INSPECTION PROCEDURE 85205

FACILITY OPERATIONS AND INTERNAL CONTROLS

PROGRAM APPLICABILITY: 2681

85205-01 INSPECTION OBJECTIVE

Confirm that facility operations coincide with activities described in the NRC approved FNMC Plan and that internal controls as described in the Plan and practiced, provide knowledge of the identity, quantity, and location of all special nuclear material within the licensee's facility.

85205-02 INSPECTION REQUIREMENTS

Operation of the facility and internal controls should comply with applicable federal regulations and license conditions. The FNMC Plan will provide the structure for the licensee's program. As applicable for each facility, determine by inspection whether:

02.01 MBA and ICA boundaries conform with those approved in the FNMC plan. [70.58(d)(1), (4)]

02.02 The MBA/ICA structure provides administrative and physical controls sufficient to localize losses, thefts, or diversions to a specific MBA or ICA and to identify the mechanisms. [70.58(d) (2)]

02.03 The movement of SNM between MBAs and/or ICAs is controlled as follows: [70.51(e)(1)(v), (vi), (vii)]

a. Procedures are maintained and followed for the control, distribution, and use of internal transfer documents.

b. Internal transfer documents are signed by authorized SNM custodians.

02.04 Current knowledge is provided for items of SNM in process and in storage of the identity, quantity, and location of all such items. [70.58(h)]

02.05 Procedures are established, maintained and followed for tamper-safing containers or vaults containing SNM. These procedures of describe control of tamper-safing devices, records of the date,

time and individual who applies a tamper-safing device, and the program for verifying the integrity of tamper-safing devices and responding to devices which are found to have been compromised. [70.51(e)(1)(i); 70.51(f)(2)(ii),(iii)]

02.06 Procedures are established, maintained and followed to assure accurate identification of SNM received and shipped by the licensee and to review and evaluate shipper-receiver differences on an individual container or lot basis, on a shipment basis, and on a cumulative basis for like material. These procedures describe appropriate investigative and corrective actions which will be taken to reconcile significant shipper-receiver differences. [70.58(g)(1), (2), (3)]

02.07 Procedures are established, maintained and followed for scrap control to limit the accumulation and measurement uncertainty of these materials on inventory. Procedures should include (1) the identification and classification of scrap, and (2) the provisions for regular processing and recovery of scrap so that scrap having a measurement uncertainty of greater than ± 10% is not on inventory longer than six months if it contains plutonium, U-233, or HEU, or not longer than twelve months if it contains LEU or plutonium containing 80 weight percent or more Pu-238. [70.58(i)]

85205-03 INSPECTION GUIDANCE

03.01 Regulations. 70.51(e) (1); 70.58(d), (e), (g), (h), (i).

03.02 Regulatory Guides and Reports

Regulatory Guide 5.10 - Pressure-Sensitive Seals (7/73)
Regulatory Guide 5.15 - Security Seals (1/74)
Regulatory Guide 5.28 - Evaluation of S/R Differences (6/74)
Regulatory Guide 5.45 - Standard Format and Content (12/74)
Regulatory Guide 5.49 - Internal Transfers of SNM (3/75)
Regulatory Guide 5.57 - Shipping/Receiving Controls (6/80)
NUREG/CR 2820 - Resolution of S/R Differences (9/82)
NUSAC Report No. 790 - Analysis of S/R Differences (12/82)

03.03 Criteria. Low enriched plants typically have one or two large MBAs. The licensee should have the ability to localize losses through accountability measurements, process controls, or quality assurance data. The number of MBAs and ICAs at high enrichment facilities should reflect the size and complexity of process operations. All transfers of special nuclear material between any two control areas must be properly documented and measured. The measurement of SNM may occur at either the point of transfer or the point of receipt. Transfer documents must contain appropriate descriptive information such as date, material type, enrichment, weight, item or container number, and appropriate analytical information. Material transfer documents must be uniquely identified and controlled. Once a material transfer document has been used, the SNM custodian should immediately forward a copy to the accounting office. All material transfer documents must be accounted for.

For purposes of the current knowledge requirement, an item is created whenever a quantity of SNM is placed in a container (usually portable) having a fixed volume. Items which exist for longer than some predetermined time limit (approved by the NRC) should be uniquely identified and entered into an item control program

according to an NRC-approved schedule. Processing vessels (e.g., closed V-blenders, boats and trays of UO_2 pellets, etc.) would normally be excluded from this program unless they are removed from the process line for storage. Time limits and schedules associated with the item control program should be specified in the FNMC Plan along with a general listing of those items which will be included in and those which will be excluded from the program. In addition, periodic verification of the reliability of the item control program should be conducted as described in the FNMC Plan.

The licensee's tamper-safing program must use tamper-indicating devices in a manner such that, if tampering occurs, an indication will result. The seals must use a consecutive numeric or alphanumeric identification system to prevent surreptitious use of blank seals. Seal design should help preclude duplication. All tamper-indicating devices should be rigorously controlled. As a minimum, these devices should be kept in a locked container until used by authorized individuals. A specific individual must be designated for controlling and issuing the devices.

Procedures must be maintained and followed which provide guidance for proper application of tamper-indicating devices. They should include procedures for seal application to doors and frames as well as containers of SNM. The records system to control and account for these devices should indicate the date and time of application, the item or container number to which applied, the signatures of persons to whom issued, the signatures of those who applied and witnessed the application, the device type, and the seal identification number. For application or use on items or containers of HEU, U-233, or Pu, two individuals must witness seal application and be able to attest to the contents. With LEU, a single individual may apply seals and attest to the contents. For devices being removed, the records system should indicate the date and time of removal, the item or container number, the device number, and the signature of the authorized individual who removed and destroyed the tamper-indicating device. Records of seal issuance, application, and destruction should be stored in a locked container. In addition, as a minimum, these records should be reconciled once per material balance period (i.e., during each physical inventory). Periodic monitoring of the presence and integrity of seals and response to compromised seals should be carried out in accordance with the program outlined in the licensee's FNMC Plan.

Verification for SNM receipts of container identity and integrity, seal identity and integrity, and bulk container gross weights should be accomplished within the time limits approved in the FNMC Plan. Shipper-receiver differences should be evaluated for significance for both element and isotope. Any statistically significant shipper-receiver difference (whether for element only, isotope only, or both) must be investigated and resolved unless the U-235 (or U-233 or Pu) difference associated with a particular line item or the total shipment, as the case may be, is less than 50 grams. Packaging of SNM shipments should be observed by appropriate licensee personnel to assure compliance with all required local, state, and federal regulations. Shipping information should also be carefully checked and seal integrity examined prior to the shipment of any container.

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