

EU NORM Symposium

2 – 5 October 2017

FINAL AGENDA

Monday, October 2

9:00 – 9:30	Registration	
9:30 – 9:45	Welcome	J. Dean
	IAEA Key-notes presentation Chair: Rafael Garcia Tenorio	
9:45 – 9:55	20 years NORM conferences; an overview	S. Pepin, C. Kunze
9:55 – 10:20	Addressing challenges in regulating NORM residues	Z. Fan
10:20 – 10:45	Key-note: What is the radiological/ecological impact of NORM residues and effluents on the environment?	H. Vandenhove
10:45 – 11:15	Coffee break	
	Session “Metrology of NORM” Chair: Julian Dean	
11:15 – 11:45	Reference Materials produced as part of a European metrology research project	B. Russell
11:45 – 12:05	Method development for the rapid on-site analysis of low level ²²⁶ Ra in environmental and produced water samples	E. Van Es
12:05 – 12:25	Low level radioactivity laboratories: how to tackle with NORM	S. Di Pasquale
12:25 – 12:45	Metrological assurance of radiation technologies	V. Tenishev
12:45 – 13:00	Discussion	
13:00-14:00	Lunch	
	Session “Building material” Chair: Rob Wiegiers	
14:00–14:30	Key-note: Building materials in the BSS	R. Wiegiers
14:30-14.50	Assessing ionizing radiation from construction products under Construction Product Regulation	P. Vuorinen

	CPR — Dose assessment of emitted gamma radiation	
14:50-15:10	A harmonised European norm for the determination of natural radioactivity in construction products	G. de With
15:10 – 15:30	Impact assessment of the use of NORM residues in alkali activated materials for building applications	W. Schroeyers
15:30-16.00	Coffee break	
16:00 – 16:20	Radiological evaluation of by-products used in construction and alternative applications; Preparation of By-BM natural radioactivity database	Z. Sas
16:20 – 16:40	Building materials in UK and application of the EU BSSD 2013 activity concentration index	K. Jones
16:40 – 17:00	Discussion	

Tuesday, October 3

	Session “NORM in industries” Chair: David Read	
9:00 – 9:20	NORM in the UK iron and steel industry	F. Dal-Molin
9:20 – 9:40	Calculation Guide NORM – Assessing the dose	J. Dilling
9:40 – 10:00	Development of a semi-empirical model for radiological assessment of workers involved in operation and maintenance of oil & gas plants	L. Del Moro
10:00 – 10:20	NORM in the UK’s Onshore Oil & Gas industry	J. Garner
10:20 – 10:50	Coffee break	
10:50 – 11:10	Estimation of annual doses of outside workers from maintenance of multiple facilities	C. Ahrens
11:10 – 11:30	Various Radioactive Exposure Pathways Determination for TiO ₂ Production - Case Study	P. Otahal
11:30 – 11:50	A case study of occupational doses in NORM industries in China	Q. Wu
11:50 – 12:10	Poster presentations	J.-C. Mora., A. Reichelt
12:10 – 12:30	Discussion	
12:30 -13:30	LUNCH	
	Session “NORM in the environment” Chair: Hildegard Vandenhove	
13:30 – 14:00	Key-note: NORM monitoring of landfills and brownfields	S. Pepin

14:00 – 14:20	Evaluation and survey of a thorium contaminated legacy site in Austria	F. Rechberger
14:20 – 14:40	Radioecological implications of the presence of radioactive particles in NORM raw materials and NORM wastes	R. Garcia-Tenorio
14:40 -15:00	The Spanish approach for the conventional management of NORM residues	J.C. Mora
15:00 – 15:30	Coffee break	
Working groups discussion		
15:30 - 16:00	Introduction to the working groups and themes	R. Wiegers, R. Gellermann
16:00 – 17:00	Discussion in working groups	All
17:00 - 17:15	Reporting of issues identified	Rapporteur of each group

19:00	Symposium Dinner (King's Head, Teddington)
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Wednesday, October 4

Session "NORM in the environment" (continued)		
Chair: Stéphane Pepin		
9:00 – 9:30	Environmental NORM Impact due to Acid Mining Drainage in the Iberian Pyrite Belt (South of Spain): A Comparison between Controlled and not Controlled Situations	R. Garcia-Tenorio
9:30 – 9:50	Study of Naturally Occurring Radioactive Material (NORM) in Water Supply Treatment Plants.	K. Yangsup
09:50-10:10	Practices in chemical risk assessment as a guidance for the mitigation of risks from NORM (Uranium and Thorium)	P. Steinmann
10:10 - 10:30	²³⁸ U, ²²⁶ Ra, ²²⁸ Ra, ¹³⁷ Cs and ⁴⁰ K in mushrooms and soil-to-mushroom transfer factors in certain areas in China	F. Tuo
10:30 – 11:00	Coffee break	
European NORM Association and working groups discussion		
11:00 – 11:30	Presentation of the European NORM Association : History, statutes, strategy and Q&A	R. Wiegers, C. Kunze, S. Pepin
11:30 – 12:15	Discussion in working groups	All
12:15 -13:15	LUNCH	
13:15 – 15:15	Discussion in working groups	All
15:15 – 15:45	Coffee break	
15:45 – 16:45	Results of working groups discussion	Working groups rapporteurs

Thursday, October 5

	Session "Radon and Thoron" (Chair to be announced)	
9:00 – 9:30	Key-note ERA - Exposures to radon in the NORM industry in Belgium	B. Dehandschutter
9:30 – 9:50	Seasonal variations of the unattached fraction and equilibrium factor of ^{222}Rn , ^{220}Rn in dwellings of Ajmer and Jaipur provinces of Rajasthan, India	R. Jakhu
9:50 – 10:10	The study of relationship between porosity of aerated concrete block and its radon emanation coefficient	Qingzhao Zhang
10:10 – 10:30	Working group discussion	
10:30 – 11:00	Coffee break	
11:00 – 11:20	Working group discussion	
	Conclusions and closing	
11:20 – 12:00	Conclusions	Members of organising committee
12:00 - 12:15	Closing of the workshop	NPL
12:15 -13:30	LUNCH	

Posters

- 1) Andreas Reichelt - Investigations on some NORM Residues from the Processing of Scrap Metal in the Ferrous Metallurgy
- 2) Juan Carlos Mora - An estimation of the activity concentration of Po-210 which can be found in the internal scales of coal-fired power plants
- 3) Elsje May Van Es - Rapid low-level analysis of ^{226}Ra in groundwater samples: sensitivity and speed of analysis, can you have both?
- 4) JungHwan Jang, Inhalation Dose assessment at Zircon and Bauxite industries in Korea
- 5) R. Garcia Tenorio, Assessment of naturally occurring radionuclides in marine biota affected by NORM discharges in the southern Gulf of Mexico
- 6) R. Garcia Tenorio, Characterisation of the Belgian NORM Observatory Site