

UNITED STATES
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
ALL LICENSEES AUTHORIZED TO) EA-08-212
MANUFACTURE OR INITIALLY TRANSFER)
ITEMS CONTAINING RADIOACTIVE)
MATERIAL FOR SALE OR DISTRIBUTION)
AND POSSESS HIGH-RISK RADIOACTIVE)
MATERIAL OF CONCERN)

**ORDER IMPOSING ADDITIONAL SECURITY MEASURES
(EFFECTIVE IMMEDIATELY)**

I

The Licensees identified in Attachment 1¹ to this Order hold licenses issued in accordance with the Atomic Energy Act of 1954, as amended, by the U.S. Nuclear Regulatory Commission (NRC or Commission) or an Agreement State authorizing them to manufacture or

¹ Attachment 1 contains sensitive information and will not be released to the public.

initially transfer items containing radioactive material for sale or distribution. Commission regulations at 10 CFR § 20.1801 or equivalent Agreement State regulations require Licensees to secure, from unauthorized removal or access, licensed materials that are stored in controlled or unrestricted areas. Commission regulations at 10 CFR § 20.1802 or equivalent Agreement States regulations require Licensees to control and maintain constant surveillance of licensed material that is in a controlled or unrestricted area and that is not in storage.

II

On September 11, 2001, terrorists simultaneously attacked targets in New York, N.Y., and Washington, D.C., utilizing large commercial aircraft as weapons. In response to the attacks and intelligence information subsequently obtained, the Commission issued a number of Safeguards and Threat Advisories to its Licensees in order to strengthen Licensees' capabilities and readiness to respond to a potential attack on a nuclear facility. The Commission has also communicated with other Federal, State and local government agencies and industry representatives to discuss and evaluate the current threat environment in order to assess the adequacy of security measures at licensed facilities. In addition, the Commission has been conducting a review of its safeguards and security programs and requirements.

As a result of its consideration of current safeguards and license requirements, as well as a review of information provided by the intelligence community, the Commission has determined that certain additional security measures are required to be implemented by Licensees as prudent measures to address the current threat environment. Therefore, the

Commission is imposing the requirements set forth in Attachment 2² on certain Manufacturing and Distribution Licensees identified in Attachment 1 of this Order who currently possess, or have near term plans to possess, high-risk radioactive material of concern. These requirements, which supplement existing regulatory requirements, will provide the Commission with reasonable assurance that the public health and safety and common defense and security continue to be adequately protected in the current threat environment. Attachment 3 of this Order contains the requirements for fingerprinting and criminal history record checks for individuals when a licensee's reviewing official is determining access to Safeguards Information or unescorted access to the radioactive materials. These requirements will remain in effect until the Commission determines otherwise.

The Commission concludes that the security measures must be embodied in an Order consistent with the established regulatory framework. Furthermore, the Commission has determined that some of the security measures contained in Attachment 2 of this Order contain Safeguards Information and will not be released to the public as per the NRC's "Order Imposing Requirements for the Protection of Certain Safeguards Information" (EA-08-161), regarding the protection of Safeguards Information. The Commission hereby provides notice that it intends to treat all violations of the requirements contained in Attachment 2 to the NRC's "Order Imposing Requirements for the Protection of Certain Safeguards Information" (EA-08-161), applicable to

² Attachment 2 contains some requirements that are SAFEGUARDS INFORMATION, and cannot be released to the public. The remainder of the requirements contained in Attachment 2 that are not SAFEGUARDS INFORMATION will be released to the public.

the handling and unauthorized disclosure of Safeguards Information as serious breaches of adequate protection of the public health and safety and the common defense and security of the United States. Access to Safeguards Information is limited to those persons who have established a need-to-know the information, are considered to be trustworthy and reliable, have been fingerprinted and undergone a Federal Bureau of Investigation (FBI) identification and criminal history records check in accordance with the NRC's "Order Imposing Fingerprinting and Criminal History Records Check Requirements for Access to Safeguards Information" (EA-08-162). A need-to-know means a determination by a person having responsibility for protecting Safeguards Information that a proposed recipient's access to Safeguards Information is necessary in the performance of official, contractual, or licensee duties of employment. Individuals who have been fingerprinted and granted access to Safeguards Information by the reviewing official under the NRC's "Order Imposing Fingerprinting and Criminal History Records Check Requirements for Access to Safeguards Information" (EA-08-162) do not need to be fingerprinted again for purposes of being considered for unescorted access.

This Order also requires that a reviewing official must consider the results of the Federal Bureau of Investigations criminal history records check in conjunction with other applicable requirements to determine whether an individual may be granted or allowed continued unescorted access. The reviewing official may be one that has previously been approved by NRC in accordance with the "Order Imposing Fingerprinting and Criminal History Records Check Requirements for Access to Safeguards Information" (EA-08-162). Licensees may nominate additional reviewing officials for making unescorted access determinations in accordance with NRC Orders EA-08-162. The nominated reviewing officials must have access to Safeguards Information or require unescorted access to the radioactive material as part of

their job duties.

To provide assurance that Licensees are implementing prudent measures to achieve a consistent level of protection to address the current threat environment, Manufacturing and Distribution Licensees identified in Attachment 1 to this Order shall implement the requirements identified in Attachments 2 and 3 to this Order. In addition, pursuant to 10 CFR § 2.202, I find that in light of the common defense and security matters identified above, which warrant the issuance of this Order, the public health, safety and interest require that this Order be effective immediately.

III

Accordingly, pursuant to Sections 81, 147, 149, 161b, 161i, 161o, 182 and 186 of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR § 2.202, 10 CFR Part 30, and 10 CFR Part 32, IT IS HEREBY ORDERED, **EFFECTIVE IMMEDIATELY**, THAT ALL LICENSEES IDENTIFIED IN ATTACHMENT 1 TO THIS ORDER SHALL COMPLY WITH THE REQUIREMENTS OF THIS ORDER AS FOLLOWS:

- A. The Licensee shall, notwithstanding the provisions of any Commission or Agreement State regulation or license to the contrary, comply with the requirements described in Attachments 2 and 3 to this Order. The Licensee shall immediately start implementation of the requirements in Attachments 2 and 3 to the Order and shall complete implementation by **February 10, 2009**, or the first day that radionuclides of concern at or above threshold limits (i.e., high-risk radioactive material), also identified in Attachment 2, are possessed, whichever is later.

- B. 1. The Licensee shall, within **twenty (20) days** of the date of this Order, notify the Commission, (1) if it is unable to comply with any of the requirements described in Attachments 2 or 3, (2) if compliance with any of the requirements is unnecessary in its specific circumstances, or (3) if implementation of any of the requirements would cause the Licensee to be in violation of the provisions of any Commission or Agreement State regulation or its license. The notification shall provide the Licensee's justification for seeking relief from or variation of any specific requirement.
2. If the Licensee considers that implementation of any of the requirements described in Attachments 2 or 3 to this Order would adversely impact safe operation of the facility, the Licensee must notify the Commission, within **twenty (20) days** of this Order, of the adverse safety impact, the basis for its determination that the requirement has an adverse safety impact, and either a proposal for achieving the same objectives specified in Attachments 2 or 3 requirement in question, or a schedule for modifying the facility to address the adverse safety condition. If neither approach is appropriate, the Licensee must supplement its response to Condition B.1 of this Order to identify the condition as a requirement with which it cannot comply, with attendant justifications as required in Condition B.1.
- C. 1. In accordance with the NRC's "Order Imposing Fingerprinting and Criminal History Records Check Requirements for Access to Safeguards Information" (EA-08-162) only the NRC-approved reviewing official shall review results from

an FBI criminal history records check. The licensee may use a reviewing official previously approved by the NRC as its reviewing official for determining access to Safeguards Information or the licensee may nominate another individual specifically for making unescorted access to radioactive material determinations, using the process described in EA-08-162. The reviewing official must have access to Safeguards Information or require unescorted access to the radioactive material as part of their job duties. The reviewing official shall determine whether an individual may have, or continue to have, unescorted access to radioactive materials that equal or exceed the quantities in Attachment 2 to this Order. . Fingerprinting and the FBI identification and criminal history records check are not required for individuals exempted from fingerprinting requirements under 10 CFR 73.61 [72 Fed. Reg. 4945 (February 2, 2007)]. In addition, individuals who have a favorably decided U.S. Government criminal history records check within the last five (5) years, or have an active federal security clearance (provided in each case that the appropriate documentation is made available to the Licensee's reviewing official), have satisfied the Atomic Energy Act of 1954, as amended, fingerprinting requirement and need not be fingerprinted again for purposes of being considered for unescorted access.

2. No person may have access to Safeguards Information or unescorted access to radioactive materials if the NRC has determined, in accordance with its administrative review process based on fingerprinting and an FBI identification and criminal history records check, either that the person may not have access

to Safeguards Information or that the person may not have unescorted access to a utilization facility or radioactive material or other property subject to regulation by the NRC.

- D. Fingerprints shall be submitted and reviewed in accordance with the procedures described in Attachment 3 to this Order. Individuals who have been fingerprinted and granted access to Safeguards Information by the reviewing official under Order EA-08-162, do not need to be fingerprinted again for purposes of being considered for unescorted access.

- E. The Licensee may allow any individual who currently has unescorted access to radioactive materials, in accordance with this Order, to continue to have unescorted access without being fingerprinted, pending a decision by the reviewing official (based on fingerprinting, an FBI criminal history records check and a trustworthy and reliability determination) that the individual may continue to have unescorted access to radioactive materials that equal or exceed the quantities listed in Attachment 2. The licensee shall complete implementation of the requirements of Attachments 2 and 3 to this Order by **February 10, 2009**, or the first day that radionuclides of concern at or above threshold limits (i.e., high-risk radioactive material), also identified in Attachment 2, are possessed, whichever is later.

- F. 1. The Licensee shall, **within twenty (20) days** of the date of this Order, submit to the Commission a schedule for completion of each requirement described in Attachments 2 and 3.
 - 2. The Licensee shall report to the Commission when they have achieved full compliance with the requirements described in Attachments 2 and 3.
- G. Notwithstanding any provisions of the Commission's or an Agreement State's regulations to the contrary, all measures implemented or actions taken in response to this Order shall be maintained until the Commission determines otherwise.

Licensee responses to Conditions B.1, B.2, F.1, and F.2 above shall be submitted to the Director, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555. In addition, Licensee submittals that contain specific physical protection or security information considered to be Safeguards Information shall be put in a separate enclosure or attachment and, marked as "SAFEGUARDS INFORMATION - MODIFIED HANDLING" and mailed (no electronic transmittals i.e., no e-mail or FAX) to the NRC.

The Director, Office of Federal and State Materials and Environmental Management Programs, may, in writing, relax or rescind any of the above conditions upon demonstration by the Licensee of good cause.

IV.

In accordance with 10 CFR 2.202, the Licensee must, and any other person adversely affected by this Order may, submit an answer to this Order within twenty (20) days of the date of this Order. In addition, the Licensee and any other person adversely affected by this Order may request a hearing of this Order within twenty (20) days of the date of the Order. Where good cause is shown, consideration will be given to extending the time to request a hearing. A request for extension of time must be made, in writing, to the Director, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and include a statement of good cause for the extension.

The answer may consent to this Order. If the answer includes a request for a hearing, it shall, under oath or affirmation, specifically set forth the matters of fact and law on which the Licensee relies and the reasons as to why the Order should not have been issued. If a person other than the Licensee requests a hearing, that person shall set forth with particularity the manner in which his interest is adversely affected by this Order and shall address the criteria set forth in 10 CFR 2.309(d).

All documents filed in NRC adjudicatory proceedings, including a request for hearing, a petition for leave to intervene, any motion or other document filed in the proceeding prior to the submission of a request for hearing or petition to intervene, and documents filed by interested governmental entities participating under 10 CFR 2.315(c), must be filed in accordance with the NRC E-Filing rule, which the NRC promulgated in August 2007, 72 Fed. Reg. 49139 (Aug. 28, 2007) and codified in pertinent part at 10 CFR Part 2, Subpart B. The E-Filing process requires participants to submit and serve all adjudicatory documents over the internet, or in some cases to mail copies on electronic storage media. Participants may not submit paper copies of their

filings unless they seek a waiver in accordance with the procedures described below.

To comply with the procedural requirements associated with E-Filing, at least ten (10) days prior to the filing deadline the requestor must contact the Office of the Secretary by e-mail at HEARINGDOCKET@NRC.GOV, or by calling (301) 415-1677, to request (1) a digital ID certificate, which allows the participant (or its counsel or representative) to digitally sign documents and access the E-Submittal server for any NRC proceeding in which it is participating; and/or (2) creation of an electronic docket for the proceeding (even in instances when the requestor (or its counsel or representative) already holds an NRC-issued digital ID certificate). Each requestor will need to download the Workplace Forms Viewer™ to access the Electronic Information Exchange (EIE), a component of the E-Filing system. The Workplace Forms Viewer™ is free and is available at <http://www.nrc.gov/site-help/e-submittals/install-viewer.html>. Information about applying for a digital ID certificate also is available on NRC's public website at <http://www.nrc.gov/site-help/e-submittals/apply-certificates.html>.

Once a requestor has obtained a digital ID certificate, had a docket created, and downloaded the EIE viewer, it can then submit a request for a hearing through EIE. Submissions should be in Portable Document Format (PDF) in accordance with NRC guidance available on the NRC public website at <http://www.nrc.gov/site-help/e-submittals.html>. A filing is considered complete at the time the filer submits its document through EIE. To be timely, electronic filings must be submitted to the EIE system no later than 11:59 p.m. Eastern Time on the due date. Upon receipt of a transmission, the E-Filing system time-stamps the document and sends the submitter an e-mail notice confirming receipt of the document. The EIE system also distributes an e-mail notice that provides access to the document to the NRC Office of the

General Counsel and any others who have advised the Office of the Secretary that they wish to participate in the proceeding, so that the filer need not serve the document on those participants separately. Therefore, any others who wish to participate in the proceeding (or their counsel or representative) must apply for and receive a digital ID certificate before a hearing request is filed so that they may obtain access to the document via the E-Filing system.

A person filing electronically may seek assistance through the "Contact Us" link located on the NRC website at <http://www.nrc.gov/site-help/e-submittals.html> or by calling the NRC technical help line, which is available between 8:30 a.m. and 4:15 p.m., Eastern Time, Monday through Friday. The help line number is (800) 397-4209 or locally, (301) 415-4737.

Participants who believe that they have good cause for not submitting documents electronically must file a motion, in accordance with 10 C.F.R. 2.302(g), with their initial paper filing requesting authorization to continue to submit documents in paper format. Such filings must be submitted by (1) first class mail addressed to the Office of the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemaking and Adjudications Staff; or (2) courier, express mail, or expedited delivery service to the Office of the Secretary, Sixteenth Floor, One White Flint North, 11555 Rockville, Pike, Rockville, Maryland, 20852, Attention: Rulemaking and Adjudications Staff. Participants filing a document in this manner are responsible for serving the document on all other participants. Filing is considered complete by first-class mail as of the time of deposit in the mail, or by courier, express mail, or expedited delivery service upon depositing the document with the provider of the service.

Documents submitted in adjudicatory proceedings will appear in NRC's electronic hearing docket which is available to the public at http://ehd.nrc.gov/EHD_Proceeding/home.asp,

unless excluded pursuant to an order of the Commission, an Atomic Safety and Licensing Board, or a Presiding Officer. Participants are requested not to include personal privacy information, such as social security numbers, home addresses, or home phone numbers in their filings. With respect to copyrighted works, except for limited excerpts that serve the purpose of the adjudicatory filings and would constitute a Fair Use application, Participants are requested not to include copyrighted materials in their works.

If a hearing is requested by the Licensee or a person whose interest is adversely affected, the Commission will issue an Order designating the time and place of any hearing. If a hearing is held the issue to be considered at such hearing shall be whether this Order should be sustained.

Pursuant to 10 CFR 2.202(c)(2)(i), the Licensee may, in addition to requesting a hearing, at the time the answer is filed or sooner, move the presiding officer to set aside the immediate effectiveness of the Order on the ground that the Order, including the need for immediate effectiveness, is not based on adequate evidence but on mere suspicion, unfounded allegations, or error.

In the absence of any request for hearing, or written approval of an extension of time in which to request a hearing, the provisions specified in Section III above shall be final twenty (20) days from the date of this Order without further order or proceedings. If an extension of time for requesting a hearing has been approved, the provisions specified in Section III shall be final when the extension expires if a hearing request has not been received.

AN ANSWER OR A REQUEST FOR HEARING SHALL NOT STAY THE IMMEDIATE
EFFECTIVENESS OF THIS ORDER.

Dated this 14th day of August 2008

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Charles L. Miller, Director
Office of Federal and State Materials
and Environmental Management Programs

Attachment 1: Service List of Materials Licensees - Redacted

Attachment 2: Additional Security Measures for Manufacturing and Distribution Materials Licensees (U) - (Revision 1)

These Additional Security Measures (ASMs) and new requirements are established to delineate licensee responsibility in response to the current threat environment. The following security measures apply to Radioactive Material Manufacturing and Distribution Licensees who, at any given time, possess greater than or equal to the quantities of concern of radioactive material defined in Table 1 (unless the licensee documents the basis for concluding that radioactive material possessed cannot be easily aggregated into quantities in excess of the limits defined in Table 1). As with the additional security measures previously provided to other licensees who possess risk significant radioactive sources, these increased security measures and requirements address licensees who are authorized to possess high-activity radioactive material which poses a high risk to human health if not managed safely and securely.

1. Establish a security zone (or zones). A security zone is an area, determined by the licensee, that provides for both isolation of radioactive material and access control.
 - a. Only use and store the radioactive material within the established security zone(s); and
 - b. The licensee shall demonstrate for each security zone, a means to deter, detect and delay any attempt of unauthorized access to licensed material. The security

zone is not required to be the same as the restricted area or controlled area, as defined in 10 CFR Part 20 or equivalent agreement state regulations; and

- c. Security zones can be permanent or temporary to meet transitory or intermittent business activities (such as during periods of maintenance, source delivery, source replacement, and temporary job sites.). Different isolation/access control measures may be used for periods during which the security zone is occupied versus unoccupied.
2. Control access at all times to the security zone and limit admittance to those individuals who are approved and require access to perform their duties.
 3. Implement a system to monitor, detect, assess and respond to unauthorized entries into or activities in the security zone.
 - a. **[This paragraph contains SAFEGUARDS INFORMATION and will not be publicly disclosed]**
 - b. Provide a positive measure to detect unauthorized removal of the radioactive material from the security zone; and
 - c. **[This paragraph contains SAFEGUARDS INFORMATION and will not be publicly disclosed]**
 4. **[This paragraph contains SAFEGUARDS INFORMATION and will not be publicly disclosed]**

5. Licensees shall document the basis for concluding that there is reasonable assurance that individuals granted access to safeguards information or unescorted access to the security zone are trustworthy and reliable, and do not constitute an unreasonable risk for malevolent use of the regulated material. "Access" means that an individual could exercise some physical control over the material or device containing radioactive material.
 - a. The trustworthiness and reliability of individuals shall be determined based on a background investigation. The background investigation shall address at least the past 3 years and, as a minimum, include fingerprinting and a Federal Bureau of Investigation (FBI) criminal history check, verification of work or education references as appropriate to the length of employment, and confirmation of employment eligibility.
 - b. Fingerprints shall be submitted and reviewed in accordance with the procedures described in Attachment 3 to this Order.
 - c. A reviewing official that the licensee nominated and has been approved by the NRC, in accordance with NRC "Order Imposing Fingerprinting and Criminal History Records Check Requirements for Access to Safeguards Information," may continue to make trustworthiness and reliability determinations. The licensee may also nominate another individual specifically for making unescorted access determinations using the process identified in the NRC "Order Imposing Fingerprinting and Criminal History Records Check Requirements for Access to Safeguards Information."

- d. Individuals for whom the licensee has not made a determination of trustworthiness and reliability, based on the appropriate background investigation above, shall be escorted within the security zone to prevent unauthorized access or actions to the licensed radioactive material. The licensee shall also ensure these individuals are clearly identifiable as needing an escort while in the security zone.
6. Before transfer of radioactive materials that exceed the quantities in Table 1, Licensees shall:
- a. **[This paragraph contains SAFEGUARDS INFORMATION and will not be publicly disclosed]**
 - b. **[This paragraph contains SAFEGUARDS INFORMATION and will not be publicly disclosed]**
 - c. Assure that the material is shipped to an address authorized in the license and that the address is valid,
 - d. Verify the address for deliveries to temporary job site, and
 - e. Document the verification or validation process.
7. For domestic highway and rail shipments of materials in quantities greater than or equal to the quantities in Table 1, per conveyance, the licensee shall:
- a. Only use carriers who:
 - (1) Use established package tracking systems,
 - (2) Implement methods to assure trustworthiness of drivers,

- (3) Maintain constant control and/or surveillance during transit, and
- (4) Have the capability for immediate communication to summon appropriate response or assistance.

The licensee shall verify and document that the carrier employs the measures listed above.

- b. Coordinate departure and arrival times with the recipient.
- c. Immediately initiate an investigation with the carrier and intended recipient if the shipment does not arrive by close of business on the day of the previously coordinated arrival time. Not later than one hour after the time when, through the course of the investigation, it is determined the shipment has become lost or stolen, the licensee shall notify the appropriate local law enforcement agency, the NRC Operations Center at (301) 816-5100, and the appropriate Agreement State regulatory agency. If after 24 hours of initiating the investigation, the radioactive material cannot be located, it shall be presumed lost and the licensee shall immediately notify the NRC Operations Center and, for Agreement State licensees, the appropriate Agreement State regulatory agency.
- d. In addition to a and b above, for highway and rail shipments of material in quantities greater than or equal to 100 times the quantities in Table 1, per conveyance, the licensee shall implement the NRC Order for Additional Security Measures on the Transportation of Radioactive Material Quantities of Concern.

8. For imports and exports of material in quantities greater than the quantities in Table 1, per conveyance, the licensee shall follow the requirements in the Final Rule 10 CFR Part 110, July 1, 2005, (70 FR 37985 and 46066) Export and Import of Radioactive Materials: Security Policies.

9. The licensee shall protect pre-planning, coordinating, and reporting information required by ASM 7 related to shipments of radioactive material, and the radioisotopes identified in Table 1 as sensitive information (proprietary business financial or confidential). Licensees shall restrict access to this information to those licensee and contractor personnel with a need to know. Licensees shall require all parties receiving this information to protect it similarly. Information may be transmitted either in writing or electronically and shall be marked as "Security-Related Information - Withhold Under 10 CFR 2.390."

10. The licensee shall maintain all documentation required by these ASMs for a period of not less than three (3) years after the document is superceded or no longer effective.

Table 1: Radionuclides of Concern

Radionuclide	Quantity of Concern ¹ (TBq)	Quantity of Concern ² (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
Ra-226 ³	0.4	11
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 ⁴	See Footnote Below ⁵	

¹ 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.

² 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.

³ The Atomic Energy Act, as amended by the Energy Policy Act of 2005, authorizes NRC to regulate Ra-226 and NRC is in the process of amending its regulations for discrete sources of Ra-226.

⁴ 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.

⁵ 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..... ≥ 1

Guidance for Aggregation of Sources

NRC supports the use of the International Atomic Energy Association's (IAEA) source categorization methodology as defined in IAEA Safety Standards Series No. RS-G-1.9, "Categorization of Radioactive Sources," (2005) (see http://www-pub.iaea.org/MTCD/publications/PDF/Pub1227_web.pdf) and as endorsed by the agency's Code of Conduct for the Safety and Security of Radioactive Sources, January 2004 (see http://www-pub.iaea.org/MTCD/publications/PDF/Code-2004_web.pdf). The Code defines a three-tiered source categorization scheme. Category 1 corresponds to the largest source strength (equal to or greater than 100 times the quantity of concern values listed in Table 1.) and Category 3, the smallest (equal or exceeding one-tenth the quantity of concern values listed in Table 1.). Additional security measures apply to sources that are equal to or greater than the quantity of concern values listed in Table 1, plus aggregations of smaller sources that are equal to or greater than the quantities in Table 1. Aggregation only applies to sources that are collocated.

Licensees who possess individual sources in total quantities that equal or exceed the Table 1 quantities are required to implement additional security measures. Where there are many small (less than the quantity of concern values) collocated sources whose total aggregate activity equals or exceeds the Table 1 values, licensees are to implement additional security measures.

Some source handling or storage activities may cover several buildings, or several locations within specific buildings. The question then becomes, "When are sources considered collocated for purposes of aggregation?" For purposes of the additional controls, sources are considered collocated if breaching a single barrier (e.g., a locked door at the entrance to a storage room) would allow access to the sources. Sources behind an outer barrier should be aggregated separately from those behind an inner barrier (e.g., a locked source safe inside the locked storage room). However, if both barriers are simultaneously open, then all sources within these two barriers are considered to be collocated. This logic should be continued for other barriers within or behind the inner barrier.

The following example illustrates the point: A lockable room has sources stored in it. Inside the lockable room, there are two shielded safes with additional sources in them. Inventories are as follows:

The room has the following sources outside the safes: Cf-252, 0.12 TBq (3.2 Ci); Co-60, 0.18 TBq (4.9 Ci), and Pu-238, 0.3 TBq (8.1 Ci). Application of the unity rule yields: $(0.12 \div 0.2) + (0.18 \div 0.3) + (0.3 \div 0.6) = 0.6 + 0.6 + 0.5 = 1.7$. Therefore, the sources would require additional security measures.

Shielded safe #1 has a 1.9 TBq (51 Ci) Cs-137 source and a 0.8 TBq (22 Ci) Am-241 source. In this case, the sources would require additional security measures, regardless of location, because they each exceed the quantities in Table 1.

Shielded safe #2 has two Ir-192 sources, each having an activity of 0.3 TBq (8.1 Ci). In this case, the sources would not require additional security measures while locked in the safe. The combined activity does not exceed the threshold quantity 0.8 TBq (22 Ci).

Because certain barriers may cease to exist during source handling operations (e.g., a storage location may be unlocked during periods of active source usage), licensees should, to the extent practicable, consider two modes of source usage — “operations” (active source usage) and “shutdown” (source storage mode). Whichever mode results in the greatest inventory (considering barrier status) would require additional security measures for each location.

Use the following method to determine which sources of radioactive material require implementation of the Additional Security Measures (ASMs):

- Include any single source equal to or greater than the quantity of concern in Table
- 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:
$$\left[\frac{\text{amount of radionuclide A}}{\text{quantity of concern of radionuclide A}} \right] + \left[\frac{\text{amount of radionuclide B}}{\text{quantity of concern of radionuclide B}} \right] + \text{etc.} \dots \geq 1$$

**Attachment 3: Requirements for Fingerprinting and Criminal History Checks of
Individuals when Licensee's Reviewing Official is Determining Access to Safeguards
Information or Unescorted Access to Radioactive Materials**

General Requirements

Licensees shall comply with the following requirements of this attachment.

1. Each Licensee subject to the provisions of this attachment shall fingerprint each individual who is seeking or permitted access to safeguards information (SGI) or unescorted access radioactive materials equal to or greater than the quantities listed in Attachment 2 to this Order. The Licensee shall review and use the information received from the Federal Bureau of Investigation (FBI) and ensure that the provisions contained in this Order and this attachment are satisfied.
2. The Licensee shall notify each affected individual that the fingerprints will be used to secure a review of his/her criminal history record and inform the individual of the procedures for revising the record or including an explanation in the record, as specified in the "Right to Correct and Complete Information" section of this attachment.
3. Fingerprints for access to SGI or unescorted access need not be taken if an employed individual (e.g., a Licensee employee, contractor, manufacturer, or supplier) is relieved from the fingerprinting requirement by 10 CFR 73.59 for access to SGI or 10 CFR 73.61 for unescorted access, has a favorably-decided U.S. Government criminal history check (e.g. National Agency Check, Transportation Worker Identification Credentials in

accordance with 49 CFR Part 1572, Bureau of Alcohol Tobacco Firearms and Explosives background checks and clearances in accordance with 27 CFR Part 555, Health and Human Services security risk assessments for possession and use of select agents and toxins in accordance with 27 CFR Part 555, Hazardous Material security threat assessments for hazardous material endorsement to commercial drivers license in accordance with 49 CFR Part 1572, Customs and Border Patrol's Free and Secure Trace Program¹ within the last five (5) years, or has an active federal security clearance. Written confirmation from the Agency/employer which granted the federal security clearance or reviewed the criminal history check must be provided for either of the latter two cases. The Licensee must retain this documentation for a period of three (3) years from the date the individual no longer requires access to SGI or unescorted access to radioactive materials associated with the Licensee's activities.

4. All fingerprints obtained by the Licensee pursuant to this Order must be submitted to the Commission for transmission to the FBI.

¹ The FAST program is a cooperative effort between the Bureau of Customs and Border Patrol and the governments of Canada and Mexico to coordinate processes for the clearance of commercial shipments at the U.S. – Canada and U.S. – Mexico borders. Participants in the FAST program, which requires successful completion of a background records check, may receive expedited entrance privileges at the northern and southern borders.

5. The Licensee shall review the information received from the FBI and consider it, in conjunction with the trustworthy and reliability requirements of this Order, in making a determination whether to grant, or continue to allow, access to SGI or unescorted access to radioactive materials.

6. The Licensee shall use any information obtained as part of a criminal history records check solely for the purpose of determining an individual's suitability for access to SGI or unescorted access to radioactive materials equal to or greater than the quantities used in Attachment 2 to this Order.

7. The Licensee shall document the basis for its determination whether to grant, or continue to allow, access to SGI or unescorted access to radioactive materials equal to or greater than the quantities used in Attachment 2 to this Order.

Prohibitions

A Licensee shall not base a final determination to deny an individual access to radioactive materials solely on the basis of information received from the FBI involving: an arrest more than one (1) year old for which there is no information of the disposition of the case, or an arrest that resulted in dismissal of the charge or an acquittal.

A Licensee shall not use information received from a criminal history check obtained pursuant to this Order in a manner that would infringe upon the rights of any individual under the First

Amendment to the Constitution of the United States, nor shall the Licensee use the information in any way which would discriminate among individuals on the basis of race, religion, national origin, sex, or age.

Procedures for Processing Fingerprint Checks

For the purpose of complying with this Order, Licensees shall, using an appropriate method listed in 10 CFR 73.4, submit to the NRC's Division of Facilities and Security, Mail Stop T-6E46, one completed, legible standard fingerprint card (Form FD-258, ORIMDNRCOOOZ) or, where practicable, other fingerprint records for each individual seeking access to SGI or unescorted access to radioactive materials equal to or greater than the quantities used in Attachment 2 to this Order, to the Director of the Division of Facilities and Security, marked for the attention of the Division's Criminal History Check Section. Copies of these forms may be obtained by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, by calling (301) 415-7232, or by e-mail to forms.resource@nrc.gov.

Practicable alternative formats are set forth in 10 CFR 73.4. The Licensee shall establish procedures to ensure that the quality of the fingerprints taken results in minimizing the rejection rate of fingerprint cards due to illegible or incomplete cards.

The NRC will review submitted fingerprint cards for completeness. Any Form FD-258 fingerprint record containing omissions or evident errors will be returned to the Licensee for corrections.

The fee for processing fingerprint checks includes one re-submission if the initial submission is returned by the FBI because the fingerprint impressions cannot be classified. The one free re-submission must have the FBI Transaction Control Number reflected on the re-submission. If

additional submissions are necessary, they will be treated as initial submittals and will require a second payment of the processing fee.

Fees for processing fingerprint checks are due upon application (Note: other fees may apply to obtain fingerprints from your local law enforcement agency). Licensees should submit payments electronically via <http://www.pay.gov>. Payments through Pay.gov can be made directly from the Licensee's credit/debit card. Licensees will need to establish a password and user ID before they can access Pay.gov. To establish an account, Licensee requests must be sent to paygo@nrc.gov. The request must include the Licensee's name, address, point of contact, e-mail address, and phone number. The NRC will forward each request to Pay.gov and someone from Pay.gov will contact the Licensee with all of the necessary account information. Licensees shall make payments for processing before submitting applications to the NRC. Combined payment for multiple applications is acceptable. Licensees shall include the Pay.gov payment receipt(s) along with the application(s). For additional guidance on making electronic payments, contact the Facilities Security Branch, Division of Facilities and Security, at (301) 415-7404.

Alternatively, licensees may also submit payment with the application for processing fingerprints by fingerprints by corporate check, certified check, cashier's check, or money order, made payable to "U.S. NRC." Combined payment for multiple applications is acceptable.

The application fee (currently \$36) is the sum of the user fee charged by the FBI for each fingerprint card or other fingerprint record submitted by the NRC on behalf of a Licensee, and

an NRC processing fee, which covers administrative costs associated with NRC handling of Licensee fingerprint submissions. The Commission will directly notify Licensees subject to this regulation of any fee changes.

The Commission will forward to the submitting Licensee all data received from the FBI as a result of the Licensee's application(s) for criminal history checks, including the FBI fingerprint record.

Right to Correct and Complete Information

Prior to any final adverse determination, the Licensee shall make available to the individual the contents of any criminal records obtained from the FBI for the purpose of assuring correct and complete information. Written confirmation by the individual of receipt of this notification must be maintained by the Licensee for a period of one (1) year from the date of the notification. If, after reviewing the record, an individual believes that it is incorrect or incomplete in any respect and wishes to change, correct, or update the alleged deficiency, or to explain any matter in the record, the individual may initiate challenge procedures. These procedures include either direct application by the individual challenging the record to the agency (i.e., law enforcement agency) that contributed the questioned information, or direct challenge as to the accuracy or completeness of any entry on the criminal history record to the Assistant Director, Federal Bureau of Investigation Identification Division, Washington, DC 20537-9700 (as set forth in 28 CFR Part 16.30 through 16.34). In the latter case, the FBI forwards the challenge to the agency that submitted the data and requests that agency to verify or correct the challenged entry. Upon receipt of an official communication directly from the agency that contributed the

original information, the FBI Identification Division makes any changes necessary in accordance with the information supplied by that agency. The Licensee must provide at least ten (10) days for an individual to initiate an action challenging the results of an FBI criminal history records check after the record is made available for his/her review. The Licensee may make a final determination on access to SGI or unescorted access to radioactive materials equal to or greater than the quantities used in Attachment 2 to this Order based upon the criminal history record only upon receipt of the FBI's ultimate confirmation or correction of the record. Upon a final adverse determination on access to SGI or unescorted access to radioactive materials equal to or greater than the quantities used in Attachment 2 to this Order, the Licensee shall provide the individual its documented basis for denial. Access to SGI or unescorted access to radioactive materials equal to or greater than the quantities used in Attachment 2 to this Order shall not be granted to an individual during the review process.

Protection of Information

1. Each Licensee who obtains a criminal history record on an individual pursuant to this Order shall establish and maintain a system of files and procedures for protecting the record and the personal information from unauthorized disclosure.
2. The Licensee may not disclose the record or personal information collected and maintained to persons other than the subject individual, his/her representative, or to those who have a need to access the information in performing assigned duties in the process of determining access to SGI or unescorted access to radioactive materials equal to or greater than the quantities used in Attachment 2 to this Order. No individual

authorized to have access to the information may re-disseminate the information to any other individual who does not have a need-to-know.

3. The personal information obtained on an individual from a criminal history record check may be transferred to another Licensee if the Licensee holding the criminal history record receives the individual's written request to re-disseminate the information contained in his/her file, and the gaining Licensee verifies information such as the individual's name, date of birth, social security number, sex, and other applicable physical characteristics for identification purposes.
4. The Licensee shall make criminal history records, obtained under this section, available for examination by an authorized representative of the NRC to determine compliance with the regulations and laws.
5. The Licensee shall retain all fingerprint and criminal history records received from the FBI, or a copy if the individual's file has been transferred, for three (3) years after termination of employment or denial to access SGI or unescorted access to radioactive materials equal to or greater than the quantities used in Attachment 2 to this Order. After the required three (3) year period, these documents shall be destroyed by a method that will prevent reconstruction of the information in whole or in part.