

The Nuclear Materials Management and Safeguards System (NMMSS)



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**Accuracy**

**Accountability**

**Performance**



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# IAEA Safeguards Reporting Requirements for U.S. Facilities

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2015 Annual Users Training Meeting



## BACKGROUND – Overview of Governing Requirements

Nuclear Material  
Reporting to the IAEA



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## Reporting Requirements



- IAEA Information Circular (INFCIRC)/207, *Notification to the Agency of Exports and Imports of Nuclear Material*, July 1974
- IAEA INFCIRC/288, *Agreement between the United States of America and the Agency for Safeguards in the United States*, November 1977
- *Subsidiary Arrangements to the Agreement between the Government of the United States of America and the International Atomic Energy Agency for the Application of Safeguards in the United States of America* (Code 10) June 1978
- U.S. Government's voluntary reporting in accordance with IAEA GOV/2588, *Strengthening of Agency Safeguards*, September, 1992

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## Reporting Requirements (Continued)



- Imports and exports of nuclear material
  - INFCIRC/207, *Notification to the Agency of Exports and Imports of Nuclear Material*, requires reporting import and export transactions for all domestic U.S. facilities, except those selected by the IAEA
- IAEA safeguarded material
  - INFCIRC/288, *Agreement between the United States of America and the Agency for Safeguards in the United States*, requires that transaction, inventory, and material balance information be reported for facilities selected by the IAEA under the Agreement
    - URENCO USA, Eunice, NM (enrichment facility) – *no facility attachment*
    - AREVA, Richland, WA (fuel fabricator)
    - Global Nuclear Fuel, Wilmington, NC (fuel fabricator)
    - Westinghouse, Columbia, SC (fuel fabricator)
    - K-Area Material Storage (KAMS) facility at the DOE Savannah River Site, Aiken, SC - *no facility attachment*
- 10 CFR Part 75, *Safeguards on Nuclear Material – Implementation of US/IAEA Agreement* – *codifies the content and the timing requirements for nuclear industry to report information agreed to by the USG under INFCIRC/207 and INFCIRC/288*

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## Reporting Content



- INFCIRC/207: All import and export activity for all facilities within the U.S., except those selected by the IAEA, is reported to the IAEA on a monthly basis
- INFCIRC/288: All transaction activity for a facility selected by the IAEA is reported to the IAEA on a monthly basis
  - Imports and exports that would have been included under the INFCIRC/207 reporting requirements
  - Any domestic or applicable internal activity that affects the material balance of the facility
  - Yearly inventory reports
- Once a Facility Attachment has been ratified, additional data requirements are imposed

*All relevant transactions are to be reported to the IAEA within 30 days from the last day of the month in which the activity occurred.*

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## Additional Requirements for INFCIRC/288



- Facilities subject to INFCIRC/288 reporting requirements must annually submit a Physical Inventory and Material Balance Report. The reports are converted by NMMSS into the following IAEA data files:
  - MBR-288-1 (Material Balance Report)
  - MBR-CN-288-1 (Material Balance Concise Notes Report)
  - PIL-288-1 (Physical Inventory Listing Report)
  - PIL-CN-288-1 (Physical Inventory Listing Concise Notes Report)

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## Material Types (MT) Reported to the IAEA



Depleted Uranium

MT 10 = D

Enriched Uranium

MT 20 = EG

Plutonium

MT 50 = P

Uranium-233

MT 70 = EK

Normal Uranium

MT 81 = N

Thorium

MT 88 = T

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## Mechanisms for Data Collection



### Four forms for submission of Data to NMMSS

DOE/NRC Form 741

Nuclear Material Transaction Report

DOE/NRC Form 742

Material Balance Report

DOE/NRC Form 742C

Physical Inventory Listing

DOE/NRC Form 740M

Concise Note

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## Data Requirements 10 CFR Part 75



### Initial Inventory Report

- (a) Initial inventory reporting date shall be the last day of the calendar month in which the Commission gives the licensee notice that an initial inventory report is required.
- (b) The initial inventory report...must show the quantities of nuclear material contained in or at a facility as of the initial inventory reporting date. The information in the initial inventory report may be based upon the licensee's or certificate holder's book record.
- (c) The initial inventory report shall be dispatched within twenty (20) days after the initial inventory reporting date.

### Accounting Reports

- (a) The accounting reports for each IAEA material balance area must consist of: (i) Nuclear Material Transaction Reports (Inventory Change Reports); and (ii) Material status reports showing the material balance based on a physical inventory of nuclear material actually present.
  - **DOE/NRC Form 741 and DOE/NRC Form 742**
- (b) The reports shall be based on data available as of the date of reporting and may be corrected at a later date, as required.

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## Data Requirements 10 CFR Part 75 (Continued)



### Inventory Change Reports

- a) Nuclear Material Transaction Reports (Inventory Change Reports)...must specify identification and batch data for each batch of nuclear material, the date of the inventory change, and, as appropriate,
- The originating IAEA material balance area or the shipper; and
  - The receiving IAEA material balance area or the recipient.

Each licensee who receives special nuclear material from a foreign source shall complete both the supplier's and receiver's portion of the form.

- a) Nuclear Material Transactions Reports (Inventory Change Reports), when appropriate, must be accompanied by **Concise Notes**...This Concise Note is used in:
- Explaining the inventory changes on the basis of the operating records provided for under § 75.23; and
  - Describing, to the extent specified in the license conditions, the anticipated operational program for the facility, including particularly, but not exclusively, the schedule for taking physical inventory.

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## Data Requirements 10 CFR Part 75 (Continued)



### Material Status Reports

- a) A material status report must be submitted for each physical inventory which is taken as part of the material accounting and control procedures required by § 75.21.
- The material status report must include a material balance report and a physical inventory report which lists all batches separately and specifies material identification and batch data for each batch.
  - When appropriate, the material status report must be accompanied by a Concise Note.

*Unless otherwise specified in the license conditions, material status reports shall be dispatched as soon as possible and in any event within thirty (30) days after the start of the physical inventory.*

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# Data Requirements 10 CFR Part 75

(Continued)



## Special Reports

- a) This section applies only to licensees or certificate holders who have been given notice under § 75.7(b) that their facilities are subject to the application of IAEA safeguards.
- b) Each licensee who is subject to this section shall immediately make a special report to the Commission, by telephone (and also by telegraph, mailgram, or facsimile), in those situations described in license conditions.
  - The possibility of loss of nuclear material in excess of specified limits
  - Unexpected changes in containment to the extent that unauthorized removal of nuclear material has become possible.