

# NMSS News

# Link

OFFICE OF NUCLEAR MATERIAL

SAFETY AND SAFEGUARDS

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## NRC AWARDS STUDENTS

Several U.S. Nuclear Regulatory Commission (NRC) staff members—including staff from the Office of Nuclear Material Safety and Safeguards (NMSS)—participated in the Montgomery



County Science Fair that was held at the White Oak campus of the Food and Drug Administration in Silver Spring, MD, on Saturday, March 14, 2015. The science fair was sponsored by Science Montgomery and was open to all public, private, and home-schooled students, grades 6 through 12. The NRC staff served as judges and reviewed projects in the fields of information technology, biology, behavioral and social sciences, chemistry, computer science, mathematics, engineering, and physics. Staff interviewed middle school and high school students about their projects. The NRC once again offered a special award to middle and high school students participating in the fair who stood out as aspiring scientists as a way to highlight the agency's support for science in the schools.

## NATIONAL ENVIRONMENTAL POLICY ACT

The NRC received an award for “best poster” at the Waste Management Symposium 2015 in recognition of its leadership in training and implementation of the National Environmental Policy Act (NEPA). The poster, which was displayed at the March 17–18 event in Phoenix, AZ, was based on a paper by NMSS staff members Larry W. Camper and Zahira Cruz. The paper was published in Volume 16, Issue 04, of the journal *Environmental Practice* in December 2014 under the title, “NEPA Training is Essential: It Shouldn't Just be for Environmental Staff.”

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The poster received the “best poster” award in its category (Communications, Involvement, Education, and Training) and caught the attention of many attendees, attracting many positive comments. Some attendees suggested their employers should adopt the NRC’s approach and provide training for them on the understanding and implementation of NEPA.

The *NMSS News Link* previously highlighted the NRC’s NEPA training in its October 2014 edition.

Between 2009 and 2014, NRC staff—including attorneys, branch chiefs, division directors, and senior-level service staff—were trained in the implementation of NEPA through courses offered by Duke University and co-sponsored by the White House Council on Environmental Quality. These courses included the following elective courses:

- “Socioeconomic Impact Analysis under NEPA”
- “Accounting for Cumulative Effects in the NEPA Process”
- “Tribal Consultation”
- “Preparing and Documenting Environmental Impact Analyses”
- “Scoping, Public Involvement and Environmental Justice”
- “Current and Emerging Issues in National Environmental Policy”
- “The Law of NEPA”
- “Considering Greenhouse Gas Emissions and Climate Change under NEPA”

After completing the required courses along with the cornerstone course, “Implementation of NEPA”, and a capstone paper, NRC staff could receive Duke University’s “Implementation of NEPA Certificate.” As of December 2014, 24 NEPA certificates had been awarded to NRC staff, with another one pending. The NEPA courses provided the tools necessary to address the environmental effects of agency actions and to ensure that environmental impact analyses are substantively and procedurally accurate.

(Contact: Janelle Jessie, NMSS, 301-415-6775 or [Janelle.Jessie@nrc.gov](mailto:Janelle.Jessie@nrc.gov))



## CYBER SECURITY QUESTIONNAIRE

The NRC’s Byproduct Materials Cyber Security Working Group is asking all NRC and Agreement State byproduct materials licensees to fill out and return a questionnaire on a voluntary basis. The working group will distribute the questionnaire by e-mail ([MaterialsCyber.Resource@nrc.gov](mailto:MaterialsCyber.Resource@nrc.gov)) to all licensees that possess Category 1 or 2 radioactive materials. Licensees are not required to respond to these questionnaires; however, the working group says that a response would be greatly appreciated as it will help it better understand the potential vulnerabilities and risk associated with cyber threats and form the basis for any recommendations and possible actions for consideration. Information sought through the questionnaire includes:

- the use of devices with software-based control systems, such as irradiators and gamma knives
- the use of access control or intrusion detection systems that may allow an adversary to gain access to material and avoid detection
- the use of computer systems that licensees use for their source inventories
- the use of digital technology used to support response communications and coordination



## FROM THE DESK OF THE DIRECTOR

I would like to take this opportunity to announce the appointment of Dr. Josephine M. Piccone as Director of the Division of Material, State, Tribal and Rulemaking Programs (DMSTR), Office of Nuclear Material Safety and Safeguards (NMSS). On June 15, 2015, Dr. Piccone settled into her new position. She succeeds Laura Dudes, who was selected as Deputy Regional Administrator for Construction, Region II.

Josie brings over 30 years of NRC experience with her to DMSTR, including nearly 20 years as a senior manager—most recently in NMSS as the Director of the Yucca Mountain Directorate. She also brings a breadth of knowledge and experience in topics including, but not limited to: health physics, licensing, rulemaking, industrial & medical uses, fuel cycle, waste management, and intergovernmental liaison work.

In addition to Josie, DMSTR has a few other new managers that I'd like to announce, as well. In February, Douglas Bollock was selected as Chief of the Medical Safety and Events Assessment Branch, and Chris Einberg was reassigned as Chief of the Agreement State Programs Branch. Most recently, Sheena Whaley was selected as Chief, Rulemaking and Project Management Branch. Please join me in wishing Doug, Chris, and Sheena well in their new positions. I would like to thank you all in advance for your role in helping ensure their transition has been, and continues to be, as seamless as possible.

In my October 2014 article, I discussed the challenges and changes that we faced following the merge of NMSS and the Office of Federal and State Materials and Environmental Management Programs (FSME). I'm happy to report that since that time, we've taken huge steps to integrate

and balance our workload, improve internal coordination and provide greater flexibility to respond to a dynamic environment. The success of the merge is a testament to the quality of the NRC staff as well as yours, as our partners and stakeholders. Efforts are currently underway to capture lessons learned from the merge, and your feedback is a critical aspect of that. Stay tuned for more details on how to provide feedback, but in the meantime, I encourage you to contact me or a member of the NMSS team with any thoughts as we continually strive to improve the organization.

As you probably are all aware, the NRC is facing other organizational changes. Project Aim 2020 is the agency's effort to adapt to the challenges of the next five years and beyond. The Project Aim 2020 report points out that the NRC achieves a high level of success in accomplishing the agency's safety and security mission, but the agency effectiveness, efficiency, agility, flexibility, and performance must improve to continue to succeed in the future in an environment that is much different than previously expected. The Staff Requirements Memorandum (SRM) for Project Aim 2020 was issued by the Commission in June 2015, and it details the Commission's direction to the staff and comments on the specific recommendations in the Project Aim 2020 report. Over the next few months, the NRC will develop an implementation plan to address the SRM. As always though, the NRC's dedication to public health and safety has not changed, and I expect us to make well thought-out, calculated decisions with strong leadership commitment and oversight to better position the agency to respond to the challenges of 2020 and beyond.

A handwritten signature in black ink that reads "Catherine Haney". The script is fluid and cursive.

Catherine Haney, Director

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The NRC formed the Byproduct Materials Cyber Security Working Group to focus on identifying potential cyber security vulnerabilities among medical, industrial, and academic users of risk significant radioactive materials. This working group is comprised of staff from NMSS, the Nuclear Security and Incident Response; and Regions I, III, and IV, as well as an Agreement State representative. The cyber security landscape for byproduct materials licensees is complex because of the large number and diversity of licenses involved and the corresponding variability of operating environments and cyber threats. Byproduct licensees operate in environments that vary from large manufacturing facilities, universities, and medical facilities to small industrial radiographers. Additionally, the majority of materials licensees are not regulated by the NRC directly, but by Agreement States.

(Contact: Irene Wu, NMSS, 301-415-1951 or [Irene.Wu@nrc.gov](mailto:Irene.Wu@nrc.gov))



## ANNUAL USERS TRAINING MEETING

Approximately 180 participants, including NRC licensees with responsibility for tracking and reporting nuclear materials, participated in the Nuclear Materials Management and Safeguards System (NMMSS) 2015 annual users training May 11-14, 2015, in Las Vegas, NV.

The NMMSS is the U.S. Government's official information system containing current and historical accounting data and other related nuclear material information collected from both government and commercial nuclear facilities.

NRC licensees, the U.S. Department of Energy (DOE)/National Nuclear Security Administration (NNSA), Federal and contractor organizations, and other domestic and international entities with responsibility for tracking and reporting nuclear materials participated in the unique training focused on:

- regulatory requirements associated with nuclear material reporting
- regulatory updates relevant to nuclear material reporting
- programmatic and regulatory issues of importance to the NRC licensees and DOE/NNSA contractors
- specialized breakout sessions
- one-on-one consultations with, and technical support by, NMMSS staff, including a hands-on software orientation
- an industry roundtable discussion to share ideas and identify opportunities for improvement
- topical presentations on emerging domestic and international development

DOE owns and operates the NMMSS database, and the NRC uses NMMSS through an interagency agreement with DOE. The NMSS manages the interagency agreement and ensures that the NMMSS database operates in a manner that meets the NRC's needs.

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## SIGNIFICANT ENFORCEMENT ACTIONS

*The NRC issued the following significant actions for failure to comply with a regulation.*

### **ATC Group Services, Inc. (EA-13-251)**

On March 27, 2015, the NRC issued an Order Imposing Civil Monetary Penalty to ATC Group Services (ATC), Inc. After the NRC's November 19, 2014, Notice of Violation and Proposed Imposition of a Civil Penalty in the amount of \$3,500, the licensee requested that the violation be reduced to a Severity Level IV violation. The violation involved ATC's failure to control and maintain constant surveillance of licensed material located in an unrestricted area that was not in storage. Specifically, a company employee left the gauge locked in the back of an open-bed truck in a store parking lot in Indianapolis, IN, with the truck door unlocked and the keys in the ignition. After carefully considering the information provided by the licensee in its written response, the NRC concluded that an adequate basis did not exist for either a reduction of the severity level or mitigation of the civil penalty and imposed the \$3,500 civil penalty by Order.

### **High Mountain Inspection Services, Inc. (EA-14-182)**

On February 11, 2015, the NRC issued a Notice of Violation to High Mountain Inspection Services, (HMIS), Inc. for a Severity Level III violation. The violation involved HMIS's failure to comply with Title 10 of the *Code of Federal Regulations* (10 CFR) Part 34.49(b), "Radiation Surveys," which requires a licensee to conduct a radiation survey of a radiographic exposure device and the guide tube after each radiographic exposure when approaching the device or guide tube. Specifically, on October 7, 2014, the radiographer's assistant approached the radiography exposure device and guide tube without a survey instrument after completing a radiographic exposure of a pipe weld at a temporary job site located near Wright, WY. There was no unnecessary radiation exposure or overexposure to workers as a result of this violation.

### **Patriot Engineering and Environmental (EA-14-162)**

On February 4, 2015, the NRC issued a Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$3,500 to Patriot Engineering and Environmental for a Severity Level III violation. Specifically, on September 4, 2014, the licensee failed to maintain control and constant surveillance or use a minimum of two independent physical controls to secure a portable gauge from unauthorized removal as required by 10 CFR 20.1802, "Control of Material Not in Storage," and 10 CFR 30.34(i), "Terms and Conditions of Licenses." An authorized user failed to maintain control and constant surveillance over a gauge containing licensed material, and that gauge was driven over by construction equipment.

## **MEDICAL**

### **Beaumont Health System (EA-14-236)**

On March 9, 2015, the NRC issued a Notice of Violation to Beaumont Health System (BHS) for a Severity Level III violation. The violation involved BHS's failure to develop, implement, and maintain written procedures to provide high confidence that each administration was in accordance with the written directive as required by paragraph (a) of 10 CFR 35.41, "Procedures for Administrations Requiring a Written Directive." In accordance with 10 CFR 35.41 (b)(2), the procedures required by 10 CFR 35.41 (a) must address verifying that the administration is in accordance with the treatment plan, if applicable, and the written directive. Specifically, on October 30, 2014, the licensee administered yttrium-90 to the posterior portion of the right lobe of a patient's liver; and the licensee's procedures did not require verification

that the dose was in accordance with the applicable treatment plan and written directive. As a result, a medical event occurred as the patient received a dose that was 20.8 percent more than the prescribed dose.

Information about the NRC's enforcement program can be accessed at <http://www.nrc.gov/about-nrc/regulatory/enforcement/current.html>. Documents related to cases can be accessed through the Agencywide Documents Access and Management System (ADAMS) at <http://www.nrc.gov/reading-rm/adams.html>. Help in using ADAMS is available by contacting the NRC Public Document Room staff at 301 415-4737 or 1-800-397-4209 or by sending an e-mail to PDR.Resource@nrc.gov.

(Contact: Michele Burgess, NMSS, 301-415-5868 or [Michele.Burgess@nrc.gov](mailto:Michele.Burgess@nrc.gov))



## GENERIC COMMUNICATIONS ISSUED

The following summarizes an NRC generic communication issued by NMSS. If this document appears relevant to your needs and you have not received a copy, please call one of the technical contacts listed below. The Web address for the NRC library of generic communications is <http://www.nrc.gov/reading-rm/doc-collections/gen-comm>.

## REGULATORY ISSUE SUMMARIES

The NRC provides a regulatory issue summary (RIS) as an informational document used to communicate with the nuclear industry on a broad spectrum of matters.

On February 24, 2015, the NRC issued **RIS-15-03**, "Identifying and Reporting Security Incidents under 10 CFR PART 37." The agency issued the RIS to inform addressees of the requirements regarding identifying and reporting security incidents, including suspicious activity, involving Category 1 or Category 2 quantities of radioactive material under 10 CFR Part 37; "Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material"; to clarify when and how to report those matters; and to make recipients aware of a database used to track reports of suspicious activity.

## SELECTED FEDERAL REGISTER NOTICES

**April 23, 2015**

**80 FR 27709, Selection of Material Balance Areas and Item Control Areas (Draft Regulatory Guide; Request for Comment)**

Summary: The NRC issued for public comment draft regulatory guide (DG), DG-5057, "Special Nuclear Material Control and Accounting System for Non-Fuel Cycle Facilities." This DG provides guidance to licensees and applicants on the NRC's regulations concerning the material control and accounting of special nuclear material. The need for this guidance arises from an ongoing NRC rulemaking to revise these regulations. The scope of DG-5057 covers nuclear power plants and all non-fuel cycle facilities.

(Contacts: Tom Pham, NMSS, 301-287-9132 or [Tom.Pham@nrc.gov](mailto:Tom.Pham@nrc.gov) and Mekonen Bayssie, NRR, 301-251-7489 or [Mekonen.Bayssie@nrc.gov](mailto:Mekonen.Bayssie@nrc.gov))



## June 1, 2015

**80 FR 30924, List of Approved Spent Fuel Storage Casks: Holtec HI-STORM Flood/Wind System; Certificate of Compliance No. 1032, Amendment No. 1, Revision 1; (Direct Final Rule; Confirmation of Effective Date)**

Summary: The NRC confirmed the effective date of June 2, 2015, for the direct final rule that was published in the *Federal Register* on March 19, 2015 (80 FR 14291). This direct final rule amended the NRC's spent fuel storage regulations by revising the Holtec International, Inc., (Holtec), HI-STORM Flood/Wind (FW) System listing within the "List of approved spent fuel storage casks" to add Amendment No. 1, Revision 1, to Certificate of Compliance No. 1032. Amendment No. 1, Revision 1, allowed these casks to accept 14x14B fuel assemblies with minor changes in the internal diameter of the fuel cladding, diameter of the fuel pellet, and spacing between the fuel pins. The amendment also updated testing requirements for the fabrication of Metamic HT neutron-absorbing structural material.

(Contact: Robert D. MacDougall, NMSS, 301-415-5175 or Robert.MacDougall@nrc.gov)

## June 12, 2015

**80 FR 33988, Revisions to Transportation Safety Requirements and Harmonization With International Atomic Energy Agency Transportation Requirements (Final Rule)**

Summary: The NRC, in consultation with the U.S. Department of Transportation (DOT), is amending its regulations for the packaging and transportation of radioactive material. These amendments make conforming changes to the NRC's regulations based on the International Atomic Energy Agency's (IAEA) 2009 standards for the international transportation of radioactive material and maintain consistency with the DOT's regulations. In addition, these amendments re-establish restrictions on materials that qualify for the fissile material exemption, clarify requirements, update administrative procedures, and make editorial changes.

(Contact: Solomon Sahle, NMSS, 301-415-3781 or Solomon.Sahle@nrc.gov)

## June 12, 2015

**80 FR 33450, Physical Protection of Category 1 and Category 2 Quantities of Radioactive Materials (Petition for Rulemaking; Consideration in the Rulemaking Process)**

Summary: The NRC will consider in the rulemaking process three issues raised in a petition for rulemaking (PRM), PRM-37-1, submitted by Anthony Pietrangelo, on behalf of the Nuclear Energy Institute (NEI or the petitioner). The petitioner requests that the NRC amend its regulations to clarify and expand current exemptions for when the physical protection measures for category 1 and category 2 quantities of radioactive material do not apply to a licensee.

(Contact: Cardelia Maupin, NMSS, 301-415-2312 or Cardelia.Maupin@nrc.gov)

## June 23, 2015

**80 FR 35870, Linear No-Threshold Model and Standards for Protection against Radiation, (Petition for Rulemaking; Notice of Docketing and Request for Comment)**

Summary: The NRC has received three petitions for rulemaking (PRM) requesting that the NRC amend its "Standards for Protection Against Radiation" regulations and change the basis of those regulations from the Linear No-Threshold (LNT) model of radiation protection to the radiation hormesis model. The radiation hormesis model provides that exposure of the human body to low levels of ionizing radiation is beneficial and protects the human body against deleterious effects of high levels of radiation. Whereas, the LNT model provides that radiation is always considered harmful, there is no safety threshold, and biological damage caused by ionizing radiation (essentially the cancer risk) is directly proportional to the amount of radiation exposure to the human body (response linearity). The petitions were submitted by Carol S.



Marcus, Mark L. Miller, and Mohan Doss (the petitioners), dated February 9, 2015, February 13, 2015, and February 24, 2015, respectively. These petitions were docketed by the NRC on February 20, 2015, February 27, 2015, and March 16, 2015, and have been assigned Docket Numbers. PRM-20-28, PRM-20-29, and PRM-20-30, respectively. The NRC is examining the issues raised in these petitions to determine whether they should be considered in rulemaking. The NRC is requesting public comments on these petitions for rulemaking.

(Contact: Solomon Sahle, NMSS, 301-415-3781 or Solomon.Sahle@nrc.gov)

## ONGOING RULEMAKINGS

RULEMAKING	DESCRIPTION	STATUS
<b>PROPOSED RULES</b>		
10 CFR Part 61, "Low-Level Radioactive Waste (LLRW) Disposal"	The proposed rule would revise 10 CFR Part 61 to require low-level radioactive waste (LLRW) disposal licensees and license applicants to conduct updated site-specific analyses and to permit the development of criteria for future LLRW acceptance based on the results of these analyses.	The NRC published the proposed rule and notice of availability of the draft guidance in the <i>Federal Register</i> (80 FR 16082 and 80 FR 15930) on March 26, 2015. The comment period for both documents closes on July 24, 2015.
10 CFR Part 35, "Medical Use of Byproduct Material—Medical Event Definitions, Training and Experience and Clarifying Amendments"	The proposed rule would amend the reporting and notification requirements for a medical event, amend training and experience requirements, and make changes to how a petition for rulemaking is handled.	The NRC published the proposed rule and draft guidance in the <i>Federal Register</i> (79 FR 42224) for public comments. The comment period closed on November 18, 2014. The NRC received 48 comment letters, resulting in several hundred comments. The comments are posted at <a href="http://www.regulations.gov">www.regulations.gov</a> under Docket ID NRC-2008-0175. On October 8, 2014, the NRC held a public meeting to promote better understanding of the proposed amendments. The comments received are under NRC review. A final rule package is due to the Commission in December 2015.



10 CFR Part 73, "Enhanced Security of Special Nuclear Material"

The proposed rule would update security regulations, including portions of 10 CFR Part 73, relating to physical protection of special nuclear material at NRC licensed facilities and in transit.

On February 3, 2015, the Office of Nuclear Security and Incident Response (NSIR) submitted a user need request (MLI 4317A037) to NMSS to initiate a rulemaking to update the security regulations within 10 CFR Part 73. NSIR and NMSS completed the regulatory basis (MLI 4321A007) on February 25, 2015. On April 22, 2015, the NRC published the regulatory basis in the Federal Register (80 FR 22434).

10 CFR Part 73 – Cyber Security at Fuel Cycle Facilities

The proposed rulemaking would revise 10 CFR Part 73 to add new cyber security requirements for Fuel Cycle Facilities.

The NRC is currently drafting the regulatory basis for the rulemaking and expects to release it for public comment in September 2015.

## FINAL RULE

10 CFR Part 71, "Compatibility with Transportation Standards"

The rule would amend the regulations in 10 CFR Part 71 for the packaging and transportation of radioactive material.

The Commission affirmed the final rule presented in SECY-14-0100 on April 14, 2015. The staff is presently preparing the publication package and awaiting Office of Management and Budget clearance.

10 CFR Part 74, "Material Control and Accounting of Special Nuclear Material"

This rule would revise and consolidate the current Material Control and Accounting (MC&A) requirements into 10 CFR Part 74, and would clarify and strengthen the MC&A requirements, in part, by removing existing exemptions in the item control provisions.

Staff is resolving the public comments and preparing the final package for the rulemaking. Staff is planning to hold a public meeting in September 2015 to discuss the cumulative effects of regulation and implementation of the final rule. The final rule package is due to the Commission in November 2015.

### PETITIONS

PRM-32-8, CampCo  
Petition

CampCo submitted a petition for rulemaking asking the NRC to amend regulations to allow commercial distribution of tritium markers.

The receipt and request of the petition was published in *Federal Register* (at 78 FR 41720) on July 11, 2013, for a 75-day public comment period. The petition is currently under NRC review.

### POLICY STATEMENT

Tribal Policy Statement

The Tribal Policy Statement will describe the Commission's policy for consulting and coordination with Native American tribes.

The staff sent the Commission a Tribal Policy Statement on January 10, 2014 (SECY-14-0006; ADAMS Accession No. ML13317B141). The policy statement was published in the *Federal Register* (79 FR 71136) on December 1, 2014 for a 120 day public comment period. The public comment period was originally scheduled to close on March 31, 2015. The NRC extended the public comment period to May 31, 2015, to allow more time for members of the public to develop and submit their comments.

### PRE-RULEMAKING

10 CFR Part 20, "Standards for Protection against Radiation," International Commission on Radiological Protection (ICRP) Recommendations

The rulemaking would incorporate recommendations from the ICRP to revise 10 CFR Part 20.

The NRC published an advance notice of proposed rulemaking in the *Federal Register* (79 FR 43284) on July 25, 2014. The public comment period was extended to June 22, 2015.



## TO OUR READERS

Thank you for your interest in our newsletter. In our attempt to keep the NMSS licensee newsletter—The NMSS News Link—relevant, we welcome feedback on its contents. If you would like to suggest topics for the newsletter, please contact Vanessa Cox, NMSS Rulemaking and Project Management Branch, by telephone at 301-415-8342 or by e-mail at [Vanessa.Cox@nrc.gov](mailto:Vanessa.Cox@nrc.gov). In addition, to ensure proper delivery of The NMSS News Link and to prevent any interruption of service, please report e-mail address changes to Ms. Cox.

Please send written correspondence to the following address:

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