



Accountability
Performance
Accuracy

The Nuclear Materials Management Safeguards System

NMMSS

2016

Annual Users Training Meeting

May 9-12, 2016 | New Orleans, LA

NRC Reporting to NMMSS

Mary McConnell
NMMSS



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Reporting to NMMSS

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- Regulatory Compliance
- NRC Reporting Requirements
- Resources



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Regulatory Compliance

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- NRC regulatory questions?
 - Contact Mirabelle Shoemaker
NRC NMMSS Program Manager
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Reporting Foundations

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- There are a number of Treaties, and U.S. Government voluntary actions that require the U.S. Government to track and report nuclear materials
 - Agreements for Peaceful Nuclear Cooperation
 - US/International Atomic Energy Agency Safeguards
 - Annual report of Civilian Holdings of Plutonium
- NRC regulations are contained in Chapter 10 of the Code of Federal Regulations (10 CFR)





Reporting Guidance Documents

- NUREG/BR-0006, Rev. 7, Effective date, January 1, 2009, *“Instructions for Completing Nuclear Material Transaction Reports”*
- NUREG/BR-0007, Rev. 6, Effective date, January 1, 2009, *“Instructions for the Preparation and Distribution of Material Status Reports”*
- D-24 Personal Computer Data Input for NRC Licensees, Effective Date January 1, 2012, *“A booklet of guidance for data submissions to NMMSS using electronic formats”*





What Constitutes Successful Reporting

- Licensee-reported physical inventory and material balance forms (742 and 742C) match NMMSS generated balances
- Foreign obligation totals in section B of the material balance report (742) match NMMSS generated balances by obligation code and material type



Requirements for Reporting

NRC requires licensees to report receipts, shipments, inventory adjustments and inventory if:

- \geq 1 gram of Special Nuclear Material (SNM) (plutonium, uranium-233, or uranium-235 contained in enriched uranium)
- \geq 1 kilogram of foreign obligated source material (natural uranium, depleted uranium, or thorium)



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Requirements for Reporting (Continued)

Licensees who possess less than 350 grams of SNM are required to report their physical inventory to NMMSS between January 1 and March 31 of each year

- Reporting for a calendar year



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Requirements for Reporting (Continued)

Licensees possessing 350 grams or more of SNM must report a physical inventory to NMMSS a minimum of once a year



Requirements for Reporting (Continued)

All Licensees must submit an MSR (Material Summary Report) (Form 742, 742C) to NMMSS under the following conditions:

➤ *A RIS has a reportable quantity as of their inventory date*

AND/OR

➤ *A RIS has shipped or received a reportable quantity during the material balance reporting period*

Requirements for Reporting (Continued)

Inventories for the following materials must be reported to NMMSS if quantity is within reportable range (1 unit or greater)

Special Nuclear Material	Material Type	Units
Enriched Uranium*	20	Whole Gram
Plutonium	50	Whole Gram
Uranium-233	70	Whole Gram
Plutonium-238	83	Tenth of Gram
Uranium in Cascades	89	Whole Gram

* NRC Reporting of Enriched Uranium	
E-1	Greater than 0.711% but less than 5.00%
E-2	5.00% or more, but less than 20.00%
E-3	20.00% or more, but less than 80.00%
E-4	80.00% or more



Requirements for Reporting (Continued)

All government-owned material is reportable per the DOE Requirements

Source Material	Material Type	Units
Depleted Uranium	10	Whole Kilogram
Normal Uranium	81	Whole Kilogram
Thorium	88	Whole Kilogram



Requirements for Reporting (Continued)

All Government owned material is reportable per the DOE Requirements

Other Nuclear Material	Material Type	Units
Americium-241	44	Whole Gram
Americium-243	45	Whole Gram
Curium	46	Whole Gram
Californium-252	48	Whole Microgram
Lithium-6	60	Whole Kilogram
Neptunium-237	82	Whole Gram
Deuterium	86	Tenth of Kilogram
Tritium	87	Hundredth of Gram



Requirements for Reporting (Continued)

- Licensees that possess government-owned source material must as part of their Material Status Report (MSR) submission
 - Confirm the continuing need for government-owned nuclear materials in their possession
 - Identify any excess government-owned materials
 - Licensees who wish to return excess government-owned nuclear material, please contact Pete Dessauls



Resources

- Request NMMSS Reports
 - Monthly/Bimonthly/Quarterly/Semiannual/Annual
 - *Timely Identification of discrepancies*
 - Preliminary
 - *Request anytime throughout the year*
 - *Prior to reconciliation*



RESOURCES

(List of Reports)

NMMSS Reports:

- TJ-1X – Daily Activity by facility
- A-200 – Shows any differences for DOE and government owned material at NRC sites
- M-742 – Material Balance Report
- M-742A – Material balance report by action date
- TJ-45 Transactions
- TJ-23 Transactions (Closed months)
- IA-OBL-05 – Foreign obligation balance





Suggestions

- Use electronic files (XML)
 - *Improve accuracy and timely reporting*
 - Options are:
 - SAMS Software
 - Fillable Forms
 - Generated examples of XML

FAX, mail, email copies potentially illegible

- *Fewer calls from NMMS to verify data*
- *Input may not be what was intended*



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Suggestions (Continued)

Use NMMSS resources:

- *SAMS, Converter*
- *NMMSS Website*
- *D-23 and D-24 Reports*
- *Keep contact information up to date*
- *NMMSS Analysts*



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NMMSS Contacts

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NMMSS Points-of-Contact for Assistance

Name	Topic	Phone	Email Address
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Reasons to Call NMMSS

- How to complete transactions, inventory, and material balance
- Next transaction number in series
- Open or closed month
- Request reports
- Find a Reporting Identification Symbol (RIS) for a site
- RIS contact information
- Other questions



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Summary

- Regulatory compliance
- NRC Reporting Requirements
- Resources

❖ *Any comments, questions or ideas?*

