POSIDON

POLLUTED SITE DECONTAMINATION PCP

ELJSKOV

Project Phase Abstract

POSIDON has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N.776838

Public Description of the Project

If my tender is successful, I authorize to publish the following summary for marketing purposes. Accordingly, this summary is mandatory, but will not be assessed as part of the tender. By submitting this tender, I hereby grant full permission for the publication aforementioned.

Bidder Details	Type/ size of legal entity	Place of performance of contract activities	Logo
Main contractor: Ejlskov Ejlskov A/S Jens Olsens Vej 3 8200 Aarhus N Denmark +45 87 60 00 31 Carsten Frederiksen Cfr@ejlskov.com	SME	% of contract value allocated to main contractor: 40 % % of activities for the contract performed by the main contractor in EU Member States or countries associated with Horizon 2020: 100 %	EJLSKOV
Consortium member: DC Environment DC Environment Rue du Roton 57, 6240 Farciennes Belgium Stephane Verstraete 0032 495 24 95 86 Stephane.Verstraete@dcenvironment.be	large company, contractor	% of contract value allocated to contractor DC Environment: 10 % % of activities for the contract performed by contractor DC Environment in EU Member States or countries associated with Horizon 2020: 100 %	GROUP DC
Consortium member: CTP Centre technologique international de la Terre et de la Pierre Chaussée d'Antoing, 55, 7500 Tournai (Belgium) HENRY Mathieu +32 69 88 42 31 mathieu.henry@ctp.be	Research institute	% of contract value allocated to contractor CTP: 20 % % of activities for the contract performed by contractor CTP in EU Member States or countries associated with Horizon 2020: 100 %	CTP member of EMRA

Consortium member: Deep Green of DUFERCO WALLONIE DUFERCO WALLONIE 34 Rue Anna Boch 7100 La Louvière FALCINELLI Ugo +32.486.777.694 ufalcinelli@deep-green.com	Large company	% of contract value allocated to contractor Duferco Wallonie (Deep Green): 20 % % of activities for the contract performed by contractor Deep Green in EU Member States or countries associated with Horizon 2020: 100 %	
Consortium member: Ram-ses Ram-Ses sprl (Risk AssessMent – Soil Expert advices and Services) Parc CREALYS - Rue Camille Hubert 13 - 5032 Les Isnes, Belgium MOUTIER Maryline HALEN Henri +32 81 73 50 96 m.moutier@ram-ses.eu h.halen@ram-ses.eu	SME	% of contract value allocated to contractor Ram-ses: 10 % % of activities for the contract performed by contractor Ram-ses in EU Member States or countries associated with Horizon 2020: 100 %	

Project abstract ***(4000 characters maximum)***

[Add an abstract of the winning tender, giving a brief project description agreed with the contractor that is suitable for publication purposes]

A Belgian-Danish consortium composed of three industrial companies and small and medium enterprises, one service company and one research institute will manage the project. The consortium is mostly based on previous collaborations existing between some of the partners in the field of soil remediation.

An original way of remediation using scientific techniques from several fields will be used on the polluted soils. Firstly, the soil will undergo a hydraulic fracturing thanks to Ejlskov original techniques. Thanks to this fracturing, access to the pollutants in the core of the contaminated soils can be ensured. Then, in-situ injections step will be carried-out on fractured soils both to degrade organic pollutants and to immobilize inorganic pollutants. Injection of activated carbon containing micro-organisms will allow to decrease organic pollutants levels. The presence of micro-organisms will also enable the transformation of sulphate into sulphide components and therefore immobilize heavy metals. Meanwhile, if activated carbon injection is not possible, not efficient enough or does not work, in-situ chemical oxidation will be carried out inside the fractured soils. To immobilize the heavy metals, sulphuring agents, oxihydroxyde materials or apatite materials will be injected. The treatment will be determined during the first phases of the project.

All these steps require long term remediation. To decrease this duration, thermal activation will be applied on the fractured and injected soils. This activation is light, as only increasing the soil temperature by 10 to 15°C above the natural ground temperature is required. This light activation will enhance bacterial activity and therefore accelerate pollutants degradation.

Risk management, based on a site-specific multi-criteria approach, will be carried out for the whole duration of the project to ensure that pollutants degradation or immobilization will be effective and sustainable. This management will be performed along all the project duration, and therefore allow to take decisions on the way that all partners have to follow to reach final site remediation.

Social and environmental aspects are also taken into account: use of in-situ remediation technologies reduces the disturbance caused by civil engineering works and use of renewable energies, supplying energies for thermal activation, will reduce environmental footprint of remediation works.