

Information and final agenda

The MIND project would hereby like to welcome you and your colleagues to the fourth and final **MIND Project Annual Meeting (PAM), Implementers Review Board (IRB) and Project Executive Committee Meeting (PEC)** which are scheduled to take place in **Stockholm on the 7th to 9th of May.**

The complete MIND 2019 PAM will be hosted by SKB.

The meeting venue for the meetings:

Vattenfall building
Vattenfallet
Evenemangsgatan 13
169 03 Solna

+46 (0)46 76 70 45
+46 (0)46 459 85 82

How to reach the venue:

By train: Commuter train from Arlanda to Solna Station. Exit Arenastaden.
The journey takes about 45 minutes.

Hotel Bookings

Each participant is responsible for managing their own travel arrangements and hotel bookings. We recommend that you book your hotel room as soon as possible as the beginning of May is very busy in Stockholm.

Recommended hotels located close to the meeting venue include:

1. [Hotel Friends Rasta Strandväg 1, Solna](#) (close to the meeting)
2. [Grand Central by Scandic, Kungsgatan 70, 111 40 Stockholm](#) City center (150 m from the Central Station, two stops by commuter trains to the meeting place in Solna)
3. [Ibis Styles Stockholm Odenplan](#) (one stop by commuter trains to the meeting place in Solna)
4. [Scandic Kontinental Vasagatan 2, Stockholm City Center](#) (150 m from the Central Station, two stops by commuter trains to the meeting place in Solna)

Travel

- [Arlanda Airport](#) is the nearest airport (45 minutes by commuter train. There is a train station located in the airport building.



Commuter train station: Solna. Exit Arenastaden.



Vattenfall building, entrance, Evenemangsgatan 13

MIND Implementers Review Board Workshop

May 6th The IRB workshop will be organized by Johan Andersson and take place at Arenastaden, Moorborg on the 3rd floor. A separate agenda will be distributed to those that are expected to participate.

1. MIND-Project Meeting Registration

The MIND Project Annual Meeting will be hosted from May 7th and will end on May 9th. Registration will be open from 8:30 on May 7th. The meeting will be held in conference hall Vattenfallet on the 2nd floor.

2. MIND-Project Annual Meeting

May 7th

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|-------------|---|
| 08:45-10:00 | Registration and coffee outside conference hall "Vattenfallet". |
| 10:00-10:20 | Opening of meeting by the coordinators <i>Birgitta Kalinowski, Petra Christensen, SKB</i> |
| 10:20-10:40 | Project Officer: <i>Athanasios Petridis, European Commission</i> |
| 10:40-11:40 | Keynote: The relevance of microbial processes in Nagra's safety case. <i>Olivier Leupin, Nagra</i> |
| 11:40-12:00 | Summary of IRB-meeting on May 6 th , <i>Johan Andersson, SKB</i> |
| 12:00-13:00 | <i>Lunch</i> |
| 13:00-14:30 | Overview by WP-leaders (30 min per WP) <ul style="list-style-type: none"> ▪ WP1: The behaviour of organic containing long-lived intermediate level wastes. <i>Joe Small, NNL</i> ▪ WP2: The influence of microbial processes on high level waste and spent fuel geological disposal. <i>Karsten Pedersen, Micans</i> ▪ WP3: Integration, Communication and Dissemination. <i>Natalie Leys, SCK-CEN</i> |
| 14:30-15:00 | <i>Coffee</i> |
| 15:00-16:00 | Effective communication about microbes in radioactive waste management through improved understanding of expert and lay persons' conceptualizations. <i>Tanja Perko, SCK-CEN</i> |
| 16:00-16:36 | Oral poster presentations (3 minutes/ poster) |
| 16:45-18:45 | Poster session with refreshments (Modis) |

May 8th Theme sessions

Theme session 1: Microbes and radionuclide interactions (chair: Joe Small)

- 09:00-09:05 Introduction. *Joe Small, NNL*
- 09:05-09:25 Impact on *Stenotrophomonas bentonitica* BII-R7 on the mobility of Se, Eu and U within the deep geological repository system of radioactive waste. *Miguel Angel Ruiz-Fresneda et al., UGR*
- 09:25-09:45 Microbial controls on the mobility of uranium and other radionuclides in nuclear waste disposal in the presence of ISA and gluconate. *Gina Kuippers, UniMan*
- 09:45-10:05 The fate of polycarboxylic organic decontamination agents in high pH Low Level Waste disposal. *Natalie Byrd, UniMan*
- 10:05-10:30 *Coffee*
- 10:30-10:50 Radionuclide interaction with organic compounds: characterization on a molecular level. *Hannes Brinkmann et al., HZDR*
- 10:50-11:10 General discussion on microbes and radionuclide interactions. *All*

Theme session 2: Organics and gases (chair: Joe Small)

- 11:10-11:15 Introduction. *Joe Small, NNL*
- 11:15-11:35 Investigating the biodegradation of organic compounds released from irradiated ion exchange resins. *Aislinn Boylan et al., EPFL*
- 11:35-11:55 Biodegradation of maintenance waste and gas generation. *Minna Vikman et al., VTT*
- 11:55-12:15 Methane generation under repository relevant conditions, *Niels Burzan et al., EPFL*
- 12:15-13:15 *Lunch*
- 13:15-13:35 An active microbial community in boom clay pore water collected from piezometers impedes validating predictive modelling of ongoing geochemical processes. *Kristel Mijndonckx et al., SCK-CEN*
- 13:35-13:55 Acetate is an important carbon source of the Fennoscandian deep biosphere. *Malin Bomberg et al., VTT*
- 13:55-14:15 Monod kinetic modelling of microbial processes in borehole experiments. *Liam Abrahamsen-Mills and Joe Small, NNL*
- 14:15-14:35 General discussion on organics and gases. *All*
- 14:35-15:00 *Coffee*

Theme sessions 3: Microbiology and engineered barriers (chair: Karsten Pedersen)

- 15:00-15:05 Introduction. *Karsten Pedersen, Micans*
- 15:05-15:25 Natural occurring spore-forming sulfate reducers and their influence on the bentonite barrier. *Nicole Matschiavelli et al. HZDR*
- 15:25-15:45 Biofilm - influenced anaerobic corrosion of stainless steel and carbon steel. *Tomáš Černoušek et al. CVREZ*

- 15:45-16:05 The effects of microbial activity on the physical, chemical and transport properties of bentonite on steel corrosion experiments. *Simon Gregory et al. BGS*
- 16:05-16:25 Temporal evolution of the Microbial Community associated with bentonite *in situ*. *Niels Burzan et al., EPFL*
- 16:25-16:45 Bentonite characteristics after two years of storage with indigenous bentonite and water microbes. *Hanna Miettinen et al., VTT*
- 18:00-22:00 Joint walk to the conference dinner at Fjärilshuset in Hagaparken

May 9th

Theme sessions 3 (cont.)

- 09:00-09:05 Good morning and welcome. *Karsten Pedersen, Micans*
- 09:05-10:05 Keynote: Iron and copper corrosion morphologies related to MIC? *Johannes Johansson, SKB*
- 10:05-10:25 Survival of microorganisms in bentonite subjected to gamma radiation and the effect of anaerobic conditions on the microbial ecosystem evolution in bentonite. *Kateřina Černá, TUL*
- 10:25-10:55 Coffee
- 10:55-11:15 Microbial effects from the point of view of bentonite safety. *Markus Olin, VTT*
- 11:15-11:35 Geochemical patterns and constraints of microbial sulphate reduction in the geosphere. *Riikka Kietäväinen et al., GTK*
- 11:20-11:40 General discussion on microbiology and engineered barriers. *All*
- 11:40-12:00 NWMO microbiology research and development program. *Mehran Behazin, NWMO*
- 12:00-13:00 Lunch
- 13:00-13:20 How Microbiology Fits into the Performance Assessment for the Waste Isolation Pilot Plant. *Julie Swanson, LANL*
- 13:20-14:20 Performance Assessment. *Joan Govaerts, SCK-CEN*
- 14:20-14:50 Coffee
- 14:50-16:20 IRB/ IGDTP/MIND2 WMO perspective and discussion
MIND2 (internal view – *Andrea Cherkouk HZDR and Rizlan Bernier- Latmani, EPFL*)
MIND2 (IRB/ WMO view – *Johan Andersson + all*)
- 16:20-16:30 Closing of meeting *Birgitta Kalinowski, Petra Christensen*

Poster session

The MIND **Poster Session** is held on May 7th (17.00 – 19.00). This session is open for all and will include mingle and refreshments.

1. Lorraine Field, BGS, “Petrological and mineralogical findings from experiments into microbial effects on steel and compacted
2. Pablo Martínez-Rodríguez, UGR, “Phosphates speciation influences BE9 bacterial strain uranium bioremediation potential”
3. Mark Dopson, Linnaeus University, “Shining a light on sulfur cycling in the deep biosphere”
4. Katie Gilmour, Newcastle University, “Growth and activity of the microbial community of MX80 bentonite in the presence of iron”
5. Alena Ševců, TUL, “Effect of concrete on microbial community under repository relevant conditions”
6. Kateřina Černá, TUL, “Detection of living bacteria in bentonite – cell staining”
7. Susanna Maanoja, Tampere University, “Compacted clay as a potential source of substrates for groundwater and clay microbes”
8. Toru Nagaoka, Crieipi, “Microbial influenced corrosion of carbon steel in compacted buffer material composed of Kunigel V1 and sand mixture”
9. Tom Rogiers/Kristel Mijndonckx, SCK-CEN, “Dynamic genetic adaptation in the bacterium *Cupriavidus metallidurans* in response to uranium”
10. Sarah Butterworth, Manchester University, “Identifying the limits and impacts of microbial metabolism in geodisposal scenarios”
11. Takahiro Goto, Nuclear Waste Management Organization of Japan, “Investigation of bentonite products in Japan for alternative buffer materials”
12. Alexey Safonov, Russian Academy of Science, “Microbial corrosion of carbon and stainless steel by thermophilic microbiota in contact with bentonite for crystalline rock RW repository in Russia”

Project Executive Committee Meeting

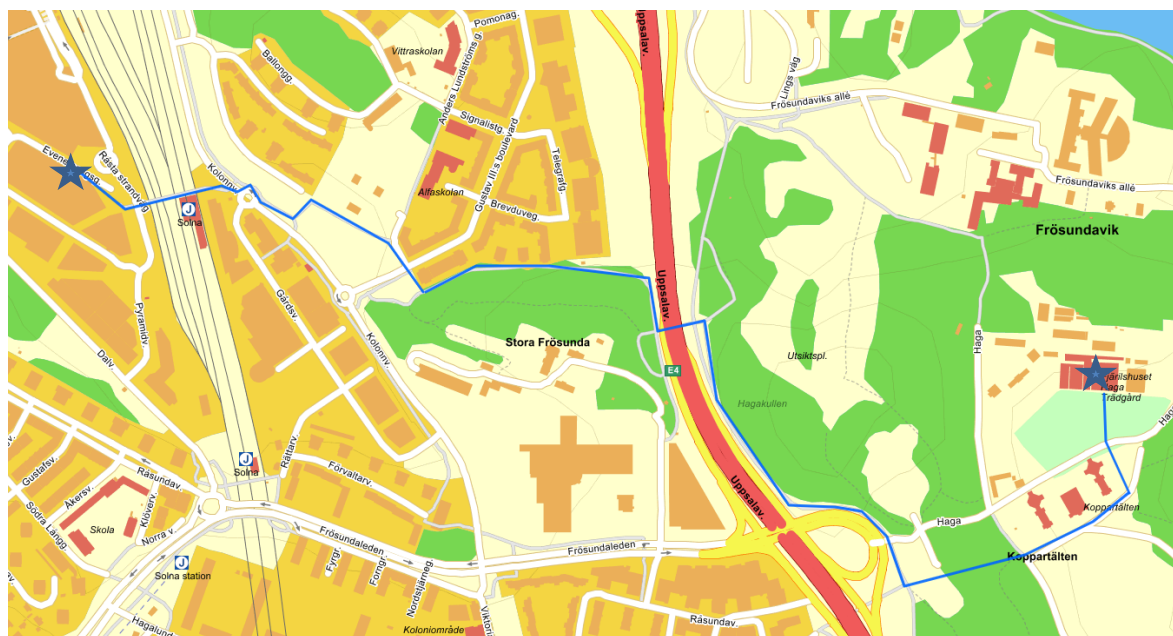
The MIND **Project Executive Committee meeting** is held on the afternoon of May 8th (16:45–17:45). This meeting is only open for **PEC** members who will in due time receive a call and agenda for the meeting.

Project Dinner

The MIND **Project Dinner** is held on May 8th (18:15-22:00). We will meet up outside the Vattenfall building for a joint walk to Fjärilshuset (*Butterfly House*) in Hagaparken (approx. 30 minutes' walk). Fjärilshuset is situated behind the Copper tents.



The Copper tents in Hagaparken.



Directions to Fjärilshuset from the Vattenfall building. The distance is about 2 km.

3. Post-meeting excursion to SFR, Forsmark

May 10th

- 09:00 The bus departs from Evenemangsgatan 13, outside the Vattenfall building
- 11:15 *Arriving at the Forsmark Inn for lunch*
- 12.30 Leaving for The final repository for L/ILW, SFR
- 13.00-15.00 Visit to SFR
- 13:00 Presentation of SKB, Forsmark
 - 13:45 Check-in at SFR: passport and security control.
 - 14:15 Guided tour underground.
- 15.30 Transportation back. There will be two stops: First Arlanda Airport 16:15 and then Stockholm Central station 17:00.



SFR

MIND Project Annual Meeting 2019

Information and Final Agenda



PAM1, Granada 2016



PAM2, Prague 2017



PAM3, Lausanne 2018