# Operating windows for site characterisation

NICOLE Network meeting on 25-27 May 2011 Venue: Kulturhuset, Islands Brygge 18, 2300 Copenhagen, Denmark

## **Preliminary program**

The NICOLE Workshop on 25-27 May 2011 will look into the subject of Innovative Site Characterisation tools, and update us on where they can provide value in the management of contaminated sites. We have all heard anecdotally, or may have tried some of the myriad of new techniques and approaches being proposed around the industry. From forensics using isotopes and DNA, to new drilling methods and microbes - the range of options on offer may seem confusing.

From the ongoing work with the Soil Directive it is evident that some sort of baseline and monitoring will be needed in the future and we find ourselves facing other new pieces of legislation such as the Industrial Emissions Directive (IED) which may also have potentially onerous baseline monitoring requirements. As such, our thoughts turn to the tools and methods we have for investigation, and thought it was time to update ourselves with a state of the art review...

This workshop aims to draw us away from the marketing literature and technique sellers, and via a walk through the site conceptual model, explore and contextualise techniques appropriateness – for example:

- What technical conditions does it operate under for example under what lithological or hydrogeological conditions can it actually operate and what are its limitations and ranges?
- In what circumstances will it add value so for example is it only really warranted in a detailed compliance defence, or will it help to speed up development or remediation?

A programme of invited speakers will review the current and recent techniques and possibilities for site investigations such as drilling, sampling, in situ measurement and analysis for liquid, solid or gaseous contaminants in the subsurface. Moreover tracer tests, geophysics and last but not least plants as a pollutant diagnostic tool will be addressed. An entire days session is devoted to the development of advanced diagnostic techniques looking at forensics, DNA, isotopes, microbes, pharmaceuticals, and exploring some of the challenges in the analysis and the applicability both in corporate compliance work, and in remediation.

The speakers will explore what are the operating windows of the current and developing methods. We ask our invited speakers to present case studies also, showing where techniques are useful, applicable, appropriate and value for money.









# Wednesday 25 May 2011 NICOLE Working Group and Subgroup Meetings

09.00-10.30	Parallel meetings of:     Working Group Brownfields     Working Group Mercury (kick-off)
10.30-11.00	Coffee break
11.00-12.30	Parallel meetings of: • Working Group Soil • Working Group Sustainable Remediation
12.30-13.30	Lunch
13.30-17.30	Subgroup meetings: Industry Subgroup (13.30-17.30 hrs) Service Providers Group (14.30-17.30 hrs)
17.30-17.45	Break
17.45-18.00	Launch final report NICOLE Working Group Brownfields Presentation by Ian Heasman, Working Group leader
18.00-19.00	General Assembly

## Thursday 26 May 2011 - Conference Day 1

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08.30-09.00	Registration			
INTRODUCTION -	Chair: Lucia Buvé, UMICORE, Belgium			
09.00-09.10	Opening and welcome - by Lucia Buvé - by host (Grontmij / Carl Bro)			
09.10-09.25	Contaminated Land Legislation in Denmark Ole Kiilerich, EPA Denmark			
09.25-09.50	<ul> <li>Update on NICOLE</li> <li>Steering group</li> <li>by Lucia Buvé, network chair</li> <li>NICOLE Working Groups</li> <li>by working group leaders</li> </ul>			
09.50-10.30	NICOLE Technology Award And the winner is  Introduction on NICOLE Technology Award Anja Sinke, chairperson of NICOLE Award Committee  Handing over of prize by Lucia Buvé Presentations by award nominees and winner			
10.30-11.00	Coffee break			
11.00-11.30	Introduction to the workshop theme Wouter Gevaerts, ARCADIS, Belgium			
FIELD INVESTIGAT	FION: GEOLOGY AND HYDROGEOLOGY – Chair: Lucia Buvé, UMICORE, Belgium			
11.30-12.00	State of the art on geophysics Frédéric Nguyen, Université de Liège, Belgium			
12.00-12.30	Current trends for tracer techniques in environmental hydrogeology Serge Brouyère, Université de Liège, Belgium			
12.30-14.00	Lunch			

FIELD INVESTIGATION: NEW DEVELOPMENTS - Chair: Wouter Gevaerts, ARCADIS, Belgium

Direct push technologies: Overview, Applications and Limits Carsten Leven-Pfister, University Tübingen, Germany, and Hans-Peter Koschitzky, VEGAS, University Stuttgart, Germany

14.00-14.30

14.30-15.00	Quantification of Mass Discharge from DNAPL sites in heterogeneous geological settings Poul Bjerg, Technical University of Denmark
15.00-15.30	Comparison of purge and no-purge sampling strategies for deep groundwater Speaker to be confirmed
15.30-16.00	Chlorinated solvent contamination, difficulties in understanding mass distribution, a case study  Pierre Guibert, Environ, France
16.00-16.30	Coffee break
VAPOUR INTRUSI	ON – Chair: Kristian Kirkebjerg, Grontmij / Carl Bro, Denmark
16.30-17.00	Sampling of vapour Majbrith Sørensen, Grontmij / Carl Bro, Denmark
17.00-17.30	Risk assessment of vapour intrusion Lena Torin, Golder, Sweden
18.00-20.00	Excursion by boat to redeveloped areas in Copenhagen
20.00-22.30	Dinner at a restaurant in the harbor of Copenhagen

# Friday 27 May 2011 - Conference Day 2

ADVANCED DIAGN	IOSTICS AND DATA INTERPRETATION – Chair: Carla Schön, Electrolux, Sweden	
09.00-09.30	Forensics - state of the art and possibilities in contaminated sites management Helmut Dörr, Dr. Dörr Consult, Germany	
09.30-10.00	Isotopes in contaminated sites management - principles and recommendations Heinrich Eisenmann, Isodetect GmbH, Munich, Germany	
10.00-10.30	Closing down of remediation using Biotraps and DNA analysis – a case study Alex Lee, WSP, UK	
10.30-11.00	Coffee break	
ADVANCED DIAGN	IOSTICS AND DATA INTERPRETATION 2 – Chair: Mark Travers, Environ, USA	
11.00-11.30	Analytical challenges Frank Jacobsen, Grontmij / Carl Bro, Denmark	
11.30-12.00	Pharmaceuticals in groundwater bodies as a forensic tool Joachim Schmidtke, Environ, Germany	
12.00-12.30	Tree sampling for environmental forensics Chris Balouet, Environment International, France	
12.30-13.30	Lunch	
ADVANCED DIAGN	IOSTICS AND DATA INTERPRETATION 3 – Chair: Sarah MacKay, WSP, UK	
13.30-14.00	Data management systems Speaker to be confirmed	
14.00-14.30	Isotopes and Microbes; a fruitful couple to prove natural attenuation of MtBE Alette Langenhoff, Deltares, the Netherlands	
14.30-15.00	Non destructive screening tools: overview, case study, relation with guidelines Speaker to be confirmed	
CLOSING SESSION	l – Chair: Sarah MacKay, WSP, UK	
15.00-15.30	Wrap-up and discussion Kristian Kirkebjerg, Grontmij / Carl Bro, Denmark	
	End of workshop; adjourn	



NICOLE is a network for the stimulation, dissemination and exchange of knowledge about all aspects of industrially contaminated land. Its 120 members of 20 European countries come from industrial companies and trade organisations (problem holders), service providers/ technology developers, universities and independent research organisations (problem solvers) and governmental organisations (policy makers).

The network started in February 1996 as a concerted action under the 4<sup>th</sup> Framework Programme of the European Community. Since February 1999 NICOLE has been self supporting and is financed by the fees of its members.

#### **Organising Committee:**

Kristian Kirkebjerg, Grontmij / Carl Bro, Denmark / chair Organising Committee Lucia Buvé, UMICORE, Belgium Wouter Gevaerts, ARCADIS, Belgium Hans-Peter Koschitzky, VEGAS/University Stuttgart, Germany Sarah MacKay, WSP, UK Carla Schön, Electrolux, Sweden Mark Travers, Environ, USA Elze-Lia Visser-Westerweele, NICOLE Service Providers Group, NL

#### Secretariat:

Marjan Euser, NICOLE Secretariat

#### **Venue of the event:**

Kulturhuset Islands Brygge, Islands Brygge 18, DK-2300 Copenhagen S, Denmark - www.k-i-b.dk

#### **Hotel accommodation** (prereservation for NICOLE expires on **25 April 2011**:

Copenhagen Island hotel, Kalvebod Brygge 53, DK-1560 Copenhagen V, Denmark www.copenhagenisland.dk

Room rate: DKK 1050 per room, taxes and breakfast included

Reference for booking: block ID 1299238 - NICOLE

Contact person for hotel reservations: t.poulsen@arp-hansen.dk

Please provide your credit card number, name card holder, expiry date.

### **Conference registration:**

Please complete the conference registration form available from <a href="https://www.nicole.org">www.nicole.org</a>. Deadline for registration: **9 May 2011**.

Conference fee:	Central and	Other
	Eastern Europe	countries
- NICOLE members and speakers	No fee	No fee
- Members Common Forum	No fee	No fee
- Others:		
Representative of an industrial or service providing company (*)	€ 250	€ 500
Representative of a small or medium sized company (*)	€ 150	€ 250
Repr. of a research institute/ university/governmental organisation	€ 100	€ 150
Conference dinner on 26 May, price excl. drinks:	€ 40	€ 40
(drinks will be charged separately)		

(\*) Representatives of companies who are not yet member of NICOLE are welcome to the workshop to get acquainted with the network. When attending a next workshop they will need to have become NICOLE member.

For further information about NICOLE-membership and registration for the workshop: NICOLE Secretariat: Mrs Marjan Euser, Deltares, PO Box 85467, NL-3508 AL Utrecht, the Netherlands Phone: +31 651 286 087 - Email: marjan.euser@deltares.nl Internet: www.nicole.org





