



Highlights of NMMSS Reconciliation Process

Nuclear Material Management and Safeguards System (NMMSS)
NNSA Office of Materials Integration (ONMI)

Developed by:





Presentation Outline

- What is the definition of NMMSS Reconciliations?
- Who has to reconcile with NMMSS?
- When should reporting and reconciliation occur?
- How does the NMMSS reconciliation process take place.
- What are some additional tips for NMMSS reconciliation

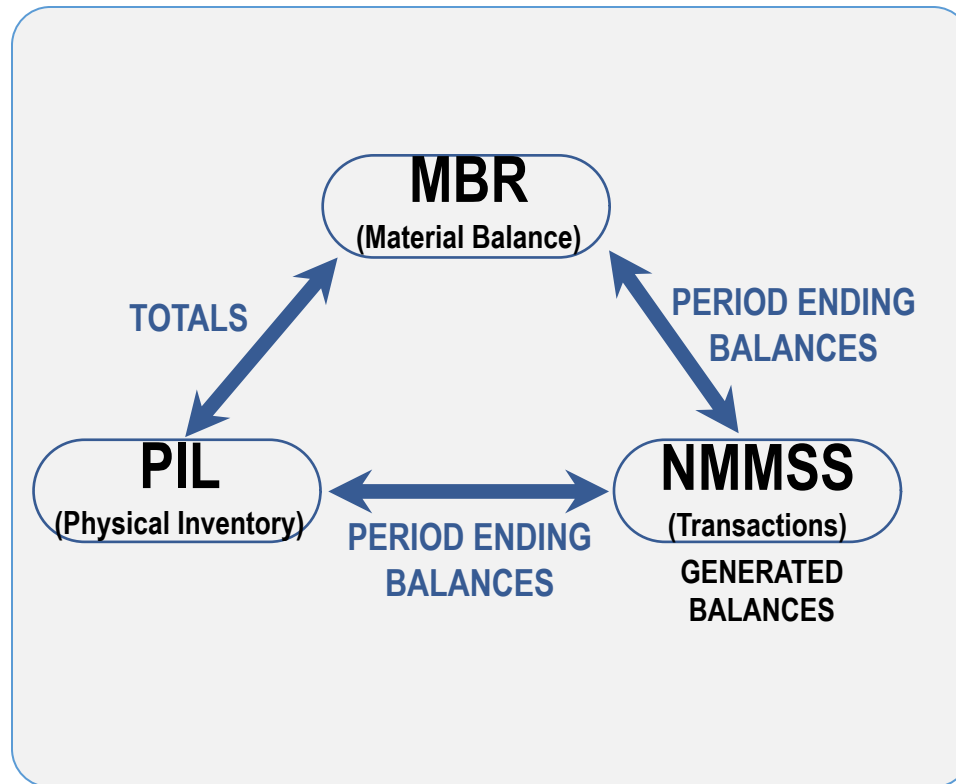


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Reconciliation Balancing





Banking Example

Beginning
Balance



Plus
Deposits



Less
Withdrawals



Equals

Ending
Balance



Developed by:

LINK
Technologies



Banking Example

Beginning
Balance



Plus
Deposits



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Equals

Ending
Balance



NMMSS
Transactions



Banking Example

NMMSS
Material
Balance

Beginning
Balance



Plus
Deposits



Less
Withdrawals



Equals

Ending
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NMMSS
Transactions

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LINK
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Banking Example

NMMSS
Material
Balance

Beginning
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Plus
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Less
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Equals

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Balance

NMMSS
Transactions

NMMSS
Inventory



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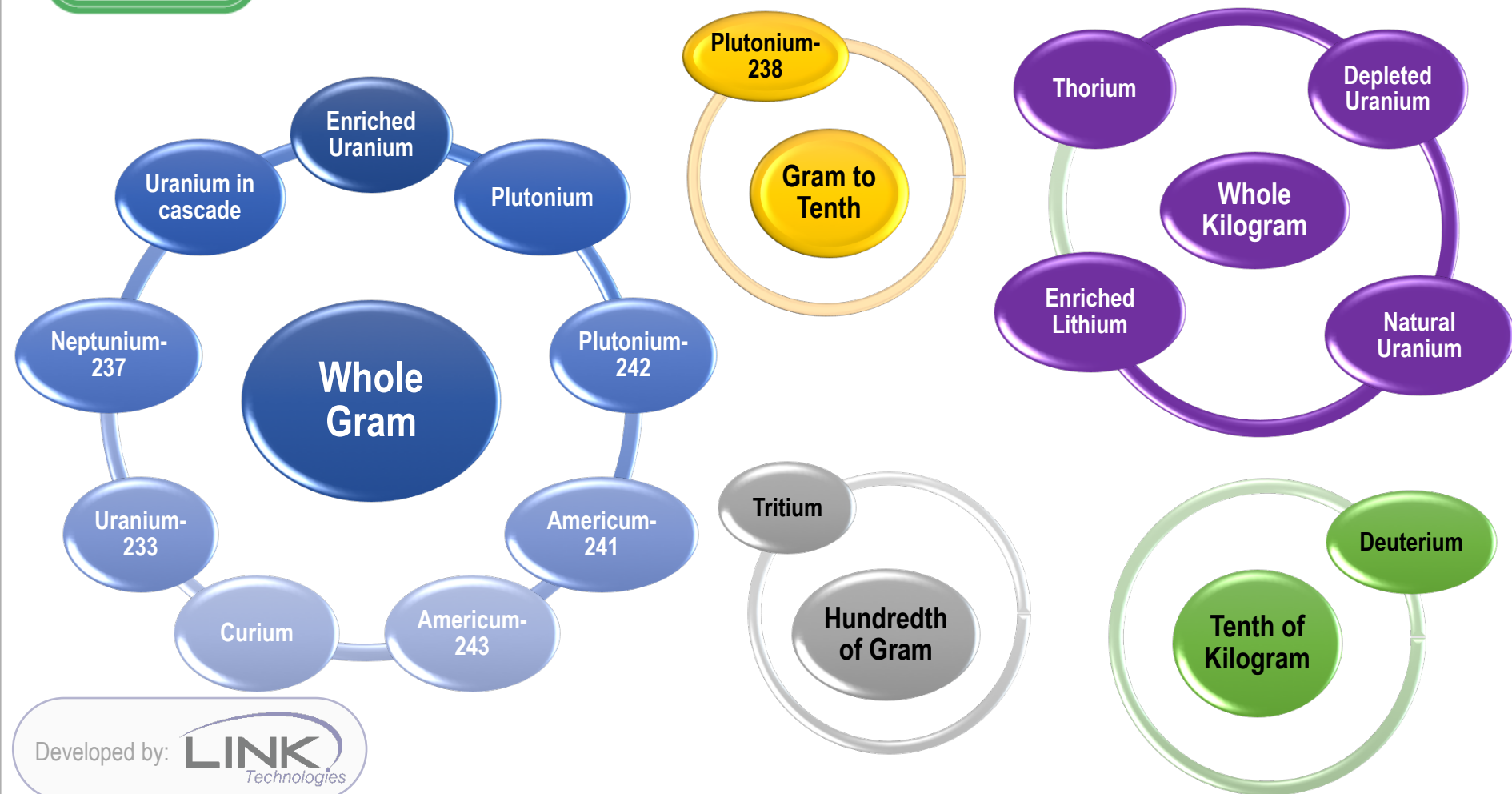


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NMMSS Material Types





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Reporting Criteria for DOE Sites and NRC Licensees Based of Requirements



Licensees must report to NMMSS if:

- Facility possesses one gram or more of special nuclear material (SNM) (plutonium, uranium-233, or uranium-235 contained in enriched uranium)
- One kilogram or more of foreign obligated source material (natural uranium, depleted uranium, or thorium)
- 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**
- Licensees possessing 350 grams or more of SNM must report a physical inventory to NMMSS a **minimum of once a year**



DOE contractors must report to NMMSS if:

- Site possesses a reportable unit of accountable nuclear materials
- All sites with a reportable quantity on **September 30** must reconcile prior to NMMSS closing the month of September



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NMMSS Transaction Reporting

- Transactions (DOE/NRC Form 741)
 - Used to report any receipts or shipments of nuclear materials. They can be:
 - *Shipping and receiving (includes Imports/Exports)*
 - *Decay*
 - *Rounding*
 - *Normal operating loss*
 - *Production*
 - *Fission and Transmutation*
 - *Corrections*

For Both DOE and NRC Facilities

Shipments	Receipts
You must report shipments within <i>one working day</i>	You must report receipts within <i>ten working days</i>

DOE/NRC FORM 741 (10-2014)



DOE/NRC Form 742 Material Balance

DOE/NRC FORM 742
(09-2014)
MANDATORY DATA
COLLECTION
AUTHORIZED BY:
10 CFR 30.40, 50, 70, 72,
74, 75, 150, Public Laws
92-603, 96-463, 104-101

**U.S. DEPARTMENT OF ENERGY
AND
U.S. NUCLEAR REGULATORY COMMISSION**

MATERIAL BALANCE REPORT

APPROVING MY OWN: NO. 3100-0004 EXPIRES: 08/31/17
Estimated burden per response to comply with this mandatory collection request: 2 hours for small licensees and 5 hours for large licensees. Reported licensees are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the PDA, Privacy, and Information Collection Branch (1-5 P53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to: info@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NECH-1022, (3150-0004), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. NAME AND ADDRESS
2. LICENSE NUMBER(S)
3. REPORTING IDENTIFICATION SYMBOL (RIS)
4. REPORT PERIOD (MM/DD/YYYY)
FROM: TO:
5. MATERIAL TYPE
(Submit separate report for each type)

SECTION A MATERIAL ACCOUNTABILITY

PC	SEQ	A. ELEMENT WEIGHT	B. ISOTOPE WEIGHT
	8. BEGINNING INVENTORY -- U.S. GOVT-OWNED		
	9. BEGINNING INVENTORY -- NOT U.S. GOVT-OWNED		
	RECEIPTS		
	11. PROCUREMENT FROM DOE RIS FROM:		
	13. PROCUREMENT -- FOR THE ACCOUNT OF DOE		
	14. DOD RETURNS -- USE A		
	15. DOD RETURNS -- USE B		
	16. DOD RETURNS -- OTHER USES		
	21. PRODUCTION		
	22. FROM OTHER MATERIALS a. ICT b. ICT c. ICT		
	30. RECEIPTS REPORTED TO DOE/NRC ON DOE/NRC 741 (not listed elsewhere) FROM: RIS		
	REMOVALS		
	41. EXPENDED IN SPACE PROGRAMS		
	42. SALES TO U.S. GOVT RIS TO: RIS		
	43. SALES TO OTHERS FOR THE ACCOUNT OF U.S. GOVT RIS TO:		
	44. DOD -- USE A		
	45. DOD -- USE B		
	46. DOD -- OTHER USES		
	47. EXPENDED IN U.S. GOVT TESTS		
	48. ROUTINE TESTS		
	49. SHIPPER -- RECEIVER DIFFERENCE		
	51. SHIPMENTS REPORTED TO NRC/DOE ON NRC/DOE 741 (not listed elsewhere) TO: RIS		

DOE/NRC FORM 742
(09-2014)
10 CFR 30.40, 50, 70, 72,
74, 75, 150, Public Laws
92-603, 96-463, 104-101

**U.S. DEPARTMENT OF ENERGY
AND
U.S. NUCLEAR REGULATORY COMMISSION**

MATERIAL BALANCE REPORT (Continued)

SECTION A (Continued) MATERIAL ACCOUNTABILITY

PC	SEQ	A. ELEMENT WEIGHT	B. ISOTOPE WEIGHT
	54. SHIPMENTS -- MISC		
	58. DONATED MATERIAL -- TO U.S. GOVT BY OTHERS		
	59. DONATED MATERIAL -- TO OTHERS BY U.S. GOVT		
	65. ROUNDING ADJUSTMENT		
	71. DEGRADATION TO OTHER MATERIALS a. ICT b. ICT		
	72. DECAY		
	73. FISSION AND TRANSMUTATION		
	74. NORMAL OPERATIONAL LOSSES/MEASURED DISCARDS		
	75. ACCIDENTAL LOSSES		
	76. APPROVED WRITE-OFFS		
	77. INVENTORY DIFFERENCE		
	80. ENDING INVENTORY -- U.S. GOVT OWNED		
	81. ENDING INVENTORY -- NOT U.S. GOVT OWNED		
	82. TOTAL (Lines 41-81)		
	83. BIAS ADJUSTMENT		

SECTION B FOREIGN OBLIGATIONS

PC	SEQ	1. COUNTRY OF OBLIGATION	2. ELEMENT WEIGHT	3. ISOTOPE WEIGHT
	4. TOTAL WEIGHT			

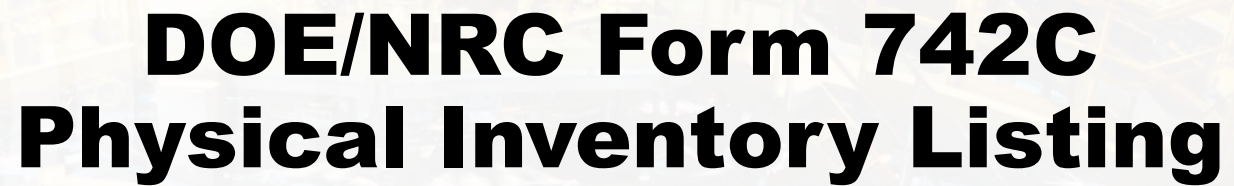
SECTION C CERTIFICATION

To the best of my knowledge and belief, the information given above and in any attached schedules is true, complete, and correct.

SIGNATURE (See instructions for provisions on confidentiality) TITLE DATE

WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL, AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECTS. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

Developed by: 

NRC FORM 742C (09-2014)

To the best of my knowledge and belief, the information given above and in any attached schedules is true, complete, and correct.



Inventory and Material Balance

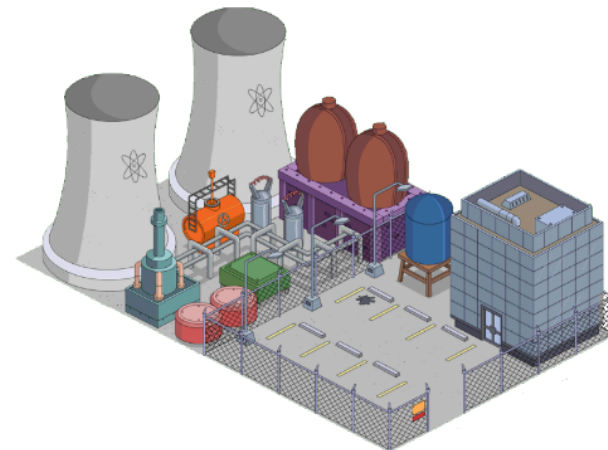
MBR

(GENERATED FROM PREVIOUS
ENDING BALANCE WITH
TRANSACTIONS APPLIED FOR
THE REPORTING PERIOD)

--COMPARED TO--

Facility Inventory

(REPORTED INVENTORY
COEI)



Developed by: **LINK**
Technologies



Nuclear Material Ownership

G

DOE-Owned

J

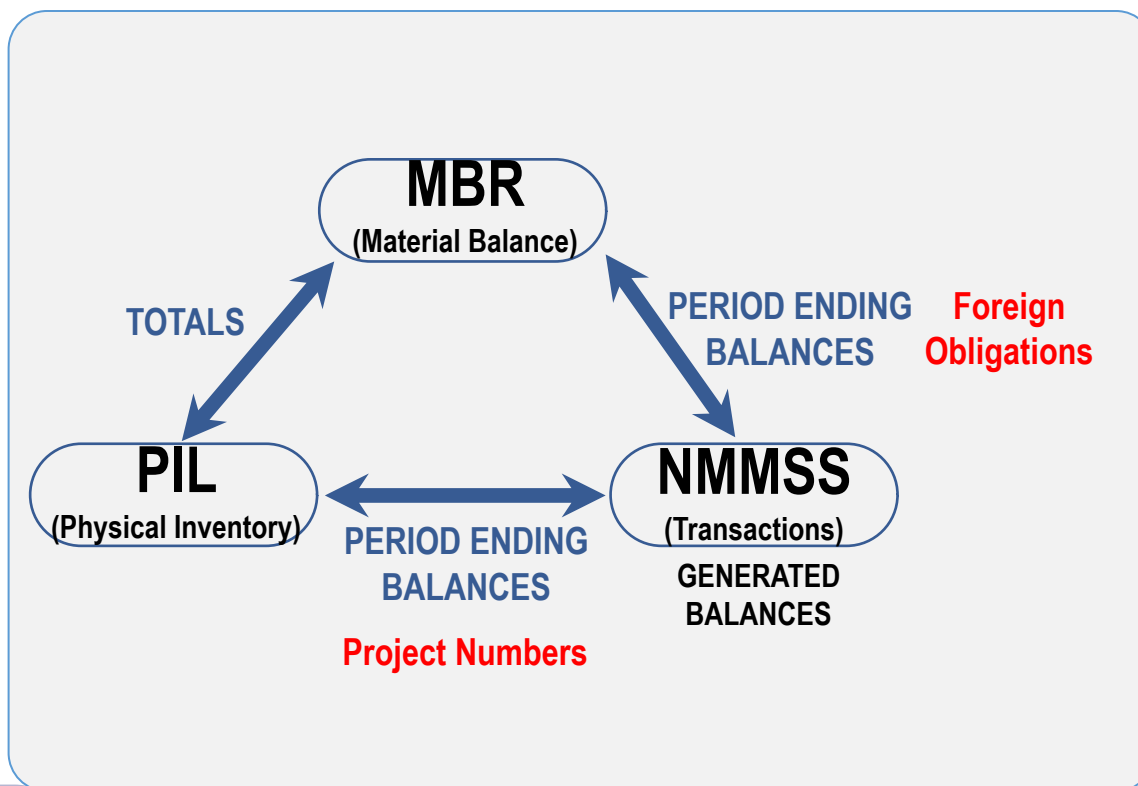
Non-DOE-Owned

Developed by:





Reconciliation Process



Developed by:





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Reporting Forms

DOE/NRC Form 741 (Transaction)

DOE/NRC FORM 741
U.S. NUCLEAR REGULATORY COMMISSION
NUCLEAR MATERIAL TRANSACTION REPORT

EXPIRES: 10/31/2017

1. NAME AND ADDRESS
2. REPORTING IDENTIFICATION SYMBOL (RIS)
3. INVENTORY DATE
4. LICENSE NUMBER(S)

5. BATCH DATA

6. TOTALS

7. SIGNATURE
8. TITLE
9. DATE

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DOE/NRC Form 742 (Material Balance)

DOE/NRC FORM 742
U.S. DEPARTMENT OF ENERGY
AND
U.S. NUCLEAR REGULATORY COMMISSION
MATERIAL BALANCE REPORT

EXPIRES: 08/31/2017

1. NAME AND ADDRESS
2. REPORTING IDENTIFICATION SYMBOL (RIS)
3. INVENTORY DATE
4. LICENSE NUMBER(S)

5. BATCH DATA

6. TOTALS

7. SIGNATURE
8. TITLE
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DOE/NRC Form 742 (Material Balance)

DOE/NRC FORM 742
U.S. DEPARTMENT OF ENERGY
AND
U.S. NUCLEAR REGULATORY COMMISSION
PHYSICAL INVENTORY LISTING

EXPIRES: 08/31/2017

1. NAME AND ADDRESS
2. REPORTING IDENTIFICATION SYMBOL (RIS)
3. INVENTORY DATE
4. LICENSE NUMBER(S)

5. BATCH DATA

6. TOTALS

7. SIGNATURE
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Discrepancy Resolution

- NMMSS communicates with the facility.
- Use NMMSS report(s) to find problem entries.
- Record action needed to correct the discrepancy.
- Pay particular attention to foreign obligation and project number balances.



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NMMSS – It's a Team Effort

**For additional questions or assistance,
please contact the NMMSS team at
NMMSS@nnsa.doe.gov.**

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