



**Scientific Study on
External Ionising Radiation Exposure
during Vehicle Radiographic Inspections
“X-ray Study”**

**UNECE – WP.30
Geneva, 12 June 2012**

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This is the IRU





Evolution of IRU Membership



Security demands lead to increase in vehicle scanning



the world road transport association  International Road Transport Union

CTWG10093/IFKR Geneva, 4 November 2010

IRU RESOLUTION ON USING X-RAY EQUIPMENT FOR INSPECTING VEHICLES AT BORDERS AND PORTS

adopted unanimously by the IRU Goods Transport Council
in Geneva on 4 November 2010

IRU Resolution on limiting the health and safety risks of x-ray vehicle inspection technology for commercial vehicle drivers.

The International Road Transport Union (IRU), representing road transport operators through its 180 Members in 74 countries on 5 continents,

Considering that

- Border, port and other inspection authorities use non-intrusive inspection ("x-ray") technology more and more in order to produce interior images of commercial vehicles
- Such technology is used to reveal contraband, such as drugs, weapons and currency, as well as the onboard presence of illegal immigrants, therefore, inspection authorities consider this tool as an efficient complement to their cumbersome work of manual inspections, including with canine teams
- X-ray equipment may involve mobile or static inspection machines using various ray sources
- Different control procedures and scanning equipment is used by different countries, which indicates a lack of harmonisation in enforcement
- X-ray scans of one and the same vehicle may take place several times a day on the same route and during the same trip without mutual recognition of such checks, while international and national legislation calls for a decrease in the number of controls en-route
- No preventive measures to protect the drivers are available as well as no information on control procedures and on the impact of x-ray inspections on the health of drivers is accessible

Urgently calls upon governmental authorities to

- Obtain from the manufacturers of x-ray equipment a guarantee that the x-ray technologies and apparatus used are harmless, i.e. without negative health consequences for the driver and without damage to the cargo, as well as ensure that

IRU Resolution

Is there a health and safety risk for drivers?

Scientific Study on
EXTERNAL IONISING RADIATION EXPOSURE DURING
CARGO / VEHICLE RADIOGRAPHIC INSPECTIONS

Executive Summary and Recommendations



Zagreb,
April 2012

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Study by the
Institute for Medical
Research and
Occupational Health
Zagreb, Croatia –
Recommended by the ILO



There are 2 types of scanners used at borders

Silhouette Scanner

- Driver sits inside the vehicle
- Driver drives the vehicle through the scanner



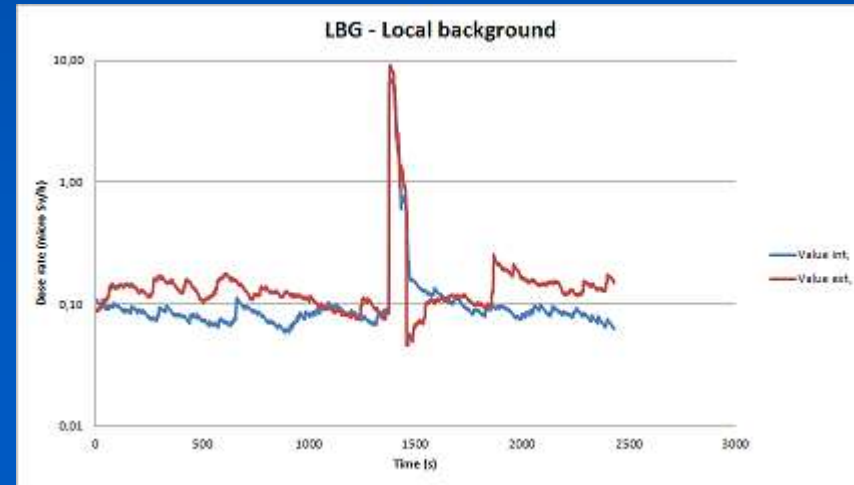
There are 2 types of scanners used at borders



LINAC Scanner

- Driver is not in the vehicle
- LINAC scanner moves along the stationary vehicle

- Background radiation was measured and equipment calibrated
- Phantom driver control measurements
- Drivers carried personal dosimeters
- Dosimeters were placed in the cabin



- On site scanning and safety procedures were observed and compared with accepted international standards
- Customs officers, x-ray scanning operators, inspection staff and drivers were interviewed at every border crossing visited



➤ Customs keep history track of every truck-company - driver scanned (blacklist?)

Szukanie historyczne

Data startu: Data końca:
 Wynik inspekcji: Wynik inspekcji:
 Pokaż obrazy RTG Pokaż zdjęcia

Numer kontenera: Numer rejestracyjny pojazdu:
 Numer paszportu: Tył ANPR:
 Prząd ANPR: Nazwisko kierowcy:
 Numer rejestracyjny naczepy:

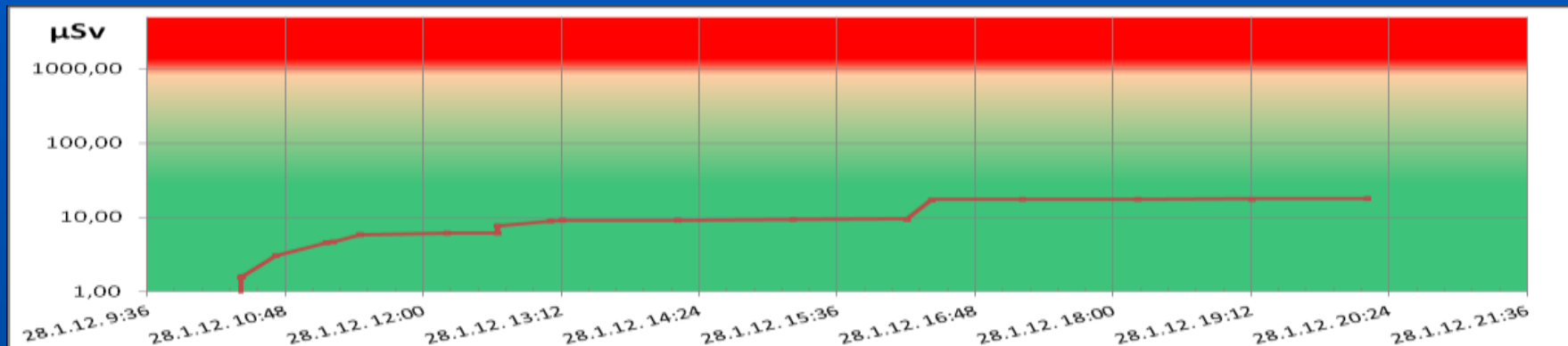
4 Wyniki

ID	Katalog	Widok	Porównaj	Data	Wynik inspekcji	Wynik szukania	RTG	Numer kontenera	Komentarz	Nazwisko kierowcy	Numer paszportu	Numer rejestracyjny pojazdu	Numer rejestracyjny naczepy
30313	20120419027	<input type="button" value="Widok"/>	<input type="button" value="Porównaj"/>	2012-04-19 09:39:35		<input type="checkbox"/>		ZP120419006	MAN PSP DLA OC	Zerowy	Zerowy	RZ79134	RZ9736C
18860	20111105005	<input type="button" value="Widok"/>	<input type="button" value="Porównaj"/>	2011-11-05 09:19:43		<input type="checkbox"/>		MM111105003	MAN PSP DLA OC	Zerowy	Zerowy	RZ79134	RZ9736C
9727	20110611020	<input type="button" value="Widok"/>	<input type="button" value="Porównaj"/>	2011-06-11 08:51:47		<input type="checkbox"/>		RK110611005	MAN PUSTY DLA OC	Zerowy	Zerowy	RZ79134	RZ9736C
6082	20110430025	<input type="button" value="Widok"/>	<input type="button" value="Porównaj"/>	2011-04-30 09:08:17		<input type="checkbox"/>		RK110430008	MAN PUSTY DLA OC	Zerowy	Zerowy	RZ79134	RZ79134

- Scanning stationary vehicles takes considerable time
- Clear information on the scanning process is missing
- Border authorities were sometimes not acquainted with radiation protection standards

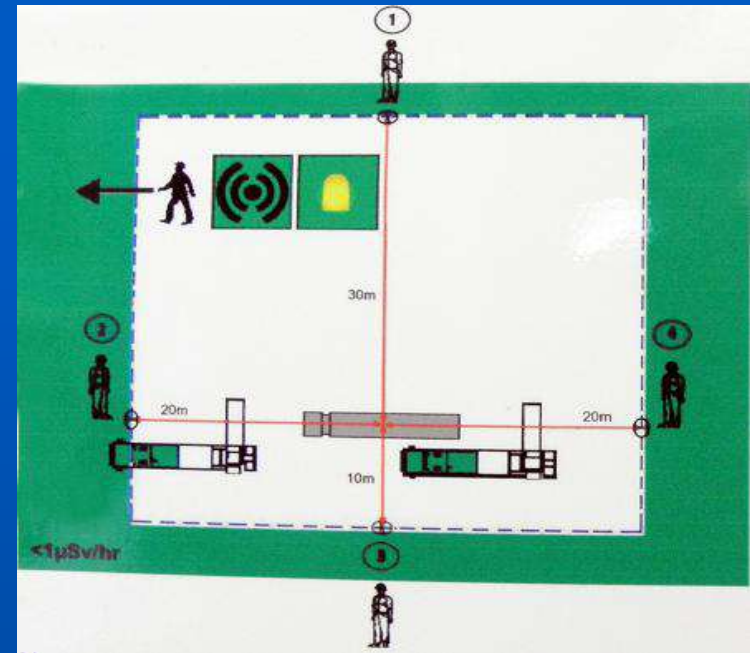


- No occupational health and safety risks for drivers if procedures are followed
- No residual radiation occurs in the vehicle



Study Results

- Internationally recognised radiation protection standards are not always followed



- **Install appropriate information panels everywhere x-ray scanning is performed**
- **Develop x-ray scanning certificates to facilitate and accelerate process**
- **Implement internationally recognised x-ray scanning procedures**
- **Improve education of drivers, Customs officers and x-ray scanning operators on the functioning and risks of x-ray scanning**



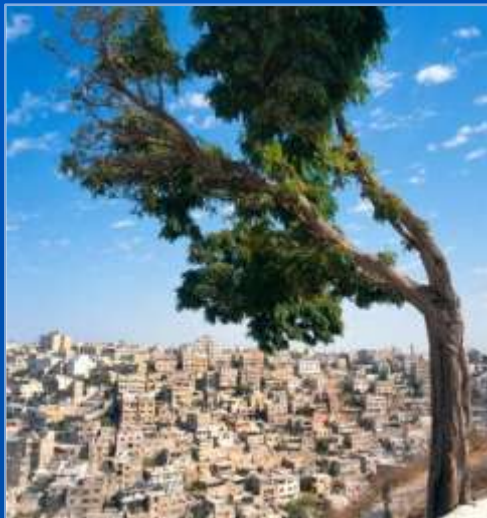
Save the date!



7th Euro-Asian Road Transport Conference & Ministerial Meeting



Amman, 12-13 June 2013





www.iru.org

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for a better future*



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