

Proposed Rules

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This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

NUCLEAR REGULATORY COMMISSION

10 CFR Chapter I

Transportation of Radioactive Material in Quantities of Concern

AGENCY: Nuclear Regulatory Commission.

ACTION: Public meetings and request for comment.

SUMMARY: The Nuclear Regulatory Commission (NRC) is holding three public meetings to seek public comment to enhance the development of the technical basis for rulemaking proposing to revise NRC regulations on the security requirements for the transportation of Radioactive Material in Quantities of Concern (RAMQC). The goal of this enhanced participatory process is to ensure effective security measures are in place for the protection of radioactive material shipments given the post-September 11, 2001, threat environment. New requirements for recipient license verification; coordination of shipment information; advance notification of shipments; notification of shipment delays, schedule changes and suspected loss; continuous and active shipment position monitoring; two-way and redundant telecommunication; secondary drivers for certain shipments; contingency procedures; and safeguarding shipment information will be incorporated.

This document also addresses the State of Washington petition to the NRC requesting that NRC consider adopting global positioning satellite (GPS) technology tracking as a national requirement for mobile or portable uses of radioactive material in quantities of concern.

DATES: Submit comments concerning this action by February 8, 2008. Comments received after February 8th will be considered if practicable to do so, but only those comments received on or before the due date can be assured consideration.

The staff will hold three public meetings to discuss RAMQC with other Federal Agencies, State Partners, Stakeholders, and the public. These meetings will be held on Tuesday, January 15, 2008, Thursday, January 17, 2008, and Wednesday, January 23, 2008.

ADDRESSES: The comments may be provided to the Chief, Rules and Directives Branch, Division of Administration Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. Written comments should also be transmitted to the Chief of the Rules and Directives Branch, either by means of facsimile transmission to (301) 415-5144, or by e-mail to nrcprep@nrc.gov.

The January 15, 2008, meeting will be held at the U.S. NRC Region III, 2443 Warrenville Road, Suite 210, Lisle, Illinois 60532-4352. The January 17, 2008, meeting will be held at the Edward R. Roybal Auditorium and Conference Center, Ronald V. Dellums Federal Building, 1301 Clay Street, Oakland, California 94612-5217. The January 23, 2008 meeting will be held at U.S. Nuclear Regulatory Commission Auditorium, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852-2738.

FOR FURTHER INFORMATION CONTACT: Susan Bagley, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (301) 415-5378, e-mail, RAMQCcomments@nrc.gov.

SUPPLEMENTARY INFORMATION:

- I. Background
- II. Discussion
- III. Proposed Measures
- IV. Questions To Consider

I. Introduction

Prior to September 11, 2001, NRC focus was on the safety and security of people and the environment ensuring they were protected from the inadvertent or accidental release of radioactive material. The attacks of September 11, 2001, led the NRC to re-think how far a terrorist would go to hurt the public. This included the purposeful use of medical and industrial radioactive materials to cause harm. The NRC joined with the international community to look at medical and industrial radioactive materials with this as its main consideration. This effort was lead by

the International Atomic Energy Agency (IAEA) with active participation by the NRC. As part of this process, the NRC reviewed the chemical, physical, and radiological characteristics of each radioactive material for its attractiveness to a terrorist. This effort identified sixteen radioactive materials which could pose a serious threat to people and the environment in the wrong hands. This effort further identified the different quantities or "thresholds" of materials that could be useful to a terrorist. The IAEA published these results in a document titled "Code of Conduct on the Safety and Security of Radioactive Sources." A link to this document is on the NRC Web site at <http://www.nrc.gov/security/byproduct/enhanced-security.html>.

The NRC refers to these sixteen radioactive materials as "Radioactive Materials in Quantities of Concern" or RAMQC. The RAMQC thresholds are provided in Table 1 in the discussion section below. Once the sixteen radioactive materials were identified by the IAEA, the NRC reviewed and revised its security requirements to prevent unauthorized access to these materials. Several areas where additional requirements could be put in place to improve transportation security were identified and changes were instituted.

Initially the NRC issued advisories to commercial users of radioactive materials (referred to as licensees) and requested that they implement additional security measures on their shipments of radioactive material. Licensees understood the need for additional security and voluntarily implemented the additional security as requested. However, an NRC advisory doesn't carry the weight of a regulation or an Order. The NRC cannot impose penalties if a licensee doesn't meet the recommendations of an NRC advisory.

The Atomic Energy Act authorizes the NRC to impose requirements on commercial users of radioactive materials by two methods, either by the promulgations of regulations which are published in Title 10 of the Code of Federal Regulations or by issuing an Order. An Order carries the same legal authority as a regulation.

Because an NRC advisory is a communication tool rather than an enforcement mechanism, the NRC issued two legally binding Orders to

licensees transporting RAMQC. One Order requires licensees to put in place additional security measures for the transport of Category 2 quantities of radioactive material. These requirements are part of the Increased Controls security enhancements for Category 2 quantities of radioactive materials. The second Order requires licensees to put into place additional security measures for the transportation of Category 1 quantities of material. The second Order is not publicly available because it includes detailed security requirements that are designated as Safeguards Information.

Although the security Order is legally binding on licensees, the NRC is committed to keeping the public informed and values public involvement in our regulatory process. By its nature, the rulemaking process is deliberative and takes substantial time. The process is now started and the first step in this process is for the staff to prepare what is referred to as a “technical basis.” The “technical basis” is a document that identifies the regulations the staff agrees need to be revised. Once the “technical basis” is complete, the staff will then prepare a “draft proposed rule” using the technical basis to develop the proposed

language for the new rule. The “draft proposed rule” will also be published for public comment and, after all the public comments are resolved, the final rule is published.

II. Discussion

Q 1. What Is RAMQC?

A 1. RAMQC is an acronym for Radioactive Material in Quantities of Concern. RAMQC refers specifically to 16 radioactive materials (fourteen single radionuclides and two combinations). These materials are: Americium-241; Americium-241/Beryllium; Californium-252; Curium-244; Cobalt-60; Cesium-137; Gadolinium-153; Iridium-192; Plutonium-238; Plutonium-239/Beryllium; Promethium-147; Radium-226; Selenium-75; Strontium-90 (Yttrium-90); Thulium-169; and Ytterbium-169. RAMQC does not include spent fuel.

Q 2. What Prompted This New Category of Material Called RAMQC?

A 2. The attacks of September 11, 2001, made everyone re-think how far a terrorist would go to hurt the public. This included reconsidering how a terrorist could use medical and industrial radioactive materials to cause

harm. The NRC and the international community, led by the International Atomic Energy Agency (IAEA), took another look at medical and industrial radioactive materials with this as its main consideration. As part of this effort, the NRC reviewed the chemical, physical, and radiological characteristics of radioactive material for its attractiveness to a terrorist. This effort identified 16 radioactive isotopes and combinations of isotopes that could pose a serious threat. This effort further defined different quantities or “thresholds” of materials that could be useful to a terrorist. The IAEA published their results in a document titled “Code of Conduct on the Safety and Security of Radioactive Sources.” A link to this document is found on the NRC Web site at <http://www.nrc.gov/security/byproduct/enhanced-security.html>.

After the Code of Conduct was developed, the NRC referred to these 16 radioactive materials as “Radioactive Materials in Quantities of Concern” or RAMQC.

Q 3. What Are the RAMQC Thresholds?

A 3. The RAMQC thresholds are provided in the Figure below.

Radioactive material	Category 1		Category 2	
	Terabequerels (TBq)	Curies (Ci)	Terabequerels (TBq)	Curies (Ci)
Americium-241	60	1,600	0.6	16
Americium-241/Beryllium	60	1,600	0.6	16
Californium-252	20	540	0.2	5.4
Curium-244	50	1,400	0.5	14
Cobalt-60	30	810	0.3	8.1
Cesium-137	100	2,700	1.0	27
Gadolinium-153	1000	27,000	10.0	270
Iridium-192	80	2,200	0.8	22
Plutonium-238	60	1,600	0.6	16
Plutonium-239/Beryllium	60	1,600	0.6	16
Promethium-147	40,000	1,100,000	400	11,000
Radium-226	40	1,100	0.4	11
Selenium-75	200	5,400	2.0	54
Strontium-90 (Yttrium-90)	1,000	27,000	10.0	270
Thulium-170	20,000	540,000	200	5,400
Ytterbium-169	300	8,100	3.0	81

Terabequerels are the official value to be used for determining whether a material is a Category 1 or Category 2 quantity. Curies are provided for practical usefulness only and are rounded after conversion.

Q 4. What Is the Scope of These Public Meetings?

A 4. The NRC is planning to revise its requirements for licensees securely transporting RAMQC. The first step in this process is for the staff to prepare what a “technical basis.” The “technical basis” is a document that identifies

what improvements are needed in the regulations.

These public meetings are limited to discussion of transportation security for RAMQC. The staff is interested in gathering stakeholder opinion and recommendations in this area.

Q 5. Is This the Only Opportunity for the Public To Provide Comment on This Policy Change?

A 5. No, there will be another opportunity for the public to provide comment on this policy change. Once the “technical basis” is complete, the staff will then prepare a “draft proposed rule” that identifies the proposed

language for the regulations. The draft proposed rule will be published for public comment. After all the public comments on the draft proposed rule are resolved, the final rule will be published.

Q 6. What Doesn't This Policy Change Cover?

A 6. This policy change will not address air and water transport. Transport of this material within airports and by air is regulated by the Federal Aviation Administration. Transport of this material within ports and by waterway is regulated by the U.S. Coast Guard.

This policy change will not address transshipments of this material through the U.S. Transshipments are shipments that originate by a foreign company in one country, pass through the United States and then continue on to a company in another country. The NRC does not regulate these shipments because there is no NRC licensee involved in this activity. Transshipments are regulated by the Department of Transportation and Department of Homeland Security.

Q 7. Will These Meetings Discuss Spent Fuel Shipments?

A 7. These meetings will not address transport of spent fuel. Spent fuel transportation is being handled under a separate rulemaking effort.

Q 8. Will These Meetings Address Fingerprinting for Access to Radioactive Material?

A 8. These meetings will not address the Energy Policy Act of 2005 (EPA) requirement for fingerprinting of individuals with access to radioactive material. The NRC will address the EPA requirement for fingerprinting under a separate rulemaking effort.

Q 9. Why Is the NRC Holding Stakeholder Meetings?

A 9. The NRC is holding these stakeholder meetings to ensure the public is given adequate opportunity to comment on issues related to increased transportation security requirements for shipments of RAMQC. Public comments will be used to help develop the technical basis for the RAMQC transportation security rulemaking effort.

Q 10. Who Can Participate in These Meetings?

A 10. Any member of the public at large, industry groups, government officials (Federal, State and local), and NRC licensees may participate.

Q 11. Why Is the NRC Planning To Revise Its Requirements in This Area?

A 11. Prior to 9/11, NRC requirements focused on safety and preventing inadvertent or accidental exposure to both workers and the public by these materials. These requirements also provided security for the material. However, the events of 9/11 made NRC take a broader look at its requirements and re-evaluate what a terrorist might do to attain these materials with the intention of harming the public. From this effort, the NRC identified several areas where additional requirements could be implemented to improve transportation security.

Q 12. What Actions Has NRC Taken To Improve Transportation Security in This Area?

A 12. The NRC has issued both security advisories and Orders to its licensees to improve transportation security in this area.

Q 13. What Is an NRC Advisory?

A 13. An NRC advisory recommends areas for improvement to licensees. Immediately after the events of Sept. 11, 2001, the NRC issued security advisories to licensees and requested that they implement additional security measures on their shipments of RAMQC. The NRC advisories contained specific security upgrades and are not publicly available. Licensees understood the need for additional security and implemented the measures as requested.

However, an NRC advisory is not legally binding and does not carry the weight of a regulation or Order. The NRC cannot impose penalties if a licensee doesn't meet the recommendations of an NRC advisory.

Q 14. What "Legally-Binding" Actions did NRC Take?

A 14. The Atomic Energy Act of 1954, as amended, authorizes the NRC to impose requirements on commercial users of radioactive materials by two methods, either through regulations or by issuing an Order. The NRC can impose penalties when a licensee doesn't meet a requirement of the regulation or an Order. An Order carries the same legal authority as a regulation.

The NRC issued legally binding Orders to licensees transporting RAMQC in 2005. These Orders required licensees to put in place additional security measures in addition to the existing NRC regulations when transporting RAMQC. The Orders issued to licensees transporting RAMQC Category 2 are available on our public

Web site at <http://www.nrc.gov/security/byproduct/orders.html>.

The Orders issued to licensees transporting RAMQC Category 1 are designated Safeguards Information and are not publicly available.

Q 15. Is Everything That Was Safeguards Information Going to be Public?

A 15. No. The Orders issued to licensees contained detailed security information that could be useful to an adversary if made public. In order to increase public awareness and participation, NRC staff identified the primary security concepts behind each security measure in order to be able to discuss the security measures in a public forum. Once the new rule is published, the detailed security measures employed by each licensee will be safeguards information or safeguards information-modified.

Q 16. Why Doesn't the NRC Just Keep the Orders in Effect?

A 16. The legally binding Orders issued by the NRC could stay in place indefinitely. Because the Orders are Safeguards Information, this does not meet the NRC commitment to maintain openness and to provide the public an opportunity to comment on policy changes. The NRC is interested in keeping the public informed and highly values public involvement in our process.

Assured that additional security (because of existing regulations and Orders) is in place during transport of this material, the staff is now planning to more formally revise its policy and gather public and stakeholder input in this area. The staff will begin this process by using the additional security measures developed as the basis for these discussions.

Q 17. Why Is This Material Being Shipped?

A 17. In general, RAMQC is shipped to medical institutions, companies that support medical and academic institutions, and companies that manufacture and distribute radioactive material for various industrial applications. As radioactive sources get older, radioactive decay takes place and their strength decreases. Sources lose their effectiveness and have to be replaced or replenished periodically with new sources and older sources must be transported for disposal.

Another, much less transported type of RAMQC is large scale plant equipment (i.e. steam generators and reactor vessels) from commercial power plants.

Q 18. How Is the Public Protected From These Shipments?

A 18. Regulating transport of radioactive material (RAM) is a joint responsibility of the NRC and the DOT.

The quantities of RAM being considered as part of this policy change, in general, are transported in packages (casks) that meet rigorous NRC safety standards. The packages are referred to as "Type B" packages in both NRC and DOT regulations. The NRC fact sheet on transportation of radioactive materials can be found at <http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/transport-spenfuel-radiomats-bg.html>.

In addition to the existing regulations, the NRC imposed additional security measures by Order on licensees. In general, the objectives of these Orders are to: (a) Enhance control over the material; and (b) prevent malevolent use of the material. The Orders address the following attributes: (a) Pre-planning and coordination of shipments; (b) control, monitoring and communications during shipments; and

(c) procedures, training and control of security information.

The carrier transporting RAMQC must also meet the DOT's requirements for shipment of the radioactive material. A link to DOT is provided on NRC's Web site at <http://www.nrc.gov/materials/transportation.html>.

Q 19. How Does the NRC Ensure Shippers are Following its Rules?

A 19. The NRC and Agreement State inspectors are aware of the intent of the additional security measures, have received training to ascertain whether shippers are meeting security requirements, and have conducted licensee inspections. These inspections are guided by in-place procedures. The NRC also instituted a security findings review panel, which reviews inspection findings to ensure consistency in the inspection and enforcement process.

Q 20. What Is the Timeline for Implementing a New Rule in This Area?

A 20. The technical basis is scheduled for completion in Spring 2008. The draft

proposed rule is scheduled for publication in the Spring of 2009. The new rule is expected to be published in 2010.

III. Proposed Measures

As mentioned earlier, this is the first step of the process to revise the NRC regulations to improve security during transport of RAMQC. This first step consists of writing the "technical basis" and during this step we are gathering input from stakeholders. Using the security Orders as a basis, the general requirements to enhance security during transportation of RAMQC are provided in Table 2. To facilitate discussions, the requirements are categorized by their major attributes: (A) Licensee verification; (B) planning and coordination; (C) notifications; (D) communications; (E) drivers and accompanying individuals; (F) procedures, training and control of information; and (G) additional requirements for portable and mobile devices.

TABLE 2.—GENERAL REQUIREMENTS FOR SECURITY DURING TRANSPORT OF RAMQC

Requirement	Category 1	Category 2
A. Licensee Verification:		
1 Verify recipients are authorized to receive regulated material by direct contact with regulatory authority ¹	✓
2 Confirm validity of unusual orders	✓
3 Verify the address for a temporary work site is valid	✓
B. Planning and Coordination:		
1 Coordinate expected arrival time of the shipment	✓	✓
2 Coordinate expected departure time of the shipment	✓
3 Confirm receipt of the shipment	✓	✓
4 Use carriers which:		
(a) Use package tracking systems. (Package tracking systems can identify the location of package when queried, however they are not necessarily active monitoring of the package. For example, the U.S. registered mail program is a package tracking system.)	✓
(b) Have continuous and active monitoring systems	✓
(c) Assure trustworthiness and reliability of drivers	✓	✓
(d) Assure trustworthiness and reliability of personnel with knowledge of the shipment	✓
(e) Maintain constant control or surveillance during transit	✓	✓
(f) Have capability for immediate communication to summon appropriate response or assistance	✓	✓
5 Pre-plan and coordinate shipment with States through which the shipment will pass	✓
C. Notifications:		
1 Provide at least 7 days advance notification of the shipment to the NRC and the affected States	✓
2 If the shipment does not arrive at the expected arrival time, initiate an investigation to find it	✓	✓
3 If the shipment has become lost, stolen, or missing:		
(a) Immediately notify the NRC Operations Center	✓	✓
(b) Immediately notify the local law enforcement agencies and the appropriate Agreement State regulatory authority	✓
D. Communications:		
1 Establish redundant communications allowing the transport to contact communication center at all times	✓
2 Ensure back-up communications are not subject to the same interference factors as the primary communication	✓
3 Ensure shipments are continuously and actively monitored by a telemetric position monitoring system or an alternative tracking system reporting to a communication center. ²	✓
4 Communication center provides positive confirmation of location, status and control over the shipment	✓	✓
5 Communication center prepared to implement pre-planned procedures in response to events	✓	✓
E. Drivers and Accompanying Individuals:		
1 Report into the communication center at regular, pre-set intervals	✓
3 No casual stops during transport	✓
4 If stopped, perform checks to monitor the shipment	✓
F. Procedures, Training and Control of Information:		
1 Develop, maintain and implement policies and procedures for proper handling and protection against unauthorized disclosure of transportation security information	✓	✓

TABLE 2.—GENERAL REQUIREMENTS FOR SECURITY DURING TRANSPORT OF RAMQC—Continued

Requirement	Category 1	Category 2
2 Develop normal and contingency procedures to cover; notifications, communications protocols, loss of communications, and response to actual, attempted, or suspicious activities related to theft, loss, diversion or sabotage of a shipment	✓	✓
3 Designate detailed security information as Safeguards Information	✓
G. Additional Requirements for Portable and Mobile Devices:		
1 Have two independent physical controls that form tangible barriers to secure the material from unauthorized removal when the device is not under direct control and constant surveillance by the licensee	N/A	✓
2 For devices in or on a vehicle or trailer. Licensees shall also use a method to disable the vehicle or trailer when not under direct control and constant surveillance by the licensee	N/A	✓

Notes:

¹ In accordance with 10 CFR Part 20, licensees are required to verify that their customers are authorized to possess the material. However, this verification could be by means other than by direct contact with the regulatory authority.

² A licensee may use a carrier or third-party communication center in lieu of establishing one itself. A commercial facility must have the capabilities, necessary procedures, training, and personnel background investigations to meet the applicable requirement

³ Portable or mobile devices are within RAMQC Category 2.

IV. Questions To Consider

The NRC requests that interested parties comment on this policy change to improve security during transport of RAMQC. Besides comments on the security measures provided above, the NRC is also interested in discussing the questions below.

Question 1

Which part of Title 10 of the Code of Federal Regulations (CFR) should the staff revise to include requirements to enhance security during transportation of RAMQC? At this time, the staff is considering revising either the requirements of 10 CFR Part 20 or Part 73.

Question 2

Should the NRC issue these requirements under its authority to protect public health and safety or under its authority to promote the common defense and security?

The NRC can either impose new requirements under its authority in the Atomic Energy Act of 1954, as amended, to protect public health and safety or under its authority to promote the common defense and security. If these enhancements to the regulations are issued under public health and safety, the NRC would co-regulate with the Agreement States. If these enhancements are issued under common defense and security, the NRC would retain its authority and would not co-regulate with the Agreement States in this area.

Question 3

What technologies are in use to track the location of sources, packages or vehicles carrying radioactive material in quantities of concern?

On April 27, 2007, Governor Gregoire, State of Washington, submitted a petition for rulemaking to the NRC. In

her petition, Governor Gregoire requested that NRC consider adopting global positioning satellite (GPS) technology tracking as a national requirement for mobile or portable uses of radioactive material in quantities of concern. The NRC is considering this request. The staff is interested gaining a better understanding of the availability, cost and practicality of technologies that could be used to track the location of the source, package or vehicle.

Dated at Rockville, Maryland, this 28th day of December, 2007.

For the Nuclear Regulatory Commission.

Robert K. Caldwell,

Branch Chief, Fuel Cycle and Transportation Security Branch, Division of Security Policy, Office of Nuclear Security and Incident Response.

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2008-0414; Directorate Identifier 2007-NM-340-AD]

RIN 2120-AA64

Airworthiness Directives; Bombardier Model CL-600-2C10 (Regional Jet Series 700, 701, & 702), Model CL-600-2D15 (Regional Jet Series 705), and CL-600-2D24 (Regional Jet Series 900) Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for the products listed above. This proposed AD results from mandatory continuing

airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

Bombardier Aerospace has completed a system safety review of the aircraft fuel system against fuel tank safety standards * * *.

[A]ssessment showed that supplemental maintenance tasks [for the fuel tank wiring harness installation, and the hydraulic system No. 3 temperature transducer, among other items] are required to prevent potential ignition sources inside the fuel system, which could result in a fuel tank explosion. * * *

The proposed AD would require actions that are intended to address the unsafe condition described in the MCAI.

DATES: We must receive comments on this proposed AD by February 4, 2008.

ADDRESSES: You may send comments by any of the following methods:

- *Federal eRulemaking Portal:* Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- *Fax:* (202) 493-2251.

- *Mail:* U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

- *Hand Delivery:* U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-40, 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the