

## Cores Symposium on Radon and NORM – regulatory aspects, scientific achievements and research needs

3-4 September 2019

STUK Auditorium, 3<sup>rd</sup> floor, Laippatie 4A

### Programme

#### Tuesday 3 September:

11:00-12:00	Registration Coffee and sandwiches / lunch
<b>Session: Environmental chemistry of radon and NORM</b> <b>Chair: Prof. Gareth Law, University of Helsinki</b>	
12:00-12:30	NORM in the UK steel industry: analytical, environmental, health and safety considerations <i>Dr Franck Dal Molin, CEFAS, UK</i>
12:30-12:50	Radon transport from radium in disposed waste <i>Dr. Henrik Nordman, VTT</i>
12:50-13:20	NORM research and strategy at the HZDR, Germany <i>Dr Thuro Arnold, HZDR Germany</i>
13:20-13:40	<i>Coffee</i>
<b>Session: Exposure and trophic transfer of radon and NORM</b> <b>Chair: Dr. Kaisa Vaaramaa, STUK</b>	
13:40-14:00	Exposure to radon in Finland <i>Dr. Tuukka Turtiainen, STUK</i>
14:00-14:20	NORM and radon research in Estonia <i>Dr. Alan Tkaczyk, University of Tartu</i>
14:20-14:40	Uncertainties in the determination of radon and thoron concentrations <i>Dr. Tuukka Turtiainen, STUK</i>
14:40-15:00	Non-linear transfer of uranium and other elements into organisms <i>Dr. Päivi Roivainen, STUK and University of Eastern Finland</i>
15:00-15:20	Microbial effects on radionuclide biosphere behaviour and transfer <i>Dr Merja Lusa, University of Helsinki</i>
15:20-15:30	The current state of two NORM waste legacy sites in Finland <i>Topi Suominen, STUK and University of Helsinki</i>
15:30-15:50	<i>Coffee</i>
<b>Session: Health effects of radon and NORM</b> <b>Chair: Prof. Sisko Salomaa</b>	
15:50-16:20	Natural radiation exposure and childhood brain tumours <i>Dr. Jad Abuhamed, STUK</i>
16:10-16:30	Radon and lung cancer <i>Prof. Anssi Auvinen, STUK and Tampere University</i>
16:30-16:50	Natural radioactive substances in drinking water – carcinogenicity and chemical toxicity, <i>Prof. Anssi Auvinen, STUK and Tampere University</i>

- 18:30	<b>Get together Buffet</b>
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### Wednesday 4 September:

<b>Session: Mitigation of radon and NORM – regulatory aspects</b>	
<b>Chair: Dr. Teemu Siiskonen, STUK</b>	
09:00-9:30	Implementation of the European Basic Safety Standards – what does it mean for radon and NORM? <i>Dr. Antti Kallio, STUK</i>
9:30-10:00	Conversion of radon exposure to effective dose <i>Dr. Tuukka Turtiainen</i>
10:00-10:20	National Action Plan and Nordic Co-operation on Radon <i>Dr. Päivi Kurttio</i>
10:20-10:50	Recovery of uranium as side product in the Terrafame metal mine – regulatory perspectives <i>Jarkko Kyllönen, STUK</i>
10:50-11:40	Lunch
<b>Session: Mitigation of radon and NORM</b>	
<b>Chair: Dr. Päivi Kurttio, STUK</b>	
11:40-12:00	Mitigation of radon in buildings and workplaces <i>Dr. Olli Holmgren, STUK</i>
12:00-12:20	Mitigation of NORM in industries, technological processes, legacy sites and environmental conditions <i>Dr. Antti Kallio, STUK</i>
12:20-12:40	Mitigation of radon in new buildings – preventive measures and trends <i>Dr. Olli Holmgren, STUK</i>
12:40-13:00	Research needs <i>Prof. Sisko Salomaa, STUK and University of Eastern Finland</i> General discussion
13-14	Visit to STUK radon laboratory

### 13/14-16 Cores Board meeting, Neuvotteluhuone Visuaali (room 4189), 4<sup>th</sup> floor

#### Posters:

- CONCERT European Joint Programme on Radiation Protection Research.  
*STUK and University of Eastern Finland*
- CORES – Consortium for Radiation Safety Research  
*STUK - Radiation and Nuclear Safety Authority, Aalto University, Lappeenranta University of Technology, Tampere University, University of Eastern Finland, University of Helsinki, University of Jyväskylä, University of Oulu, University of Turku and VTT*
- Radon communication in Finland  
*Katja Kojo, STUK*
- Radon is a risk also in workplaces located on air-permeable soil formations in Finland  
*Irmeli Mänttari, Päivi Kurttio, Katja Kojo, Antti Kallio, Tarja Ilander, STUK*
- The current state of two NORM waste legacy sites in Finland  
*Tope Suominen, STUK and University of Helsinki*
- FINNORM project: NORM-selvitys Suomessa  
*Mila Pelkonen et al.*