect Material Control - Selected Items, Revision 4,

P/P 70-4 - Nonconforming Material Control - EM, Revision 8,

P/P 70-5 - Material Review, Revision 8

P/P 70-13 - Enrichment Control of Nuclear Material, Revision 2,

P/P 70-19 - Product Quality Certification, Revision 4,

P/P 70-33 - Nonconforming Material Control - FCO, Revision 6,

P/P 70-34 - Nonconforming Material Control - FMO, Revision 6,

P/P 80-21 - Shop Traveler & Mini-Traveler Control - EM, Revision 7,

QASAR 320-100.1 - Inspection Stamps - EM, Revision 2

QASAR 320-110.3 - Segregation of Scrap Production Material - EM,
Revision 2, and - of Scrap Production Material - EM,
and of Delivery to Ship (DTS) Paperwork - EM

WMD ASME Code Compliance Manual.

- c. Inspection of five (5) lots of parts in Equipment Manufacturing and verification of traceability identification, status, identification and serialization. The implementation of the above procedures was varied.

3. Findings

a. Deviations

See Notice of Deviation Item B.

b. Unresolved Items

None.

c. Comments

This lot of parts was to be serialized, however, at the time of the inspection the parts had not been serialized. Only 44 serial numbers were assigned. A search of other lots of Guide Caps did not identify where the additional parts may have come from. This lot was placed on Inspection Report, RX 173, because traceability had been lost.

D. Equipment Calibration

1. Objective

The objective of this area of the inspection was 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.

2. Method of Accomplishment

The preceding objective was accomplished by:

- a. Review of the Topical Report, BWR Quality Assurance Program Description, NEDO-11209-04, Section 12, titled Control of Measuring and Test Equipment; and Wilmington Manufacturing Department Quality Assurance Program, NEDE-20586, Revision 6, Section 6.12, titled Control of Measuring and Test Equipment which establishes the general requirements for material control.

- b. Review of the following Practice and Procedures (P/Ps) and Quality Assurance Section Administrative Routines (QASARs) which established the specific requirements of material control:

P/P 70-22 - Mechanical Gage Control, Revision 6,

P/P 70-23 - Instrument Control and Calibration, Revision 4,

QASAR 320-60.2 - Special Gage Ordering - EM, Revision 1,

QASAR 320-60.3 - Nonconforming Measuring and Test Equipment, Revision 4, and

QASAR 320.60.8 - Standard Metrology Equipment, Revision 1.

- c. Inspection of the inspection stations in Fuel Component Manufacturing and of the gages found at the stations. Also, the instruments at the welding and autoclave stations were inspected. A sample of nineteen (19) gages was established. These gages were reviewed and the Gage Inspection Standards associated with them. In addition, Gage Inspection Reports, Damaged Gage Reports, Gage Inspection Parameters, and the Gage Resume were inspected and the above verified to be implemented.

3. Findings

a. Deviation

See Notice of Deviation Item C.

b. Unresolved Items

None.

c. Comments

The "pigme" welders in question were reportedly stickered before the end of this inspection. The other instrumentation in the area will have to be inspected for proper stickering.

E. Exit Interview

The inspectors met with management representatives (denoted in paragraph A) at the conclusion of the inspection on January 25, 1980. The inspectors summarized the scope and findings of the inspection. The management representatives had no comments in response to each item discussed by the inspectors.

DETAILS SECTION II

(Prepared by M. J. Rucker)

A. Persons Contacted

- E. Lennon, QA Engineer
- E. Stoudenmire, Supervisor, Quality Records and Material Release
- F. Maliga, Manager, Quality Verification and Release
- T. Baggett, Records Clerk, Quality Verification and Release
- J. Black, Acting for R. Dopki, Manager, Document Control Center
- J. Douglas, Microfilm Clerk, Document Control Center
- R. Dopki, Manager, Document Control Center
- D. Morehouse, Manager, Equipment Manufacturing Engineering

B. Records1. Objectives

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

- a. Quality assurance records are identified, collected and stored in such a way that the fuel quality history is documented and protected.
- b. The manufacturer's records system meets the requirements of Criterion XVII, Appendix B, 10 CFR 50.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of Topical Report, BWR Quality Assurance Program Description, NEDO-11209-04A, Section 17, titled, Quality Assurance Records, and Wilmington Manufacturing Department Quality Assurance Program, NEDE-20586, Revision 6, Section 6.17, titled, Quality Assurance Records, which establishes the general requirements for QA records.
- b. Review of the following Practice and Procedures (P/Ps) and Quality Assurance Section Administrative Routines (QASARs) which establishes the specific requirements for records:

P/P 30-28, Product Quality Records, Revision 8

P/P 30-33, QA Records Legibility, Revision 1,

QASAR 320-130.9, Storage and Access to Quality Records - EM, Revision 2, and

QASAR 320-130.10, Receipt, Review and Filing of Quality Records - EM, Revision 2.

- c. Verification of the implementation of the above by checking a sample of QA records indexed in the Document Control Center (DCC) for location of records, storage system, completion, legibility, and retention times. Also, verification of implementation of storage for supplemental records, system for removal and return of QA records, procedures for authoritative access to QA records.

3. Findings

a. Deviations

None.

b. Unresolved items

None.

c. Comments

P/P 30-28 states that lifetime permanent records are shipped to Ominwest. However, there appears to be a discrepancy in this information. DCC sends permanent QA records marked "47705-storage."

C. Internal Audits

1. Objectives

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

- a. The fuel manufacturer has implemented a system of internal audits sufficient to determine the effectiveness of the manufacturer's quality assurance program.
- b. The manufacturer's system meets the requirements of Criterion XVIII, Appendix B, 10 CFR 50.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of Topical Report, BWR Quality Assurance Program Description, NEDO-11209-04A, Section 18, titled, Audits, and Wilmington Manufacturing Department Quality Assurance Program, NEDE-20586, Revision 6, Section 6.18, titled Audits, which establishes the general requirements for Internal Audits.
- b. Review of the following Practice and Procedures (P/Ps) and Quality Assurance Section Administrative Routines (QASARs) which establishes the specific requirements for Internal Audits:
 - P/P 30-13, Internal Quality Audit Program, Revision 5,
 - P/P 30-19, Responsibility Assignments - QA, Revision 4,
 - P/P 60-16, Vendor Quality Audits, Revision 6,
 - P/P 70-9, Corrective Action Request, Revision 6,
 - QASAR 320-150.1, Training and Qualification of QA Audit Personnel, Revision 2, and
 - QASAR 320-150.2, Quality Assurance Audits, Revision 4.
- c. Implementation of the above procedures was verified by a sampling of the following:
 - (1) Yearly audit schedules covering the 18 criteria of Appendix B of 10 CFR 50.
 - (2) Audits conducted, reports written and submitted to management.
 - (a) Internal Audit No. 22, Control of Purchased Material, December 18-31, 1979, and
 - (b) Internal Audit No. 23, Procurement Document Control and Corrective Action, December 1979.
 - (3) Audit files containing audit plans/checklists, reports, corrective action requests and records of corrective action responses.
 - (4) Audit Corrective Action Summary Log.
 - (5) Quarterly Internal Audit Program Reports.
 - (6) Records of Training and Qualification of two (2) QA Audit personnel.

3. Findings

a. Deviations

None.

b. Unresolved Items

None.