

PREVENTION OF THE RADIOACTIVE MATERIALS ILLICIT TRAFFICKING IN ALBANIA

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Përmbajtja

Në Shqipëri, burimet radioaktive përdoren në mjekësi, industri, bujqësi, kërkime dhe arsim. Ligji bazë për mbrojtjen nga rrezatimi në Republikën e Shqipërisë është ligji "Për Mbrojtjen nga Rrezatimi Jonizues", Nr. 8025, datë 09.11.1995, ndryshuar me ligjin Nr. 9973, datë 28.07.2008 që përaftron parimet bazë të sigurisë të Agjencisë Ndërkombëtare të Energjisë Atomike. Në mbështetje të administrimit dhe transportit të sigurt të materialeve radioaktive është nënshkruar memorandumi i bashkëpunimit Nr. 419, datë 14.01.2009 "Zbulimi dhe luftimi i trafikimit të paligjshëm të materialeve radioaktive" midis Drejtorisë së Përgjithshme të Doganave dhe Institutit të Fizikës Bërthamore të Zbatuar ku pasqyrohet bashkëpunimi midis këtyre institucioneve. Në zbatim të legjislacionit shqiptar në fuqi, që synon mbrojtjen dhe sigurinë e këtyre materialeve, është miratuar rregullorja "Për Procedurat Standarde të Operimit" (PSO) për zbulimin e materialeve radioaktive të Drejtorisë së Përgjithshme të Doganave. Për të siguruar kufirin dhe për të parandaluar hyrje-daljen dhe tranzitin e paautorizuar të mbetjeve radioaktive dhe burimeve radioaktive në Republikën e Shqipërisë, Shërbimi Doganor Shqiptar ka marrë të gjitha masat e duhura për vendosjen e pajisjeve të nevojshme për zbulimin automatik dhe/ose manual të radioizotopëve në pikat e kalimit kufitar.

Fjalëkyçe: Materiale radioaktive, trafikimi paligjshëm, mbetje radioaktive, burime radioaktive.

Abstract

In Albania, radioactive sources are used in medicine, industry, agriculture, research and education. The basic law for radiation protection in the Republic of Albania is the law "On Protection from Ionizing Radiation", No. 8025, date 09.11.1995, amended by law no. 9973, date 28.07.2008 that approximates the IAEA safety fundamental. In support of safe and secure radioactive materials management and transport a Memorandum of Understanding no. 419 dated 14.01.2009 "Detecting and combating of illicit trafficking on radioactive materials" has been signed between General Customs Directorate and IANP, where is reflected co-operation between institutions. In implementation of the Albanian legislation in force, aiming at the protection and security of these types of materials, is approved the regulation "On Standard Procedures of Operations (SOPs) for the detection of radioactive materials" of the General Customs Directorate. In order to secure the border to prevent the unauthorized entrance - exit and transit of the radioactive waste and radioactive sources in the Republic of Albania, the Albanian Customs Service has taken all the due measures to place the necessary devices for automatic and/or manual detection of the radioisotopes in border crossing points.

Key words: Radioactive materials, illicit trafficking, radioactive waste, radioactive sources.

1. Introduction

The main purpose of this paper is to assess the present situation on the responsible institutions cooperation to ensure the safety and security in response to nuclear security events in Albania, in respect to the current management practices and regulatory control for the safety and security of both authorized and unauthorized radioactive material shipments. The assessment is focused on the safety and security of high-activity sealed sources and orphan sources, as defined by IAEA categorization of Sources and also in the detection of illicit trafficking of nuclear and other radioactive materials out of regulatory control. In support of safe radioactive material transport oversight, a Memorandum of Understanding (MOU) has been signed by the Albanian General Custom Directorate (GCD) and the Institute of Applied Nuclear Physics (IANP). IANP is responsible for the safe and is involved in the detection and management of unauthorized radioactive material shipments [5],[6],[7].

To address the security risks associated with illicit trafficking of nuclear and other radioactive materials out of regulatory control, Albania has undertaken significant effort to equip the main border points (BPs) with radiation portal monitors (RPMs). While the main purpose of the RPM at the different BPs in Albania is related to nuclear security and the detection of illicit trafficking of nuclear materials, the RPMs can serve other vital safety roles. First, the RPMs can detect unauthorized shipments of radioactive materials and their transit through Albanian territory, thereby increasing the radiological protection for the people and the environment. Secondly, the RPMs can detect consumer goods, such as food stuffs, that may be contaminated with radioactive materials above safety/regulatory limits.

The basic law for radiation protection in the Republic of Albania is the law "On Protection from Ionizing Radiation ", No. 8025, date 09.11.1995, amended by law no. 9973, date 28.07.2008 [1]. Decision No 877, date 30.10.2015 of Council of Minister for the approval of the new regulation "On the physical security of radioactive sources in the Republic of Albania" cover main aspects related to security [2]. The object of this regulation is the determination of measures on the physical protection of radioactive materials, transportation, and the requirements to keep the radioactive sources in secure places and their use only by the physical/legal persons licensed for the relevant activities according to the legal acts and regulations.

Meanwhile Decision no. 638, date 07.09.2016, of the Council of Ministers for the approval of the new regulation "On the approval of the regulation on the safe handling of radioactive waste in the Republic of Albania", [3] and Decision No.815, dated 16.11.2016 on the adoption of the regulation "On the safe transport of radioactive materials cover main aspects related to safety of radioactive materials [8].

2. Responsible Institutions for Nuclear Security and Organizational Responsibilities

The Customs serves as the lead enforcement agency at the border point or in border and is responsible for responding to all alarms and alarm adjudications. Customs is responsible for ensuring all necessary secondary inspections are conducted and informing appropriate response agencies when suspicious alarms/alerts are identified. Article 3 of Decision No. 638, date 7.9.2016 “On the approval of the regulation on the safe handling of radioactive waste in the Republic of Albania” defines Responsible Institutions [3] as described below:

1. Radiation Protection Commission (RPC) as the Regulatory Body defines the policies related to the treatment of the radioactive waste and DSRS and also for the Transport of Radioactive Materials in Albania. RPC shall take the appropriate measures to ensure that all radioactive sources in the Republic of Albania of categories 1, 2 and 3 are registered, controlled and securely protected during and at the end of their useful lives [9],[10]. RPC shall establish and implement a security inspection programme. The frequency of the inspections shall be established taking into account level for physical protection.
2. The Radiation Protection Office (RPO) is established as the executive body of the RPC.
3. Institute of Applied Nuclear Physics (IANP) is the institution in charge for the processing of all radioactive waste and disused sealed radioactive sources (DSRS) and for the transport of radioactive materials in Albania.

The Customs Officers and supporting Officers are responsible for:

- Operating CAS workstation
- Escorting vehicles to the secondary inspection area
- Conducting secondary inspections
- Coordinating investigation activities
- Dispositioning conveyances or people that generate radiation alarms
- Interdicting illegally transported radioactive material
- Contacting support agencies as needed
- Enforcing laws and other regulations
- Coordinating all maintenance and repair activities.
- The detection systems will be operational seven days a week and will be staffed by Officers during operations.

2.1 Technical Reachback Organization.

Two teams are actually operational at IANP in detecting and combating illicit trafficking and smuggling of nuclear and radioactive materials:

- Mobile Expert Support Team (MEST);
- Network of controlling import - export merchandise for radioactive contaminations (2 control teams at Tirana and Durres customs, 1 control team in IANP for special cases - analyses of samples from suspected goods, expertise ordered by prosecution office, courts, police, etc).

The IANP provides oversight of the operations and reachback access to specialized technical support for radiation detection operations at all Border Custom Points presented in figure no.1.



Figure no.1. Albanian Custom Border Points

In the situation that a radiation source cannot be identified or the Officer needs further guidance, the Officer shall contact technical reachback.

Situations that may dictate the need for technical assistance include:

- Any of the Radioisotope Identification Devices (RIDs) identify Special Nuclear Material.
- Neutron radiation is detected.
- The RID identifies any isotopes of concern for a Radiological Dispersal Device and the shipping information shows no item that matches this isotope.
- Alarms still unresolved and considered suspicious after the secondary inspection.
- Unusually high level of radiation.

Technical reachback will contact the appropriate authorities as outlined in the procedures not included in this document to support further investigation [4],[11]. Prior to contacting other authorities, the reachback organization and Customs will ensure the necessary information is documented.

3. Memorandum of Understanding between IANP and GCD

A Memorandum of Understanding no.419 dated 14.01.2009 is signed between General Custom Directorate and IANP with the aim “For detecting and combating of illicit trafficking on radioactive materials” [4] where the following ways of collaboration are reflected:

- Cooperation when radioactive materials beyond prescribed norms are determined;
- Technical assistance for operation of radiation detection equipment and interdictions (such as RIDs identify Special Nuclear Material, neutron radiation is detected, suspicious alarms, unusual high levels of radiation).
- The continuous training of Front Line Officers to improve the effectiveness and efficiency of alarm assessments and actions taken.

Cooperation with law enforcement agencies

Radiation Protection Commission has the support of Institute of Applied Nuclear Physics to take under control of all orphan sources. IANP performs all procedures for the safety and security of the sources with orphan status to the storage of this Institute. The expenses in case that the owner of the sources is not identified are covered by State. The RPC has established and implemented written procedures that address the actions to be taken in respect of sources that have been found or lost from authorized control. Also these are treated as a part of emergency procedures

Conclusions

Albania has been working closely with the IAEA in the field of security of radioactive sources. Together have been preparing and approved the INSSP.

In this framework Albania has reviewed the existing laws and have in process the regulations to determine where provisions specifically related to nuclear security issues (physical protection, illicit trafficking, import-export, border control, waste management, penalties), taking into account international legal instruments, recommendations and IAEA guidelines (gap analysis).

The role of Radiation Protection Commission is very important in the implementation of the requirements for the security of radioactive materials in Albania.

References

- [1] Law no. 8025, dated 11.01.1995 "On protection against ionizing radiation" amended No. 9973, July 28-th 2008
- [2] Decision no. 877, date 30.10.2015 of Council of Minister for the approval of the regulation "On physical protection of radioactive materials in the Republic of Albania"
- [3] Decision no. 638, date 07.09.2016, of the Council of Ministers "On the approval of the regulation on the safe handling of radioactive waste in the Republic of Albania"
- [4] Cooperation Agreement between Center of Applied Nuclear Physics and the Directorate General of Customs 419 dated 14/01/2009 "On discovering and combating the illicit trafficking of radioactive materials"
- [5] Law no. 102/2014, "the Customs Code of the Republic of Albania", 22 August 2014
- [6] Regulation no. 9, date 07.01.2010 "On the categorization of radioactive sources in the Republic of Albania", in function of the radiation protection, safety and security of ionizing radiation sources
- [7] Guideline no. 1526/2, dated 13.04.2012 "Over the procedures of physical movement for radioactive materials, goods and reaction in case of incident with radioactive sources in CPs"
- [8] Decision no.815, dated 16.11.2016 on the adoption of the regulation "On the safe transport of radioactive materials
- [9] Decision no. 158, date 13.02.2008 of Council of Minister over "Import-Export of Ionizing Radiation Sources
- [10] Regulation no.4873 / dated 17.06.2008 "On cooperation between the Customs Service and the State Police"
- [11] Regulation about Standard Operation Procedures for Recovery of Radioactive Materials date 10.05.2016.