

# MOBILITY MISSION REPORT

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**KLIKNETE NEBO KLEPNETE SEM A ZADEVTE TEXT.**

## MISSION TITLE

Attendance to SEG2023 Conference

## DESCRIPTION

### Concerned organisations

The International Symposium on Energy Geotechnics (SEG23) was celebrated to bring together the academics and industrial partners working on energy-related geotechnics. It was organized by the Technical University of Delft (TUDelft) on behalf of the Technical Committee 306 of the International Society of Soil Mechanics. The concerned organizations were:

- Waste management organisations
- Research entities
- Universities
- Industry

### Concerned infrastructures or facilities

Other relevant infrastructure or facility to be specified

### Concerned phases



## Themes and topics

- Theme 3: Engineered barrier system (EBS) properties, function and long-term performance
  - Spent Fuel and high-level waste disposal canisters
  - Containers for long-lived intermediate and low level wastes
  - Clay-based backfills, plugs and seals
  - Cementitious-based backfills, plugs and seals
  - Salt backfills
  - EBS system understanding
- Theme 4: Geoscience to understand rock properties, radionuclide transport and long-term geological evolution
  - Long-term stability (uplift, erosion and tectonics)
  - Perturbations (gas, temperature and chemistry)
  - Aqueous pathways and radionuclide migration

## Keywords

Energy; Nuclear waste; Host rocks; Gas transport; Self-sealing; Safety assessment

## EXECUTIVE SUMMARY

Attendance at SEG23 has allowed me to present the work developed during EURAD project WP6 GAS to the scientific and industrial community. Additionally, interesting and motivating lectures took place during the conference which increased my knowledge and broadened my vision regarding technologies and material behavior, among others. It also permitted me to meet other researchers and extend my network.

## 1. MISSION BACKGROUND

Klikněte nebo klepněte sem a zadejte text.

### 1.1. R&D background

The proposed mobility action implied the travel from Barcelona (Spain) to Delft (The Netherlands), the accommodation, and the daily allowance to participate as a lecturer at the “Symposium on Energy Geotechnics, Accelerating the Energy Transition (SEG23)”. The symposium took place from the 3rd to the 5th of October 2023.

I sent two extended abstracts entitled “Effectiveness of self-sealing after gas transport in Boom Clay” and “Multi-scale investigation on gas transport behaviour of compacted granular bentonite under partially saturated states” that were accepted and selected for oral presentation. The oral presentations focused on the gas transport behavior of Boom Clay and granular bentonite at both macroscopic and microscopic scales.

### 1.2. Mission objectives

The mission was to present to the audience the results developed during the WP GAS of EURAD as well as acquire new knowledge from the lectures of other colleagues.

### 1.3. Mission request

These results presented at the symposium, which were developed during the EURAD project, provided further insight into the gas transport and self-sealing capacity to the audience in the field of radioactive waste management and other energy-related disciplines.

### 1.4. Mission composition

#### Host organisation

Technical University of Delft (The Netherlands)

#### Host facility

Technical University of Delft (The Netherlands).

#### Mission dates

3 – 5 October 2023

## 2. MAJOR PRACTICES, TECHNIQUES, METHODS, TOOLS OR SYSTEMS OPERATED OR STUDIED

*Describe up to four of the most important practices, methods or tools you operated or studied during the mission, as applicable. This entire section shall be maximum two pages (remove this entire sentence).*

### 2.1. Practice, technique, method, tool or system operated or studied during the mission

Not applicable

#### Description

Not applicable.

#### Usage

Not applicable

#### Benefits

Not applicable.

#### Limitations

Not applicable

#### Applicability

Not applicable

### 2.2. Practice, technique, method, tool or system operated or studied during the mission

Not applicable

#### Description

Not applicable

#### Usage

Not applicable

#### Benefits

Not applicable.

### Limitations

Not applicable.

### Applicability

Not applicable

#### 2.3. Practice, technique, method, tool or system operated or studied during the mission

Not applicable.

### Description

Not applicable.

### Usage

Not applicable.

### Benefits

Not applicable.

### Limitations

Not applicable.

### Applicability

Not applicable.

#### 2.4. Practice, technique, method, tool or system operated or studied during the mission

Not applicable.

### Description

Not applicable.

### Usage

Not applicable.

### Benefits

Not applicable.

### **Limitations**

Not applicable.

### **Applicability**

Not applicable.

### 3. MISSION FINDINGS AND CONCLUSIONS

Klikněte nebo klepněte sem a zadejte text.

#### 3.1. Lessons learned and conclusions

Not applicable.

#### 3.2. Relevant findings and conclusions for home organisation

Not applicable.

#### 3.3. Relevant findings and conclusions for host organisation

Not applicable.

#### 3.4. Relevant findings and conclusions for other organisations

Not applicable.

## 4. POTENTIALS FOR IMPROVEMENT OR DEVELOPMENT

Klikněte nebo klepněte sem a zadejte text.

### 4.1. Generic potentials

Not applicable.

### 4.2. Potentials for home organisation

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### 4.3. Potentials for host organisation

Klikněte nebo klepněte sem a zadejte text.



## APPENDICES

### Mission journal

Monday 02/10/2023 – Flight from Barcelona to Amsterdam; train from Amsterdam to Delft.

Tuesday 03/10/2023 – Attendance at SEG23 – Presentation of the paper: “Multi-scale investigation on gas transport behaviour of compacted granular bentonite under partially saturated states”

Wednesday 04/10/2023 - Attendance at SEG23 – Presentation of the paper: “Effectiveness of self-sealing after gas transport in Boom Clay”.

Thursday 05/10/2023 - Attendance at SEG23.

Friday 06/10/2023 – Return to Barcelona.

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## MISSION BENEFICIARY

Laura GONZALEZ-BLANCO  
 Post-doctoral researcher  
 Geomechanical Group  
 International Centre for Numerical Methods in Engineering (CIMNE), Spain

## PARTNER EXPERTS CONTRIBUTING TO THE MISSION

### Host organisation experts

- Not applicable

### Home organisation experts

- Not applicable

### Other organisations experts

- Not applicable

## REPORT APPROVAL

Date	Beneficiary	Home mentor/supervisor	Host mentor/supervisor
Date of last signee	Laura Gonzalez-Blanco	Enrique Romero	Not applicable
	Visa	Visa	Visa