

## REGULATORY AUTHORITY ACTIVITIES IN SUPPORT TO NUCLEAR FORENSICS

### 1. INTRODUCTION

The nuclear forensics is the process of comparing sample characteristics with existing information about the types of material the origin and methods of production of nuclear and other radioactive material or previous cases associated with similar material. Thus, nuclear forensics regarded as a new area of integrated science research that allows not only to identify radioactive material (withdrawn from illicit trafficking or resulting from a nuclear accident), but also trace the entire chain of related events - from source origin until to detection. Nuclear forensics is the examination of nuclear and other radioactive materials using analytical techniques to determine the origin and history of this material in the context of law enforcement investigations or the assessment of nuclear security vulnerabilities. In this activity, consolidation and assistance of all organizations that can be involved in nuclear forensics are necessary.

### 2. PRACTICAL ACTIVITIES

On April 24, 2008, the President of the Republic of Azerbaijan signed a decree on creation of an independent regulatory authority, State Agency on Nuclear and Radiological Activity Regulations (SANRAR) under the Ministry of Emergency Situations, which gives the regulatory function in considerable extent to the sole body. With establishment of Regulatory Authority all the powers and duties related to the provision of supervision and control over nuclear and radiological activities, accounting and control of nuclear and other radioactive materials, as well as authority for authorization in this area were transferred to SANRAR. Since the creation of new Regulatory Authority, the analysis of all obligations arising from the international agreements and treaties, as well as the improvement of the implementation of assigned functions, have been one of the main priorities of SANRAR activities. To date, SANRAR plays an important role in fulfilling of obligations stipulated by the relevant international agreements, taking the necessary measures to improve of existed infrastructure aimed to strengthening of the legislative and technical bases, as well as to improving of the used communication and information technologies. The practice of the regulatory activities in the Republic of Azerbaijan are includes the authorization, inventory, accounting, performance of the relevant obligations under the safeguards agreement, inspections, export-import control, expert assessment, enforcement, etc. The presentation will describes the regulatory aspects in the field of regulation of nuclear and radiological activities in relation to the provision of necessary information and technical support for nuclear forensics, as well as the created associated infrastructure. Technological capabilities, disadvantages and ways of improvement will also be described in presentation.

### 3. FINDINGS OR RESULTS

Decision-making capabilities, established organizational structure and financing mechanisms allow the fulfillment of the main functions of the regulatory authority at present. At the same time, there are challenges related to the legislative base and staffing of regulatory authority with the highly qualified staff in connection with the planning of expansion of activities in the field of peaceful nuclear technologies and for improving their capabilities for successful implementation an appropriate role in support to nuclear forensics activities.

### 4. CONCLUSION

The decision on development of nuclear technologies for peaceful purposes and planning of the construction of research reactor in the future requires improving the structure and capabilities of the Regulatory Authority, as well as improving the legislative framework for the possibility of comprehensive execution of regulatory functions. The presentation will summarize achieved progress and provide proposals to improvement of existing infrastructure in considerable to extent to the necessary requirements.

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