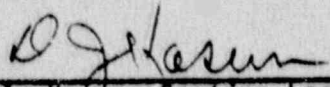


The information in this enclosure is considered to be appropriate for public disclosure pursuant to 10 CFR 2.790(d).

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

Report No.: 70-1113/90-205
License No.: SNM-1097
Safeguards Group: III
Licensee: General Electric Co.
Wilmington, NC 28402
Facility Name: Nuclear Fuel & Components Manufacturing
Inspection Conducted: August 6-10, 1990

Inspector: 
R. L. Jackson, Safeguards Physical Scientist Date Signed 9/20/90
Physical Security and MC&A Licensing and
Inspection Section, SGDB, SGTR, NMSS

Approved by: 
D. J. Kasun, Section Leader Date Signed 9/21/90
Physical Security and MC&A Licensing and
Inspection Section, SGDB, SGTR, NMSS

SUMMARY

Scope: The areas given limited examination during this routine announced SNM material control and accounting safeguards inspection included the licensee's MC&A system management and assessment program, measurement system, measurement controls and physical inventory. Appropriate critical MC&A procedures and portions of the licensee's approved Fundamental Nuclear Material Control (FNMC) Plan were inspected for compliance.

On August 6-10, 1990 R. Oldham, New Brunswick Laboratory (NBL), assisted the NRC inspector in conducting a test and evaluation of the licensee's procedures for the determination of the accuracy of SNM declared in dried sludge residues. This effort resulted in an Inspector Follow-Up-Item (IFI 90-205-1). During this period the licensee took six samples to be sent to the IAEA Safeguards Analytical Laboratory (SAL) in Seibersdorf, Austria, for destructive analysis of U and U-235. Duplicate samples were taken for NBL to perform confirmatory measurements for the NRC. The NRC will make a comparison statistical evaluation of the U and U-235 data between the licensee's, the IAEA, and NBL analytical results.

ENCLOSURE 1

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Results: Within the limited scope of this inspection, it appears that the licensee has established, implemented and is maintaining adequate SNM MC&A systems to ensure that the general performance objectives of 10 CFR 74.31(a)(1) through (3) are met. Two IFIs were identified to the licensee. The licensee had no adverse comment in regard to either IFI.

IFI 90-205-01

The licensee's analytical sampling procedures/methods are to be revised to more accurately determine the SNM content of dried sludge residues and to reduce a significant bias which now exists in this particular measurement system. The bias is causing an understatement of GE's SNM inventory value.

IFI 90-205-02

Based on certain physical inventory verification results, the licensee is to reassess the procedures/methods used to determine filter SNM holdup values as a result of SNM manufacturing operations.

Also onsite during the inspection were 10 IAEA inspectors, under the provisions of the US/IAEA Safeguards Agreement, to conduct a physical inventory verification (PIV) of the licensee's August 6, 1990, physical inventory. Mr. Harvey Zibulsky, NRC International Safeguards Branch, acted as an observer of the IAEA PIV activities. The IAEA PIV activities included an MC&A ledger audit, item count, nondestructive assay measurements, weighings and sampling of SNM for destructive analyses. The IAEA onsite activities were conducted on August 10, 1990. IAEA conclusions relative to the acceptability of the PIV are not expected to be finalized for several months after all destructive measurement results are completed and evaluated. While onsite the IAEA inspectors did not identify any IAEA safeguard anomalies.