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Programme

REM proficiency test workshop

Radioactivity Environmental Monitoring
building material proficiency test
&
Training course on measurement of
radioactivity in building materials

Joint Research Centre Geel

24 – 26 September 2024

Joint
Research
Centre

REM proficiency test workshop 2024

The aims of the workshop are

- to gather participants of the REM 2020 natural radioactivity in building material proficiency test and discuss the results
- to provide training with the aim of improving the level of radiation monitoring in Europe.

The events (including lunches and one dinner) are free of charge.

The workshop language will be English.

For breakout meetings, separate rooms are available

In-person attendance is preferred and recommended. We will enable online participation, but cannot guarantee that a two-way communication will be possible at all times and in case of technical problems, priority will be given to the on-site participants to be able to stick to the agenda.

The workshop and training course comprises presentations on the REM building material proficiency test, building material radioactivity measurement techniques, international standards and other auxiliary concepts of building materials linked to origin like geology and hydrogeology. Furthermore, radiological aspects of new types of building materials and also decommissioning issues will be on the agenda.

The lectures are aimed for laboratory staff dealing with radioactivity measurements but can be followed by desk officers having a basic understanding of radioactivity.

When it comes to methods, there will be mainly presentations on gamma-ray spectrometry and alpha-particle spectrometry.

Lunches are provided all 3 days in the JRC-Geel canteen and a joint dinner will be organised at a local restaurant in Geel in the evening September 24.

Workshop organiser

Mikael Hult

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Secretariat and contact

G.II.6 secretariat

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Footnote: As clarification, we inform you that the organising JRC-unit recently changed identifier **from G.II.5 to G.II.6**, which e.g. affects the name of the secretariat's functional mailbox

REM proficiency test workshop 2024

1st day - 24 September 2024, morning

08:20 Bus departure from hotels in Geel
08:45 Arrival at the Joint Research Centre, registration

Session 1: Welcome and Introduction, chair: Mikael Hult

09:00 **Welcome and logistics**
Mikael Hult (JRC-Geel)

09:05 **Introductory speeches**
Ulla Engelmann (Director of JRC Directorate G – Nuclear Safety and Security)
Willem Janssens (JRC, Directorate G Dept. II)

09:20 **Introduction of the G.II.6 Unit**
Arjan Plompen (JRC-Geel)

09:30 **Overview of Euratom Directives linked to environmental monitoring and building materials in the EU Member States**
Elena Luminita Diaconu (EC, Directorate General for Energy)

Session 2: Building material PT, chair: Jan Paepen

09:55 **Introduction to the PT**
Mikael Hult (JRC-Geel)

10:15 **Reference materials production**
Håkan Emteborg (JRC-Geel)

10:35 Coffee break

10:55 **Assigning reference values, performance evaluation**
Piotr Robouch & Pieter Dehouck (JRC-Geel)

11:20 **Results of the REM 2020 PT**
Mikael Hult (JRC-Geel)

12:00 **Discussion**

12:15 Lunch

REM proficiency test workshop 2024

1st day - 24 September 2024, afternoon

Session 3: Presentation by participants, chair: Raf Van Ammel

- 13:30 **SURO, Czechia**
Lenka Dragounová
- 13:45 **IFIN-HH, Romania**
Ileana Radulescu
- 14:00 **KRISS, Rep. of Korea**
Sang-Han Lee
- 14:15 **Eurofins Eichrom, France**
Benoit Daniel
- 14:30 **AGES, Austria**
Eva-Maria Lindner-Leschinski
- 14:45 **Discussion**
- 15:00 Coffee break

Session 4: Gamma-ray spectrometry, chair: Mirela Vasile

- 15:20 **Developments in gamma-ray spectrometry**
Marie-Christine Lépy (CEA, LNHB, France)
- 15:50 **Gamma-ray spectr. of building materials (tips and pitfalls)**
Mikael Hult (JRC-Geel)
- 16:10 **Gamma-ray spectrometry**
Michel Bruggeman (SCK CEN, Belgium)
- 16:40 **Italian experiences in measuring building materials**
Pierino de Felice (ENEA, Italy)
- 17:10 **End of Day-1**
- 17:15 Bus departure to hotels
- 19:00 Dinner in Geel (preliminary Taverne Flore at Geel central square)

REM proficiency test workshop 2024

2nd day - 25 September 2024, morning

- 08:20 Bus departure from hotels in Geel
- 08:45 Arrival at the Joint Research Centre, registration

Session 5: Alpha-particle spectrometry, chair: Krzysztof Pelczar

- 09:00 **Radiochemical separation of U and Th isotopes**
Mirela Vasile (SCK CEN, Belgium)
- 09:30 **Alpha-particle spectrometry of NORMs - QA, validation and matrix aspects**
Viktor Jobbàgy (Social Organization for Radioecological Cleanliness, Veszprém, Hungary)
- 10:00 **Large area alpha-particle spectrometry**
Grzegorz Zuzel (Jagiellonian University, Poland)
- 10:30 **Measurement of ultralow radon concentrations**
Krzysztof Pelczar (JRC-Geel)
- 10:45 Coffee break
- 11:00 **IAEA reference materials and proficiency tests**
Katarzyna Sobiech-Matura (IAEA-Monaco)
- Session 6:** A new European standard on measuring radioactivity in building material, chair: Raf Van Ammel
- 11:20 **Introduction**
Jan Paepen (JRC-Geel)
- 11:50 **A new European standard for measuring radioactivity in building materials**
Manfred Fuchs (EC, Directorate General for Internal Market, Industry, Entrepreneurship and SMEs)
- 12:30 Lunch

REM proficiency test workshop 2024

2nd day - 25 September 2024, afternoon

Session 7: Building materials and NORM, chair: Jan Paepen

- 13:30 **Hydrogeology**
 Anita Eröss (ELTE, Hungary)
- 13:55 **Geology**
 Ruben Snellings (KU Leuven, Belgium)
- 14:20 **Introduction to building materials**
 Yannis Pontikes (KU Leuven, Belgium)
- 14:50 Coffee break
- 15:10 **Stakeholder perception of new types of building materials**
 Nazanin Love (SCK CEN, Belgium)
- 15:25 **NORM**
 Wouter Schroeyers (UHasselt, Belgium)

Session 8: Nuclear decommissioning and communication, chair: Mikael Hult

- 15:55 **Belgian approach to deal with concrete and building materials from nuclear sites**
 Thomas Huys & Robin Tuerlinckx (Belgoproces, Belgium)
- 16:35 **Navigating Nuclear Decommissioning, Sustainability, and dating**
 Sven Boden (SCK CEN, Belgium)
- 17:00 **Radon communication: state-of-the-art and good practices**
 Tanja Perko (SCK CEN, Belgium)
- 17:25 **Discussion**
- 17:30 **Closure Day 2**, followed by bus to hotels

Laboratory visit

3rd day - 26 September 2024

08:20 Bus pick-up at hotels in Geel

Depending on number of participants, possibly two groups that swap at lunch-time

Morning session:

Radionuclide metrology team presentations (not lab)
Linear Accelerator
Reference material production facility
Monnet tandem accelerator

12:30-13:30 Lunch

Afternoon session:

HADES - 225 m deep underground laboratory for ultralow-level gamma-ray spectrometry (JRC) and geological studies for final repository of nuclear waste (SCK CEN, Euridice)
(Due to the grid-floor, high heel shoes are not suitable)

16:00 Bus to train station or Hotel in Geel