



CUSTOMS CONTROL OVER THE TRANSPORTATION OF RADIATION SOURCES AND RADIOACTIVE MATERIALS THROUGH THE FRONTIER OF THE REPUBLIC OF BELARUS

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Abstract

1. *As it is shown in the name the main purpose of this Paper is to describe system of customs control over transportation of radiation sources and radioactive materials through the frontier of the Republic of Belarus, clarifying herewith influence of global situation on the creation of this system and noting technical needs of Customs Administration of Belarus in its activities aimed at strengthening the control system.*
2. *The Republic of Belarus has not the enterprises of atomic-industrial complex and does not produce radioactive and nuclear materials, so, control over them is largely connected with their transit through frontiers of Belarus and its territory. It is necessary to note, that the frontier of Belarus with the Ukraine, Poland and Baltic States is an external frontier of a Custom Union between Belarus, Russia, Kazakhstan and Kirghizia. On the territory of the last three states are concentrated extraction and production of radioactive and nuclear materials, part of which can be transported by the shortest way to the European countries through the territory and frontiers of the Republic of Belarus.*
3. *The significant part of the republic territory (about 20 %) suffered from Chernobyl catastrophe. In a number of the polluted regions of Belarus there were created the zones of «moving people further out», the residing on them is prohibited by legislation. On those territories there were created numerous burial grounds for the conditionally radioactive and low radioactive wastes. In this connection, there is also a danger of illegal importation of various radioactive wastes from contiguous countries to these zones and burial them there. On the other hand, there are known the numerous cases of exportation of various materials, subjects, food from the polluted zones even out of Belarus.*
4. *Taking into account the aforesaid the Customs Administration of the Republic of Belarus as well as other public authorities, clearly recognizes the necessity of organization of an effective radiation control on customs frontiers and on the territory of Belarus, so, for these purposes there was developed the special legislation consisting of international instruments and national governmental acts. The main of them are International Program INTAR, Governmental Act of March 18, 1997 «About establishment of the interdictions and limitations on movement of things through customs border of the Republic of Belarus»; Agreement between the Republic of Belarus and the United States of America concerning liquidation of consequences of emergencies and prevention of proliferation of the weapons of mass destruction of October 22, 1992, Protocol between Customs Services of Members of the Commonwealth of Independent States on interaction in organizing the customs control over fissionable and radioactive materials of May 21, 1998, Law of the Republic of Belarus «About radiation safety of the population» of January 5, 1998, Order of the Customs Administration of the Republic of Belarus «About the customs control over radioactive substances» of December 23, 1997, Regulations on the control over radioactive contamination of the Republic of Belarus by Chernobyl catastrophe, and others.*

5. *On the basis of the named documents the Customs Administration works on organization of an effective customs control over the transportation of radiation sources and radioactive materials through the frontier of the Republic of Belarus. Actually this control covers the following tasks: ensuring radiation safety of the population of the Republic of Belarus, suppression of illegal movement of fissionable and radioactive materials through customs border, revealing of offenses of customs and other laws. It is carried out in conformity with international standards and consists of: primary radiation control, additional radiation control and detailed radiation examination.*

It is well understood that organization of an effective radiation control largely connected with personnel training and acquisition of special equipment. In this fields the Customs Administration of Belarus received a significant assistance from customs administrations of Austria, Germany, Finland, France, the United States of America, Russian Federation. So, Customs Administration of Belarus expresses its acknowledgments to them for the rendered assistance.

1. Introduction

1.1. Actually Governments of majority of countries of the world realize in full measure necessity of the strict control over unauthorized movement of the radioactive and nuclear materials through state frontiers. In the light of this they made emphasis on creation of such control systems, which represent a complex of means having high sensitivity to detection of small quantities of radioactive and nuclear materials, including special materials (for weapons).

1.2. The given situation took shape because the last years the world community is facing a problem, which until now was considered as an abstract problem connected with possibility of partial or even full run of proliferation of nuclear and radioactive materials out from control. On the one hand, this process was sharply sped up by disintegration of the USSR, and, on the other hand - by general development of high technologies in the world, that allowed a number of the states to create their own nuclear or radiological weapons.

1.3. In connection with aforesaid the traditional «paper-registration» control system of movement of radioactive and nuclear materials both inside the states and through their frontiers became less effective. Besides, decentralization and intensification of trade in fissionable and radioactive materials resulted in growth of their carriages and became reasons of a problem connected with strengthening of measures aimed at safety of transportation of similar materials. In existing concept of safety is put not only traditional staff and environment protection during transportation of the indicated materials, but also economic protection connected with a problem of confirmation of isotope structure (under the nomenclature and quantity) stated while dispatching.

2. Prerequisites of creation of radiation control system in the Republic of Belarus

2.1. General prerequisites

2.1.1. The Republic of Belarus has not the enterprises of atomic-industrial complex and does not produce radioactive and nuclear materials, so, control over them is largely connected with their transit through frontiers of Belarus and its territory. It is necessary to note, that the frontier of Belarus with the Ukraine, Poland and Baltic States is an external frontier of a Custom Union between Belarus, Russia, Kazakhstan and Kirghizia. On the territory of the last three states are

concentrated extraction and production of radioactive and nuclear materials, part of which can be transported by the shortest way to the European countries through the territory and frontiers of the Republic of Belarus.

2.1.2. Besides, the significant part of the republic territory (about 20 %) suffered from Chernobyl catastrophe. In a number of the polluted regions of Belarus there were created the zones of «moving people further out», the residing on them is prohibited by legislation. On those territories there were created numerous burial grounds for the conditionally radioactive and low radioactive wastes. In this connection, there is also a danger of illegal importation of various radioactive wastes from contiguous countries to these zones and burial them there. On the other hand, there are known the numerous cases of exportation of various materials, subjects, food from the polluted zones even out of Belarus.

2.1.2. In this connection, creation of system of the radiation control on Byelorussian frontier is an actual problem for ensuring economic and political safety of the State and safety of its citizens. This system already has certain normative base.

2.2. Legal prerequisites

2.2.1. The Republic of Belarus, as the Member of International Atomic Energy Agency, Custom Union of the four CIS countries, Union with Russia, confirmed creation of a system of the radiation control on the state frontier pursuant to the following international obligations and republican acts:

- International Program INTAR (Illicit Trafficking Radiation Assessment Program) aimed at prevention of illegal movement of radioactive and fissionable materials through customs borders;
- Decision of the Council of Ministers of the Republic of Belarus of March 18, 1997 N 218 «About establishment of the interdictions and limitations on movement of things through customs border of the Republic of Belarus»;
- Agreement between the Republic of Belarus and the United States of America concerning liquidation of consequences of emergencies and prevention of proliferation of the weapons of mass destruction of October 22, 1992;
- Perspective plan of cooperation of Members of the Commonwealth of Independent States in peaceful use of atomic energy and increase of safety of nuclear installations of January 17, 1997, aimed at cooperation between customs and special services, ministries and departments on counteraction to an illegal turn-over of nuclear and radioactive materials - section 1.4.;
- Protocol between Customs Services of Members of the Commonwealth of Independent States on interaction in organizing the customs control over fissionable and radioactive materials of May 21, 1998, aimed at establishment of an order of informing and interaction of Contracting Parties in cases of illegal movement of fissionable and radioactive materials through customs borders;
- Law of the Republic of Belarus «About radiation safety of the population» of January 5, 1998, determined fundamentals of the law regulation in the field of radiation safety of the population. These fundamentals are aimed at creation of conditions ensuring life and health protection of the people from harmful effect of ionizing radiation;
- Order of the Customs Administration of the Republic of Belarus «About the customs control over radioactive substances» of December 23, 1997 N 434 determined the order and operations of the officials of customs service as well as of other competent bodies while movement of fissionable and radioactive materials through customs borders of the Republic of Belarus;
- Regulations on the control over radioactive contamination of the Republic of Belarus by

Tchernobyl catastrophe determined a network of divisions of the radiation control on the territory of the Republic of Belarus and their competence;

- Regulations about organization of customs researches and examinations in customs service of the Republic of Belarus (adopted by Order of Customs Administration on December 19, 1994 N 377) determined conditions and order of production of customs researches and examinations in customs service as well as order of withdrawal, packing, transportation, registration, storage and disposal of samples and specimens taken for customs research.

3. Elements of control system

Pursuant to the above-stated the customs service of Republic of Belarus determined the following tasks of the customs control over fissionable and radioactive materials: ensuring radiation safety of the population of the Republic of Belarus, suppression of illegal movement of fissionable and radioactive materials through customs border, revealing of offences of customs and other laws.

3.1. Object and forms of control

3.1.1. Objects of the customs control over fissionable and radioactive materials are goods under the customs control, and means of transport moved through customs border of the Republic of Belarus.

3.1.2. The customs control over fissionable and radioactive materials is carried out in the forms of:

- survey of appearance of transport packing kits (sets) for their conformity to established requests;
- examination with use of technical means, as the primary radiation control and additional radiation control;
- customs research as detailed radiation examination.

3.2. Stages of Control

The customs control is carried out in case of availability of information about movement of radioactive substances as well as by selection (under solution of the customs officials) and includes the following stages: primary radiation control, additional radiation control, detailed radiation examination.

3.2.1. Primary radiation control with the use of stationary radiation control systems (SRCS) is carried out before presentation of goods and means of transport for customs clearance. The primary radiation control is carried out in cases when in point of customs clearance there are no SRCS, but there are dosimeters-warning indicators.

3.2.2. The primary radiation control on the frontier is made in an automatic regime by automobile stationary systems of radiation control (ASSRC). The activity on the primary radiation control was begun in the republic in 1994 by installation of SRCS (production of French firm NARDEUX) in border crossings «Kozlovichi» and «Warsaw Bridge». In 1996 five border crossings (Berestovitsa, Bruzgi - Grodno custom-house; New Guta - Gomel custom-house; Kamenny Log, Kotlovka - Oshmyany custom-house) were equipped with ten SRCS (production of byelorussian firm POLYMASTER). Besides, within the framework of the Nann-Lugar Program to the Republic of Belarus there were delivered 36 foot SRCS (production of the company RADOS) and one SRCS (production of the company LUNDLUM) - within frames of cooperation between special services of the Republic of Belarus and the USA.

3.2.3. Additional radiation control is carried out after presentation of things to customs clearance with use of devices of the radiation control intended for determination of concrete parameters of measured values. This control includes localization of a radiation source in case of SRCS operation and its primary identification in field conditions, determination of availability of surface contamination of objects by alpha and beta radiation sources. The additional radiation control is made by portable devices intended to be operated in severe conditions.

3.2.4.1. A limited number of portable search screen monitors PRM-470 and GATEMAN (production of the American companies) were delivered to customs services of the Republic of Belarus within the framework of the Nann-Lugar Program.

3.2.4.2. Tasks of the additional radiation control:

- finding out the reasons of SRCS operation or of radiation control devices;
- locating a source of ionizing radiation;
- separating the radiation consignment and people; isolation of the revealed object, which contains a source of ionizing radiation with observance of norms of radiation safety.

3.2.5. Detailed radiation examination is carried out in accordance with «Regulations on organization of customs researches and examinations in customs service of the Republic of Belarus».

3.2.6. The selection and taking of samples for customs research is carried out by the customs officials authorized to realize customs control over radioactive materials, independently, or with engaging of the experts from specialized divisions. Upon termination of examination the customs officials should receive from the experts of customs laboratory or specialized laboratories the following: conclusion about reference of sample to radioactive substance, determination of its radio-isotope (qualitative) and quantitative structure and specific activity of substance, and also recommendation for radiation safety.

3.2.7. The customs official is made a decision: about issue of the sanction on movement through customs border or on fulfillment of operations determined by a customs procedure; about detention (withdrawal) or return of the radiation consignment if it is not smuggling.

3.3. Information necessary for registration (in case of detention of the means of transport)

3.3.1. Customs officials enter the following data in the register for means of transport:

- date and time of operation of devices;
- information on the driver and accompanying persons (name, passport data, place of activity and post);
- name of the enterprise-receiver, enterprise-shipper with the indication of addresses;
- name of the enterprise-carrier with indication of address;
- type of the means of transport, number, model;
- name, quantity, character of the consignment;
- availability of the permission on movement of radioactive substances/materials issued by Atom Supervision Body (Promatomnadzor) under Ministry on Extraordinary Situations of the Republic of Belarus.

3.3.2. If necessary, more detailed information is recorded or the copies of customs, transport and other documents are made. The above-stated information is entered in the register for all means of transport moving the radiation consignments through customs border of the Republic of Belarus (with or without permission of Promatomnadzor).

4. Needs of Customs Administration in creation of more effective control system

4.1. Actually, with the purposes to produce more effective customs control over fissionable and radioactive materials moved through the frontiers of Belarus the customs service of the Republic of Belarus has to be equipped with the following means of the radiation control:

| | Name | Quantity |
|----|------------------------------------|----------|
| 1. | Transport monitor | 54 |
| 2. | Searching microprocessor dosimeter | 138 |
| 3. | Radiometer-dosimeter universal | 20 |
| 4. | Mail-baggage monitor | 2 |

5. Conclusion

5.1. In conclusion it is necessary to note that the system of the radiation control over fissionable and radioactive materials in the Republic of Belarus is in process of active creation. It is connected first of all with the realizing, both by byelorussian population and by public authorities at all levels, the danger for people and environment hidden in illicit transportation of fissionable and radioactive materials as well as the linking with this proliferation of nuclear and mass destruction weapons. To an even greater degree the creation of the named system connected with liquidation of Chernobyl catastrophe consequences.

5.2. It is well understood that organization of an effective control over the materials in question demands from the competent public services, in particular from the Customs Administration of Belarus authorized to produce the named control, to develop legal basis, to train the staff and to equip specialized divisions. As for legislation and training - they are prepared, but acquisition and installation of equipment are in process of realization and connected with financial means.

5.3. Customs Administration of Belarus expresses acknowledgments to the international community for assistance rendered within the frameworks of special programs - significant assistance in acquiring equipment and personnel training were received from the United States of America, France, Germany, Austria, Finland and other countries. Customs Administration of Belarus is especially thankful to the Customs Administration of the Russian Federation for permanent help in all spectrum of customs matters.