

NORDROCS 2008

2nd Joint Nordic Meeting on Remediation of Contaminated Sites

September 24-25, 2008 • Helsinki, Finland



The Nordic countries hereby invite you to NORDROCS 2008, the 2nd Joint Nordic Meeting on Remediation of Contaminated Sites to be held in Helsinki, Finland, 24–25 September 2008.

OBJECTIVE

The objective of NORDROCS is to address issues on contaminated site remediation and assessment in the context of Nordic conditions. The purpose of the meeting is to provide a forum for the exchange of information gathered through research and project experience. Target groups include consultants, contractors, scientists, regulators and other professionals working with contaminated sites in the Nordic countries and in the countries around the Baltic Sea.

ORGANIZING COMMITTEE

Reetta Piskonen, WSP Environmental (MUTKU, Finland) Maria Sundesten, Golder Associates (Renare Mark, Sweden) Astrid Zeuthen-Jeppesen, Alectia A/S (ATV Jord og Grundvand, Denmark) Arwe Misund, COWI (Miljøringen, Norway) Cornelis A. Meyles, Environment and Food Agency (Iceland)



MILJØRINGE

Renare Mark

ATV Jord og Grundvand

PLACE

Paasitorni Conference Centre, Paasivuorenkatu 5 A, Hakaniemi, Helsinki

EXHIBITION

NORDROCS 2008 hosts a commercial exhibition at Paasitorni Conference Centre, where various companies present their services on remediation of contaminated sites. The exhibition opens with the get-together at 18:00 on Tuesday, September 23, and ends at 17:00 on Thursday, September 25. The exhibition is open during the conference hours.

TOPICS

- Impact of EU directives on current policies and legislation in the Nordic countries
- Risk assessment
- Remediation of chlorinated solvents, organic pollutants and metal contamination
- Monitoring
- Decision support tools
- Re-use of contaminated soil
- Sediments



KEYNOTE SPEAKERS

Our keynote speakers will give us an introduction to the main topics of the meeting as follows:

- Jussi Reinikainen, Finnish Environment Institute: Experiences on risk-based assessment of soil contamination and remediation needs.
- Kenneth Holm, Finnish Environment Institute: Perspectives on re-use of contaminated soils.
- Tomas Henrysson, Swedish EPA: Sustainable Remediation are we there yet?
- Eva Brorström-Lundén, IVLs Laboratories, Sweden: Monitoring of contaminated sites.
- Lars Otto Reiersen, Arctic monitoring and assessment program (AMAP), Norway: Global transport of pollutants.
- Tom Heron, NIRAS, Denmark: Innovative Technologies for Soil and Groundwater Remediation Status and Challenges.
- Carsten Bagge Jensen, The Capital Region of Denmark: Decision support tools.
- Dorte Balle Hermansen, Danish Environmental Protection Agency: EU legislation on the remediation of contaminated land – the Environmental Liability Directive and the Directive on Soil Protection.
- Cornelis A. Meyles, Environment and Food Agency of Iceland: Soil contamination – Communication of governmental bodies to regional and municipal authorities and the public. Alexander Boronin, Russian academy of science (RAS): Use of plants and rhizosphere micro-organisms for bioremediation.



PROGRAMME AT ONE GLANCE

TUESDAY 23RD OF SEPTEMBER

Short course: "Accelerated Bioremediation of Chlorinated Solvents in Groundwater" Registration opens Get-together and light dinner buffet

WEDNESDAY 24[™] OF SEPTEMBER

Registration Opening of the meeting Scientific and technical sessions Poster exhibition Commercial exhibition Conference dinner

THURSDAY 25[™] OF SEPTEMBER

Scientific and technical sessions Poster exhibition Commercial exhibition Summary and closing of the meeting

FRIDAY 26TH OF SEPTEMBER

Excursions (preliminary programme, subject to changes) State-of-the-art treatment methods Remediation of contaminated sites in the capital area

PROGRAMME Tuesday, September 23, 2008

8:30–16:30 Short Course:

Accelerated Bioremediation of Chlorinated Solvents in Groundwater

Teachers: Neal Durant – Geosyntec Consultants, USA Evan Cox - Geosyntec Consultants, Canada

17:00 Registration opens

18:00-20:00 Get together

Place: All the events take place at the Paasitorni Conference Centre, Paasivuorenkatu 5, Helsinki, unless otherwise noted.

The programme may be subject to minor changes.

PROGRAMME Wednesday, September 24, 2008

09:00	Registration and Coffee	
	Session I	Session II
10:00	Opening of the meeting Juha Sorvali, President of MUTKU	
10:05	 Policies related to contaminated soils EU Legislation on the Remediation of Contaminated Land – the Environmental Liability Directive and the Directive on Soil Protection. Dorte Balle Hermansson, Danish Environmental Protection Agency Sustainable Remediation - Are we there yet? Tomas Henrysson, Swedish EPA Soil contamination - Communication of Governmental Bodies to Regional and Municipal Authorities and the Public Cornelis A. Meyles, Environment and Food Agency of Iceland 	
11:35	Break	
11:45	 Remediation of Chlorinated Solvents Innovative Technologies for Soil and Groundwater Remediation Status and Challenges. <i>Tom Heron, NIRAS, Denmark</i> Effective Remediation of Chlorinated Solvent Mixtures in Groundwater via Biostimulation and Bioaugmentation <i>Evan Cox, Geosyntec Consultants, Canada</i> Use of Nano Scale Zero Valent Iron (Nzvi) for Ground Water Remediation 	 11:45 Remediation of Sediments Stability Of Contaminated Sediments <i>Gijs D Breedveld, Norwegian Geotechnical Institute, Norway</i> A Strategy For Environmental Risk Assessment Of Contaminated Sediment <i>John Sternbeck, WSP Environmental, Sweden</i> Remediation And Re-Use Of Contaminated Soil And Sediments In Finl <i>Juha Väyrilä, Ekokem-Palvelu Oy, Finland</i>
	Pirjo Tuomi, Golder Associates, Finland >>>	

>>>	• Stimulated Reductive Dechlorination of 1,1,1-Trichloroethane in Mixed Chlorinated Solvent Contamination In Clayey Till <i>Charlotte Scheutz, Technical University of Denmark</i>	>>>	• Contaminated Sediments In Harbours Containing Marine-Archaeological Artefacts; The Demand For Multidisciplinary Approach. A Case From The Harbour Of Bergen, Norway Håkon Kryvi, County Governor of Hordaland, Norway
13:15	Lunch		
14:30	Remediation of Organic Contaminants	14:30	Re-use of Contaminated Soil
	 Remediation of Toluene and 2-Nitrotoluene Contaminated Soil and Groundwater by MNA <i>Eerik Järvinen, Ramboll Analytics Oy, Finland</i> Remediation of Soil on Former Creosote Wood Impregnation Facility in Elverum, Norway – A Case Study <i>Ola Nordal, Asplan Viak AS, Norway</i> Chemical Oxidation of Pharmaceuticals and Pesticides at Kærgård Plantage and Høfde42 <i>Niel Durant, Geosyntec Consultants, USA</i> 		 Perspectives on Re-use of Contaminated Soils Kenneth Holm, Finnish Environment Institute Environmental Criteria for Re-use of Contaminated soil Ole Hjelmar, DHI Group, Denmark Re-use of Dioxin Impacted Sediments Philip Studds, Ramboll Whitbybird, UK
15:30	Coffee break		
16:00	Risk Assessment	16:00	Remediation of Metal Contamination
	 Experiences on Risk-based Assessment of Soil Contamination and Remediation Needs Jussi Reinikainen, Finnish Environment Institute Effective Use of Risk Assessment to Reduce Remediation Costs Philip Studds, Ramboll Whitbybird, UK Methods to Assess Leaching and Transport from Contaminated Sites Mark Elert, Kemakta Konsult AB, Sweden 		 Remediation of Cu- Ni Contaminated Forest Soil Using Organic Mulch and Native Woody Plants <i>Tiina M. Nieminen, Finnish Forest Research Institute</i> Limiting Measures to Prevent Lead Spreading from Target Areas and Hot Spots within Military Shooting Fields <i>Carolina Ersson, Johan Hellden AB, Sweden</i> Combined In Situ Treatment of Chlorinated Solvents and Heavy Metals in Groundwater Using Ehc-M[®] <i>Josephine Molin, The Adventus Group, Canada</i>
17:15	End of the day		
19:00	Conference dinner at Restaurant 'Bank' in the City Centre of Helsinki		
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PROGRAMME Thursday, September 25, 2008

9:00	Key notes of the day		
	• Use of Plants and Rhizosphere Micro-organisms for Bioremediation <i>Alexander Boronin, Russian academy of science (RAS)</i>		
	• Monitoring of Contaminated Sites Eva Brorström-Lundén, IVLs Laboratories, Sweden		
	• Decision Support Tools Carsten Bagge Jensen, The Capital Region of Denmark		
10:30	Coffee break		
11:00	Monitoring	11:00	Decision Support Tools
	• The Submerged Tunnel Project in the Oslo Harbour. Environmental Monitoring of Water and Sediment – Results and Experiences <i>Anne Fevang, Rambøll Norway AS</i>		• Multi-Criteria Analysis as a Decision Support Tool for Remediation Alternatives at Contaminated Sites <i>Pär-Erik Back, SWECO VIAK AB, Sweden</i>
	• Molecular Methods for Assessment of Natural Attenuation in Contaminated Groundwater <i>Haydn Williams, EnviroGene Ltd, UK</i>		• Cost-Benefit Analysis for Comparing Remedial Actions at Contaminated Sites Lars Rosen, Chalmers University of Technology, Sweden
	• Monitoring of Bioremediation Efficacy at Five Sites with Mixed Hydrocarbon Contamination by Mineralization and Functional Gene Assays <i>Kirsten Jørgensen, Finnish Environment Institute</i>		• Eco-Efficient Contaminated Soil Management – Local and Regional Aspects <i>Riina Antikainen, Finnish Environment Institute</i>
12:00	Lunch		
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13:00	Risk Assessment	13:00	Remediation of Chlorinated Solvents
	 Hazard Identification and Risk Assessment for a Former Industrial Chemical Plant Jacqueline Falkenberg, NIRAS, Denmark Risk Assessment And Prioritisation Of Pesticide Point Sources – 		 Bioremediation of a Chlorinated Solvents Plume in a Fractured Limestone Aquifer Using a Dechlorinating Bioreactor <i>Charlotte Riis, NIRAS, Denmark</i> The Use of Bench Scale and Pilot Testing to Assess Chemical Oxidation
	 Catchment Scale <i>Ida Olesen, Region of Southern Denmark</i> Modelling the Real Thing: Comparison of the Calculated Vapour 		in Delivering Cost Effective Remediation for Chlorinated Hydrocarbons: A Case Study in Switzerland John Lamble, WSP Remediation, UK
	Intrusion to Analysed Volatile Concentrations Kari Koponen, Finnish Consulting Group		• Use of a Large Diameter Auger for Partial Mass Removal from a Source Zone <i>Derek Langgons, Golder Associates AB, Sweden</i>
14:00	Coffee break		
14:15	Risk Assessment	14:15	Legal Aspects
	 Environmental Dredging – Does It Really Get Any Cleaner? Jens Laugesen, DNV, Norway Evaluation of a Leaching Method for Organic Compounds Anja Enell, Swedish Geotechnical Institute 		 The Concept of Compensation for Environmental Damage – a Nordic Comparative Study <i>Pernille Aagard, Advokatfirmaet Energi og Miljø Denmark</i> State Financed Mapping and Remediation vs. Polluter Pays Principle - Impacts of the EU State Aid Regime <i>Casper Herler, Hammarström Puhakka Partners Attorneys Ltd, Finland</i>
15:00	Closing session		
	 Global Transport of Pollutants Lars Otto Reiersen, Arctic Monitoring and Assessment Programme (AMAP), Norway Panel Discussion on Nordic Profile Similarities Challenges Collaboration 		

16:00 Closing of the meeting

PROGRAMME Friday September 26, 2008

8:00–16:30 State-of-the-Art Treatment Methods

On a trip in Southern Finland we visit the Ekokem hazardous waste treatment plant, a pilot plant for remediation research at Lahti business and science park, and Allu, a company providing technical services for remediation.

9:00–15:00 Remediation of Contaminated Sites in the Capital Area

Visit to the major contaminated sites in Helsinki area: Myllypuro landfill, the new harbour at Vuosaari, new residential areas by the sea: Introduction to the site history, remediation actions and current or future activities.

SHORT COURSE

"Accelerated Bioremediation of Chlorinated Solvents in Groundwater"

Time: Tuesday, September 23 at 8:30–16:30. Place: Paasitorni Conference Centre Teachers: Neal Durant and Evan Cox (Geosyntec Consultants, USA/ Canada)

More information and registration: www.mutku.fi/nordrocs-2008

SOCIAL PROGRAMME

Get-together Time: Tuesday, September 23 at 18:00–20:00 Place: Paasitorni Conference Centre

Conference dinner Time: Wednesday, September 24 at 19:00 **Place:** Restaurant Bank, Helsinki

EXCURSIONS

We invite you to join one of our two excursion trips on Friday, September 26

1) State-of-the-art-treatment methods at 8:00-16:30, September 26

On a trip in Southern Finland we visit the Ekokem hazardous waste treatment plant, a pilot plant for remediation research at Lahti Business and Science Park, and Allu, a company providing technical services for remediation. Excursion starts and ends at the Paasitorni Conference Center.

2) Remediation of contaminated sites in the capital area at 9:00–15:00, September 26

Visit to the major contaminated sites in Helsinki area: Myllypuro landfill, the new harbour at Vuosaari, new residential areas by the sea: Introduction to the site history, remediation actions and current or future activities. Excursion starts and ends at the Paasitorni Conference Center.

FEES

Excursions:

Early bird registration fee	by 12 June 2008	€ 450
Late registration fee	after 12 June 2008	€ 600

Short course "Accelerated Bioremediation of Chlorinated Solvents in Groundwater"

by 12 June 2008 after 12 June 2008	€ 175 € 225
	€ 50

Registration fee includes:

- Access to all conference sessions
- Lunch on both conference days
- Light buffet at the get-together
- Conference dinner
- Abstract book with final programme

Excursion includes:

- Transport from and back to the Paasitorni conference centre
- Lunch

Short course includes:

- Course material
- Lunch

REGISTRATION

A registration form is available on the meeting's web pages: www.mutku.fi/nordrocs-2008

For more information on registration, please, send e-mail to: www.nordrocs2008@congreszon.fi

ACCOMMODATION

HOTEL RESERVATION

Congreszon will arrange accommodation for delegates upon request. Delegates should make their hotel reservation in advance. Accommodation allocations during the Congress have been made at the hotels listed below. Please note that when reserving a double room both names should be indicated on the form. The room prices include breakfast and VAT.

HOTEL DEPOSIT

To guarantee your hotel reservation a deposit of one night's hotel fee is required. Reservation without a paid deposit cannot be accepted. The deposit should be paid together with the registration payments. Your deposit will be forwarded to the hotel and automatically be deducted from your hotel bill when checking out from the hotel. Your hotel reservation will be confirmed as soon as Congreszon has received the deposit payment..

CHANGES AND CANCELLATIONS

All changes in your accommodation reservations must be sent to Congreszon in writing. If you need to cancel your reservation, please refer to the cancellation and refund policy.



Hilton Helsinki Strand

John Stenbergin ranta 4

The elegant Hilton Helsinki Strand is located in a beautiful setting by the sea yet only a stone's throw from Helsinki's city centre and financial districts. With its 192 newly refurbished rooms, excellent restaurant, first-class conference and banqueting facilities and rooftop saunas with swimming pool and exercise room, the Strand is an ideal choice for anyone who appreciates top-quality service delivered with efficiency and friendliness. Hilton Helsinki Strand is located near the conference venue.

Single room	€ 160
Double room	€ 190

Hotel Arthur

Vuorikatu 19

Privately owned, cosy Hotel Arthur is located close to the Railwaystation in the very heart of Helsinki. The main sights, biggest department stores and theatres are just a walking distance away. The recently refurbished rooms are cosy and brightly coloured.

Single room	€ 95
Double room	€ 115
Business room	€ 130

Sokos Hotel Helsinki

Kluuvinkatu 8

A modern, business-like hotel between the Ateneum and the Senate Square. Located in the city centre, where everything happens, it is an excellent starting point for a beautiful day in the city.

Single room	€ 171
Double room	€ 191

PAYMENTS & CANCELLATION

CONGRESS PAYMENTS

All congress payments - the registration fee, the hotel deposit, tour payments - must be made in advance by credit card (on-line registration) or by bank transfer to Congreszon Ltd.

In order to guarantee your hotel room, the hotel deposit should be paid by the end of July 2008.

The **bank transfers** should be paid in euros to: Congreszon Ltd, Sampo Bank, 00075 Helsinki, Finland Account number 800010-70766853 IBAN (International bank account number): FI18 8000 1070 7668 53 SWIFT / BIC code: DABAFIHH

As reference, please state on the remittance: Nordrocs 2008 and the delegate's name.

The following credit cards are accepted: Eurocard/Mastercard, Visa. Kindly indicate clearly the card type, card number, cvc-number, expiry date, the cardholder's name and address, and the total amount in euros on the registration form.

PLEASE NOTE: No cheques are accepted.

CONFIRMATION

You will receive an e-mail confirmation letter from Congreszon as soon as your credit card has been charged or your fees have been received by bank transfer.

Cancellation of any kind has to be made in writing to Congreszon Ltd. Please note that for organizational reasons refunds will not be made until after the Congress. If canellation of participation is received by

CANCELLATION OF THE REGISTRATION

All cancellations must be sent in writing to Congreszon Ltd e-mail: *nordrocs2008@congreszon.fi*

For cancellations **before August 1 2008**, there will be a total refund minus \notin 50 for administrative costs. For cancellations after that date no refunds are made. Cancellation of hotel and tours

Please note that any alterations to your hotel and other reservations must be sent to Congreszon Ltd per e-mail *nordrocs2008@congreszon.fi*

For cancellations **before August 1, 2008**, the hotel deposit payment will be refunded.

FOR CANCELLATIONS AFTER THAT DATE THERE WILL BE NO REFUNDS

PRACTICAL ARRANGEMENTS / USEFUL INFORMATION

Transportation to and from the International Helsinki -Vantaa airport.

Around 120 international flights a day arrive at Helsinki-Vantaa Airport, which is situated 19 kilometres from the centre of Helsinki and can be reached by car in approximately 25 minutes. You can also take a taxi, the Finnair airport bus or Bus 615 to the Central Railway Station.

Note!

Questions about practical arrangements, such as hotel bookings, registration problems etc. should be sent to the following e-mail address: *www.nordrocs2008@congreszon.fi*

Travelling within Helsinki

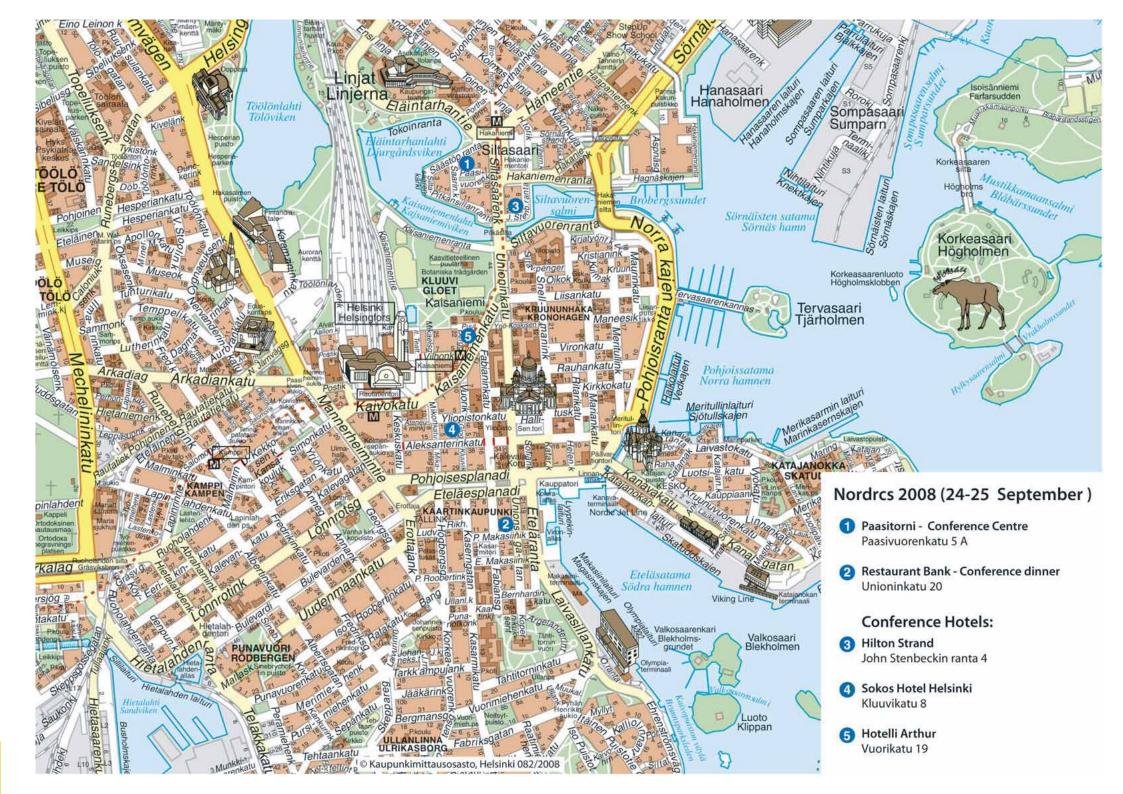
With a single ticket you can hop aboard trams, busses, the metro and even the ferry to Suomenlinna. Single tickets can be purchased from the driver, from ticket machines or even by sending an SMS text message by mobile phone (requires a Finnish service provider). Tickets cost around $\notin 2$.

Telecommunication

The international access code for Finland is +358. This is followed by a citycode, (Helsinki 09) and then the number.

International emergency telephone number

112





IMPORTANT DATES

Deadline for "early bird" registration:

June 12, 2008

Short course: "Accelerated Bioremediation of Chlorinated Solvents in Groundwater"

September 23, 2008

Conference: Excursions: September 24 and 25, 2008 September 26, 2008

MORE INFORMATION

www.mutku.fi/nordrocs-2008

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nordrocs2008@congreszon.fi

The meeting is funded by:



