

March 29, 2006

The Honorable Norm Coleman  
Chairman, Permanent Subcommittee  
on Investigations  
Committee on Homeland Security and  
Governmental Affairs  
United States Senate  
Washington, D.C. 20510

Dear Mr. Chairman:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am submitting this letter to respond to your concerns expressed during the March 28, 2006 hearing held by the Senate Permanent Subcommittee on Investigations. I am providing information on the NRC's regulation of radioactive sources, including information on requirements implemented since 9/11, to enhance security and control of radioactive sources. The NRC bases its security and control program for radioactive materials on the principle of allocating attention and resources proportionate to the risk of malevolent use of the sources.

Since September 11, 2001, the NRC has thoroughly re-evaluated its safeguards and security programs and worked aggressively to enhance the security of risk-significant radioactive sources. The NRC will continue to do so. The Commission believes that significant achievements have been made in regulating the security of radioactive materials, not only in the United States, but worldwide through the International Atomic Energy Agency (IAEA). However, our work is not done. Background information on the NRC Program for regulating radioactive sources is included in Enclosure 1.

Before the terrorist attacks of 9/11, the NRC participated in several national and international efforts to address the potentially significant health and safety hazards posed by the uncontrolled use of radioactive sources. The participating parties recognized the need for increased control of risk-significant radioactive sources to prevent inadvertent or intentional unauthorized access, primarily due to the potential health and safety hazards posed by uncontrolled sources. Following 9/11, the NRC and other agencies recognized that these efforts to prevent malevolent use of radioactive sources should also include a heightened awareness of, and focus on, the need to prevent intentional unauthorized access. The timeline in Enclosure 2 summarizes the NRC's radioactive source management and control activities prior to and post-9/11 and highlights future initiatives. The activities implemented to date have resulted in increased controls over risk-significant radioactive sources to prevent unintended radiation exposure and to prevent malicious acts. Ongoing domestic and international efforts will result in further assurance that these sources will remain properly secured.

As noted on the timeline in Enclosure 2, from 1998 to 2003, the NRC participated in developing the IAEA Code of Conduct on the Safety and Security of Radioactive Sources (Code of Conduct). Additional information on the Code of Conduct is also included in Enclosure 3, Information Box 1. Concurrently with the development of the Code of Conduct, the NRC and the U.S. Department of Energy (DOE) conducted a joint study on risk-significant sources that could conceivably be used in a Radiological Dispersal Device (RDD). This study, which was published in 2003, revealed conclusions concerning risks of sources very similar to the conclusions of the IAEA Code of Conduct, although the two documents used different methodologies. The Commission actively sought consensus, both internationally and domestically, on the list of radioactive sources, including amounts, that should be subject to strengthened controls. The resulting thresholds of concern for radioactive sources are the values used by the NRC and other U.S. agencies, as well as the IAEA and other countries, to increase controls on radioactive sources in a graded manner. The Code of Conduct groups radioactive sources into five categories, the top two of which (Categories 1 and 2) identify the most risk-significant sources. Of particular note, as shown in Enclosure 3, the Code of Conduct includes provisions for strengthening the international import/export regime for radioactive sources. The NRC has implemented revised import/export regulations consistent with these provisions, making the U.S. the first country to do so.

The NRC, in cooperation with the Departments of Energy, Homeland Security (DHS), Transportation, Commerce and Defense, as well as the Environmental Protection Agency, Federal Bureau of Investigation, and Agreement States, is developing a National Source Tracking System to track risk-significant radioactive sources. Until this system becomes operational, the NRC maintains 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 requirements. These security 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. The NRC also continues to assist DOE in its efforts to accelerate the collection of unwanted radioactive sources through DOE's Offsite Source Recovery Program, which since 1997 has recovered over 10,000 radioactive sources.

The NRC has learned of the Government Accountability Office's (GAO) actions in transporting a small amount of radioactive material across our Nation's borders at certain locations. The GAO investigation concluded that the amount of radioactive material transported by GAO was sufficient to construct an RDD, or "dirty bomb," based on information obtained from officials of the National Institute of Standards and Technology. While the Commission agrees that the material obtained by GAO could be used to construct a bomb containing an insignificant amount of radioactive material, we strongly disagree that it could be used as "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.

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). These sources 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 their 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 further 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. Additional information on NRC Orders and Increased Controls is included in Enclosure 3, Information Boxes 2 and 4.

The Energy Policy Act of 2005 requires the NRC and other organizations to take a number of actions with respect to security of risk-significant sources. These actions are listed in Enclosure 3, Information Box 3. The NRC is taking steps to implement all of these actions.

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 taking steps to do just that. 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 was covered under a general license (see Enclosure 1 for a discussion of general licenses).

To improve the ability of licensees and others, such as Customs and Border Protection (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 Agreement State to verify that the possession of the materials is legitimate.

In summary, the NRC has acted responsibly to protect the public from the risks of exposure to radioactive material by 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 need to continuously 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. I would be pleased to discuss this matter with you in more depth.

Sincerely,

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Nils J. Diaz

Enclosures:

1. Overview of NRC Program for Regulating Radioactive Sources
2. Timeline on Management and Control of Radioactive Sources
3. Information Boxes

cc: Senator Carl Levin

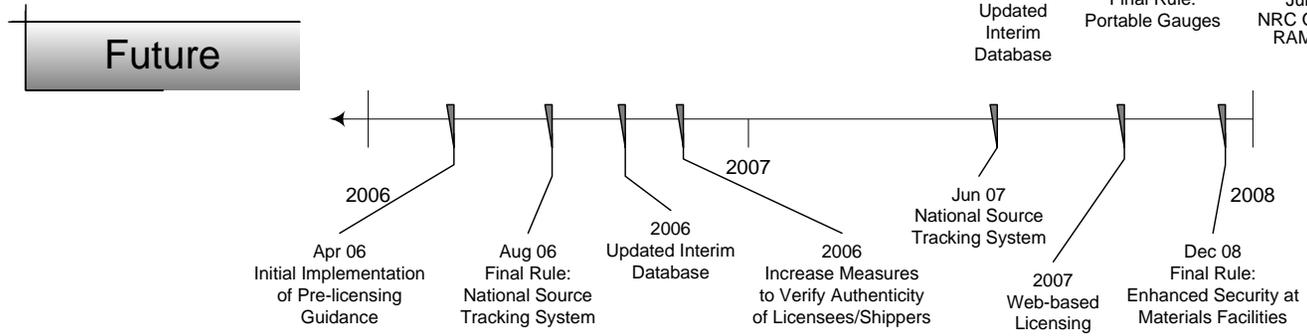
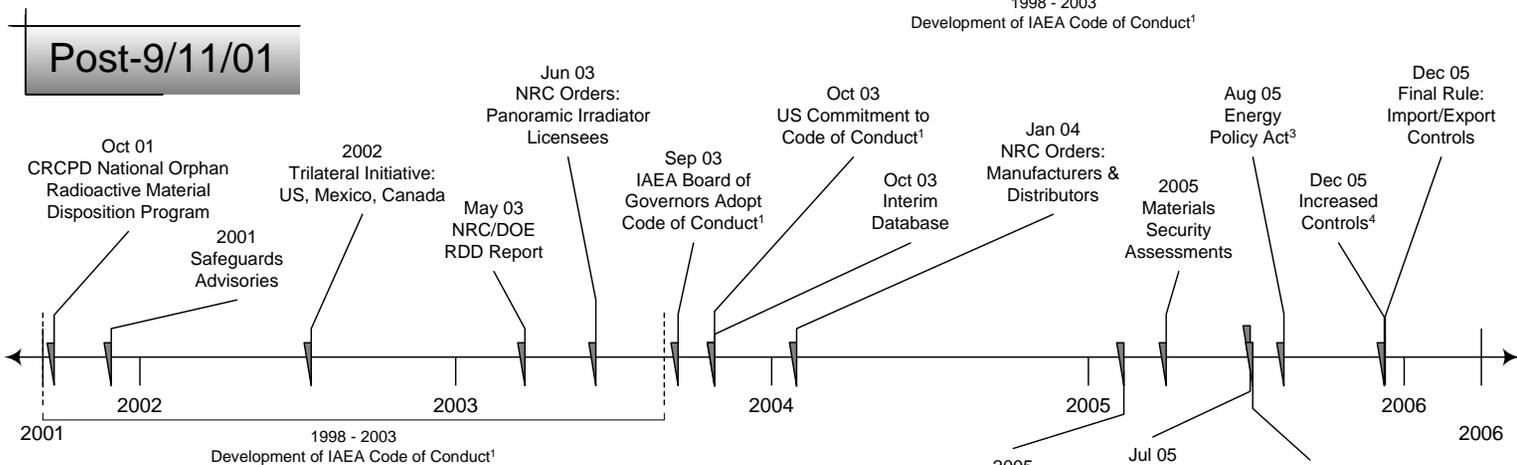
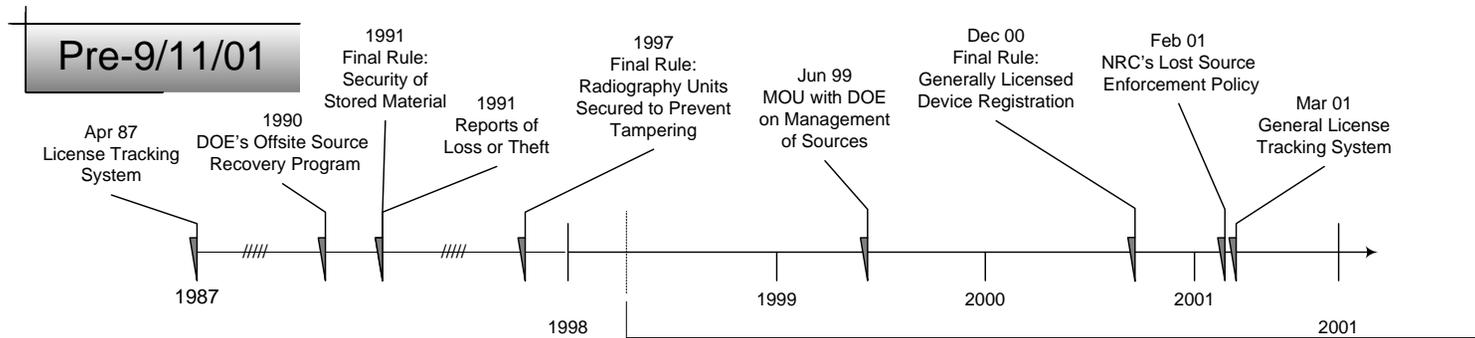
## **Overview of the Nuclear Regulatory Commission Program for Regulating Radioactive Sources**

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 an NRC or Agreement State (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) license. 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 4,500 specific radioactive materials licenses, and thirty-three Agreement States administer approximately 17,300 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 tracking of, the Category 1 and 2 sources. These sources were identified in the DOE/NRC joint study and in the Code of Conduct since they present the greatest risk for potential use in a RDD. NRC and the Agreement States have issued orders for enhanced security measures and increased controls to licensees with Category 1 and 2 materials. NRC has developed an Interim Inventory to identify the NRC and Agreement State licensees with Category 1 and 2 sources and is developing a National Source Tracking System (NSTS) to more closely monitor these sources. NRC is also considering if any additional actions need to be taken for Category 3 sources.

Import or export of Category 1 and 2 radioactive material requires a specific import or export license from NRC before the sources are transported in 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 National Source Tracking System (NSTS), now under development, will capture information on all Category 1 and 2 sources, including those being imported or exported.

# Timeline on Management and Control of Radioactive Sources



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

## 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