Management of disused sealed sources in Lithuania

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Management of disused sealed sources in Lithuania
Legal basis

- Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management;
- Government Resolution No. 174 On Approval of the Strategy of Radioactive Waste Management (2002, reviwed 2008);
- Law on Radiation Protection (1999);
- Law on the Management of Radioactive Waste (1999);
- Resolution No. 205 On Republic of the Lithuania Government Resolution No. 653 "On Regulations of Licensing the Practices Involving Sources of Ionizing Radiation" (2004);
- Lithuanian Hygiene Standard HN 73:2001 "Basic Standard of Radiation Protection";
- HN 89:2001 "Management of Radioactive Waste";
- Rules of Physical Protection of Ionizing Radiation Sources.
- Regulation on the Pre-disposal Management of Radioactive Waste at the Nuclear Power Plant, VD-RA-01-2001

Management of disused sealed sources in Lithuania
Former practice

- Since 1964 all radioactive waste from the research, medical and industrial institutions was sent to disposal facility at Maišiagala (volume of facility 200 m3).
- In 1989 that facility was closed. Since then, all collected institutional waste is stored at the Ignalina NPP storage facilities.
- The Maišiagala facility was originally designed as a final repository however, recent safety assessment showed that the facility meets only temporary storage facility requirements. RATA received a VATESI license for post closure surveillance of the closed Maišiagala storage facility.

Main practice of management of sources of ionizing radiation (1)

- It is prohibited to produce, operate, market, store, assemble, maintain, repair, recycle, transport sources of ionizing radiation and handle related radioactive waste without a license issued by the RPC.
- 5 risk categories according IAEA Code of Conduct on the Safety and Security of Radioactive Sources and requirements of Council Directive 2003/122/EURATOM.
- *State Register of Ionizing Sources and Doses of Workers* managed by RPC.
- Regular inspections.

Main practice of management of sources of ionizing radiation (2)

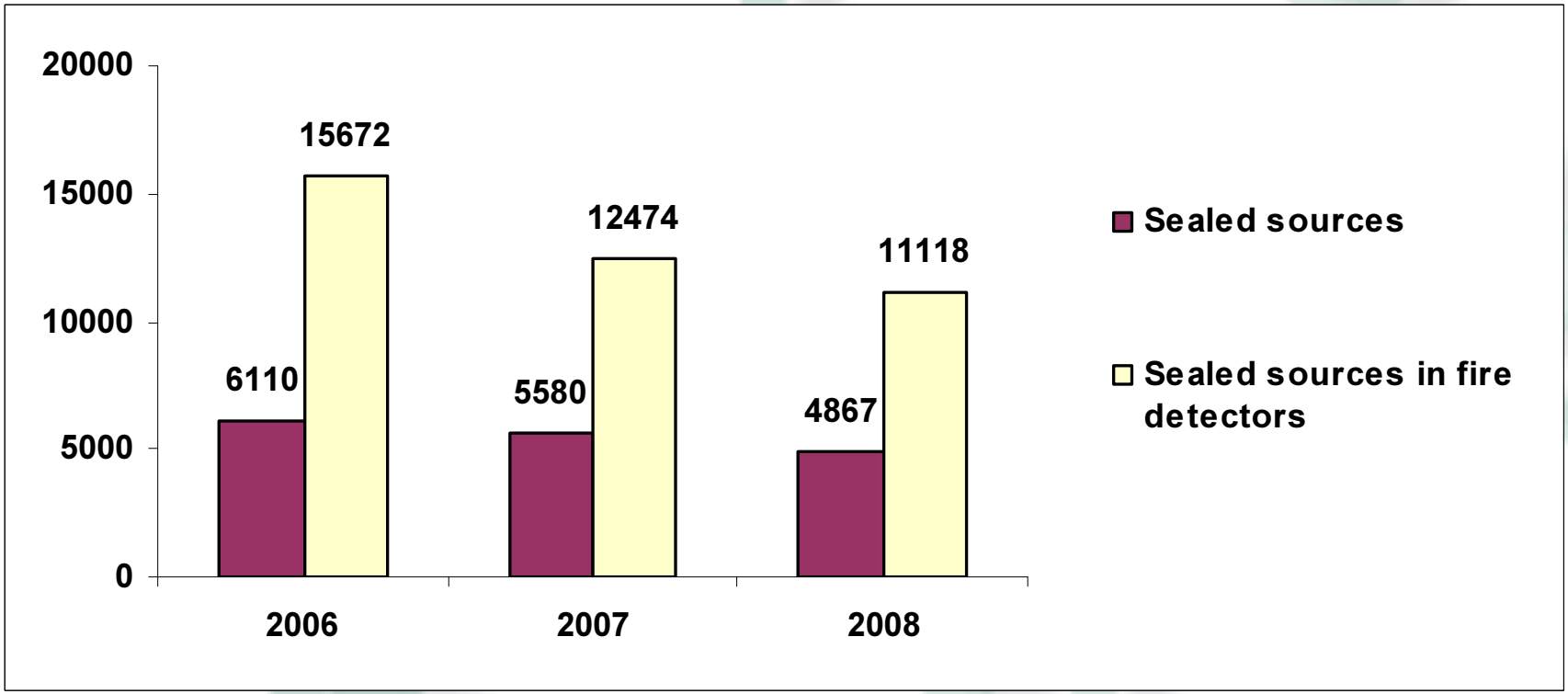

Fig. 1. Variations of number of sources in 2006-2008

Main practice of management of disused sources

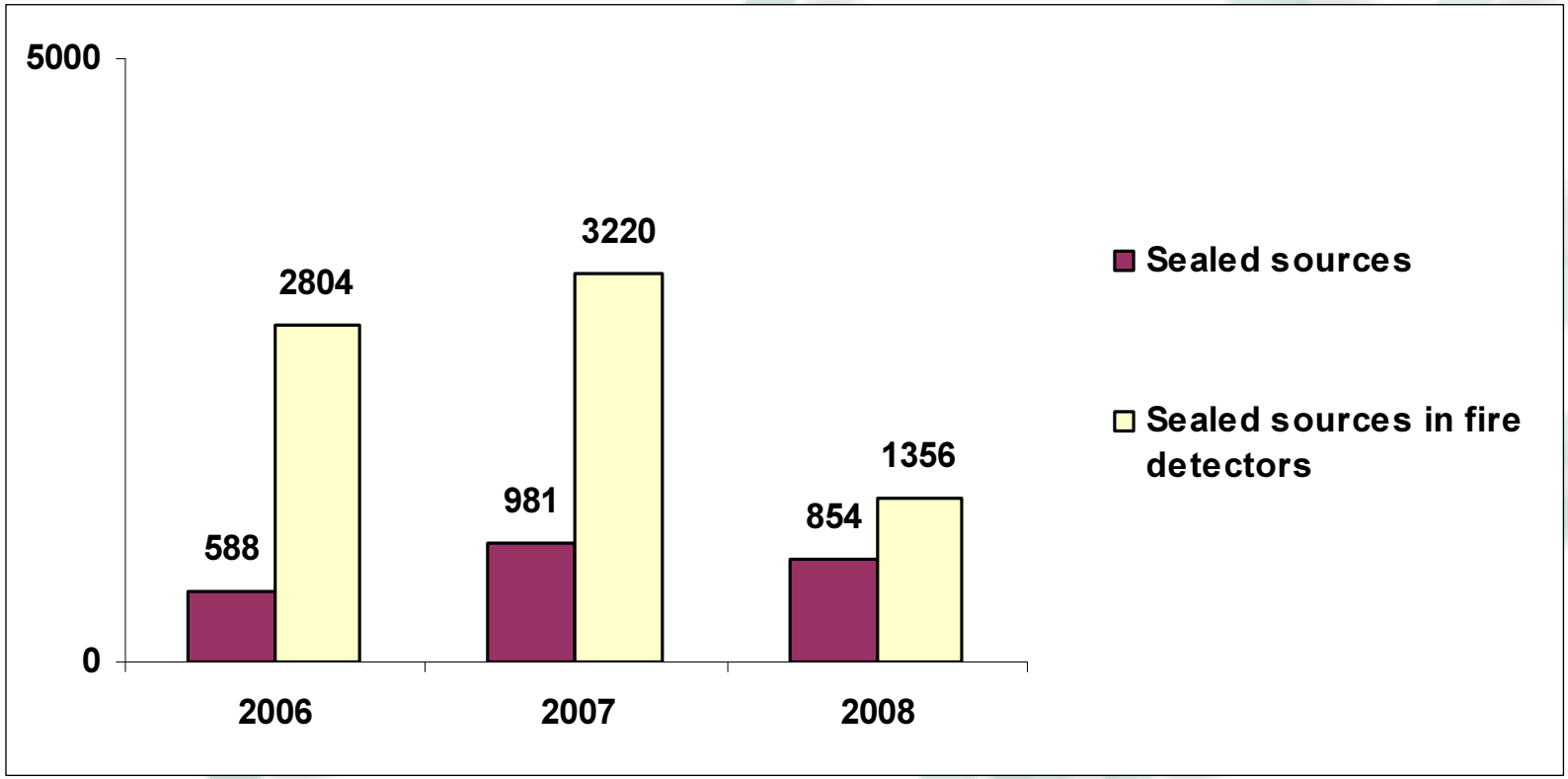

Fig. 2. Variation of eliminated from the State Register sources of ionizing radiation in 2006-2008

Requirements for management of disused sealed sources

- Sealed sources may be imported into the Republic of Lithuania if after their use it is intended to return them to their supplier.
- Contract with the Radioactive Waste Management Agency (RATA) and surety bond .
- The Radiation Protection Centre, when issuing licences for the activities involving sources of ionising radiation, takes account of the possibility of their final disposal or their return to the supplier.

Orphan sources

- ***Regulations on Handling of Illegal Sources of Ionizing Radiation and Contaminated Facilities*.**
- ***Regulations of High Activity Sealed Ionizing Radiation Sources and Orphan Ionizing Radiation Sources.***
- **Inspections in metal scrap enterprises and yards, former soviet enterprises, areas of soviet military units and closed municipal disposal sites.**
- **2009**

  12 orphan smoke detectors with Pu-239 radionuclide were found in the cleared forest strip, near Vilnius-Panevėžys highway.

Management of disused sealed sources in Lithuania
Future practice

- Disused sealed sources will be collected from the waste producers (users of sources) and stored at Ignalina NPP until the new storage facilities will be build.
- All sources stored at Ignalina NPP legacy storage facilities will be retrieved and separated from other radioactive waste and then stored in new storage facility waiting for disposal.
- Radioactive waste as well as treated sources will be disposed according to waste acceptance criteria.

Thank you!