

SAMIRA Workshop

Management of spent fuel and radioactive waste arising from non-energy uses of nuclear and radiation technologies

13 November 2019

Albert Borschette Congress Center, Brussels



European Commission

EU2019.FI Finland's Presidency of the Council of the European Union

The Finnish presidency

Safe and responsible management of radioactive waste and spent nuclear fuel originated from non-energy uses of nuclear and radiation technologies is as important as for the nuclear-fuel cycle for energy generation. Although the amounts of waste and spent fuel to be processed are substantially smaller compared to the energy sector, nevertheless there exists particular features to be considered and specific challenges to be tackled under sound policies.

The workshop aims at identifying strategies in place in the EU and at discussing how maintaining adequate skills and resources in this field, with a view to needs for supra-national cooperation. The workshop results are going to contribute to the preparation of Council conclusions about the waste management in non-energy uses of nuclear and radiation technologies.

Opening

9h00 – 9h15

Hans Rhein, Head of Unit EURATOM co-ordination, legal matters and international relations, DG ENER, European Commission

Session 1: Setting effective strategies for waste management from non-energy uses

Radioactive waste generation in non-energy uses occurs in all EU Member States, including those with no nuclear power programme, while 21 Member States manage spent fuel test/research reactors.

Setting an effective strategy to safely manage those materials may depend substantially on the national energy policy (i.e. whether the State pursues the use of nuclear energy or not) as well as on the distribution of waste generators (in general more spread than for nuclear energy related facilities). The presence of a structured national framework related to nuclear energy may facilitate a Member States to maintain a stronger safety culture, higher resources and competences, and it generally simplifies the identification of waste routes.

As an outcome of this session, the workshop participants should identify the various strategies adopted by Member States along with best practices and opportunities for improvement or for supra-national cooperation.

Chair: Liisa Heikinheimo, Deputy Director General Nuclear Energy and Fuels, Energy Department, Ministry of Economic Affairs and Employment, Finland

- 9h15-9h30 Management of spent fuel and radioactive waste in the context of the Council conclusions on non-power nuclear and radiological technologies and applications – Roxana Banu, Atomic questions attaché, Permanent Representation of Romania to the European Union
- 9h30-9h45 Management of non-energy spent fuel and radioactive waste in Sweden – Erica Brewitz, Senior specialist, Swedish Radiation Safety Authority (SSM)
- 9h45-10h00 Management of non-energy spent fuel and radioactive waste in Lower Saxony – Hilke Hattermann, Specialist, Ministry for the Environment, Energy, Building and Climate Protection of the State of Lower Saxony, Germany
- 10h00-10h15 Management of non-energy spent fuel and radioactive waste in Spain – Elena Vico Del Cerro, Head of the Safety and Licencing Department, ENRESA
- 10h15-10h30 The Euratom Joint Programme EURAD - ROUTES project – Elisa Leoni, EURAD – ROUTES WP Coordinator, IRSN
- 10h30-11h00 Q&A and discussion

Coffee Break: 11h00 – 11h15

Session 2: Maintaining adequate sectorial skills & resources

Like for strategies, ensuring access to adequate sectorial skills and resources may depend substantially on the national energy policy. As far as skills are concerned, there is of course a great deal of overlap between managing radioactive waste and spent fuel from non-energy uses of nuclear and radiation technologies and those from energy generation. Therefore, in those States with nuclear power programmes, resourcing plans are generally benefiting from the research and training programmes under the energy sector, with a sort of flywheel effect.

This session should provide a high-level assessment of challenges in maintaining skills and resources to cope with national needs. Best practices and opportunities for improvement or for supra-national cooperation should also be identified.

Chair: Said Abousahl, Head of Unit Euratom Coordination, Joint Research Centre (JRC), European Commission

- 11h15-11h30 The Finnish approach to maintaining adequate sectorial skills and resources – Jussi Heinonen, Director of Nuclear Waste Management, Radiation and Nuclear Safety Authority, STUK
- 11h30-11h45 Radioactive Waste Management - the perfect career – Ian Gordon, Section Head - Waste Technology Section, IAEA

12h00-12h15 JRC programmes in capacity building and monitoring human resources in nuclear – Franck Wastin, Head of Unit Knowledge for Nuclear Security and Safety, JRC

12h15-12h45 Q&A and discussion

Lunch Break: 12h45 – 14h00

Session 3: Topical challenges across diverse applications

Contrary to the case of nuclear power plants, a main feature of the management of radioactive waste and spent fuel from test/research nuclear facilities is the need to process a high variety of materials in relatively small quantities. As a general consequence, standardisation or industrialisation of processes might not be possible.

Generation of radioactive waste from medical applications is by nature rather decentralised. Likewise, disused sealed sources may originate from several places. This is a major feature to take into account for safe management of radioactive waste in this sector.

The outcome of this session should be a review of topical experiences.

Chair: Jussi Heinonen, Director of Nuclear Waste Management, Radiation and Nuclear Safety Authority, STUK

14h00-14h15 Status, requirements and way forward for the sustainable management of used nuclear fuel and radioactive waste from EU research reactors – Vanessa Vo Van, Vice-President Back-end Sales, Orano

14h15-14h30 Decommissioning of research reactors in Finland – Linda Kumpula, Senior specialist, Nuclear Waste Management, Ministry of Economic Affairs and Employment, Finland

14h30-14h45 Management of radioactive waste from the production of radioisotopes – Grégory Delécaut, head of IRE Lab, Belgian Institute for Radioelements (IRE)

14h45-15h00 Management of radioactive waste in a busy nuclear medicine department, Jennie Cooke, Senior Physicist, St James's hospital, Dublin

15h00-15h15 Recumo – Recovery of uranium from residues of ⁹⁹Mo based radio-pharma in Belgium, Sammy Shihab, RECUMO Director, SCK CEN

15h15-15h30 Management of disused sealed sources and radioactive wastes from non-energy applications in Italy, Alessandro Dodaro, Director of Fusion and Technology for Nuclear Safety and Security Department, ENEA; President, Nucleco SpA

15h30-16h00 Q&A and discussion

Coffee Break: 16h00 – 16h15

Closing session

16h15-16h45 Panel discussion: Session summaries, co-operation needs and opportunities

Chair: Liisa Heikinheimo (Finland)

Panellists: Gianfranco Brunetti (DG ENER), Said Abousahl (JRC), Jussi Heinonen (STUK), Ian Gordon (IAEA)

16h45-17h15 Q&A and open discussion

17h15-17h30 Closing remarks and next steps:

Jan Jilek, Deputy Head of Unit Radiation protection and nuclear safety, DG ENER, European Commission

Liisa Heikinheimo, Deputy Director General Nuclear Energy and Fuels, Energy Department, Ministry of Economic Affairs and Employment