



NMMSS News

Nuclear Materials Management & Safeguards System
Published Periodically by & for NMMSS Users

June 2017

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NMMSS News is sponsored by the Department of Energy and the Nuclear Regulatory Commission.

The 2017 NMMSS Annual Users Training Event Successfully Concluded *Strong Domestic and International Participation*

Each year, the U.S. Department of Energy (DOE)/National Nuclear Security Administration (NNSA) and the U.S. Nuclear Regulatory Commission (NRC) jointly organize and sponsor the Nuclear Materials Management and Safeguards System (NMMSS) Users Training Meeting. This year, the training meeting was held May 15-18, 2017, in Las Vegas, NV. Participants consisted of over 200 professionals from 60 domestic and international organizations, representing a broad cross section of the nuclear materials management community.

The training topics, panel discussions, and breakout sessions focused on important topics relevant to nuclear material accountancy, materials control and accountability, international reporting associated with imports and exports, nonproliferation, national security, and tracking and accounting for nuclear material subject to peaceful use agreements. The culmination of the four-day training meeting was a day-long guided overview of the history and mission of the Nevada National Security Site (NNSS).

The participants had the opportunity to learn from and engage in technical discussions with nuclear materials management officials and experts from U.S. government agencies representing DOE, NNSA, NRC, Department of State (DoS), the Department of Commerce, and the National Institute of Standards and Technology (NIST); U.S. commercial nuclear industry, DOE national laboratories; the private sector; and international organizations including:

- International Atomic Energy Agency (IAEA): Department of Safeguards;
- European Commission (EURATOM): Nuclear Accountancy and International Obligations Group;
- Republic of Korea: Nuclear Safety and Security Commission, the Institute of Nuclear Nonproliferation and Control, the Atomic Energy Research Institute, and Korea Hydro Nuclear Power.



Pete Dessaulles, NNSA, and Mirabelle Shoemaker, NRC, deliver remarks



Rich Meehan, NNSA, opens the meeting



(First row, left to right) Alain Rialhe, IAEA; Cedric De-Walsche, European Commission; Brigitte Jonas, IAEA; Peter Habighorst, NRC



The Government Accountability Office (GAO) also briefed the participants on its latest audit and evaluation of how NMMSS, on behalf of the U.S. Government, tracks the inventory of foreign nuclear material subject to peaceful use agreements (i.e., obligated material) in the United States. GAO was very complimentary of NNSA and NRC activities and applauded actions underway to further strengthen tracking of obligated nuclear material.

We encourage you to review the training agenda, presentations, registrant roster, and the event photographs on NMMSS website <https://nnsa.energy.gov/aboutus/ourprograms/nuclearsecurity/nmmsshome>.

DOE/NNSA and NRC sponsors extend their sincere appreciation to the presenters and participants for all of their contribution to make the 2017 users training a success.

2017 Awards and Recognitions

Rita LaPointe and Ben Romero (*below left*) of the NNSA Tritium and Materials Management Program Office (NA-197) received special recognition for their exemplary efforts in reconciling outstanding transactions involving Section 91 material. NMMSS also presented special facility achievement recognitions to the facilities BWX Technologies, Inc., (BWXT) Nuclear Operations Group (NOG) (*below right*) and Global Nuclear Fuels America (*next page, top left*).



Michael Wilbricht, AREVA Richland (*below right*), was recognized for his participation and follow-up in actions associated with the periodic meetings between NRC, NMMSS, and the IAEA selected facilities.



In total, 224 facilities received recognition for their hard work at reporting their transactions, material balances, and inventories to NMMSS in a timely, accurate fashion. Congratulations go out to these facilities for their achievements! At the 2017 NMMSS Annual Users Training, approximately 130 achievement certificates were distributed to the high quality reporters. The remaining certificates will be mailed to the recipients.

Mark Your Calendar – 2018 NMMSS Annual Users Training

The 2018 annual training will be held May 14-17, 2018, in New Orleans, LA. Registration information will become available in December 2017. There is no fee associated with participating in this unique nuclear materials management training opportunity.

Additionally, if you are interested in a specific topic or would like to make a presentation, please send your suggestions to Mr. Pete Dessaulles, pete.dessaulles@nnsa.doe.gov or Ms. Mirabelle Shoemaker at Mirabelle.shoemaker@nrc.gov.



Recap of Training Workshop in San Juan, PR in Support of NRC Rule on Modified Small Quantities Protocol

The Nuclear Regulatory Commission (NRC) is in the process of rulemaking referred to as the Modified Small Quantities Protocol (SQP). This rule amends the Nuclear Regulatory Commission's regulations in 10 CFR Parts 40, 70, and 75, as needed, to ensure that the U.S. Government can meet its international obligations under INFCIRC/366, an agreement between the U.S. and the IAEA for the application of safeguards in connection with the Treaty for the Prohibition of Nuclear Weapons in Latin America.

The NRC is responsible for ensuring compliance by the licensees in the U.S. Caribbean Territories. Changes will go into effect as a final rule under 5 U.S.C. 553(a)(1), which allows agencies to issue rules involving the foreign affairs functions of the United States without notice and comment. These rule changes must be in effect before the U.S. Government can bring the modified Small Quantities Protocol into force. Implementation of nuclear material accountability under this agreement is expected to go into effect in the fall of 2017. In preparation for this milestone, NMMSS supported the NRC training workshop in San Juan, Puerto Rico, related to the implementation of INFCIRC/366 reporting requirements.

The NMMSS training was delivered on April 11-12, 2017. In attendance were representatives from the NRC, the NNSA Office of Nuclear Materials Integration, NRC licensees based in San Juan, and the Government of Puerto Rico Department of Health. The training covered the overview, regulatory framework, and the how-to process for the U.S. Caribbean licensees to report nuclear material accountancy data consistent with the terms of INFCIRC/366. The second day of the training was spent working one-on-one with one of the licensees expected to report the highest volume of imports and exports of reportable nuclear material to NMMSS. The training workshop was received positively by participants.



Boiling Nuclear Superheater (BONUS) Reactor, in San Juan PR

DOE Inventories Are Due by 9/30/2017

[DOE O 474.2](#), Change 4, *Nuclear Material Control and Accountability*, requires that DOE sites annually reconcile their facility data after submitting their September 30 inventory. The reconciliation of the annual inventory is to be completed by November 15. The process is as follows:

- The facility submits its inventory for the period and is provided with the results of processing in NMMSS.
- Preliminary reports are available upon request from NMMSS for facility use in comparing facility data with NMMSS balances.
- The data at the facility and reported data in NMMSS are compared.
- Adjustments are made to the facility books or to NMMSS, as appropriate, regarding balances of material by type, ownership code, and project number (if DOE-owned), and foreign obligations, if applicable.

Please contact Mary McConnell at Mary.McConnell@nnsa.doe.gov or (301) 903-6240 with any questions.



Soliciting Case Studies!

NMMSS is soliciting “case study” scenarios from the entire stakeholder community to integrate real-life facility circumstances and reporting issues, lessons learned, and best practices into NMMSS training classes. The case studies highlight the congruence of facility-specific business practices and regulatory requirements and examine unique circumstances that necessitate a fresh look at reporting protocols. The solicited topics are intended to be diverse and encompass a broad range of topics, including the reporting of imports and exports, obligations, transactions involving domestic facilities (including between NRC and DOE facilities), licensing, reporting updates or corrections to previously reported transactions, reporting batch names, and accounting for government-owned material. The facility-specific aspects of the case studies will remain anonymous, as all case studies are presented as hypothetical scenarios.

Please send any case studies to Mirabelle Shoemaker at Mirabelle.shoemaker@nrc.gov or Pete Dessaules at pete.dessaules@nnsa.doe.gov.

NUREG/BR-0006 and NUREG/BR-0007 Revisions

The NRC has published interim revisions of NUREG/BR-0006, Rev. 8 and NUREG/BR-0007, Rev. 7 that do not affect how licensees in the 50 United States report to NMMSS. The purpose of the interim revisions was to meet a milestone in the NRC’s project schedule for revising Title 10 of the Code of Federal Regulations (10 CFR) Part 75, which will require nuclear material status reporting from licensees in the U.S. Caribbean Territories. As such, the NUREGs were updated with new appendices that will be applicable only to licensees reporting under INFCIRC/366, *U.S.-IAEA Caribbean Territories Safeguards Agreement*.

The specific changes to the NUREGs include:

- New Appendix G in NUREG/BR-0006, Rev. 8, containing instructions for licensees required to report under INFCIRC/366.
- New Appendix E in NUREG/BR-0007, Rev. 7, containing instructions for licensees required to report under INFCIRC/366.

The only change to NUREG/BR-0007, Rev. 7 that pertains to NMMSS users is an update to Appendix C, page C-1, which identified material balance codes. This sheet was previously available as an erratum in April 2014. It was formatted and incorporated into the NUREG text with this interim publication.

At the 2017 Annual NMMSS Users Meeting, the NRC delivered a presentation on the purpose of bifurcating the revision schedule for the NUREGs and provided a status of the effort to revise the NUREGs in full.

Please contact Mirabelle Shoemaker at (301) 415-7363 or Mirabelle.shoemaker@nrc.gov with any questions on the NUREGs.

Inventory Reconciliation of NRC Licensees – Helpful Tips for Information!

NRC regulations require licensees to report to NMMSS if they possess one gram or more of special nuclear material (SNM) (plutonium, uranium-233, or uranium-235 contained in enriched uranium) or one kilogram or more of foreign-obligated source material (natural uranium, depleted uranium, or thorium). Below are some tips to help facilitate a smooth reconciliation. As always, NMMSS analysts are available to provide technical assistance by phone or email.

1. All Government-owned material is reportable per NUREG/BR-0006, Rev. 8, including all SNM, source material, and other materials listed in the Reportable Elements and Isotopes section of the [NMMSS User’s Guide](#).
2. For non-government-owned material, licensees are required to submit a Material Balance Report (MBR) or Material Status Report (742 or 742C) when their facilities:
 - Possessed, shipped, or received one gram (≥ 0.5 g) or more of SNM during the reporting period (see the table below); OR

- Possessed, shipped, or received one kilogram (≥ 0.5 kg) or more of foreign obligated source material (natural uranium, depleted uranium, or thorium – see Table 1 below); OR
 - Imported or exported 1 kg (≥ 0.5 kg) or more of source material.
3. The following reports, which you can request from any NMMSS analyst, may help licensees prepare for reconciliation:
- M-742A, Material Balance Report by Action Date
 - IA-OBL-05, Obligation Summary Report
 - TJ-045, Transaction Detail for Shipments, Receipts, and Onsite Gains and Losses
4. Fillable Forms 742 and 742C are posted on the NMMSS website – <http://nnsa.energy.gov/aboutus/ourprograms/nuclearsecurity/nmmsshome/nmmssinfo/doenrcforms>.

The forms are also posted on the NRC website – <http://www.nrc.gov/reading-rm/doc-collections/forms>.

Material	Material Type	Reporting Unit (rounded up)	Weight that is Reported
Enriched uranium*	20	Whole gram	Element and isotope
Plutonium	50	Whole gram	Element and isotope
Uranium-233	70	Whole gram	Element and isotope
Plutonium-238	83	Tenth of a gram	Element and isotope
Depleted uranium	10	Whole kilogram	Element and isotope
Normal uranium	81	Whole kilogram	Element only
Thorium	88	Whole kilogram	Element only

*Assay levels of enriched uranium (from NUREG/BR-0007, Rev. 7)

Report enriched uranium by assay level (see below) on separate MBR forms.

- E-1** Greater than normal but less than 5%
- E-2** 5% or more, but less than 20%
- E-3** 20% or more, but less than 80%
- E-4** 80% or more

For any regulatory questions, please contact Mirabelle Shoemaker, NRC NMMSS Project Manager, by telephone at 301-415-7363, or by email at mirabelle.shoemaker@nrc.gov.

Upcoming NRC NMMSS I Training Course

NMMSS training for NRC licensees and Federal employees is scheduled for **July 11-13, 2017**, at DOE Headquarters in Germantown, MD. This course is designed for individuals with limited experience in NRC reporting requirements or those who need a refresher. The course content is based on NUREG/BR-0006, Rev. 8 and NUREG/BR-0007, Rev. 7. The following topics, among others, will be included:

- Completion of data forms: transactions, inventory, and material balance;
- Inventory reconciliation;
- Foreign obligations reporting; and
- Report products.



The desired class size is 10 participants or less. A minimum of 6 is required to conduct the class. You may register for the class by contacting Mitch Hembree at (301) 903-6299 or Mitch.Hembree@nnsa.doe.gov and providing your name, nationality, job title, facility name, address, telephone number, and email address. Due to security requirements for entering the DOE Germantown facility, all potential students who are not U.S. citizens MUST register for this workshop at least 45 days prior to the instruction dates. There are no training fees for this course.

If interested, please contact Mitch Hembree by July 3, 2017.

Upcoming NMMSS Training Course for DOE

The DOE NMMSS I (MCA-112) training course is scheduled for **September 12-15, 2017**, at DOE Headquarters in Germantown, MD. This course is designed for personnel who have less than two years of experience in nuclear materials accounting.

The desired class size is 12 or less. A minimum of 6 is required to conduct the class. You may register for the class by contacting Mitch Hembree at (301) 903-6299, or by email at Mitch.Hembree@nnsa.doe.gov, and providing him with your name, nationality, job title, facility name, address, telephone number, and email address. Students must also register for the class with the National Training Center (NTC) at <https://ntc.doe.gov/default.aspx>. There are no training fees for DOE personnel or DOE contractors.

If interested, please contact Mitch Hembree by September 5, 2017.

Available Products to Assist the NMMSS Community

The following products are available to NMMSS users upon request.

- **D-2: DOE Directory of Reporting Identification Symbols (RIS).** This directory contains a listing of RISs for the DOE sites that NMMSS accepts as valid as of May 2017.
- **D-3: NRC Directory of Reporting Identification Symbols (RIS).** This directory contains a listing of RISs for the licensed sites that NMMSS accepts as valid as of May 2017.
- **D-15: International Nuclear Facilities.** This directory contains a listing of RISs for nuclear sites located outside of the United States that NMMSS accepts as valid as of May 2017.

Safeguards Management Software (SAMS): SAMS is a facility-based version of the NMMSS software maintained by DOE and NRC. Version 8.0, the most recent update of the SAMS software, lets users input data and perform edit checks for transactions, material balance reports, and inventories, and includes an updated Authority Reference File.

Copies of the above items are available free of charge. Please contact any member of the NMMSS staff, or send a request to the NMMSS mailbox (NMMSS@nnsa.doe.gov) if you would like any of the above items sent to you.

Transaction/Inventory Due Dates for DOE Sites

Reporting Month	Transaction Due	Inventory Due
June 2017	July 10	July 17
July 2017	August 10	August 15
August 2017	September 11	September 15
September 2017	October 10	October 16
October 2017	November 13	November 17
November 2017	December 11	December 15
December 2017	January 10	January 16
January 2018	February 12	February 16
February 2018	March 12	March 16

Upcoming 2017-2018 Observed Holidays

Independence Day	Tuesday, July 4, 2017
Labor Day	Monday, September 4, 2017
Columbus Day	Monday, October 9, 2017
Veterans' Day	Friday, November 10, 2017
Thanksgiving Day	Thursday, November 23, 2017
Christmas Day	Monday, December 25, 2017
New Year's Day	Monday, January 1, 2018
Martin Luther King, Jr. Day	Monday, January 15, 2018

NMMSS Points of Contact For Nuclear Material Reporting Technical Support and Assistance

Name	Function	Phone	Email Address
Elaine Beacom	International Reporting (IAEA and obligations), international operations	(301) 903-1328	Elaine.Beamon@nnsa.doe.gov
Mary McConnell	Domestic Reporting (NRC and DOE)	(301) 903-6240	Mary.McConnell@nnsa.doe.gov
Mitch Hembree	Peaceful Use Agreements Reports (Obligated Material) NMMSS training	(301) 903-6299	Mitch.Hembree@nnsa.doe.gov
John Cettin	NRC reconciliation Data processing	(301) 903-6870	John.Cettin@nnsa.doe.gov
Elizabeth (Liz) Mohamed	DOE reconciliation Data processing	(301) 903-6240	Elizabeth.Mohamed@nnsa.doe.gov
Brandon Zack	Records management	(301) 903-6240	Brandon.Zack@nnsa.doe.gov
James Lavery	Data processing, File management	(301) 903-0092	James.Lavery@nnsa.doe.gov
Ali Tabatabai	Issues/suggestions	(301) 515-9654	Ali.Tabatabai@hq.doe.gov

Program Management
Department of Energy Peter Dessaulles (301) 903-4525 Pete.Dessaulles@nnsa.doe.gov
Nuclear Regulatory Commission Mirabelle Shoemaker (301) 415-7363 Mirabelle.Shoemaker@nrc.gov
International POCs
DOE International POC Shannon Chester (301) 903-7449 Shannon.Chester@nnsa.doe.gov
NRC International POC Santiago Aguilar (301) 415-7918 Santiago.Aguilar@nrc.gov
Email: NMMSS@nnsa.doe.gov Unclassified Fax: (301) 903-1998 www.nnsa.energy.gov/nmmss

<https://nnsa.energy.gov/aboutus/ourprograms/nuclearsecurity/nmmsshome>



Unclassified/Overnight Surface Mailing Addresses NMMSS Website

Unclassified

Mary McConnell

NMMSS Program, NA-532/Germantown Bldg.
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585-1290

Overnight – Unclassified

Mary McConnell

Attn: NMMSS Program, NA-532
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874-1207

Classified

The NMMSS classified mailing address is available on the Safeguards and Security Information Management System (SSIMS) or by calling a NMMSS analyst. Identify Mary McConnell as the recipient and NA-532 as the organization.

IMPORTANT: The “DO NOT X-RAY” marking does not prevent incoming packages from being sanitized. Please package compact discs (CDs) in cardboard rather than plastic casings. The plastic is heated by the sanitization machine, thereby warping the CD. There is less chance of this occurring if the CD is packaged in cardboard.

For information on transmitting classified data to NMMSS electronically, contact Pete Dessaulles at (301) 903-4525 or Pete.Dessaules@nnsa.doe.gov.

NMMSS News is sponsored by the Department of Energy (POC: Pete Dessaulles, (301) 903-4525, Pete.Dessaules@nnsa.doe.gov), and the Nuclear Regulatory Commission (POC: Mirabelle Shoemaker, (301) 415-7363, Mirabelle.Shoemaker@nrc.gov).

Please provide feedback or suggested topics of interest to Mary McConnell at Mary.McConnell@nnsa.doe.gov, (301) 903-6240.