

International Conference on Radioactive Waste Management: Solutions for a Sustainable Future (CN-294)



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International cooperation on predisposal waste management innovation in the PREDIS project, addressing technology gaps and common industrial challenges

The European community has initiated a cooperative research project aimed at developing and improving safer treatment and conditioning methodologies and processes for wastes. The project “PREDIS: Pre-Disposal Management of Radioactive Waste” addresses innovation and break-through technologies for better handling of low-level and intermediate level radioactive wastes, with a focus on treatment of metallic materials, liquid organic waste and solid organic waste which can result from nuclear power plant operation, decommissioning and other industrial processes. The project also addresses digitalization solutions for improved safety and efficiency in handling and assessing cemented-waste packages in extended interim surface storage. An example of this is digital twins and the use of artificial intelligence for big data mining from non-destructive evaluation methods. Through all of these pre-disposal treatment activities, waste acceptance criteria are a critical parameter for optimizing the safe and efficient handling and minimisation of wastes over the whole life cycle, from cradle to grave.

The PREDIS project will produce tools guiding decision-making on the added-value of the developed technologies and their impact on the design, safety, environmental impact and economics of pre-disposal waste management and future disposal. It is anticipated that the project results are close to implementation by the end user community, which is ensured through their active involvement with the partners and the co-funding structure of this EC project. The project’s Strategic Research Agenda will highlight needs for future technology development, investments and needs also from the perspectives of competence development and preservation of knowledge.

This 4-year project began in September 2020, including 47 consortium partners representing 17 Member States. The project also includes an additional 24 industrial partners engaged via the end user group to steer the project direction to focus on their most pressing needs and challenges. Details of the project can be followed at <https://predis-h2020.eu/>.

This presentation will highlight the achievements of the first year, including the detailed gap analysis and baseline strategic research agenda. The overviews about technical innovation activities from each waste stream will be presented, along with information on strategic studies relevant to all issues such as Waste Acceptance Criteria, environmental indicators and economic assessments of the improved technologies. A call to action is included, for wider engagement from interested stakeholders.

Do you wish to participate as a Young Professional?

No

Speaker’s title

Ms

Affiliation

Do you wish to be considered for a Young Professional grant?

No

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