

● EU HASS Directive

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● Situation before the HASS Directive

- No satisfactory regulatory system in force at time of supply of sources
- Traceability of sources not assured during the whole lifecycle
- Lack of awareness of users of sources
- Storage of disused sources in user's premises for undefined periods
- Disappearance of the user problematic (esp. bankruptcy)

● Directive background

- “... the EC came to the conclusion that it would be appropriate to adopt specific legislation supplementing the BSS-Directive with a view to strengthen the control by the competent national authorities on those sealed radioactive sources posing the greatest risk and to emphasise the responsibilities of holders of such sources”
- Council Directive 2003/122/EURATOM of 22 December 2003 on the control of high-activity sealed radioactive sources and orphan sources

● HASS overview of requirements

- Prior authorisation
 - » Close the cycle, including financial provisions
- Record keeping
 - » Holder
 - » Authority
- Traceability
 - » Identification and marking, documentation
- Operational safety requirements
- Education and training
 - » Awareness of the consequences of loss
- Orphan sources
 - » Emergency preparedness
 - » Recovery campaigns

● Article 1 – Purpose and scope

- Purpose:
 - » to prevent exposure of workers and the public to ionising radiation arising from inadequate control of high-activity sealed radioactive sources and orphan sources
 - » to harmonise controls in place in the Member States by defining specific requirements ensuring that each such source is kept under control
- The minimum obligations resulting from this directive supplement those set out in directive 96/29/Euratom

● Article 2 – Definitions

● High activity sealed sources

- “sealed source containing a radionuclide whose activity Is equal to or exceeds the activity level specified in Annex I”
- different from the IAEA classification !

● Orphan sources

- “sealed source, the activity level of which, at the time of discovery, is above the exemption level referred to in Art. 3(2)(a) of BSS-Directive, and which is not under regulatory control, either because it has never been under regulatory control or because it has been abandoned, lost, misplaced, stolen or transferred without proper notification of the competent authority, to a new holder or without informing the recipient”
- Member States may exclude sources once their activity level has fallen below the exemption levels of BSS Directive

● Article 3 – Authorisation

- Member States shall require the holder to obtain prior authorisation for any practice involving a source, including taking possession of a source
- The authorisation covers: responsibilities, minimum staff competences, minimum source performance criteria, requirements for emergency procedures and communication links, work procedures, maintenance, adequate management of disused sources
- Authorisation can only be issued if adequate provisions, by way of financial security or any other equivalent means, have been made for the safe management of disused sources, including the case where the holder becomes insolvent or goes out of business

● Article 5 – Records

- The holder shall provide the competent authority with a copy of all or part of the records
 - when the records are established
 - at least every 12 months
 - if the situation changes
 - when the records are closed
 - at request from competent authority
- The competent authorities shall keep records of
 - authorised holders
 - the sources they hold
- The competent authorities shall keep the records up to date, taking transfers into account



Article 6 – Requirements for holders

- Each holder of a source shall:
 - » regularly undertake leak tests
 - » regularly verify that each source is still present and in apparently good condition
 - » after termination of use
 - return each source to the supplier
 - or place it in a recognised installation
 - or transfer it to another authorised holder (unless otherwise agreed with competent authority)
 - » ascertain before a transfer that the recipient holds appropriate authorisation





Article 7 – Identification and marking

- Each source has to be identified by a unique number
- The manufacturer shall provide a photograph of each manufactured source design type and of the typical source container
- The holder shall ensure that each source is accompanied by specific written information



Article 8 – Training and information

- Information and training shall place particular emphasis on the necessary safety requirements and shall contain specific *information on possible consequences of the loss of adequate control of sources*
- Member States shall *provide encouragement* to ensure that the *management and workers in installations where orphan sources are most likely to be found* (e.g. large metal scrap yards/recycling plants) and in significant nodal transit points are *informed and trained* in order to handle events where they detect a source



● Article 9 and 10 – Orphan sources

- Competent authorities must be prepared to recover orphan sources and to deal with radiological emergencies due to orphan sources
- Specialised technical advice and assistance must be available for persons who suspect the presence of an orphan source



Article 9 and 10 – Orphan sources (2)

- Member States shall *encourage* the establishment of systems aimed at detecting orphan sources in places where orphan sources may generally be encountered (e.g. large metal scrap yards/recycling installations, customs posts)
- Member States shall ensure that campaigns are organised, as appropriate, to recover orphan sources left behind from past activities
- Member States shall ensure that a system of financial security (or any other equivalent means) is established to cover intervention costs relating to the recovery of orphan sources



● Article 11 – International cooperation and information exchange

- Each Member State shall promptly exchange information and cooperate with other MS, third States, international organisations as regards
 - loss
 - removal
 - theft
 - discovery of sources

● Other relevant issues of the Directive

- Competent authority needs to be identified
- Standard record sheet for each source
- MS shall report on experience by end 2010
 - » Commission report thereafter
- Penalties required
- Advisory committee defined
 - » 2010 work programme item

● Consolidation of the European Radiation Protection Legislation “RECAST”

Project to combine the following into one directive:

- Basic Safety Standards, Directive 96/29/Euratom
- Medical Exposures, Directive 97/43/Euratom
- Public Information, Directive 89/618/Euratom
- Outside Workers, Directive 90/641/Euratom
- **Control of high-activity sealed radioactive sources and orphan sources, Directive 2003/122/Euratom**
- Radon, Commission Recommendation 90/143/Euratom

HASS in the new BSS

- Main articles and provisions should be included as they are
- No individual title on HASS – provisions can be found embedded in relevant titles
- Opportunity for improvement:
 - » Proposal to harmonise Annex 1 with the IAEA source categories and the Code of Conduct on sources
 - I.e. harmonise definition of HASS
 - » Harmonisation of terminology and definitions
 - » Improve the standard record sheet
 - » Proposal for additional requirements concerning orphan sources (?)
 - » Remove the management items (Advisory committee etc.)



BSS Recast timeline

- 2009 Finalisation of the Commission proposal for a new Directive
 - » Opinion by the Art. 31 Group of Experts
- 2010 Impact assessment
- 2010 Discussions at the Council start
- 201? Adoption
- 201? Transposition by the MS

- Other discussion topics in the recast project
 - New ICRP recommendations
 - Harmonisation with international standards (new IAEA BSS)
 - Integration of natural and artificial sources
 - » Impact on NORM and building materials industries
 - Better definition of medical/non-medical exposures
 - Graded approach to regulatory control
 - Exemption and clearance issues



Conclusion

- HASS Directive plays an important role in the safety and security of sources in the EU
 - » In addition to Code of Conduct and export guidelines of IAEA
 - » Need to harmonise definition with classification in international standards
- RECAST is an opportunity for putting the HASS requirements in a broader context and further fine-tune the HASS legislation

