

ENVIROS SPAIN S.L.  
6th EC FP FUNMIG IP Technical Secretariat  
[www.enviros.biz](http://www.enviros.biz)



ITC School of Underground Waste  
Storage and Disposal  
[www.itc-school.org](http://www.itc-school.org)



## First Announcement



## FUNMIG Course on The Fundamentals of Radionuclide Migration

07<sup>th</sup> – 10<sup>th</sup> November 2005

Gran Via Business Centre,  
Gran Vía de les Corts Catalanes, 630  
(next to Paseo de Gràcia)  
08007 Barcelona – Spain

[www.granviabc.com](http://www.granviabc.com)

## Objectives

The training course is held within the framework of the EC FP6 Integrated Project FUNMIG (Fundamental Processes of Radionuclide Migration, [www.funmig.com](http://www.funmig.com)). It is organised by ENVIROS in collaboration with the ITC School.

The main objective of the course is to provide contextual training on the Fundamentals of Radionuclide Migration to the younger generations currently involved in the research areas of FUNMIG but which lack the overall picture of the nuclear waste management context. In addition the course can be used to provide the required training to new members of the radioactive waste management community.

## Who should attend ?

Young professionals as well as scientists entering the research areas of FUNMIG. Implementers, regulators, scientists and students from outside the project are most welcome.

## Preliminary Programme

### Monday, 07<sup>th</sup> November 2005

10:30 – 11:00 h	Registration & Coffee
11:00 – 11:15 h	Welcome and Introduction <i>ENVIROS / ITC</i>
11:15 – 12:45 h	What we need to know and what is important to end-users? <i>Andra</i> <b>Lunch</b>
14:00 – 15:30 h	Radiochemical properties and radiological behaviour of key radionuclides <i>INE</i> <b>Coffee Break</b>
15:30 – 17:00 h	Groundwater flow environments in different geological formations <i>Nagra</i>
17:00 – 18:30 h	Controls on groundwater chemistry: processes, variability, evolution <i>Enviros</i>

### Tuesday, 08<sup>th</sup> November 2005

08:30 – 10:00 h	Groundwater movement in fractured rocks <i>Enviros</i> <b>Coffee Break</b>
10:30 – 12:00 h	Controls on the behaviour of pore water in clays <i>SCK•CEN</i>
12:00 – 13:30 h	Matrix diffusion <i>KTH</i> <b>Lunch</b>
15:00 – 16:30 h	Modelling the flow-field in fractured rocks <i>SKB</i> <b>Coffee Break</b>

17:00 – 18:30 h Modelling flow in heterogeneous porous rock formations  
*UPC*

### Wednesday, 09th November 2005

08:30 – 10:00 h Radionuclide sorption and precipitation  
*Enviros*

#### Coffee Break

10:30 – 12:00 h The significance of biological processes  
*SKB*

12:00 – 13:30 h Generation and properties of colloids  
*INE*

#### Lunch

15:00 – 16:30 h Modelling transport in fractured rocks  
*Enviros*

#### Coffee Break

17:00 – 18:30 h Modelling transport in unfractured, porous rocks  
*SCK•CEN*

#### Course Dinner

### Thursday, 10th November 2005

08:30 – 10:00 h Learning from in-situ experiments  
*Enresa*

#### Coffee Break

10:30 – 12:00 h How radionuclide transport is handled in safety assessments  
*Nagra*

12:00 – 13:30 h Putting it all together: worked example of sensitivities using a typical PA code  
*Enviros*

#### Lunch

15:00 – 16:30 h Looking forward: fields where relevant advances can be expected  
*Enviros*

#### Coffee, Individual Return

## Cost

Course Fee  
(including lunch): 1000.- Euro / person

Course Dinner: 50.- Euro / person

## Note

The organisation of the course does not arrange accommodation. Please arrange accommodation by yourself. Below there is a list of hotels in the area around the Gran Via Business Centre.

We kindly ask you to transfer the course fee to the following bank account until **30th October 2005**:

ENVIROS SPAIN, S.L.

Account: 0049 - 5076 - 86 - 2816088141

Banco Santander Central Hispano

Rambla Can Mora, 7

08190 Sant Cugat del Vallès (Barcelona)  
Spain

SWIFT Code: BSCHEM

IBAN: ES24 0049 5076 8628 1608 8141

## Important Dates

1st Announcement: August, 2005

2nd Announcement: September, 2005

Expression of interest: As soon as possible by email:

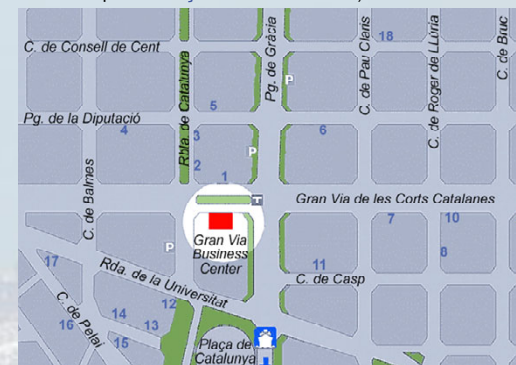
[sylvia.mieth@itc-school.org](mailto:sylvia.mieth@itc-school.org) and

[mmartell@enviros.biz](mailto:mmartell@enviros.biz)

**Registration deadline:  
15th October 2005**

## How to reach the Course Venue

The Course Venue is located in the centre of Barcelona, 6 min. walk from the PLAÇA CATALUNYA metro station. The journey from the airport takes ca. 30 min. by taxi and 45 min. by railway / metro (take Line 1 – AEROPORT / BADALONA of RENFE trains at the airport and get off after 4 stops at PLAÇA DE CATALUNYA).



## Hotels in the area:

- 1 Avenida Palace\*\*\*\* (GV Corts Catalanes, 605-607) 93 301 96 00
- 2 Onix Rambla\*\*\* (Rbla. Catalunya, 24) 93 342 79 80
- 3 NH Calderón\*\*\*\* (Rbla. Catalunya, 26) 93 301 00 00
- 4 Sansi\*\*\*\* (Diputació, 234) 93 304 07 07
- 5 Cristal\*\*\*\* (Diputació, 257) 93 487 87 78
- 6 St. Moritz\*\*\*\* (Diputació, 262-264) 93 412 15 00
- 7 Apsis Atrium Palace\*\*\*\* (GV Corts Catalanes, 656) 93 342 80 00
- 8 Ritz Roger de Llúria Barcelona\*\*\*\* (Roger de Llúria, 28) 93 343 60 80
- 9 Gran Hotel Havana\*\*\*\* (GV Corts Catalanes, 647) 93 412 11 15
- 10 Ritz\*\*\*\*\* (GV Corts Catalanes, 668) 93 510 11 30
- 11 Husa Barcelona\*\*\*\* (Casp, 1-13) 93 302 58 58
- 12 H10 Catalunya Plaza\*\*\* (Plaça Catalunya, 7) 93 317 71 71
- 13 Regina\*\*\*\* (Bergara, 2 - 4) 93 301 32 32
- 14 Catalonia Ducs de Bergara\*\*\*\* (Bergara, 11) 93 301 51 51
- 15 Pulitzer\*\*\*\* (Bergara, 6-8) 93 481 67 67
- 16 Inglaterra\*\*\* (Pelai, 14) 93 505 11 00
- 17 Jazz\*\*\* (Pelai, 3) 93 552 96 96
- 18 AC Diplomatic\*\*\*\* (Pau Claris, 122) 93 272 3810

More information on hotels can be obtained at:  
<http://www.barcelona-on-line.es/eng/index.asp>  
<http://www.bcn.es/english/home.htm>

# Registration Form

to be submitted by 15<sup>th</sup> October 2005

First name: \_\_\_\_\_

Last name: \_\_\_\_\_

Institution: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_

E-mail: \_\_\_\_\_

Number of Persons for  
Course Dinner: \_\_\_\_\_

Arrival: \_\_\_\_\_

Departure: \_\_\_\_\_

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Please mail this registration form to:

ITC School of Underground Waste  
Storage and Disposal

P.O. Box

CH-3862 Innertkirchen

Switzerland

Fax +41 56 430 0839

Or email registration details to:

[sylvia.mieth@itc-school.org](mailto:sylvia.mieth@itc-school.org)