

ORGANIZATION:

GENERAL ELECTRIC COMPANY
WILMINGTON MANUFACTURING DEPARTMENT
WILMINGTON, NORTH CAROLINA

REPORT NO.: 99900003/81-02

INSPECTION DATE(S): 7/20-24/81

IN ACTION ON-SITE HOURS: 30

CORRESPONDENCE ADDRESS:

General Electric Company
Wilmington Manufacturing Department
ATTN: Mr. J. A. Long, General Manager
P. O. Box 780
Wilmington, NC 28401

ORGANIZATION CONTACT:
TELEPHONE:

Mr. C. W. Doyle, Quality Audits and Customer Service Manager
(919) 343-5874

PRINCIPAL PRODUCT: Nuclear Fuel Assemblies and Core Hardware

NUCLEAR INDUSTRY ACTIVITY: Major nuclear fuel, control rod, drive, jet pump, steam separator, hydraulic control unit and other BWR core hardware supplier for GE designed cores.

ASSIGNED INSPECTOR:

William M. McNeill
William M. McNeill, Components Section

9/2/81
Date

OTHER INSPECTOR(S):

APPROVED BY:

for Vicki Peters
D. E. Whitesell, Chief, Components Section

9/2/81
Date

INSPECTION BASES AND SCOPE:

- A. Bases: General Electric Topical Report NEDO-11209-04.
- B. Scope: Enrichment and impurity controls; moisture and hydrogen controls; control of nonconformances and corrective action; periodic management meeting and status of previous inspection findings.

DESIGNATED ORIGINAL

Certified By

Rheanne Jouts RIV

A. VIOLATIONS:

None

B. NONCONFORMANCES:

Contrary to QA Inspection Instruction 6.2.5.1, and Section 5 of the Topical Report, the fluorine, chlorine, carbon, and nitrogen samples used by the computer to calculate total impurities and boron equivalence were not always drawn from the same material as the metal impurity sample for gadolinium fuel.

C. UNRESOLVED ITEMS:

Time did not permit verification that the material on Furnace Sheet 1573, which was suspected to have high hydrogen, was placed on hold in the Manufacturing Information and Control System (MICS) as required by procedure P&P 70-34. The material had been verified as acceptable and its status changed in the computer system (MICS). Historical reconstruction of the previous status takes one or two days by the computer unit.

D. STATUS OF PREVIOUS INSPECTION FINDINGS:

(Open) Nonconformance (81-01): The applicable project code effectivity was not included in a material requisition and its subsequent purchase order.

The translation of the year and addenda requirements on equipment is currently under discussion with the ASME. The details as to how the year and addenda are to be identified and subject to review and approval by the designer and customer is still undetermined. General Electric will resolve this problem by its September 8-10, 1981, ASME survey.

E. OTHER FINDINGS OR COMMENTS:

1. One previously identified followup item (81-01) was closed during this inspection. Handwritten notes on Engineering Instructions (EIs) were being used to identify changes to the year and addenda of the ASME code applicable to a project. A review of a sample of 20 EIs found no further problem in this area.
2. The isotopic and impurity sampling was verified in gadolinium oxide fuel for conformance to procedures and specifications. The enrichment identification systems, were verified to be in place. A sample of eight fuel lots were traced. As the Chem Lab analyzes material, results are fed into computer systems such as MICS, LMCS, and QATRACS and the acceptance status maintained in the computer system. Acceptance of material in general is via a human operator and the computer. The

control of hydrogen is handled similarly. Loaded fuel rods are off gassed and sample results placed in the computer system. Two fuel rod lots that had been off gassed were reviewed. The use of calibrated equipment and conformance to the qualified procedure were verified.

3. The identification and status of nine open Inspection Reports (IRs) were verified on fuel bundles. The dispositions, rework, repair, and approvals of four closed IRs on fuel bundles was verified. Thirteen IRs on powder, pellets, rods, and other hardware were reviewed. The processing and storage areas were inspected to verify conformance to procedures for control of nonconforming material. The Material Review Board activity was inspected. The CAR corrective action system was inspected as well as the product performance data system for the past year.

PERSONS CONTACTED

Company

General Electric

Dates

July 20-24, '81

Docket/Report No.

99900003/81-01

Inspector

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NAME (Please Print)

TITLE (Please Print)

ORGANIZATION (Please Print)

* J. H. LIBERMAN

QA ENG

GE

* C. W. DOYLE

QA & C.S. Mgr

"

R. A. JONES

Spec Prod. PLANNING

"

J. A. LONG

GEN. Mgr.

"

* E. A. LEES

QA Mgr.

"

M. E. JOHNSON

C&R CONTROLLER

"

R. L. TROILD

DESIGN Spec.

"

E. R. TEACHEY

P.C. TECH.

"

D. L. SEALEY

C&R CONTROLLER

"

J. C. CHISOLM

P.C.E.

"

A. W. SCOTT

C&R Spec.

"

E. R. MOBLEY

P.C.E.

"

T. D. BRECHTEIN

P.C.E.

"

* L. A. SHEELY

FUEL Q Mgr

"

* E. D. SINGER

FUEL Q & E Mgr.

"

Attended Exit

Inspector McNeillScope/Module H2 & I2DOCUMENTS EXAMINEDDocket No. 9990003
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1	2	TITLE/SUBJECT	3	4
/20-3178	5	ENGINEERING INSTRUCTIONS	P	3-18-81
		"	G	9-18-79
447	9	CORRECTIVE ACTION REQUEST (CAR)		3-3-81
	4	WILMINGTON MANUFACTURING DEPARTMENT QA MANUAL	8	JAN 1 81
128D5505	1	FUEL (BASIC) ROD	1	8-5-80
AGD4P12	2	URANIUM DIOXIDE FUEL PELLETS	26	MAR-18-81
70-19	3	PRODUCT QUALITY CERTIFICATION	5	2/13/81
" -38		CHEMET LABS STATION CONTROL PLANS	4	2/12/81
320-40.1		QUALITY NOTICES	5	5/22/80
" 40.6		PRODUCT/PROCESS QUALITY PLAN	3	5/5/81
100.13		QUALITY CONTROL INSPECTION INSTRUCTIONS	3	2/23/81
NH13711	8	ENG. CHANGE NOTICE	-	7/2/81
3.1.2	3	PRODUCT/PROCESS QUALITY PLAN - UO ₂ CERAMIC OPERATIONS	9	10-9-80
		ENRICHMENT CONTROL		
4.0.4	13	UO ₂ FUEL ROD OUTGASSING	17	10/9/80
3.2.2	3	PELLET SAMPLING AND RELEASE (QAT)	17	6/22/81
4.1.4	3	FUEL ROD OUTGASSING (UO ₂)	16	9/26/80

Document Types:

- | | |
|------------------|---------------------------------|
| 1. Drawing | 5. Purchas Order |
| 2. Specification | 6. Internal Memo |
| 3. Procedure | 7. Letter |
| 4. QA Manual | 8. Other (Specify-if necessary) |

Columns:

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| 1. Sequential Item Number |
| 2. Type of Document |
| 3. Date of Document |
| 4. Revision (If applicable) |

Inspector McNeil

Scope/Module H₂ & I₂O

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1	2	TITLE/SUBJECT	3	4
A.2.4	3	UO ₂ FUEL ROD OUTGASSING QATZ	"	10/9/80
G.2.5.1	3	(Gd,U)O ₂ Pellet SAMPLING AND RELEASE QATZ	5	9-3-80
G.2.8	3	FUEL ROD OUTGASSING - GADOLINIA UNIT QATZ	10	9-3-80
G.1.8	3	FUEL " " " OCOIR	7	6-27-80
A504P11	2	GADOLINIUM OXIDE-URANIUM DIOXIDE PELLETS	19	MAR 18-81
H.1.15	3	PELLET SINTERING - GAS HARPER FURNACE	4	5-7-80
	9	OFF GAS FURNACE DATA SHEETS		
	9	GADOLINA SINTERED DENSITY LOGS		
	9	OFF GAS RUN SHEETS		
	9	GADOLINA RELEASE SHEETS		

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1. Drawing
2. Specification
3. Procedure
4. QA Manual
5. Purchas Order
6. Internal Memo
7. Letter
8. Other (Specify-if necessary)
4. *Reports*

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1. Sequential Item Number
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DOCUMENTS EXAMINED

1	2	TITLE/SUBJECT	3	4
70-5	3	Material Review (P&P)	9	-
" - 9	1	Corrective Action Request (P&P)	5	-
" - 34		Nonconforming Material Control - FMQ (P&P)	7	-
" - 35		QA In-Process Corrective Action Program (P&P)	7	-
80-84		Stop Work Notice - FM (P&P)	2	-
320-60.3		Nonconforming Measurement and Test Equipment (QASAR)	4	-
" - 130.8	1	Fuel Rod Release Mark and Status Codes (QASAR)	2	-
4.9.2	3	P/P QUALITY PLANS	3	-
3.2.13	"	"	7	-
	9	C.A.R		
	9	I.R.		

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