May 2, 2006

The Honorable Edward J. Markey
United States House of Representatives
Washington, D.C. 20515

Dear Congressman Markey:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to the concerns raised in your letter of March 28, 2006, concerning the transport of radiological materials across the Nation's borders. The NRC bases its security and control program for radioactive materials on the principle of allocating attention and resources proportionate to the risk for malevolent use of the sources. Background information on the NRC Program for regulating radioactive sources is included in Enclosure 1. Responses to your specific questions are included in Enclosure 2.

In accordance with Section 651 of the Energy Policy Act, in July 2005 the NRC issued revised import/export regulations consistent with the IAEA Code of Conduct provisions, making the U.S. the first country to do so. These new regulations strengthen the import/export regime for radioactive sources.

The NRC, in cooperation with the U.S. Departments of Energy (DOE), Homeland Security (DHS), Transportation, Commerce, and Defense, as well as the Environmental Protection Agency, Federal Bureau of Investigation, and NRC Agreement States, is developing a National Source Tracking System to track risk-significant radioactive sources. In accordance with Section 651 of the Energy Policy Act, the regulations that establish the tracking system will be finalized in August 2006. Until this system becomes operational, the NRC will continue to maintain an accurate interim database of risk-significant radioactive sources licensed by both the NRC and the Agreement States. The NRC, in coordination with the Agreement States, has placed all licensees who possess risk-significant radioactive sources under additional security or control requirements. These security and control measures require that licensees confirm the identity of entities that seek to purchase radioactive materials. The NRC and the Agreement States have made great strides in improving the security and access control provisions of the regulatory framework.

You specifically mention the Government Accountability Office's (GAO's) actions in transporting a small amount of radioactive material across our borders at certain locations and expressed concern whether larger amounts would have been able to be smuggled using similar means. The GAO investigation concluded that the amount of radioactive material transported by GAO was sufficient to construct a radiological dispersal device, or "dirty bomb," after consulting with an outside expert. While the material obtained by GAO could be used as part of a bomb, it would only contain an insignificant amount of radioactive material. We strongly disagree that the material could be used for "weapons of mass disruption," as stated in the report, due to the very low radiological activity of the sources. The GAO finding is inconsistent with the considerable work done by NRC, in partnership with DOE, IAEA, and other parties, to determine appropriate thresholds for radionuclides that pose health and safety or security risks.

The type and quantity of sources used in the GAO investigation are classified as low IAEA Category 5, which is the least significant of the five categories. These sources are several orders of magnitude from being risk-significant.

The GAO expressed concern that its personnel were able to purchase three low Category 5 sources by ordering them from a commercial supplier over the telephone for delivery to a Washington, D.C. address without an NRC license and without the supplier exercising due diligence to determine that the buyer had a legitimate use for the material. The three sources ordered by GAO are in the class of material that is exempt from licensing (another example is smoke detectors). Sources that are exempt from licensing can be purchased by the general public, contain a very small amount of radioactive material, and are exempt from NRC or Agreement State licensing because of the minimal risk they pose from a safety and security perspective.

GAO also expressed concern about the possibility of accumulating larger amounts of material by making multiple purchases from different suppliers. The NRC does not consider it credible that a sufficient number of exempt quantities (e.g., the sources found in smoke detectors) would be purchased to scavenge the sources to accumulate a risk-significant quantity of material. Additionally, the transfer of byproduct material under specific or general licenses requires licensees to verify that the transferee's license authorizes the receipt of the type, form, and quantity of byproduct material to be transferred. The NRC has required some manufacturer and distributor licensees, through security orders, to exercise their responsibility to verify, at a minimum, the legitimacy of an unfamiliar purchasing company. NRC plans to issue an Information Notice to alert licensees of the due diligence that needs to be exercised should they receive an order for material from an entity with which they have previously not done business.

The NRC has instituted additional measures to enhance the regulatory program for the safety and security of the use of radioactive sources by its licensees, as well as those regulated by the Agreement States. As noted above, with regard to risk-significant sources, the NRC has focused its efforts to provide additional security on radioactive material that could be used by a terrorist for malevolent purposes by implementing tracking of sources of concern and imposing additional controls by Order or other legally binding instrument, as well as requiring a specific license for import and export of risk-significant sources. The Commission believes that the issuance of these Orders has significantly reduced, and will continue to reduce, the likelihood of an event involving the malevolent use of risk-significant sources.

Regarding GAO's counterfeiting of NRC documents, the NRC agrees with GAO that their ability to counterfeit an NRC document is a matter that we should address, and we are working with Customs and Border Protection (CBP) to address this. Nevertheless, it is important to note that the counterfeited NRC documents used by GAO in their border crossing investigations were not needed to document their authorization to possess and import the sources because the very small amount of radioactive material being transported did not require a specific license and was covered under a general import license (see Enclosure 1 for a discussion of specific and general licenses).

To improve the ability of licensees and others, such as CBP, to determine whether documents authorizing the possession of materials are legitimate, the NRC is committed to working with CBP and other elements of DHS, as well as the Agreement States, to provide CBP easier access on a 24-hour-a-day basis to the information needed to confirm that shipments of risk-significant sources are legitimate. The new import licensing requirements for risk-significant sources should aid this effort. Currently, CBP can contact the NRC Operations Center or appropriate Agreement State to verify that the possession of the materials is legitimate.

In summary, the Commission is acting responsibly to protect the public from the risks of exposure to radioactive material by continually strengthening the system for security and control of sources. We have determined which radioactive materials could result in potentially significant injury to the public and have taken measures to ensure that they are safely and securely handled both here and abroad. We recognize the continuous need to analyze the safety and security systems in place and are improving our ability to analyze threats and mitigate them. Our approach is informed by the level of potential hazards to the public, recognizing the different levels of risk of different radioactive sources, and applying appropriate measures and resources.

Sincerely,

/RA/

Nils J. Diaz

Enclosures:
1. Overview of the NRC Program for Regulating Radioactive Sources
2. Response to Specific Questions

Overview of the Nuclear Regulatory Commission Program for Regulating Radioactive Sources

Licenses for radioactive materials are issued, and safety and security controls are applied using a graded, risk-informed approach. Certain radioactive materials are exempt from licensing. Exempt quantities of radioactive materials are manufactured in accordance with a U.S. Nuclear Regulatory Commission (NRC) or Agreement State license. An Agreement State is a State that has signed an agreement with the NRC, as provided by the Atomic Energy Act, allowing the State to regulate the non-Federal use of radioactive material within that State. Use of these materials is exempt from licensing due to the extremely small quantity of radioactive material contained (e.g., smoke detectors). General licenses for somewhat larger quantities of radioactive material are authorizations that do not require an application or issuance of a licensing document but, in some cases, do require an annual registration of sources with NRC. These generally licensed devices are designed and manufactured so that even in accident scenarios, there is no unacceptable risk to public health and safety. Specific licenses for even larger quantities of radioactive material are issued in paper form. NRC administers approximately 4,350 specific radioactive materials licenses, and thirty-four Agreement States administer approximately 17,450 radioactive materials licenses.

NRC has considered the full range of radioactive materials within NRC and Agreement State regulatory jurisdiction and has implemented the U.S. Government's position by applying additional controls to, and by maintaining a national registry or inventory of, the Category 1 and Category 2 sources. These sources were identified in the U.S. Department of Energy (DOE)/NRC joint study and in the International Atomic Energy Agency Code of Conduct because they present the greatest risk for potential use in a radiological dispersal device. NRC and the Agreement States have issued orders for enhanced security measures and increased controls to licensees with Category 1 and Category 2 materials. The following charts (attached) illustrate the NRC's risk-informed approach to security of risk-significant sources. As indicated in these charts, NRC took early action after the IAEA Code of Conduct was finalized in 2003 to place Category 1 and Category 2 sources under additional controls. The NRC has also developed an Interim Inventory to identify the NRC and Agreement State licensees with Category 1 and Category 2 sources and is developing a National Source Tracking System (NSTS) to more closely monitor these sources. Additionally, as part of the NSTS rulemaking, the Commission is considering if Category 3 sources should be added to the NSTS. The NRC is also evaluating its existing programs as they apply to sources below Category 2 quantities to identify areas where increased licensee accountability or access control requirements may be warranted.

Import or export of Category 1 and Category 2 radioactive material requires a specific import or export license from NRC before the sources are transported into or out of the country. Importers and exporters, or shippers, are not required to carry import or export licenses, or licenses for possession of radioactive sources with shipments; however, NRC now receives prior notification of imports of Category 1 and Category 2 radioactive material. NRC's NSTS, when implemented, will capture information on all Category 1 and Category 2 sources, including those being imported or exported. Imports and exports of sources below Category 2 are covered under a general license.

Response to Specific Questions

Question 1: When will the Commission issue its regulations requiring officials to verify whether an individual seeking to import radioactive materials is authorized to do so and possesses the appropriate documentation with the NRC? Why have these regulations been delayed? When do you expect the final regulations to take effect?

Answer: The U.S. Nuclear Regulatory Commission's (NRC's) rule governing the import of radiological materials was finalized in 2005. The final rule was published on July 1, 2005 (70 FR 37985). The implementation date was December 28, 2005. The rule requires a specific license for the import or export of risk-significant quantities of radioactive materials (International Atomic Energy Agency (IAEA) Code of Conduct Categories 1 and 2). The rule also requires that licensees provide notification to the NRC at least 24 hours in advance of each shipment (import or export) of risk-significant quantities of radioactive materials. The NRC's rule places requirements on the exporters and importers, not on Customs and Border Protection (CBP). The NRC is currently working with CBP to develop a system to enable verification that the recipient of the material is authorized to receive the material being imported.

Question 2: When will the Commission issue its regulations establishing the tracking system for radiation sources? After all, in earlier correspondence, (http://www.house.gov/markey/Issues/iss_dirtybombs_ltr041021.pdf), you indicated that although an NRC/DOE working group recommended the establishment of a National Source Tracking System in May 2003 (see http://www.zyn.con/flc/meeting/presentations/Chavez_Radioactive.pdf), the system won't be complete until early 2007 - but the provisions enacted in the Energy Bill require that such a system be in place within a year.

Answer: The Energy Policy Act of 2005 requires the NRC, not later than 1 year after the date of enactment of the Act, to issue regulations establishing a mandatory tracking system for radiation sources in the United States. The Act does not address the timing for implementation of the system. The NRC is on track to issue the regulations for source tracking by August 2006. The proposed rule was published for public comment on July 28, 2005 (70 FR 43646). System implementation will occur in early- to mid-2007. The NRC is doing everything it can to expedite system implementation. In the meantime, NRC has established an interim database for risk-significant sources that is updated on an annual basis. This database proved highly accurate during Hurricanes Katrina and Rita and aided the response efforts to the hurricanes. It has also proven highly accurate in our initial implementation of the NRC's export and import regulations. All entities requesting and export or import license for risk-significant sources were already in our database.

Question 3: Has the Commission considered real-time tracking for any or all of the radiation sources covered by the Markey-Clinton language that was enacted in the Energy bill? If so, please elaborate, and if not, why not?

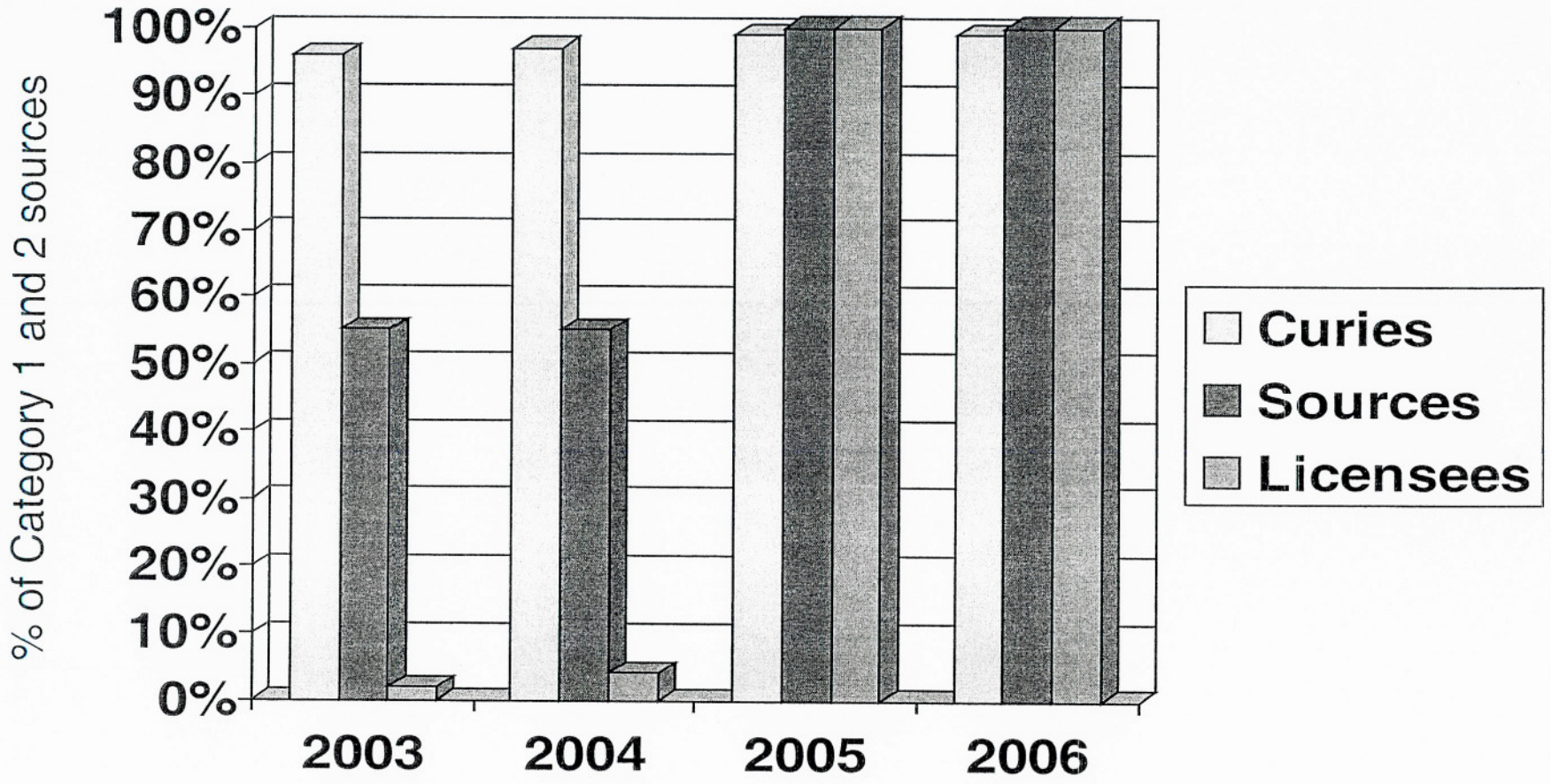
Answer: The tracking system will be a transaction-based system and does not track sources in real time. Licensees will be required to report when a risk-significant source is created, transferred, received, disassembled, or disposed of. The Interagency Coordinating Committee on source tracking may consider real-time tracking in the future as a possible enhancement to the tracking system. This Committee was involved in the development of the high-level requirements for the tracking system and will continue to be involved in the tracking system as it is deployed and as enhancements to the system are considered. Real-time tracking would likely involve design changes to the sources and the devices in which the sources are used. These and other issues related to real-time tracking would need to be fully evaluated, with a cost-benefit analysis, before any decision on real-time tracking is made.

Question 4: When will these regulations be proposed and when will they be issued in final form? (Referring to Section 656 of the Energy Policy Act of 2005.)

Answer: As you noted in your letter, Section 656 of the Energy Policy Act requires that radioactive materials when transferred or received in the United States by any party pursuant to an import or export license are accompanied by a manifest describing the type and amount of materials being transferred or received. Requirements for manifesting shipments of radioactive materials already exist in Department of Transportation regulations at 49 CFR Part 172. These requirements include that shipping papers indicate the basic description of the material; total quantity of material; physical and chemical form of the material; number and type of packages; name of each radionuclide in the material; and activity contained in each package; and that each package being transported be labeled. No additional rulemaking is planned to address manifests.

Section 656 of the Energy Policy Act also requires security background checks for each individual receiving or accompanying the transfer of radioactive materials. A requirement for background checks will be included in a proposed rule. The proposed rule is expected to be published for public comment this summer. The final rule is scheduled for publication by the end of calendar year 2006.

NRC and Agreement State
Category 1 and 2 Sources Under Increased Security Controls



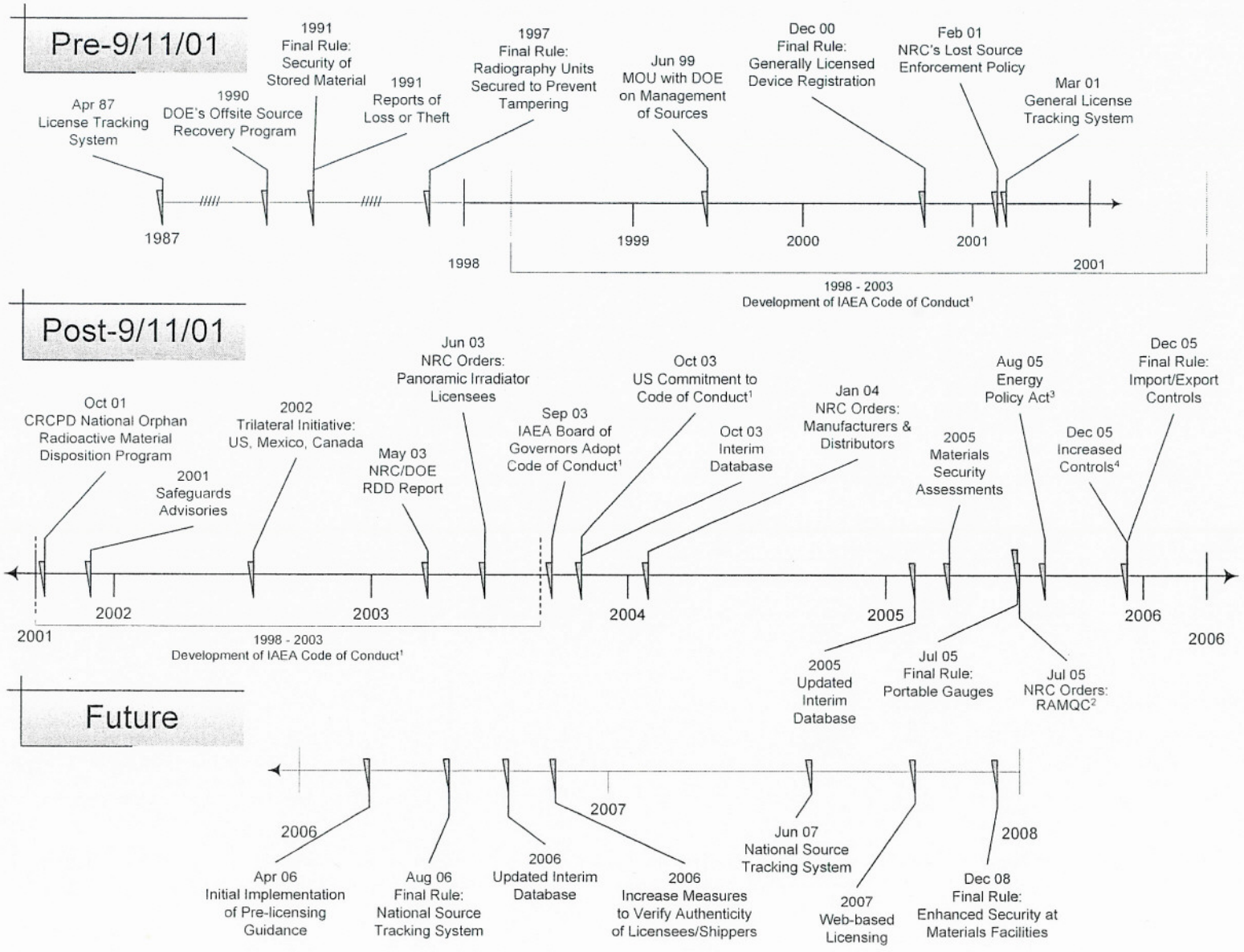
Attachment

NRC and Agreement State
Category 1 and 2 Sources Under Increased Security Controls

- Chart represents increased security controls since 9/11/01. Prior to 2001 sources where under regulatory control based on safety significance.
- Sources with the highest activity were the first to receive increased security controls after 9/11/01.
- Orders issued to licensees between 2003 and 2005 based on the risk-significance of sources
  - 2003: Irradiators
  - 2004: Manufacturers and Distributors
  - 2005: Groups 1-4 [except Radioisotope Thermoelectric Generators (RTGs)]
- Orders not sent for RTGs, which comprise ~1% of source activity and ~0.1% of sources since RTGs are under military control and protected by more stringent security requirements

Attachment

Timeline on Management and Control of Radioactive Sources



[1, 2, 3, 4] Superscripts noted on the timeline refer to Information Boxes in the attached.

Attachment

Information Boxes

BOX 1: IAEA Code of Conduct

- Achieve and maintain a high level of safety and security of radioactive sources
- Prevent unauthorized access or damage to, and loss, theft or unauthorized transfer of, radioactive sources, so as to reduce the likelihood of accidental harmful exposure to such sources or the malicious use of such sources to cause harm to individuals, society, or the environment
- Mitigate or minimize the radiological consequences of any accident or malicious act involving a radioactive source

Two general principles of the Code of Conduct are member states should:

- Establish a national register of radioactive sources
- Take appropriate steps to ensure that the import/export of sources is consistent with the provisions of the Code of Conduct

BOX 2: NRC Orders -- Radioactive Materials Quantities of Concern (RAMQC)

Additional security measures include:

- Licensee verification
- Background investigations
- Preplanning and coordination
- Notifications
- Communications
- Drivers and accompanying individuals
- Procedures, training, and control of information

BOX 3: Energy Policy Act of 2005

The Energy Policy Act requires NRC to:

- Issue regulations restricting the import, export, and sale or transfer of radiation sources
- Issue regulations establishing a mandatory tracking system for radiation sources
- Arrange with the National Academy of Sciences to conduct a study of industrial, research, and commercial uses for radiation sources
- Establish an interagency Task Force on Radiation Source Protection and Security
- Assume regulatory authority over certain naturally occurring radioactive materials
- Conduct fingerprinting and criminal history checks for persons licensed in activity subject to NRC regulation
- Ensure that materials covered by NRC-designated classes of import or export licenses are accompanied by a shipping manifest and that individuals accompanying or receiving the transfer are subject to background checks

BOX 4: Increased Controls

- Control access to risk-significant sources and limit access to only approved individuals
- Monitor and immediately detect, assess, and respond to unauthorized access
- Ensure the safe handling, use, and control of licensed material in transportation for domestic highway and rail shipments
- For portable devices, have two independent physical controls that form tangible barriers to secure unauthorized removal; for mobile devices moved outside a facility, have two independent physical controls that form tangible barriers to secure the material from unauthorized removal ; and for mobile devices moved inside a facility, have an independent physical control that forms a tangible barrier to secure the material from unauthorized movement or removal
- Retain documentation for three years
- Protect sensitive information that describes the physical protection of the risk-significant sources from unauthorized disclosure

Attachment