

**Partial Contract concluded on the basis of the Framework Agreement signed on
12 October 2016 with the title:**

**Utilization of foreign experience in the siting process for a deep
geological repository for radioactive waste in the Czech Republic**

between

CONTRACTING PARTIES

Client: **Česká republika – Správa úložišť radioaktivních odpadů**

Registered office: Dlážděná 6, 110 00 Praha 1, Czech Republic

Represented by: RNDr. Jiří Slovák, Managing Director

ID: 66000769,

Banking details:

Name of Bank: ČNB, Na Příkopě 28, Praha 1

Account No.: xxxxxxxxxxxxxxxxx

Not a payer of VAT

(hereinafter referred to as the “**Client**”) and

Name of company: **Posiva Oy (lead party) in a consortium with Saanio & Riekkola Oy
(from 31 August 2018 onwards, the company name is A-Insinööri Civil Oy)**

Registered office: Olkiluoto, FI- 27160 Eurajoki, Finland

Represented by: Janne Mokka

ID: 1029258-8,

Tax ID: FI10292588,

Banking details:

Name of Bank: Nordea (NDEAFIHH)

Account No.: xxxxxxxxxxxxxxxxxxxxx

(hereinafter referred to as the “**Supplier**”)

(hereinafter both referred to as the “**Contractual Parties**”)

The Contractual Parties hereby conclude the following Partial Contract (PC) in accordance with the provisions of Article 5 and in the format of Annex No 4 of the Framework Agreement.

**Utilization of foreign experience in the siting process for a deep geological repository
for radioactive waste in the Czech Republic**

Name of the Partial Contract:	Borehole information system
Area of Services:	iv. the assessment and/or development of specific site characterization methods
ID of Services:	2016-120-09

	Function	Name	Date	Signature
Client approved for chapter 1	Project Manager	xxxx	14.9.2018	
Compiled by	Project Manager of the Partial Contract	xxxx	13.9.18	
Partial Contract approved by the Client	Managing Director	Jiří Slovák	24.09.2018	
Supplier approved - project manager	Project Manager	xxx	12.10.18	
Supplier approved - manager of the partial contract	Project Manager of the Partial Contract	xxx	23.10.2018	
Partial Contract approved by the Supplier	Sales Director, Posiva Oy	xxx	27.10.2018	
	Managing Director, Saanio & Riekkola Oy	xxx	23.10.2018	
	Managing Director, Posiva Solutions Oy	xxx	17.10.2018	

Note: This Partial Contract (PC) has been concluded in compliance with the conditions of a Framework Agreement (FA) signed on 12 October 2016 entitled: "Utilization of foreign

experience in the siting process for a deep geological repository for radioactive waste in the Czech Republic”.

1 CLIENT’S ASSIGNMENT

1.1 Requirements concerning the scope and technical specifications

The aim of this Partial Contract is the creation of a new SURAO borehole information system (acronym BORIS). The subject of this partial contract includes a number of activities, the first of which concerns a definition of the borehole data that will be acquired during the drilling phase and the subsequent monitoring. Subsequently, sample data from the POSIVA internal database will be tested using several commercially used software applications for borehole documentation and visualisation purposes. POSIVA will then recommend the most suitable software solution to SURAO. The final stage will involve the implementation of the solution.

The Partial Contract includes the following work packages (WP):

WP1: Borehole description and software functionalities

The subject of the first part of this WP will consist of a definition of the full range of borehole description parameters (geological, geomechanical borehole logging, borehole geophysical measurements, drill core analysis, borehole testing, etc.). The second part of the WP will define all the functionalities required from the software in order to ensure a comprehensive system for the collection and storage of borehole visualisation data.

WP 2: Software overview

This work package will include the testing of at least 5 commercially-employed borehole visualisation and documentation software applications using real POSIVA drilling data as defined in WP 1. Testing will focus on the specific functionalities of the software, the connection to the database, data formats, robustness and software sustainability. The best software solution will then be chosen accompanied by a definition of the required modules and packages.

Output of WP1 and 2: A report describing the various software requirements, tested software, data to be acquired and presentation on the findings, followed by the recommendation of the most suitable solution for SURAO and its supply chain.

WP3: Software implementation

This work package will involve assistance from POSIVA with the practical implementation of the selected software solution in the context of SURAO’s various internal structures, the creation of a borehole log template and a borehole drilling log as well as a detailed definition of the structure of the borehole database.

The Client nominates the following person as the Project Manager for the Partial Contract (PC): xxxxxxxxxxxx, e-mail: xxxxxxxxxxxx The Supplier will communicate directly with this

person, with correspondence copied on all occasions to Ms. xxxxxxxxxxxxxxxx, e-mail: xxxxxxxxxxxxxxxx

The Client requires the Supplier to nominate those PC participants that will be financed from this Partial Contract.

Changes of persons nominated either by the Client or the Supplier are permitted without the requirement for amending the PC. In case of a change of Project Manager either on the side of the Client or the Supplier, the Project Manager of the one party shall be required to notify his/her counterpart in writing of the change.

1.2 Required Services deadlines

WP1+2	T0+7 Months
<ul style="list-style-type: none">– Output: A report describing the various software requirements, tested software solutions, data to be acquired and presentation on the findings, followed by the recommendation of the most suitable solution for SURAO and its supply chain.	
WP 3: Software presentation and implementation	T0+10 Months

1.3 Estimated labour intensity and/or its limitation

The Client estimates that the work involved in the PC will amount to 500 hours.

Point in the PC	Activities	Estimated labor intensity [hours]
WP 1	Borehole description and software functionalities	100
WP 2	Software overview	300
WP 3	Software implementation	100

1.4 Specific requirements concerning the organisation of the Services

The Supplier shall propose the location and timing of those meetings with the Client's experts deemed necessary for the fulfilment of the objectives of the Partial Contract. Communication via telephone, email and videoconferencing will be acceptable provided the security of the information disclosed is ensured.

2 CONFIRMATION / MODIFICATION OF THE ASSIGNMENT OF SERVICES BY THE SUPPLIER

2.1 Scope of the Services and technical specification

The Supplier confirms the assignment of Services by the Client stated in Article 1.1.

2.2 Fulfilment dates

The Supplier agrees with the deadlines stated in Article 1.2 by the Client.

The Supplier may suggest changes to the partial deadlines; however, the final deadline is in line with the requirements of the Client.

Such delays which are caused by the Client must be taken into account in the deadlines and overall schedule.

2.3 Price of the Partial Contract

The Supplier states herein the price limit of the Partial Contract which is based on the labour intensity determined in accordance with Article 2.4 of this document and the rates specified in Article 4.3 of the FA. Based on the preliminary allocation of working hours to the various experts and their hourly rates, the price estimate (exclusive of travel costs) is set at 61 436 €. The Supplier shall be required to justify all the expenses incurred. As a minimum, consultation at the Client's premises will incur travelling expenses.

2.4 Organisation of the Services

The Supplier nominates Ms. xxxxxxxxxxxx as their Project Manager. Mr. xxxxxxxxxxxx and Ms. xxxxxxxxxxxx will be the main experts carrying out the task defined in this Partial Agreement. The Supplier will take into account the limit set by the Client in Article 1.3 of the Partial Contract (500 hours).

Estimated hours per category are listed in Table 2.

Table 1: Personnel and roles in the activities set out in the Partial Contract.

Name	Role/position	Knowledge areas relevant to this PC
xxx	Senior Expert	Project Management
xxx	Project Manager	Project Management, Long-Term Safety of Nuclear Waste Disposal
xxx	Expert	Bedrock Geology, Engineering Geology, Exploration Geology; processing and interpretation of geological and rock mechanical investigation data using various drawing, modelling and data processing programs
xxx	Expert	Geophysics, Geophysical surveys, Borehole geophysics, Geophysical data management

Table 2: Personnel hours by category

Category	Hours	%	Price/€
1	0	0	0
2	124	24,8	142,80
3	376	75,2	116,30
4	0	0	0
5	0	0	0

2.5 Risk identification

The risk identification, assessment and management procedures are set out in Annex no. 3 of the FA. The Supplier has identified on risk: There is no five commercial software which are worth of testing. No other major risks are identified.

3 CONCLUSION OF THE PARTIAL CONTRACT

Articles 1 and 2 of this Partial Contract are valid.

The sub-project is subject to the approval of those persons authorised with respect to contractual matters pursuant to Article 1.3 of the FA.

The Partial Contract shall be concluded in line with Article 5 of the FA.

This Partial Contract becomes valid and comes into force on the date of its signing by authorised representatives of the two Contractual Parties.