This project has received funding from the European Union's Horizon 2020
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POSIDON
POLLUTED SITE DECONTAMINATION PCP

ANNEX 11 bis

HEALTH AND SAFETY CONDITIONS

CODICE CIG N. 7750344A30

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1 DOCUMENT INTRODUCTION AND PURPOSE

In consideration of the obligations borne by the Procurer regarding health and safety in the workplace, the present document completes the information about health and safety risks in case activities of Phase 3 Field Testing of POSIDON PCP will take place in the "Laminoir de la Rochette" site in Liege, selected as potential replacement testing site managed by SPAQUE.

2 DESCRIPTION OF THE TEST FIELD IN BELGIUM MANAGED BY SPAQUE

According to the legal framework applicable in Belgium, it will be necessary to present a Health and Safety Plan for POSIDON PCP before executing phase 3.

A coordinator from Spaque for the specific Health and Safety Plan will be appointed, but it will be the economic operator that will develop the technologies in the pilot plant that will have to present its own Health and Safety Plan.

2.1. DESCRIPTION OF THE TEST FIELD IN LIEGE MANAGED BY SPAQUE

In the Walloon region there are many partially pollutes sites with similar characteristic (situated in an extended residential area for renovation). They are considered as historical pollution resulting from disposal of waste from coal mining industries (forming the coal mining slap) and residues from iron works.

The presented document refers to the site of "Laminoir de la Rochette" in Chaudfontaine (Municipality of Liège), presented as potential replacement testing site, with future envisaged economic land use according to the urban planning.

The site is relatively plane with anthropic layer 3 m at the average. On the west side, there are dredged sediments.

2.2. LOCATION OF THE AREA

The site of Laminoir de la Rochette is located in the Municipality of Liège (Walloon region, Belgium). The site is owned by SPAQUE. The total surface area is 4.6 ha. ''Laminoir de la Rochette'' is situated on Grand'Rue Street, Chaudfontaine, the route access is from the national motorway N64.

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The site limitations are as follows: North-East - a railroad and the Vesdre river, South-East – water treatment plant of AIDE, South-West – Natura 2000 area (Bois-les-Dames) and the North-West – a sports field.

2.3. VIABILITY AND ACCESS TO THE AREA

The site is freely accessible from the Chaussée de la Rochette in Chaudfontaine. This is the unique access to the site. The contractor's attention should be drawn to the bridge gauge as well as to the presence of a road under the rail line Liège – Verviers to access the site. The trolley and equipment must be adapted to these constraints.

Access to the site : Chaussée de La Rochette à Chaudfontaine

Fig.1. Access to the site "Laminoir de la Rochette"

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Fig. 2 Areal view of « Laminoir de la Rochette »

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Several buildings were dismantled as shown in figure 3 below (the buildings in the red square).

A high-voltage cabin and a gas relief cabin managed by ALg are also present (in Parcel 67F2). Finally, the bridge to cross the Vesdre river and enter the site is used by the wagon serving the neighboring AIDE treatment plant located east of the site.

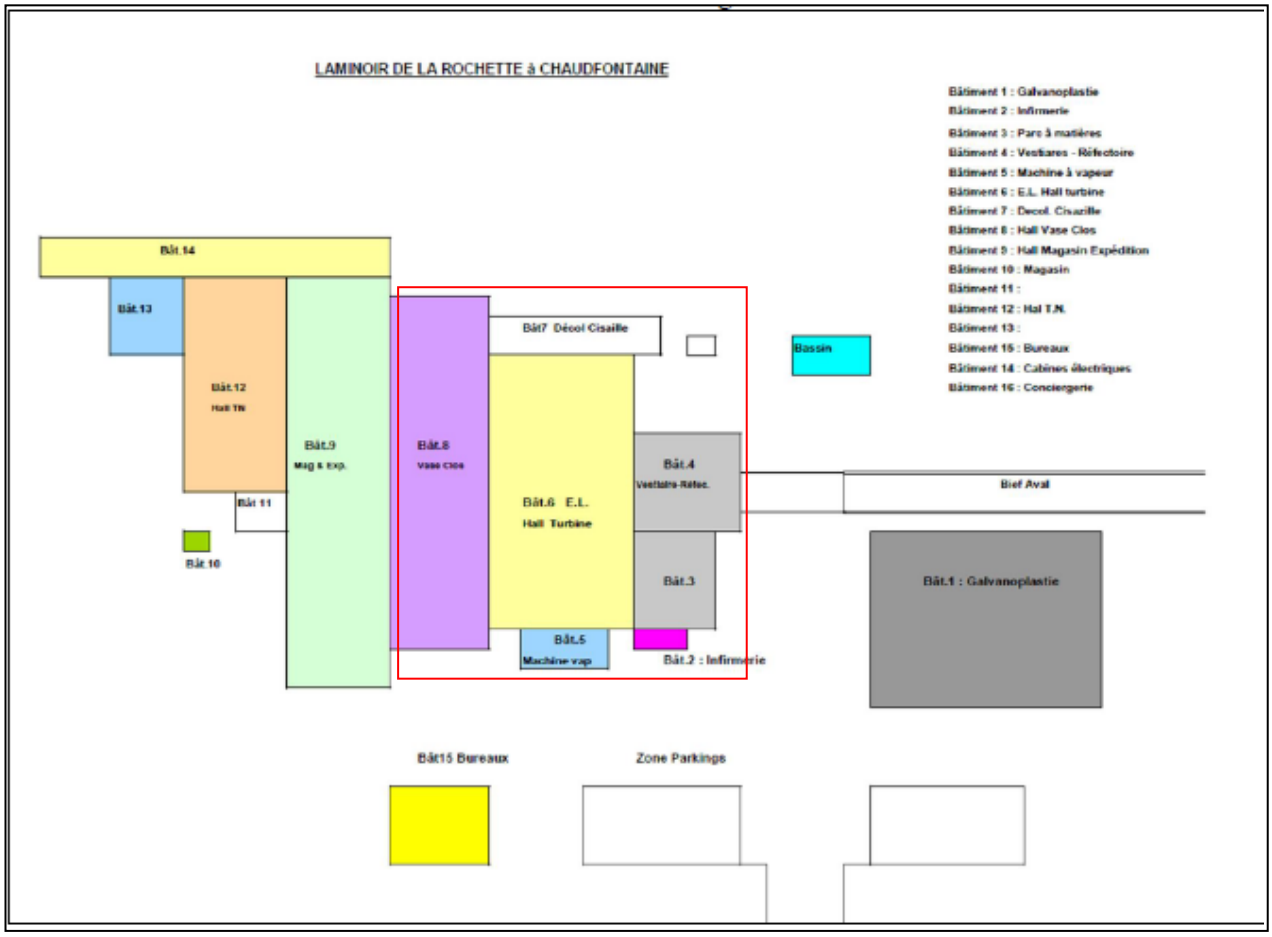

Figure 3. Location of the buildings on the site of "Laminoir de la Rochette"

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2.4. PREPARATION OF THE TESTING SUB-AREAS

In case of replacement with this Belgian site, each operator selected for Phase 3 will be assigned an area of 25x25 m where to perform its remediation technology. Moreover, it will be assigned a surrounding area, where it will be able to admit the vehicles, deposit the equipment, set up the barracks for the staff, etc. Each operator will be responsible for its area, which it will have to monitor and maintain at his own care. As an indication, the following layout of the construction site areas and the common road network has been prepared.

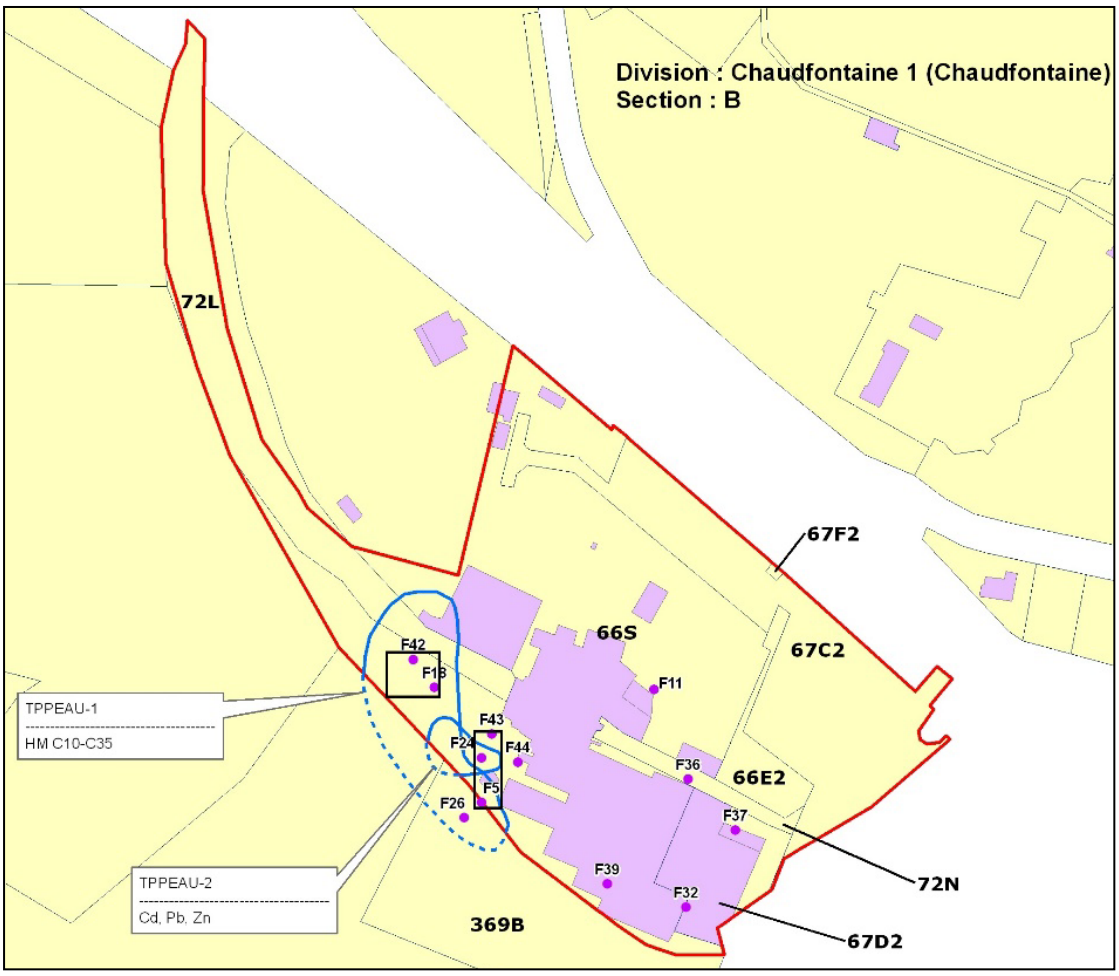

Figure 4. Testing sub-areas assigned to operators

To the operators that will carry out the tests, the area will be delivered open (i.e. without fences or closed structures). It is assumed that the activities in the field will be carried out in the open air, with consequent exposure of site personnel to meteorological agents. The identification of the assigned area in the area is the responsibility of the operator who must adopt systems that are sufficiently precise to identify the site limits. SPAQUE will provide operators with the coordinates of the vertexes of the test area.

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2.5. WEATHER CONDITIONS AND METEOROLOGICAL AGENTS

Not relevant

2.6. PRESENCE OF SUBSERVICES

Diverse distribution companies possess subservices installations in the South of the site and/ or between the end of the site and the access road, namely:

- AIDE drip collector
- Electric cables
- Telephone cables; and
- Gas pipelines
- Water sewage system

It should be noted that there is no plan of the existing sub-services on site. The operators are responsible for identifying and materializing the position of these sub-services on site and for implementing all necessary preserving measures to avoid damage. The operators are responsible for taking over from the plans “as built” of the sub-services the electrical, underground or other cables, upgraded and/ or displaced throughout the site.

2.7. PRESENCE OF OVERHEAD LINES

There are no overhead lines in the test field.

2.8. DESCRIPTION OF SITE ACTIVITIES

In case of replacement with this Belgian site, during POSIDON Phase 3 activities, the selected operators (from two to three) can apply on-site testing technologies for subsoil remediation, developed in the laboratory in the previous phases. The activity will therefore be in the field.

Specifically, the following operational phases are provided:

1. **Site preparation and management, transport, handling and loading and unloading of equipment and supplies.** The transport of the means of work and materials is carried out by a truck that is equipped with a hydraulic loading platform or a vehicle with ramps for the ascent / descent. The unloading of the vehicles must preferably take place inside the construction site areas and in safe conditions.
2. **Vegetation cutting for area maintenance**. It will be carried out using manual equipment and using brush cutters / chainsaws.

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3. **Execution of field-testing activities**. These activities are currently unknown, as the technologies and the operating methods will be known only after the presentation of the project proposals and after the refinements that these will undergo during the early stages of the project. The following is an assessment of the interfering risks on the hypothesis of open-air field activities with the use of construction site tools and reagents for soil and subsoil treatment and decontamination.

- This document must be modified and integrated as the contract progresses and whenever more information on the activity in the field will be available.

2.9. RISK FACTORS IN THE TEST FIELD ABLE TO INTERFERE WITH THE FIELD ACTIVITIES GENERAL CONDITIONS OF THE AREA

All health and safety risks of workers are now considered, and for each of them, in relation to the site where the contract is to be carried out and the type of operational phases, it is ascertained whether this risk is present or not.

As written above, the 'operational phases' are the following:

1. **Site preparation and management, transport, handling and loading and unloading of equipment and supplies.**
2. **Vegetation cutting for area maintenance**
3. **Execution of field-testing activities**

The interferential risks related to the execution of the field activities on the site "Laminoir de la Rochette", regarding the above mentioned 'operational phases' will be described in the specific document 'Health and Safety Plan' appointed by the owner. The economic operators that will develop the technology in the pilot plant will have to present their own Health and Safety Plan.

3 PREVENTIVE AND PROTECTIVE MEASURES TO BE APPLIED FOR ALL WORK-RATORS EMPLOYED IN THE FIELD ACTIVITIES IN "LAMINOIR DE LA ROCHETTE"

- To show up at work always in optimal physical conditions; interrupt operations in the case of an alteration of the physical state, fever, fatigue or other;
- Prohibition of alcohol intake or substances that can alter the psychophysical state of the worker;
- The equipment used must always be accompanied by the use and maintenance manual and comply with the relevant regulations;

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- Always use the personal protective equipment;
- The equipment used must always possess the necessary strength and suitability requirements and be kept in a good state of conservation and efficiency;
- The work equipment must be installed, arranged and used in such a way as to reduce the risks for their users and other people.

3.1. UPDATING RISK ASSESSMENT IN "LAMINOIR DE LA ROCHETTE"

The prevention measures mentioned in this document will be updated in the event of changes in working conditions and/or plants lay-out, as well as in case of subsequent information received (updates of health and safety documents, coordination moments, etc.)

All the health and safety on-site meeting reports prepared during the period of the field activity (e.g. "Initial Coordination Report", "Weekly Reports", "Consignment Reports"), as well as this document will be updated. Safety Operative Plan will be written by each operator.

3.2. CONTRACTOR OBLIGATIONS IN "LAMINOIR DE LA ROCHETTE"

Before starting the activity, each contractor's employer must draw up a safety plan containing at least the following information:

- The identification data of the company;
- The specific activities and the individual works carried out under contract;
- The name of the person in charge of the contracted operations (site manager);
- The number and names of the personnel of the company involved in the contract;
- The identification of preventive and protective measures taken in relation to one's own risks.

3.3. DESCRIPTION OF SAFETY MEASURES ADOPTED BY THE CONTRACTOR

The health and safety measures adopted by the contractor must be reported in the Security Plan drawn up by the contractor.

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