



Accountability  
Performance  
Accuracy

The Nuclear Materials Management Safeguards System

# NMMSS

# 2016

Annual Users Training Meeting

May 9-12, 2016 | New Orleans, LA

## NMMSS Edit Checks

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*NMMSS*





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# Outline

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- Background of NMMSS edit checks
- Function of NMMSS edit checks
- Edit checks implemented since the 2015 Users Meeting
- Edit checks under consideration



- NMMSS software edit checks validate facility data to ensure data submissions conform with regulatory mandates
- Format and content of data submissions follow regulatory mandates:
  - NRC: NUREG/BR-0006 and NUREG/BR-0007
  - DOE: Nuclear Materials Management and Safeguards System (NMMSS) Users Guide

# Function of NMMSS edit checks

- Edit checks help to ensure that business practices and regulatory requirements are satisfied
- For example, NMMSS software has edit checks to ensure that:
  - The shipper RIS and receiver RIS are valid and active in NMMSS
  - The transaction number is unique and not previously used
  - The date reported is not a future date
- NMMSS software edit checks assist facilities in verifying the correctness of their data

# Edit checks since the 2015 Users Meeting

## Obligation Exchanges

- **Background**: Allow for the exchange of obligations without actual physical movement of material
  - U.S. facilities may exchange obligations between domestic facilities
  - U.S. facilities may conditionally exchange obligations with foreign facilities
- **Process**: One facility transfers the obligations on a quantity of nuclear material to a second facility using an "X" action code on DOE/NRC Form 741, and the second facility responds to the "X" action code with a "Y" action code accepting the obligations
- **Edit Check**: An error is generated for all obligation exchanges involving a foreign facility. NRC or DOE approval is required to allow obligation exchanges with a foreign RIS to be processed.

# Edit checks since the 2015 Users Meeting

## Volume Reporting

- **Background**: An entry in the volume field is required for all shipments to waste sites (a "V" RIS)
  - NMMSS only captures a volume field entry when the receiver is a "V" RIS
  - Previously, the NMMSS edit check identified an entry in the volume field as an error if the transaction did not pertain to a "V" RIS
- **Edit Check**: NMMSS now allows an entry in the volume field, but only captures the entry when the receiver is a "V" RIS

# Edit checks since the 2015 Users Meeting

## Rounding Adjustment (65)

- **Background**: NMMSS edit checks did not permit NRC licensees to report the weight percent isotope or composition code when reporting a rounding adjustment (use code 65)
  - The NMMSS edit check identified such transactions as being in error
- **Edit Check**: NMMSS now captures a licensee reported weight percent isotope and composition code in a rounding adjustment

# Edit checks since the 2015 Users Meeting

## Inventory Difference [MUF (77)]

- **Background**: NMMSS edit checks did not permit NRC licensees to report weight percent isotope or composition code when reporting an inventory difference [MUF (use code 77)]
  - The NMMSS edit check identified such transactions as being in error
- **Edit Check**: NMMSS now captures licensee reported weight percent isotope and composition code specified in an inventory difference



# Edit checks under consideration

## Obligations Accounting: Uranium Enrichment

- Background: Most obligated enriched uranium is less than 5.0% enriched
- Edit Check: NMMSS will calculate the enrichment to ensure that obligation exchange involves uranium that is less than 5.0% enriched. If the uranium is 5.0% or greater enriched, NMMSS will flag the transaction as an error.





## Edit checks under consideration *(continued)*

### Obligations Accounting: Obligation Exchanges

- **Background**: Confirm that facilities involved in an obligation exchange have a sufficient inventory of obligated material to allow for the exchange
- **Edit Check**: The NMMSS edit check will compare the NMMSS book inventory and obligations for the shipper and receiver facilities to ensure that they have adequate inventory and obligations to cover the exchange. If the results are not conclusive, NMMSS staff will contact the shipping or receiving facility requesting confirmation that it has enough inventory and obligations to cover the obligation exchange. Once NMMSS has obtained assurances from the facility, the obligation exchange would be processed through NMMSS.



# Edit checks under consideration *(continued)*

The IAEA has informed the U.S. of several NMMSS reporting issues that need to be corrected to meet IAEA reporting requirements. The following are proposed edit check actions to address IAEA comments.

## IAEA Selected Facility Reporting: Measurement Basis

- **Background**: The IAEA has established four Measurement Basis codes for reporting measurements. The IAEA noted that the NMMSS reports do not always report the correct Measurement Basis code.
- **Process**: When an DOE/NRC Form 741 action code "E" transaction (indicating that a measurement has been performed) is reported to NMMSS, the Measurement Basis field must be populated with an "M" to convey the measurement to the IAEA.
- **Edit Check**: NMMSS will establish an edit check to ensure that the Measurement Basis codes reported are consistent with IAEA requirements.

# Edit checks under consideration *(continued)*

## IAEA Selected Facility Reporting: Ownership and Obligation Changes

- **Background**: NMMSS has routinely reported to the IAEA all transactions that Selected facilities have reported, including "ownership change" and "Obligation Exchange" transactions that involve no movement of nuclear materials. The IAEA has requested that NMMSS stop sending information when no movement of nuclear material occurs.
- **Edit Check**: When the facility reports an "ownership change" or an "Obligation Exchange" resulting in no movement of nuclear material, NMMSS will not report this activity to the IAEA

# Edit checks under consideration *(continued)*

## IAEA Selected Facility Reporting: Shipper/Receiver Weight Differences of Zero

- **Background**: The IAEA noted that NMMSS reports an extensive number of shipper/receiver weight differences with a zero value. The IAEA has asked that NMMSS cease reporting a zero value weight difference.
- **Edit Check**: When a facility reports a receipt where measurement weights match the shipper's weights, NMMSS will not report a zero shipper/receiver weight difference to the IAEA.

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# QUESTIONS?

