

# POLICY ISSUE INFORMATION

May 20, 2010

SECY-10-0066

FOR: The Commissioners

FROM: James T. Wiggins, Director  
Office of Nuclear Security and Incident Response

SUBJECT: INTERNATIONAL RADIOACTIVE SOURCE SECURITY EFFORTS

## PURPOSE:

This information paper responds to one item of the May 20, 2009, Staff Requirements Memorandum (SRM) M090423, "Briefing on Radioactive Source Security" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML091400200), directing staff to remain aware of what other countries are doing regarding security requirements for blood irradiators, including lessons learned, and make a recommendation to the Commission on what, if anything, should be incorporated into the U.S. Nuclear Regulatory Commission's (NRC) Radioactive Materials Programs. Other items in the SRM are addressed separately.

## DISCUSSION:

Staff remains aware of international activities in a number of ways. Information is exchanged during bilateral and multilateral meetings with international counterparts. Staff also participated in the development of International Atomic Energy Agency (IAEA) Nuclear Security Series (NSS) documents and international conferences on this topic. Information is also obtained through coordination with other Federal Agencies. With respect to the specific security requirements for blood irradiators, staff is not aware of any countries that have unique security requirements for blood irradiators.

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As of May 2010, 99 countries have made a non-binding commitment to implement the IAEA Code of Conduct on the Safety and Security of Radioactive Sources (Code of Conduct). Of those 99 countries, we understand based on conversations with IAEA and country representatives that only a limited number of countries including Australia, Canada, Indonesia, Iraq, Japan, Philippines, United Kingdom (UK), and Vietnam have developed and implemented radioactive source security measures through various means (e.g., codes of practice, incorporating guidance documents into license conditions, or regulations). Staff reviewed available information and conducted a review of documents from Australia, Canada, Philippines, UK, and Vietnam. This review did not identify any specific security requirements for blood irradiators. Other countries (such as Albania, Bulgaria, China, Croatia, Ecuador, Ethiopia, Estonia, Hungary, Ghana, Kenya, Lithuania, Macedonia, Malaysia, Nigeria, Pakistan, Peru, Poland, Russia, Tanzania, Ukraine and Uzbekistan) are in the process of developing security requirements for radioactive sources.

Based on staff discussions, most countries are designing their source security programs using or considering the IAEA NSS Implementing Guide, "Security of Radioactive Sources" (NSS No. 11, 2009) which includes guidance and recommended measures for the prevention of, detection of, and response to malicious acts involving radioactive sources. The document does not include any specific requirements associated with blood irradiator security. The draft IAEA Nuclear Security Recommendations on Radioactive Material and Associated Facilities (which was published in March 2010, and is available for 120-day Member State comment) notes that countries should consider ways of reducing the security risk associated with radioactive material, particularly radioactive sources, for example by encouraging the use of an alternative radionuclide, chemical form, or non-radioactive technology, or by encouraging device designs that are more tamper resistant. This document also notes that if the regulatory body becomes aware of a specific threat of sabotage against particular radioactive material or particular facilities, the regulatory body could choose to require additional or more stringent security measures to increase the level of protection against sabotage. While not specifically highlighting blood irradiators, this document raises issues that the U.S. has raised in its evaluation of blood irradiator security.

Domestically, the NRC continues to work with the Department of Energy/National Nuclear Security Administration (NNSA) to enhance security of certain blood and research irradiators. These efforts are discussed in SECY-10-0036, "Update on Staff Efforts to Work with Federal Partners on Voluntary Security Initiatives for Radioactive Materials," dated March 30, 2010, (ADAMS Accession No. ML100670638). Internationally, NNSA through its Global Threat Reduction Initiative Program has completed physical protection upgrades in over 40 countries at more than 755 radiological sites, including industrial, medical, and commercial facilities. Their focus is on increasing the protection of nuclear and radioactive materials in countries without regulatory requirements for enhanced security. NNSA also shares best practices with other countries including in-device delay efforts for blood and research irradiators and has briefed the Netherlands, UK, Germany, Japan, France, Canada, Austria and IAEA.

Staff has remained aware of what other countries are doing regarding security requirements for radioactive sources including blood irradiators. NRC's program is consistent with IAEA guidance and is ahead of other countries both in timing of implementing requirements and in program robustness. In summary, staff's assessment of international activities regarding blood irradiators did not uncover new or significant issues which the Commission should consider.

CONCLUSION:

Therefore, as it applies to blood irradiator security, staff does not recommend any specific changes to the Radioactive Materials Programs.

COORDINATION:

The Office of General Counsel has reviewed this paper and has no legal objection. This paper has been coordinated with the Office of Federal and State Materials and Environmental Management Programs and the Office of International Programs.

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