

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 70-1100/85-06

Docket No. 70-1100

License No. SNM-1067

Safeguards Group: III

Licensee: Combustion Engineering, Inc.
P. O. Box 500
Windsor, Connecticut 06095

Facility Name: Combustion Engineering - Nuclear Fuel Manufacturing

Inspection At: Windsor, Connecticut

Inspection Conducted: September 16 - 19, 1985

Date of Last Material Control and Accounting Inspection: June 18 - 21, 1985

Type of Inspection: Announced Material Control and Accounting

Inspector : *A. Della Ratta* for *10/17/85*
A. Della Ratta, Safeguards Auditor date

Approved by: *R. R. Keimig* *10-17-85*
R. R. Keimig, Chief, Safeguards Section date
Nuclear Materials Safety and Safeguards Branch

Inspection Summary: Routine Announced Inspection on September 16-19, 1985
(Inspection Report No. 70-1100/85-06)

Areas Inspected: Observation of Physical Inventory. The inspection involved 32 hours by one NRC region-based inspector.

Results: The licensee was in compliance with NRC requirements in the area inspected.

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DETAILS

1. Key Persons Contacted

International Atomic Energy Agency (IAEA), Department of Safeguards

J. Gough, Lead Inspector
E. Zobor, Inspector
I. Hiramatsu, Inspector
D. Jones, Inspector
G. Labellarte, Inspector

Combustion Engineering, Inc.

- * T. Bowie, Manager, Nuclear Materials and Security
- D. Parks, Manager, Nuclear Materials and Security (Replacement)
- R. Sheeran, Manager, Nuclear Licensing, Safety, Security and Accountability
- G. Kersteen, Manager of Production
- G. Buddenhagen, Supervisor

U.S. Nuclear Regulatory Commission

P. Robinson, S⁺ NMSS

- * present at exit interview

The inspector also interviewed other licensee employees involved with nuclear material control and production.

2. 30703 - Exit Interview

The inspector met with the licensee representative noted in paragraph 1 at the conclusion of the inspection on September 19, 1985, and summarized the scope and findings of the inspection.

At no time during this inspection was written material provided to the licensee by the inspector.

3. 85211 - Physical Inventory

Beginning September 17, 1985, the licensee took a complete physical inventory of special nuclear material. The previous physical inventory was taken beginning March 19, 1985.

The IAEA and NRC inspectors attended the preinventory meetings, which were conducted during the afternoon of September 16 for the Development Department personnel inventory teams, and on the morning of September 17 for the Manufacturing Department personnel inventory teams. At these meetings written inventory instructions were issued to all team members

and oral instructions were given which emphasized the importance of certain written instructions.

The majority of the physical inventory items noted by the inspectors consisted of virgin UO_2 powder, UO_2 pellets, recycle powder, fuel rods, assembled rods, sludges, drummed waste and chemistry samples. The inspectors witnessed the implementation of the licensee's procedures for listing items on inventory by the inventory teams. The inspectors noted that items such as sludges and scrap were scheduled for sampling and assay to determine the SNM content and that other items were being weighed for inventory purposes. The inspectors witnessed the weighings being performed on trays of pellets and verified that accurate weights were being recorded. The IAEA inspectors calculated the attribute and variables sampling plans for each stratum as physical inventory lists became available. The plans were to be used for inventory verification.

The IAEA and NRC inspectors performed a cross check of material located in material balance areas against the book records. This cross check included the reweighing of selected containers of UO_2 powders that had been previously weighed by the licensee prior to the physical inventory and placed in a enclosed tamper-sealed storage area. The inspectors witnessed the reweighing and observed no weight differences of significance.

Virgin UO_2 powders, grinder sludge, scrap pellets and production pellets were sampled for licensee analysis during the physical inventory. Selection of the samples was done in accordance with the IAEA sampling plan. Duplicate samples for independent analyses were also taken for the IAEA (to be sent to its laboratory in Seibersdorf, Austria) and for the NRC (to be sent to the New Brunswick Laboratory). On completion of the Uranium and Uranium-235 analyses by the licensee's and NRC's laboratories, a statistical evaluation will be made by the NRC and will be documented in a subsequent inspection report (Inspector Follow-Up Item 85-06-01).

[illegible]

R.R. Keith 9/10-5-22

INSPECTOR:

- LICENSEE VENDOR	TRANSACTION TYPE	DOCKET NO. (8 digits) OR LICENSE NO. (BY PRODUCT) (113 digits)	REPORT		NEXT INSPEC DATE	
			NO	SEC	MO	YR
COMBUSTION ENGINEERING INC.	X I - INSERT	07001100	8506	A		
	M - MODIFY			B		
	D - DELETE			C		
	R - REPLACE			D		

PERIOD OF INVESTIGATION: INSPECTION							INSPECTION PERFORMED BY:				ORGANIZATION CODE OF REGION/HQ CONDUCTING ACTIVITY (See REAC 0530: Manpower Reporting - Weekly Manpower Reporting for code)		
FROM			TO				<input checked="" type="checkbox"/> 1 - REGIONAL OFFICE STAFF <input type="checkbox"/> 2 - RESIDENT INSPECTOR <input type="checkbox"/> 3 - PERFORMANCE APPRAISAL TEAM		OTHER		REGION DIVISION BRANCH		
MO	DAY	YR	MO	DAY	YR								
09	16	85	09	19	85					1	C	B	

REGIONAL ACTION (Check one box only)		TYPE OF ACTIVITY CONDUCTED (Check one box only)							
<input checked="" type="checkbox"/>	1 - NRC FORM 88	<input type="checkbox"/>	02 - SAFETY	<input type="checkbox"/>	06 - MGMT VISIT	<input type="checkbox"/>	10 - PLANT SEC	<input type="checkbox"/>	14 - INQUIRY
<input type="checkbox"/>	2 - REGIONAL OFFICE LETTER	<input type="checkbox"/>	03 - INCIDENT	<input type="checkbox"/>	07 - SPECIAL	<input type="checkbox"/>	11 - INVENT VER	<input type="checkbox"/>	15 - INVESTIGATION
		<input type="checkbox"/>	04 - ENFORCEMENT	<input type="checkbox"/>	08 - VENDOR	<input type="checkbox"/>	12 - SHIPMENT/EXPORT		
		<input type="checkbox"/>	05 - MGMT AUDIT	<input checked="" type="checkbox"/>	09 - MAT ACCT	<input type="checkbox"/>	13 - IMPORT		

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MODULE INFORMATION										MODULE INFORMATION																									
REC OBJ		MODULE NUMBER INSP								MODULE REC FOLLOWUP				REC OBJ		MODULE NUMBER INSP								MODULE REC FOLLOWUP											
TYPE	NUMBER	PHASE	MANUAL	CHAPTER	PROCEDURE	NUMBER	LEVEL	PRIORITY	DIRECT INSPECTION EFFORT IN STAFF HOURS EXPENDED THIS INSPECTION	PERCENTAGE COMPLETED TO DATE	STATUS	PHASE	MANUAL	CHAPTER	PROCEDURE	NUMBER	LEVEL	TYPE	NUMBER	PHASE	MANUAL	CHAPTER	PROCEDURE	NUMBER	LEVEL	PRIORITY	DIRECT INSPECTION EFFORT IN STAFF HOURS EXPENDED THIS INSPECTION	PERCENTAGE COMPLETED TO DATE	STATUS	PHASE	MANUAL	CHAPTER	PROCEDURE	NUMBER	LEVEL
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* CIRCLE SEQUENCE IF VIOLATION OR DEVIATION.