

Fundamentals of Geological Disposal in Sedimentary Environments

Last Updated Monday, 23 November 2009

October 26th – 4th November 2009: Peine, Germany

This eight-day course is presented by ITC in collaboration with the Federal Office for Radiation Protection (BfS) and DBE TECHNOLOGY, hosted by the latter, and with the participation of the Clausthal University of Technology, Germany. It is a component of the IAEA Network programme for 2009. The course is designed for project managers and scientists, regulatory agencies and geoscientific organisations concerned with the development of geological repositories for long-lived wastes in sedimentary formations. The programme is developed and considerably extended from a course with a similar topic, held in 2007. This time, there is more emphasis on safety assessment methodology in sedimentary environments, as well as sections on the technical fundamentals of geological disposal and societal aspects of repository siting and development.

Visits will be made to two underground facilities: the Konrad mine (below) which was recently licensed for the disposal of low and intermediate level wastes and is currently being converted to receive wastes, and the candidate site for a repository in a salt formation for high level wastes.

Sedimentary_Environments_10_09_Programme_v3.pdf 111kb

The course programme covers all the major aspects of repository siting, development and safety assessment in sedimentary formations. It includes two practical exercises. (a) in developing a performance assessment model for a hypothetical sedimentary system and (b) in communicating with stakeholders. The key elements of the course are:

- Basics of disposal (concept of geological disposal and wastes for disposal)
- Formation properties (hydrogeological, hydrochemical and engineering)
- Repository design in clays and salt formations
- Site selection and site characterisation in mixed sedimentary formations
- Repository evolution in clay and salt environments
- Post-closure safety standards and regulations
- Components of a safety case
- Constructing and running a performance assessment (EXERCISE 1)
- Monitoring of deep repositories: concepts, instrumentation and experience
- Case studies of design and safety concepts from Germany, France, Switzerland and the Czech Republic
- Communicating with stakeholders in a repository programme (EXERCISE 2)

As with all ITC courses, training will take place in an informal, workshop atmosphere and you will be encouraged to interact with and question the tutors at all times. Each participant will receive a volume of course notes covering all the presentations and exercises.

Course Location

The course will take place at the pleasant modern offices of DBE Technology (below left), on the outskirts of the town of Peine (below centre and right), within easy walking distance of the hotel where participants will stay.

In the second week of the course, participants will travel to Clausthal on Monday for a day at the Technical University, where the performance assessment exercise will be carried out.

Other Activities

On Monday evening, 2nd November, there will be an excursion and guided tour around the ancient mining town on Goslar (below), followed by a Course Dinner. Goslar is a medieval town situated in the foot hills of the Harz Mountains in

Lower Saxony. This UNESCO World Heritage Site is famed for its magnificent gates, ramparts, the Imperial Palace, Romanesque churches, half-timbered guild houses, the ancient Rammelsberg ore mine and more!

During the intervening weekend there will be an opportunity to visit Berlin on the Saturday. The train takes approximately 2 hours from Peine to Berlin main station.

Getting to Peine

Peine is situated 45 km to the east of Hannover, the nearest airport and rail centre. Peine can be reached by rail from either Hannover main railway station or Hannover airport. There are regular connections which take approximately one hour fifteen minutes from Hannover airport to Peine. The hotel is a short taxi ride from Peine railway station. Participants should aim to arrive on the Sunday evening before the course.

Course Fees

The course fees cover tuition, accommodation, breakfast, lunch, dinner and morning and afternoon refreshments for ten days (arriving Sunday evening 25th October, departing Wednesday 4th November). Please note that dinner on Sunday 25th October and lunches and dinners on Saturday 31st October and Sunday 1st November are not included. Course notes and other materials are also covered by the fee, as are all transports during the course to field sites.

CHF 8100 - ITC Members

CHF 8950 - non-members

The course fee is due within four weeks of your registration. Registration is not guaranteed until we have received the course fee. If you have to withdraw from the course after paying your fee, it will be refunded in full up to 28th September 2009. After this date, it is not refundable.

Application form

You can register on-line using the registration form, accessible [here](#). The number of places is limited, so we would advise you to register early.

Insurance

Please note that participants on this course, or their employing organisations, are responsible for their own personal insurance.

Course Programme

The updated course programme is available as a PDF here : [Sedimentary_Environments_10_09_Programme_v3.pdf](#)
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