**MANAGEMENT & COORDINATION OF NUCLEAR SECURITY ACTVITIES IN KENYA**

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**Abstract**

Over recent years the structure, format and content of the International Atomic Energy Agency (IAEA) standards have been developed further to become the global reference for the delivery of high standards of safety, radiation protection, radioactive waste management (RWM) and the safe transport of radioactive materials.

Unlike safety, international standards for security do not exist. While nuclear safety deals with the design and operation of facilities and activities that prevent accidental release of radioactivity into the environment; security, however, embraces the need to protect materials and facilities from theft, misuse, attack or sabotage.

In managing and coordinating nuclear security activities, these two factors have been taken into account to ensure that physical security of sources and combating of illicit trafficking of nuclear and radioactive materials. The regulatory authority, working together with relevant border and other national security organs, bilateral, the IAEA and other international organizations to contain the situation.

**Introduction**

Governments and societies decide whether nuclear energy and associated technologies are used for medical, industrial and electricity generation purposes after taking into account of the benefits and risks. Nuclear regulatory bodies ensure that nuclear activities are undertaken safely and securely for the protection of radiation workers, the public and the environment.

Effective regulation is the delivery of independent and efficient oversight of the nuclear industry and other users of nuclear technology so that governments and society can be assured that the nuclear activities in their countries are operating at high levels of nuclear safety and security that are consistent with international norms.

The regulatory body is therefore seen to be effective when it ensures that an acceptable level of safety is being maintained; when it takes appropriate measures to prevent degradation of safety, promote safety improvements and performs its regulatory functions in a timely and cost effective manner and strives for its continuous improvement, the industry and other users of nuclear technology.

**Board Activities**

Activities undertaken by the Board in addressing nuclear security concerns include physical protection of category 1 and 2 sources, combating illicit trafficking of nuclear and radioactive materials and public protection through spearheading the set-up of a central radioactive waste processing facility. The Board collaborates with the police and customs officials and other intelligence agencies to apprehend illegal sources at borders and the police for sources already within the country.

**Illicit Trafficking**

On issues of combating illicit trafficking, Kenya, through the Board has hosted one national and two sub-regional IAEA sponsored workshops for the regulatory staff the police and customs officers in the last four years. During the national workshop, pagers and isotope identifiers were donated by the Agency for use by border post personnel for detecting and apprehending illicit nuclear and radioactive materials at borders. On 15 April 2009 Kenyan government signed a memorandum understanding (MOU) with the government of the United States of America for the installation of portal monitors at the port of Mombasa (Kilindini) for detection of illicit containerized nuclear and radioactive materials, through the Megaports Initiative. Kilindini is one of the largest ports in Eastern Africa, serving Kenya, Uganda, Rwanda, Burundi and some parts of Tanzania, Somalia, Ethiopia, Southern Sudan and DRC Congo. In due course other border posts may be considered for the same. Training of personnel, provision of hand-held detectors will take place over a period of years. The system is expected to start operations by the end of year 2010. The Board plan to coordinate training and other responsibilities when the MOU comes to an end.

**Nuclear Security**

Through assistance from the IAEA, the physical security of five category 1 sources (Co-60) in medical and research institutes has been enhanced to make it very difficult for un-authorized access. The security of sources of smaller magnitude (category 2 and 3) are also taken of by individual owners with the assistance of the Board.

**Radiation Waste Safety**

The Board is actively involved in the set-up of a Central Radioactive Waste Processing Facility (CRWPF). It is intended that on completion, all wastes and orphan sources emanating from within the country can be processed and stored on an interim basis. This will also include apprehended illicitly trafficked material. Land has been availed through an MOU with a Government Agency and government funding is expected for set-up of the facility. Through the Global Threat Reduction Initiative (GTRI), the USA government has shown interest in supporting the project and negotiations are in progress.

At the moment solid waste is immobilized and stored in 200L drums at a government designated site. Facilities are keeping liquid and other types of wastes (contaminated gloves, syringes, vials, etc) are stored in backyards of waste producers awaiting operation of the CRWPF.

**Partnerships**

The Kenyan regulatory authority collaborates in bilateral and other international organizations. Kenya is also a signatory to the Forum for Nuclear Regulatory Bodies in Africa (FNRBA). This was launched in March 2009 in South Africa, during the first coordinators meeting for RAF/9/038. The objectives include exchange of information, expertise and networking among others, to share knowledge and experience. We expect that the wide range of cooperative activities will enhance regulatory efficiency and effectiveness for nuclear safety and security.

**Conclusions**

The delivery of effective nuclear safety and security regulation is vital for the safe and secure use of nuclear energy and associated technologies both now and the future and is an essential prerequisite for the achievement of global energy security and sustainable development.

Regulators work for the benefit of society and therefore play a vital role. To be effective, they must be independent and free to make regulatory decisions solely in relation to the need to maintain safety and security, without pressure from those responsible for the promotion of the use of nuclear energy and associated technologies, or those who are opposed to its use.

Regulators must be competent and have adequate resources to deliver their mission, which is to ensure the protection of the public and the environment, and to assure government and the public that their nuclear industry is safe. The safety and security of nuclear facilities and nuclear and radioactive materials require effective coordination of safety and security regulation.

Continued international cooperation to promote good nuclear safety and security practice is essential for the delivery of effective regulation and the continuous improvement of the regulatory bodies.

Kenya has benefited from the various training courses, fellowships and scientific visits sponsored by the Agency and other development partners, and equipment to undertake its mandate. The government has been supportive in continued employment of regulatory staff and in the creation of regional offices to ensure that the services are closer to the people.

Reference

1. EFFECTIVE NUCLEAR REGULATORY SYSTEMS Facing Safety and Security Challenges, Proceedings of an International Conference, Moscow, 27 February – 3 March 2006. Pp 279 - 291