Scientific Study on External Ionising Radiation Exposure during Vehicle Radiographic Inspections

“X-ray Study”

UNECE – WP.30
Geneva, 12 June 2012

Jens Hügel
Head – Sustainable Development
This is the IRU
Evolution of IRU Membership

2012: 170 Members in 73 countries

2012: 22 CRIPA Members
Security demands lead to increase in vehicle scanning

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
Study Methodology

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

- 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?)
Study Results

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

- No occupational health and safety risks for drivers if procedures are followed
- No residual radiation occurs in the vehicle
Internationally recognised radiation protection standards are not always followed.
Study Recommendations

- 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
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