

August 28, 2006

MEMORANDUM TO: Samuel J. Collins, Regional Administrator, Region I  
William Travers, Regional Administrator, Region II  
James L. Caldwell, Regional Administrator, Region III  
Bruce Mallet, Regional Administrator, Region IV  
Jack R. Strosnider, Director, Office of Nuclear Material Safety  
and Safeguards  
Roy Zimmerman, Director, Office of Nuclear Security and  
Incident Response  
Bradley W. Jones, Assistant General Counsel  
for Materials Litigation and Enforcement  
Janet R. Schlueter, Director, Office of State and Tribal Programs

FROM: James Luehman, Acting Director/**RA**/  
Office of Enforcement

SUBJECT: REQUEST FOR REVIEW: ENFORCEMENT GUIDANCE  
MEMORANDUM, "GUIDANCE FOR DISPOSITIONING  
ENFORCEMENT ISSUES ASSOCIATED WITH ORDERS  
IMPOSING INCREASED CONTROLS FOR LICENSEES  
AUTHORIZED TO POSSESS RADIOACTIVE MATERIALS  
QUANTITIES OF CONCERN"

The purpose of this memorandum is to provide the enclosed draft Enforcement Guidance Memorandum (EGM), "Guidance for Dispositioning Enforcement Issues Associated With Orders Imposing Increased Controls for Licensees Authorized to Possess Radioactive materials Quantities of Concern" for your review. This EGM provides the enforcement guidance that the NRC will follow to disposition enforcement related issues resulting from the inspection of licensees' implementation of the increased control (IC) measure Orders.

Please provide your comments/concurrence to Sally Merchant of my staff (slm2) by September 8, 2006. If you have any questions, please contact Sally at 301-415-2747.

Enclosure: As stated

cc: Russell Barnes, NSIR  
Charles Miller, NMSS

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<b>NAME</b>	S. Merchant	J. Luehman
<b>DATE</b>	08/25/06	08/28/06

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, DC 20555 - 0001

EGM 06-00X

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DISPOSITIONING ENFORCEMENT ISSUES ASSOCIATED WITH  
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On November 14, 2005 and December 22, 2005, the NRC issued Orders entitled: "Increased Controls for Licensees that Possess Sources Containing Radioactive Material Quantities of Concern," to radioactive materials licensees who hold licenses issued by the NRC authorizing possession of such material, at or above threshold limits. The Orders supplement existing regulatory requirements in 10 CFR 20.1801 and 10 CFR 20.1802 in order to ensure adequate protection of, and minimize danger to, the public health and safety. The purpose of this memorandum is to provide guidance for dispositioning enforcement related issues resulting from the inspection of licensees' implementation of the increased control (IC) measure Orders.

**Interim Examples of Violations :**

The current version of the Enforcement Policy, "Supplement IV - "Health Physics (10 CFR Part 20)," does not include examples of severity levels for violations associated with failure to implement these IC. This memorandum provides interim examples of violations in each of four severity levels as guidance in determining the appropriate severity level for dispositioning violations of the Orders. In addition, because the applicable radionuclides and quantities of concern were listed in Table 1, "Radionuclides of Concern," of Attachment B of the Orders, the Table is included as an Attachment to the memorandum.

For clarity and consistency with other security and control requirements, and to prevent confusion with the term: "Radioactive Material Quantities of Concern," (RAM QC) as used in previously issued Orders (e.g., EA-05-006), the Supplement will use the Category designations outlined in the International Atomic Energy Agency (IAEA) Code of Conduct on the Safety and Security of Radioactive Sources (Code of Conduct) rather than referring to Table 1. Category 2

quantities of radioactive materials associated with the IC Orders are equal to or greater than the quantities listed in Table 1, but less than 100 times the quantities listed in Table 1. Category 1 quantities of radioactive materials associated with the IC Orders are greater than or equal to 100 times the Category 2 quantities listed in Table 1.

**Disposition of Violations of Increased Controls Requirements:**

If an inspector identifies a potential noncompliance with an IC, he or she should notify the applicable Regional Branch Chief before the inspection exit with the licensee. All the potential noncompliances shall be brought back to the applicable Regional Office for disposition.

The Regional Office will evaluate each potential noncompliance and make one of two conclusions as discussed below.

a. Good-Faith Attempt to Implement the IC

If this is the first inspection after the licensee received the IC Order, the Regional Office may then determine that the licensee has made a good faith attempt to implement an IC, if the following conditions apply:

- The licensee attempted to implement the control, even if the attempt was not completely successful;
- The licensee's failure to implement the IC was not willful; and
- The licensee has committed to agreed-upon corrective actions and time-frames for correcting the non-compliance, by the end of the inspection.

Findings which the Regional Office determines to be good-faith attempt to implement will be documented in the inspection record and inspection report. The text of the inspection record and inspection report will describe the noncompliance(s), the licensee's corrective actions, and the schedule for taking corrective actions. NRC's decision to grant credit for a good faith attempt to implement will be documented as follows:

Sample text for the inspection record

"Although this issue constitutes a violation (deviation) of the IC the NRC is not pursuing enforcement action because: (1) this is the first routine IC inspection; (2) the licensee made a good-faith attempt to implement the IC; and (3) the licensee committed to take prompt corrective actions."

Sample text for the cover letter transmitting the inspection report

"Although a violation (deviation) of (cite specific IC) was identified during this inspection and was discussed during the exit meeting, the NRC is not pursuing enforcement action because: (1) this is the first routine IC inspection; (2) you made a good-faith attempt to implement (cite the specific IC); and (3) you made a commitment to take prompt corrective actions."

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Although this approach represents an exercise of enforcement discretion in accordance with Section VII.B.6 of the Enforcement Policy, "Violations Involving Special Circumstances," unlike normal practice, the letter will not mention discretion and the subject line in the cover letter will not include the words, "Exercise of Enforcement Discretion." These cases will not be issued an Enforcement Action (EA) number. The staff should follow the guidance in TI 2800/038-06 (ML060550143) in the preparation of the inspection documentation.

### b. Not Attributable to Good-Faith Attempt to Implement the IC

Apparent violations of the IC not attributable to a good-faith attempt to implement the IC, as discussed in a, will be dispositioned through the normal enforcement process.

This EGM will remain in effect until the Commission modifies its regulations to reflect the IC.

If you have any questions, contact Sally L. Merchant at 301-415-2747 or e-mail (slm2).

cc: L. Reyes, EDO  
SECY  
M. Virgilio, DEDMRS  
W. Kane, DEDR  
W. Dean, OEDO  
J. Dyer, NRR  
B. Boger, NRR  
G. Tracy, NSIR  
M. Federline, NMSS  
R. Pierson, NMSS  
C. Miller, NMSS  
L. Camper, NMSS  
E. W. Brach, NMSS  
D. Dorman, NSIR

## **SUPPLEMENT –INCREASED CONTROL ORDERS**

This supplement provides examples of violations in each of the four severity levels as guidance in determining the appropriate severity level for violations in the area of Increased Controls.

### **A. *Severity Level I - Violations involving for example:***

1. The theft, diversion, or sabotage of a Category 1 quantity of radioactive material resulting from the failure to establish or implement one or more increased controls requirements, such as:
  - (a) Failure to control access to a Category 1 quantity of radioactive material to only individuals deemed trustworthy and reliable and having job duties that require unescorted access to the radioactive material.
  - (b) Failure to immediately respond to an attempted theft, sabotage, or diversion of a Category 1 quantity of radioactive material, including requesting assistance from the local law enforcement agency.
  - (c) Failure to provide enhanced monitoring during periods of source delivery and shipment of a Category 1 quantity of radioactive material.
  - (d) Failure to implement the Radioactive Material Quantities of Concern, Additional Security Measures (RAM QC ASM), prior to shipping a consignment containing a Category 1 quantity of radioactive material.

### **B. *Severity Level II - Violations involving for example:***

1. The theft, diversion, or sabotage of a Category 2 quantity of radioactive material resulting from the failure to establish or implement one or more increased controls requirements, such as:
  - (a) Failure to control access to a Category 2 quantity of radioactive material to only individuals deemed trustworthy and reliable and having job duties that require unescorted access to the radioactive material.
  - (b) Failure to immediately respond to an attempted theft, sabotage, or diversion of a Category 1 or Category 2 quantity of radioactive material including requesting assistance from the local law enforcement agency.
  - (c) Shipping a consignment of a Category 2 quantity of radioactive material by a carrier, other than the licensee, without first verifying that the carrier uses package tracking systems, implements methods to assure trustworthiness and reliability of drivers, maintains constant

## Multiple Addressees

control and/or surveillance during transit, and has the capability for immediate communication to summon appropriate response or assistance.

- (d) Failure to provide enhanced monitoring during periods of source delivery and shipment of a Category 1 quantity of radioactive material.
- (e) Failure to implement the RAM QC ASM, prior to shipping a consignment containing a Category 1 quantity of radioactive material.
- (f) Failure to utilize a method to disable a vehicle or trailer, in or on which a Category 1 or Category 2 quantity of radioactive material is stored, when not under direct control and constant surveillance by the licensee.

### **C. *Severity Level III - Violations involving for example:***

1. Failure to immediately respond to an attempted theft, sabotage, or diversion of a Category 1 or Category 2 quantity of radioactive material, including a failure to request assistance from the local law enforcement agency, that does not result in the theft, sabotage, or diversion of radioactive material.
2. Failure to limit unescorted access to a Category 1 or Category 2 quantity of radioactive materials to only approved individuals.
  - a. Failure to allow only trustworthy and reliable individuals unescorted access to a Category 1 or Category 2 quantity of radioactive material.
3. Failure to limit access to physical protection information to only those persons with an established need-to-know, and who were determined to be trustworthy and reliable.
4. Failure to verify that a carrier uses package tracking systems, implements methods that assures trustworthiness and reliability of drivers, maintains constant control and/or surveillance during transit, and has the capability for immediate communication to summon appropriate response or assistance, prior to shipping a Category 2 quantity of radioactive material, per consignment, by the carrier.
5. Failure to provide enhanced monitoring during periods of source delivery and shipment of a Category 1 quantity of radioactive material.
6. Failure to initiate an investigation to determine the location of a shipment of licensed material containing a Category 2 quantity of radioactive material when the shipment does not arrive on or about the expected arrival time.

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7. Failure to notify the NRC Operations Center promptly after initiating a response to any actual or attempted theft, diversion, or sabotage of sources or devices containing a Category 1 or Category 2 quantity of radioactive material.
8. Failure to implement the RAM QC ASM prior to shipping a Category 1 quantity of radioactive material, per consignment.
9. Failure to utilize a method to disable a vehicle or trailer, in or on which a Category 1 or Category 2 quantity of radioactive material is stored, when not under direct control and constant surveillance by the licensee.
10. Failure to establish or programmatic failure to implement a pre-arranged response plan with the local law enforcement agency.
11. Failure to establish or programmatic failure to implement a program to monitor and immediately detect, assess, and respond to unauthorized access to a Category 1 or Category 2 quantity of radioactive material.
12. Failure to have a dependable means to transmit information between, and among, the various components of the intrusion detection system or to summon the appropriate responder.

### **D. *Severity Level IV - Violations involving for example:***

1. Failure to document that an individual was determined trustworthy and reliable who is to be allowed unescorted access a Category 1 or Category 2 quantity of radioactive material.
2. Failure to perform a complete or adequate trustworthiness and reliability determination for an individual so that information relevant to the licensee's access approval was not obtained or considered, but the individual would likely have been granted unescorted access by the licensee if the required information had been obtained or considered.
3. Failure to limit approval for unescorted access with respect to Category 1 or Category 2 quantity of radioactive material to individuals with job duties requiring unescorted access.
4. Failure to maintain a list of persons approved for unescorted access.
5. Failure to confirm receipt of transferred radioactive material.
6. Failure to document the pre-arranged plan with the local law enforcement agency or update the pre-arranged plan when changes to the facility design or operation affect the potential vulnerability of sources.

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7. Isolated failure of the dependable means to transmit information between, and among, the various components of the intrusion detection system or to summon the appropriate responder, to operate as designed.
8. Failure to contact the recipient or originator of a shipment to coordinate an expected arrival time for a shipment of a Category 2 quantity of radioactive material.
9. Isolated failure to implement a portion of the licensee's program to monitor and immediately detect, assess, and respond to unauthorized access to a Category 1 or Category 2 quantity of licensed radioactive material, such that an opportunity exists that could allow unauthorized and undetected access to the material, but that was neither easily or likely to be exploitable.
10. Isolated failure to limit access to physical protection information to only those persons with an established need-to-know and who were determined to be trustworthy and reliable, where it is unlikely the information could be used by an unauthorized individual who represents a threat to predictably circumvent or defeat the licensee's physical protection program with a high degree of confidence.
11. Failure to provide an element of the licensee's procedure to provide enhanced monitoring during periods of source delivery and shipment of a Category 1 quantity of radioactive material that does not seriously degrade the enhanced monitoring capability.

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**Table 1: Radionuclides of Concern**

Radionuclide	Quantity of Concern <sup>1</sup> (TBq)	Quantity of Concern <sup>2</sup> (Ci )
Am-241	0.6	16
Am-241/Be	0.6	16
Cf-252	0.2	5.4
Cm-244	0.5	14
Co-60	0.3	8.1
Cs-137	1	27
Gd-153	10	270
Ir-192	0.8	22
Pm-147	400	11,000
Pu-238	0.6	16
Pu-239/Be	0.6	16
Se-75	2	54
Sr-90 (Y-90)	10	270
Tm-170	200	5,400
Yb-169	3	81
Combinations of radioactive materials listed above <sup>3</sup>	See Footnote Below <sup>4</sup>	

<sup>1</sup> The aggregate activity of multiple, collocated sources of the same radionuclide should be included when the total activity equals or exceeds the quantity of concern.

<sup>2</sup> The primary values used for compliance with this Order are TBq. The curie (Ci) values are rounded to two significant figures for informational purposes only.

<sup>3</sup> Radioactive materials are to be considered aggregated or collocated if breaching a common physical security barrier (e.g., a locked door at the entrance to a storage room) would allow access to the radioactive material or devices containing the radioactive material.

<sup>4</sup> If several radionuclides are aggregated, the sum of the ratios of the activity of each source,  $i$  of radionuclide,  $n$ ,  $A_{i,n}$ , to the quantity of concern for radionuclide  $n$ ,  $Q_n$ , listed for that radionuclide equals or exceeds one. [(aggregated source activity for radionuclide A) ÷ (quantity of concern for radionuclide A)] + [(aggregated source activity for radionuclide B) ÷ (quantity of concern for radionuclide B)] + etc.....  $\geq 1$

## Multiple Addressees

Use the following method to determine which sources of radioactive material require increased controls (IC):

- Include any single source equal to or greater than the quantity of concern in Table 1;
- Include multiple collocated sources of the same radionuclide when the combined quantity equals or exceeds the quantity of concern;
- For combinations of radionuclides, include multiple collocated sources of different radionuclides when the aggregate quantities satisfy the following unity rule:  $[(\text{amount of radionuclide A}) \div (\text{quantity of concern of radionuclide A})] + [(\text{amount of radionuclide B}) \div (\text{quantity of concern of radionuclide B})] + \text{etc.} \dots \geq 1$

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