



Fact Sheet

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Radiation Detection Equipment

The Canada Border Services Agency (CBSA) uses a variety of technology to help stop the entry of contraband and dangerous goods into Canada. The use of contraband detection technology enables CBSA officers to conduct effective, non-intrusive inspections, and allows the CBSA to focus on high-risk individuals and goods.

The CBSA is investing in technology to detect illicit shipments of radiological and nuclear materials entering Canada. The use of this technology will further reduce the risk that dangerous materials be smuggled into Canada.

In order to ensure the safety of its officers, the CBSA issued electronic dosimeters that produce an audible alarm if radiation surpasses a pre-set limit and that keep track of total amount of radiation exposure. Officers were also issued hand-held radiation detection equipment (GR135s) that are capable of pinpointing exact locations of radiation sources as well as identifying the specific type of radiation causing the alarm.

More recently, the CBSA has invested in portal and carborne radiation detectors. The portal detection system is a fully automated radiation detection system that is designed as a primary inspection tool. It is a stand-alone unit affixed to the ground, capable of mass-screening incoming marine containers in a short timeframe. If a container should trigger an alarm, the data from the portal would be sent to a central processing unit to determine if there is a need to dispatch a carborne unit for a secondary inspection.

A carborne unit is a mobile radiation detection system that is mounted on the roof of a vehicle. These units carry out a general search for radiological material and identify the type of radiation present. Personnel located at the port and at the National Risk Assessment Centre in Ottawa, with the assistance of the scientific experts from the CBSA laboratory, will investigate the cause of the alarm triggered by either the portal or the carborne radiation detection systems. The scientists are able to discern whether an alarm was caused by naturally occurring radiation or if it is a dangerous good.

The radiation detection equipment is completely safe for employees and the public, as it does not emit any radiation. The technology has long been used in industry and in other countries.

Radiation Detection Equipment is the latest in the innovative technologies that the Canada Border Services Agency has invested in to further reduce the risk of dangerous and illicit materials being smuggled into Canada. The CBSA continues to explore the use of state-of-the-art technology in order to maintain its commitment to being an innovative leader in border management.