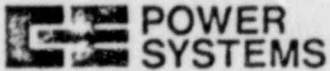


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PDR 70-1100



April 2, 1980

License SNM-1067
Docket 70-1100

U. S. Nuclear Regulatory Commission
Washington, D. C. 20555



Attention: Mr. J. G. Partlow, Chief
Material Control & Accountability
Licensing Branch
Division of Safeguards

Gentlemen:

Our definition of "book record" or "book balance" has been added to Chapters 5.0 and 6.0 of the Fundamental Nuclear Material Control Plan, as requested.

This change is submitted under the provisions of 10 CFR 70.32(c) and your request dated January 25, 1980.

Very truly yours,

H. V. Lichtenberger
Vice President-Nuclear Fuel
Nuclear Power Systems-Manufacturing

HVL/HTC/ssb

Enclosures

FEE EXEMPT

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5.0.1 Definitions

5.0.1.1 Book Record or Book Balance

The accounting documentation under the control of the Nuclear Materials Manager, which reflects all transactions of element and fissile isotope that cross the Windsor site boundaries and also reflects all transactions of element and fissile isotope that cross individual MBA/ICA boundaries within the Windsor site.

5.1 Inventory Requirements

Periodic physical inventories of Special Nuclear Material assigned to Combustion Engineering's Windsor facility are required and will be conducted in accordance with federal regulations. These inventories will normally be taken during the periods of June 15 - August 15 and December 15 to February 15. A minimum of two inventories per calendar year is required.

5.1.1 Special Inventories

Special inventories may be required for any number of reasons, some of which are:

After an unsatisfactory inventory with unreconcilable MUF where MUF is 1.5 times LEMUF, or more.

After an operating accident.

After a nonoperating accident such as fire, explosion, storm damage, etc.

Suspicion of an attempted or confirmed diversion.

5.2 Procedures

Responsibility for issuing and maintaining overall inventory procedures for Combustion Engineering is vested in the Nuclear Materials Manager.

5.3 Notice of Inventory

The production departments will be advised by the NMM prior to any inventory as to the reason and date of the inventory, the type and scope of the inventory, and the reporting methods required.

5.4 Inventory Preparations and Cut-Off Procedures

5.4.1 Based on inventory instructions indicating cut-off times, the manufacturing facilities will cease material movements as specified. Normally, inventories for NFM-W will be scheduled to coincide with the completion of a full plant clean-up upon enrichment change, thus minimizing in-process material. When a complete clean-up is not possible, a pelletizing area shutdown and as extensive a clean-up as practical will be accomplished to reduce the in-process material.

5.4 Inventory Preparations and Cut-Off Procedures

5.4.1 (Cont'd)

Normally, the following conditions will be met prior to conduct of an inventory:

- 5.4.1.1 Pellet production will cease during inventory.
- 5.4.1.2 Stacking and loading of fuel pellets will cease, although fuel rods previously loaded may be seal welded.
- 5.4.1.3 Vacuum and/or other cleaning of the following equipment will be completed:
 - a) Powder preparation stations including belts
 - b) Granulator hood and conveyor
 - c) Pellet presses
 - d) All batch make-up, recycle, hammermill, etc., loads
 - e) Powder storage pads
 - f) Stacking tables
 - g) Grinders, centrifuges and assorted equipment
 - h) All other areas where powder or chips may accumulate

The Manufacturing Process Engineer will determine, based on the known time in service, whether or not the hood filters and return air system filters will be knocked down.

Press fuel hoppers containing SNM need not be emptied, but must be gross weighed (minus recorded tare weight) for inventory purposes.

- 5.4.2 Material movement between control areas will cease at the start of, or prior to, conduct of the inventory. Fuel rod work and/or inspection may continue within production areas during the conduct of the inventory.
- 5.4.3 Accounting records will be updated to the inventory cut-off time reflecting all physical receipts or removals prior to the cut-off. Subsequently, a book balance will be established for each MBA/ICA and for the Windsor site as of the cut-off time.
- 5.4.4 The Development Department will not move SNM between its Criticality Areas nor receive or transfer SNM between manufacturing and itself during the inventory. The NMM and the applicable NMC Supervisor or NMC Engineer may release material in the event of an emergency. Such movements must be documented and signed.

5.5 Inventory teams

Inventory teams to be assigned by the Manufacturing and Development Departments will consist of two persons per team. One of the team members must be familiar with the items being inventoried. One member is designated as the recorder, the other is the counter/caller. The recorder enters inventory data on the inventory sheets; the counter/caller identifies items, weights, etc., relaying the information to the recorder as well as applying inventory stickers/tags to recorded items. The recorder will insure that all items in the team's assigned areas are inventoried and that no item is omitted or recorded in more than once.

6.0 Material Accounting System

6.0.1 Definitions

6.0.1.1 Book Record or Book Balance

The accounting documentation under the control of the Nuclear Materials Manager, which reflects all transactions of element and fissile isotope that cross the Windsor site boundaries and also reflects all transactions of element and fissile isotope that cross individual MBA/ICA boundaries within the Windsor site.

6.1 System Description

Being responsible for overall accounting and control of SNM, the NMM maintains centralized accounting records for Combustion Engineering's Windsor site. Subsidiary accounts and accounting records are established at each MBA and are maintained by the SNM custodians. All transfers of SNM are accounted for using a double entry system, crediting one account, debiting another. Approved procedures provide for reconciliation, drawing material balances, adjustments, and storage of records.

6.1.1 Account Structure

The NMM maintains consolidated, centralized accounting records as well as records of SNM under his custody. MBA 1, MBA 2, and the Nuclear Lab custodians maintain journals for their respective areas. Accounts within MBA are shown in Exhibit 6.1.

Various accounting records are maintained to properly account for SNM at the Windsor facility:

Transfer Journal: A transfer journal is maintained by material category to record initial and ending balances, receipts, shipments, and other removals of SNM.

Project Control Ledger: A project control ledger is maintained by material category to summarize the initial and ending balances, the receipts, transfer, and/or other removals for particular projects. Included is information concerning contract number, project title, reporting unit, material content, enrichment, etc.

6.1.1.1 Accounting Forms

Accounting forms used to record and transmit accounting data (source data) are: AEC Form 741, AEC Form 284, and the CE Material Transfer Ticket (Exhibit 6.2).

6.1.1.2 Flow Chart

An accounting flow chart for receipts is included as Exhibit 6.3, and a flow chart for shipments is included as Exhibit 6.4.

6.1.2 Accounting Procedures

An accounting procedures manual will be established and maintained. The NMM will have overall responsibility and updating of the procedures manual. The NMC Supervisor will prepare and update procedures peculiar to NFM-W. Appropriate levels of management will approve these procedures.