Control of trafficking of radioactive sources/substances on European Community eastern border

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Abstract

Taking into account Latvia geographical location, historical core stones (the dissolution of Soviet Union, join to European Community) and increasing of the international terrorism treats, control fissile and non-fissile radioactive material become one of high priorities.

During past 2 years active work and practical exercise with representative from Ministry of Defense, Police, and Custom etc. on control of trafficking of such materials were performed and Operational Manual for Control on Radioactive Materials for Customs and Policy officers is issued.

All land borders check points with Russian Federation and Byelorussia, all harbors and airports were equipped with a gamma/neutrons or gamma control portals.

To control unwanted material traffic within the country, as well as to ensure the recycled scrap metal is source-free use of monitoring portals and additional portable detectors in the past years strictly increased.

Cases with alarm levels, when gamma dose rate exceeds more than 1.5 times the background level, are subject to reporting and analyzing by Radiation Safety Centre (RDC) experts (24 hours on duty). Consultative phone service for inhabitants is maintained; guidelines and working procedures within Authority and other Institutions involving were developed and implemented.

As a result, in 2007 RDC has got 612 reports from the border. In 83% cases this was relevant to the trains, in 17%- to the trucks. Mostly enhanced activity was due to potassium compounds in fertilizers (85%), due to ceramics (4%), abrasives (2.5%), and refractory materials (3%).

Controlling scrap metal there were revealed two sources in 2007 - one Sr-90 calibration source and other Cs-137 orphan source (origin unknown). The presence of radioactive sources in scrap in the past 3 years has been represented by Co-60, Cs-137 and Sr-90 sources, parts of statically electricity neutralizers, Ra-226. Several times NORM industries polluted materials were from scrap excluded.

Conclusions

Applied qualitative containment and surveillance procedures on transported goods in general strengthen system for control of radioactive sources and substances within European Community Member States, and shall have systematically approach. Hence we may conclude that the total amount of orphaned sources decreases accordingly.

KEYWORDS: regulatory control, border control, early warning, illicit trafficking, scrap metal, radioactive substance

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