

# **HUNGARIAN PRACTICE AND SOME TYPICAL CASES**

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# MONITORING SYSTEMS ON BORDER STATIONS

## BORDER

Ukraine: 8

Serbia: 8

Croatia: 7



Romania : 13

Sum: 36

Measurement directions: (only inward)



**Metal recycling place**

**Hungarian made detection system (Nal)**

**Gate monitors**

**Full plastic detection system**



# **MONITORING SYSTEM IN A METAL RECYCLING PLACE**



**11 MONITORING SYSTEMS AT RECYCLING PLACES  
IN HUNGARY  
GOOD CONNECTION WITH NATIONAL RADIOHYGIENE  
DUTY SERVICE**

## **Metal tubes with naturally radioactive sources in scale**



**LOACKER Zrt, Budapest, 2008**

**volume: 4 m<sup>3</sup>**

**metal recycling place**

**Th-232**

**doserate: 2-3 x BG**

**no injury or accident**

**recycling place called the National Radiohygiene Duty Service  
melted in furnace of Dunafer (EUROFER)**

**ERECO Zrt, Budapest, 2008**

**volume: 0,5 m<sup>3</sup>**

## Sent back scrap metal from Bosnia

**2007. April**

**Place: metal recycling place in  
Budapest**

**Ra-226 radioactive isotopes  
ten sources**

**Cause: measuring only inward**

**Activity: ~ 1 MBq/source**

**Doserate on carriage: max. 15  
 $\mu\text{Sv/h}$**



# Sent back scrap metal from Bosnia



**Border station called the National Radiohygiene Duty Service**

**No out-going measurement, no injury or accident**

**Radioactive Waste Treatment and Disposal Facility, Püspökszilágy**

**Conclusion: You should measure both of the directions of the shipments (inward/outwards)**

**SOME OTHER CASES**





# **NATIONAL RADIOHYGIENE DUTY SERVICE**

- **2003/122/EURATOM -> 64/2005. (XII.22.) Ministry of Health**
- **Decree 16/2000. (VI.8.) Ministry of Health**
- **Non-stop duty service in Hungary, responsible organisation in case of extraordinary events by radioactive isotopes**
  
- **Director, Deputy director**
- **6 persons / officers**
- **24 hours / 365 days**
- **Events:           50 events/year**
  - **5 events on the scene**
  - **1-2 scrap metal events**



# THE CAR OF NATIONAL RADIOHYGIENE DUTY SERVICE

Transport: up to 5 GBq Co-60 equivalent activity



# **SUMMARY**

## **For discussing:**

- **One company, one gate and many parks/ recycling places**
- **Direction of measurements, inward/*outwards***
- **If the source is taken to the RWTDF, who pay the costs (if there is not an owner)**



**THANK YOU FOR YOUR ATTENTION!**