

AIRCOVERY



Barcelona 07/10/2026

DESSiCA GROUP

70 EMPLOYEES – 10 M€ TURNOVER
INTEGRATED VALUE CHAIN

Dehumidification



DESSiCA
sustainable air solutions

Sheet metal work



Bernard
Tôlerie
Industrielle

Electrical cabinets



 **SCHERMESSER**
ELECTRIC SYSTEMS

AIRCOVERY

TREATING VOCs

A COMPREHENSIVE AND EXPERTLY MANAGED SERVICE OFFERING

- Sizing engineering
- Laboratory validation tests
- Pilot tests for investment planning
- Design and manufacture of equipment for sale
- Treatment services including operation and monitoring
- Performance diagnostics, measurements, and analysis
- Maintenance and upgrade services



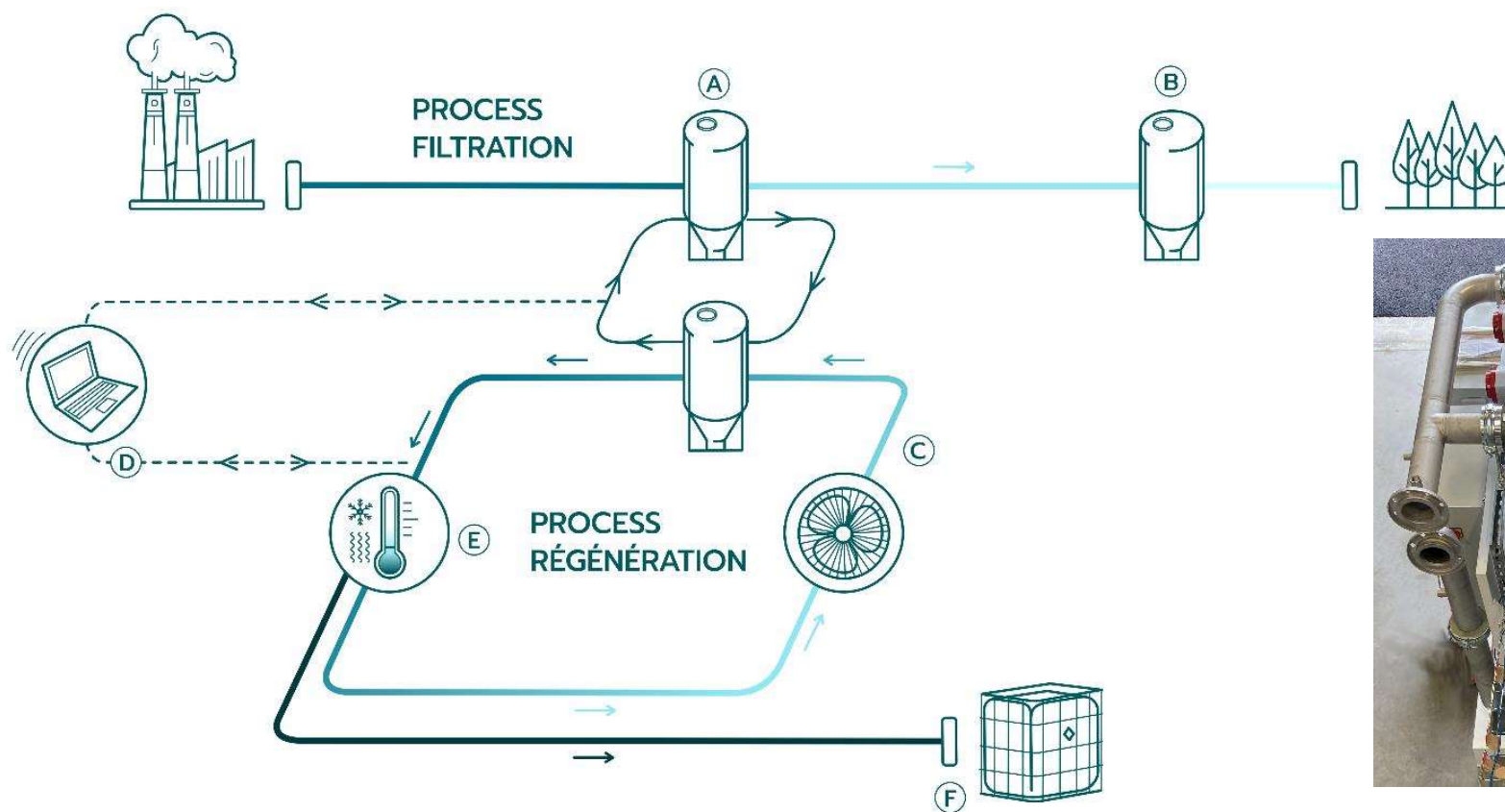


Innovative Soil Remediation Solutions

REDUCTION OF AIR ACTIVATED CARBON CONSUMPTION BY ON-SITE REGENERATION

ACTIVATED CARBON REGENERATION

PRINCIPLE



ACTIVATED CARBON REGENERATION

PRINCIPLE

CONDITIONS

HIGH COV CONCENTRATION
>1g/Nm³ → the more, the better

OTHERS like classical AC adsorption

- FLOW: 50 to 5000m³/h
- TEMPERATURE: < 40°C
- HUMIDITY: <15 à 20%

APPLICATIONS

- Venting (high concentrations)
- Multi-phase extraction
- In-Situ thermal desorption
- Thermopile
- Heated tanks
- Industrial solvent recovery - laundry facilities
- Paint industry



REGENERATION ≠ REACTIVATION

COMMON APPLICATIONS



Industrial brownfield
Metal processing plant near Lyon

IN-SITU DESORPTION

300m³/h @ 40°C

POLLUTANTS

- Tetrachloroethylene (PCE)
- Trichloroethylene (TCE)

COSTS

DELIVERY & SET-UP	15 000 €
RENTAL /month	4 500 €
TOTAL PROJECT 2 YEARS	108 000 €

No replacement of the final activated carbon filters.

COMMON APPLICATIONS



Hydraulic confinement
Chemical plant near Pau

VENTING

1000m³/h @30°C & 100%RH

POLLUTANTS

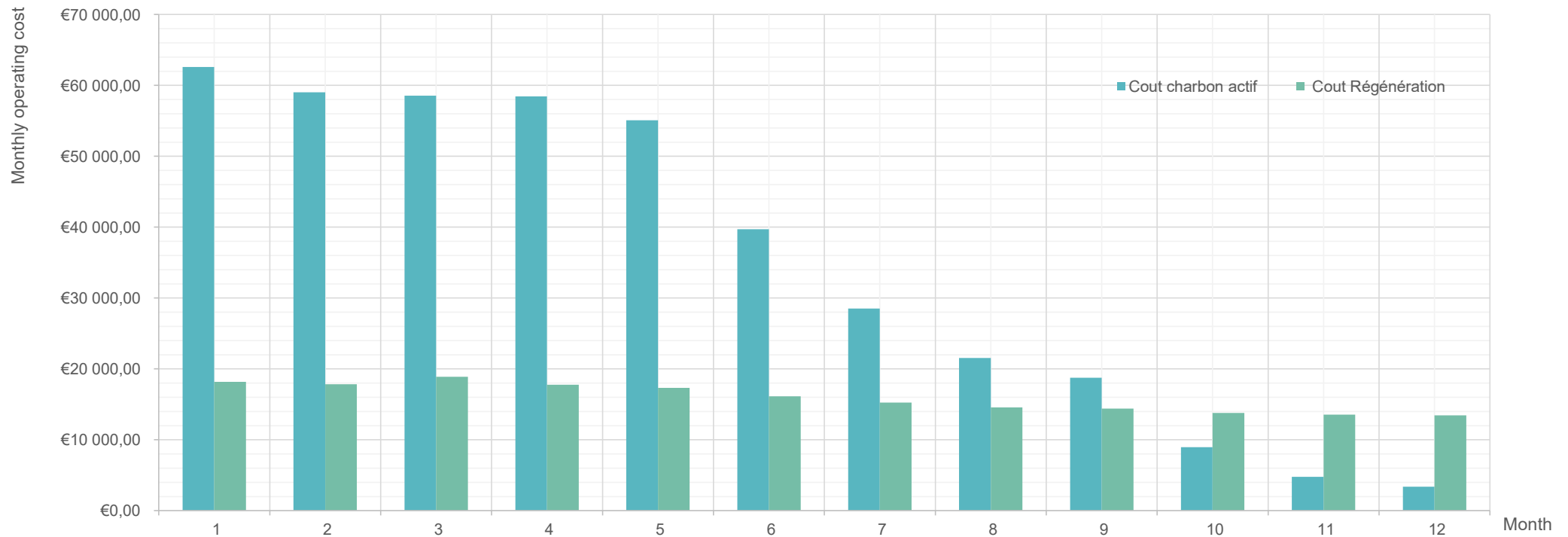
- Carbon tetrachloride CCl₄
- Chloroform CCl₃
- Toluene

COSTS

DELIVERY&SET-UP	19 600 €
RENTAL /month	9 800 €
NITROGEN	11 000 €
TOTAL PROJECT	
10 MONTHS	128 600 €

COMMON APPLICATIONS

OPERATING COST: CA vs REGENERATION



COMMON APPLICATIONS



Chlorinated solvent recovery
Automobile plant at Le Mans

VENTING

1600m³/h @ 30°C & 100%RH

POLLUTANTS

- Trichloroethylene (TCE)
- Dichloroethylene (DCE)

COSTS

DELIVERY & SET-UP	19 000 €
RENTAL /month	5 000 €
TOTAL - 10 MONTHS	69 000 €

COMMON APPLICATIONS

Activated carbon regeneration pilot
PVC plant near Lyon



COMMON APPLICATIONS



REGENERATION PILOT LAB TEST

POLLUTANTS

- Tetrachloroethane (1,1,2-TCA)
- Tetrachloroethylene (PCE)
- TPH (C5-C16)

COSTS

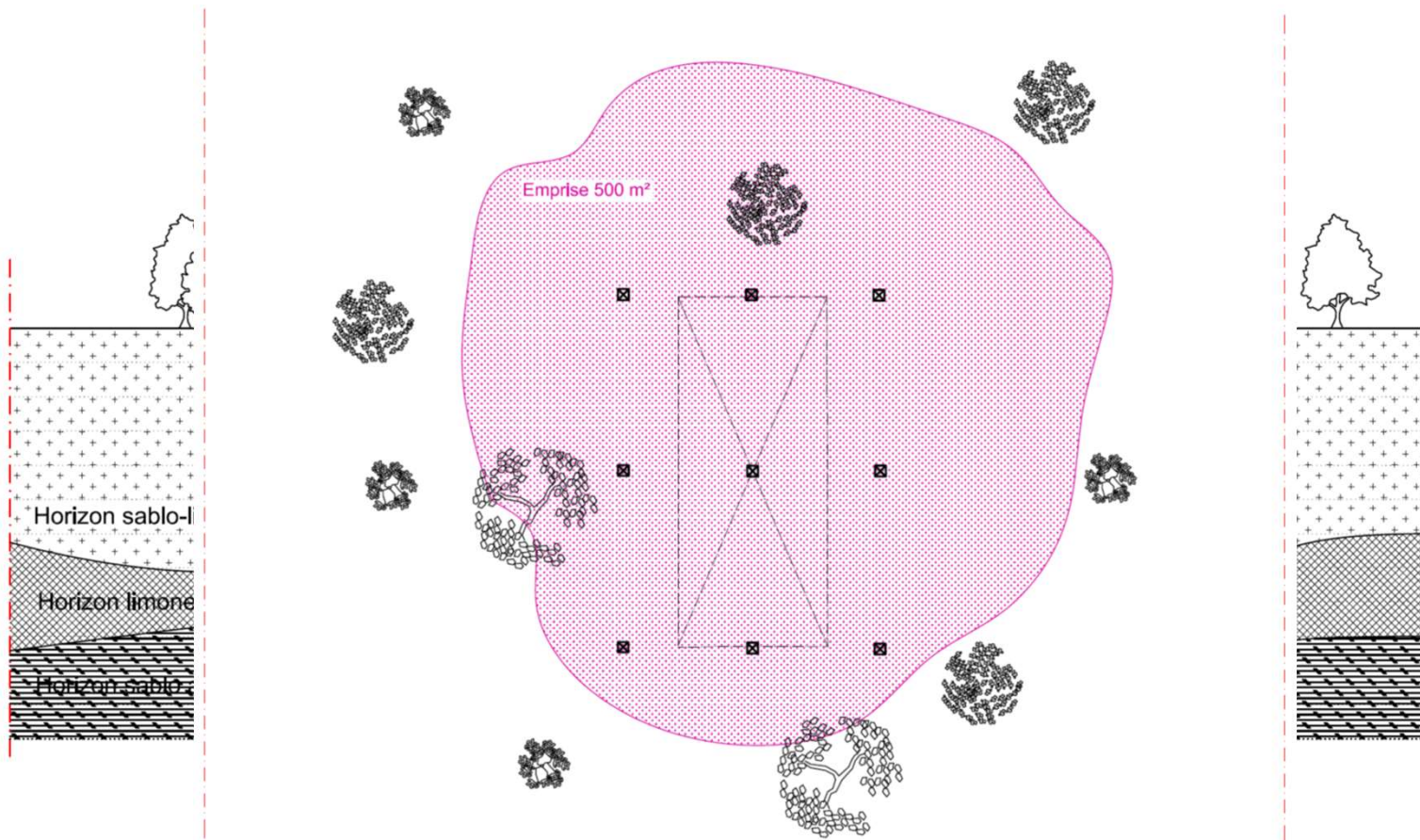
LAB TEST
DELIVERY & SET-UP
RENTAL /month
REPORT
TOTAL PROJECT

6 000 €
3 200 €
3 700 €
2 000 €
14 900 €



GHG EMISSIONS ASSESSMENT

APPLICATION TO REMEDIATION SITE



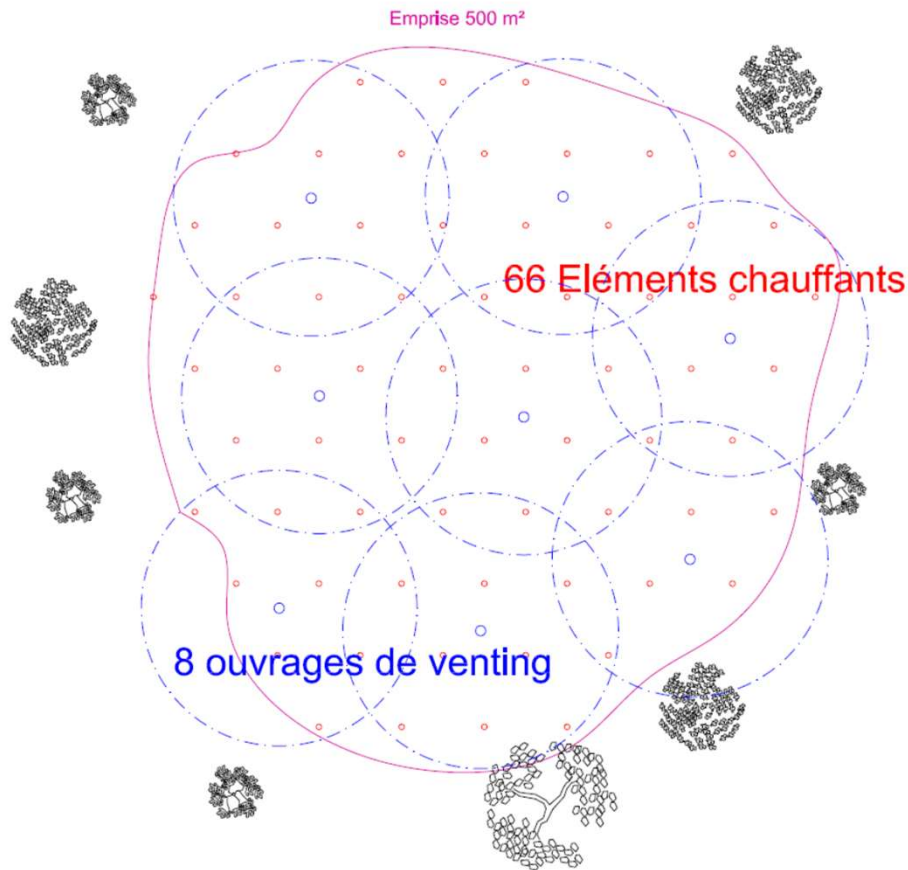
DATA

- Impact involving chlorinated solvents, above the water table, at 8 m below ground level
- Volume: 2,000 m³
- Average thickness: 4 m (10 m to 6 m below ground level)

GHG EMISSIONS ASSESSMENT

THERMAL DESORPTION TREATMENT

Catégorie d'émission
Emissions directes de GES
Emissions indirectes associées à l'énergie
Autres émissions indirectes de GES*



Émission de GES
totale
1275 kg eq CO2
500 kg eq CO2
000 kg eq CO2
144 kg eq CO2
000 kg eq CO2
702 kg eq CO2
878 kg eq CO2
440 kg eq CO2
44 t eq CO2

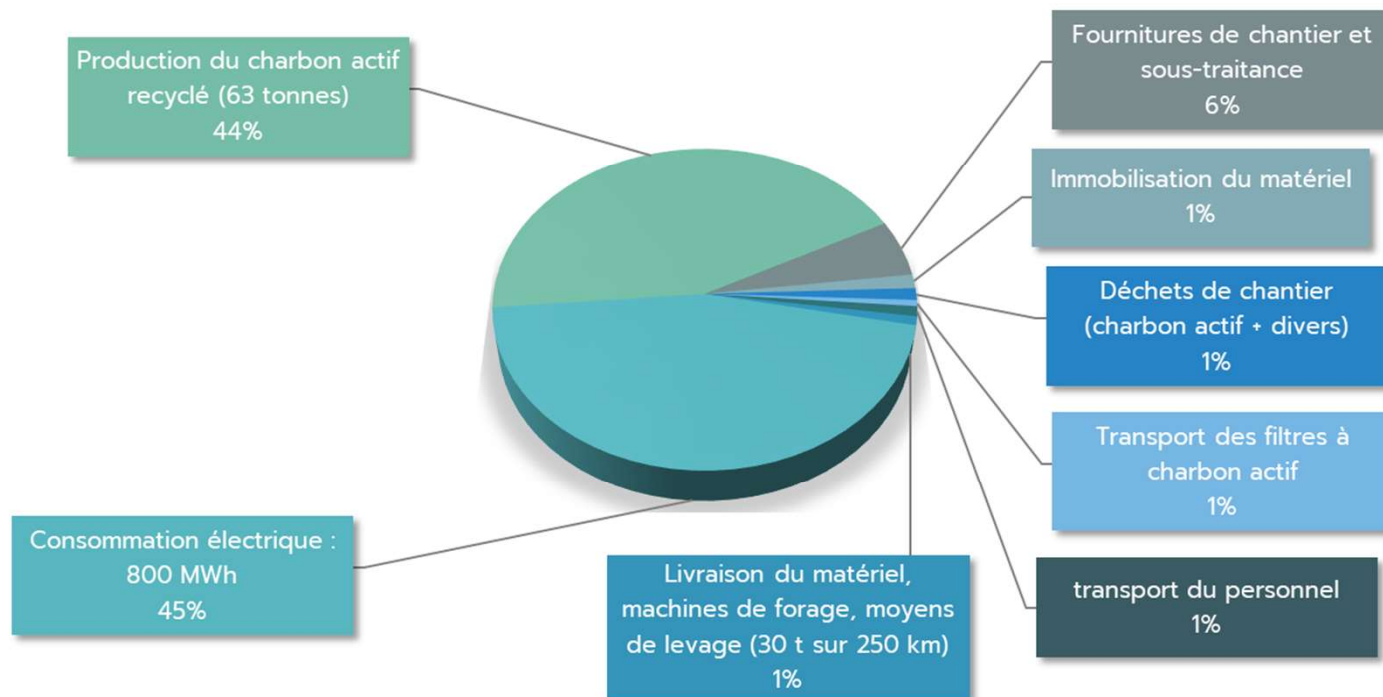
DATA

- 66 heating units (target temperature: 95°C)
- 8 venting units
- 9-month treatment period
- 95% efficiency
- Weekly on-site personnel presence

GHG EMISSIONS ASSESSMENT

THERMAL DESORPTION TREATMENT

Emission de GES totale Désorption thermique



DATA

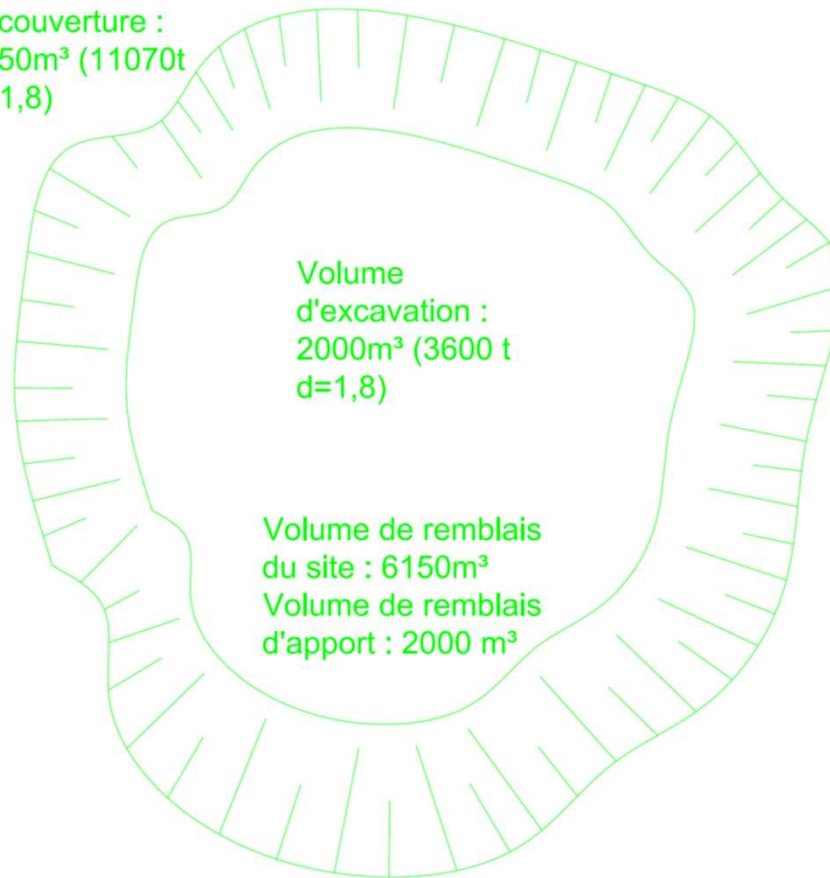
- 66 heating units (target temperature: 95°C)
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GHG EMISSIONS ASSESSMENT

EXCAVATION TREATMENT

Catégorie d'émission	N°	
Emissions directes de GES	2	Emission mobiles
Emissions indirectes associées à l'énergie	6	Emission consommation
Autres émissions indirectes de GES*	9	Achats
	10	Immobilier
	11	Déchets
	12	Transport
	13	Déplacement

Volume de
découverte :
6150m³ (11070t
d=1,8)



	Emission de GES totale
	31563 kg eq CO2
	360 kg eq CO2
ne	1920 kg eq CO2
	500 kg eq CO2
x kg	118800 kg eq CO2
	75816 kg eq CO2
	6000 kg eq CO2
al :	235 t eq CO2

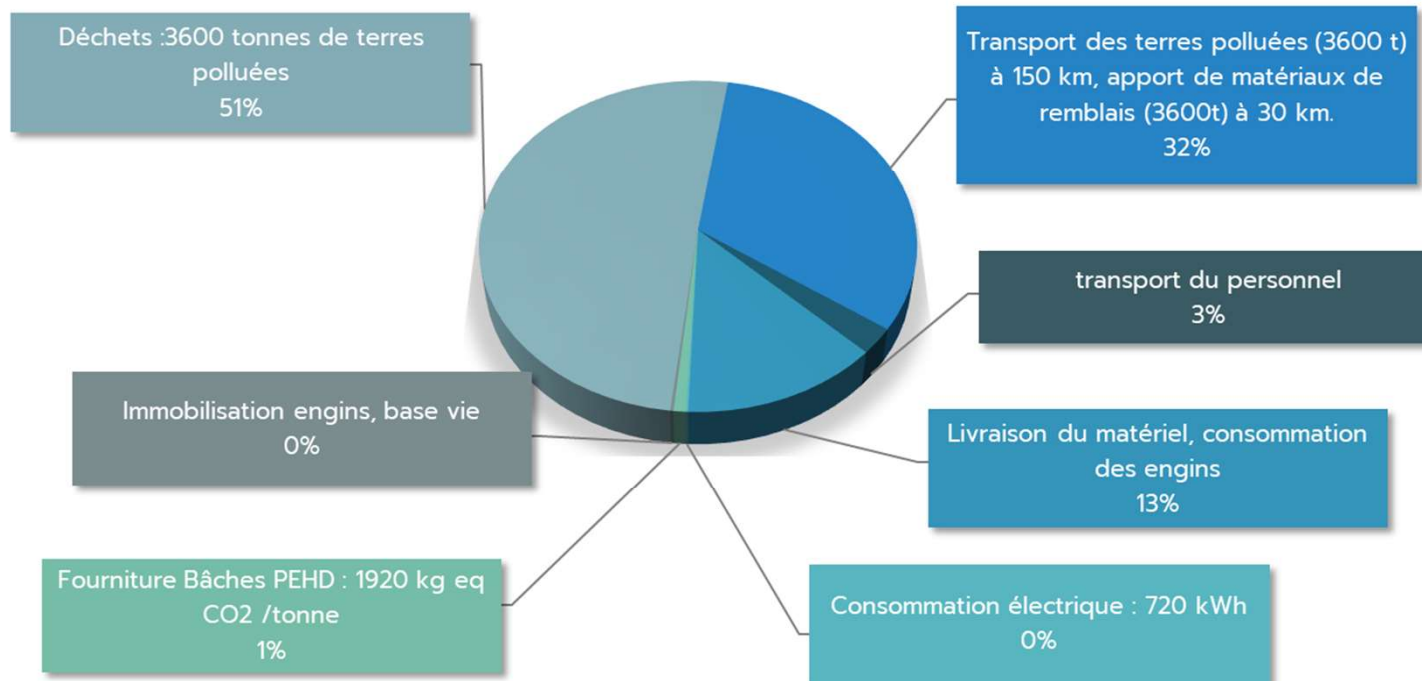
DATA

- Slope excavation (1H:2V)
- Minimalist operation:
- No shoring;
- No enclosure;
- No fugitive emission capture
- Off-site disposal
- 150 km away
- Duration: 3 months
- Daily presence

GHG EMISSIONS ASSESSMENT

EXCAVATION TREATMENT

Emission de GES totale
Excavation

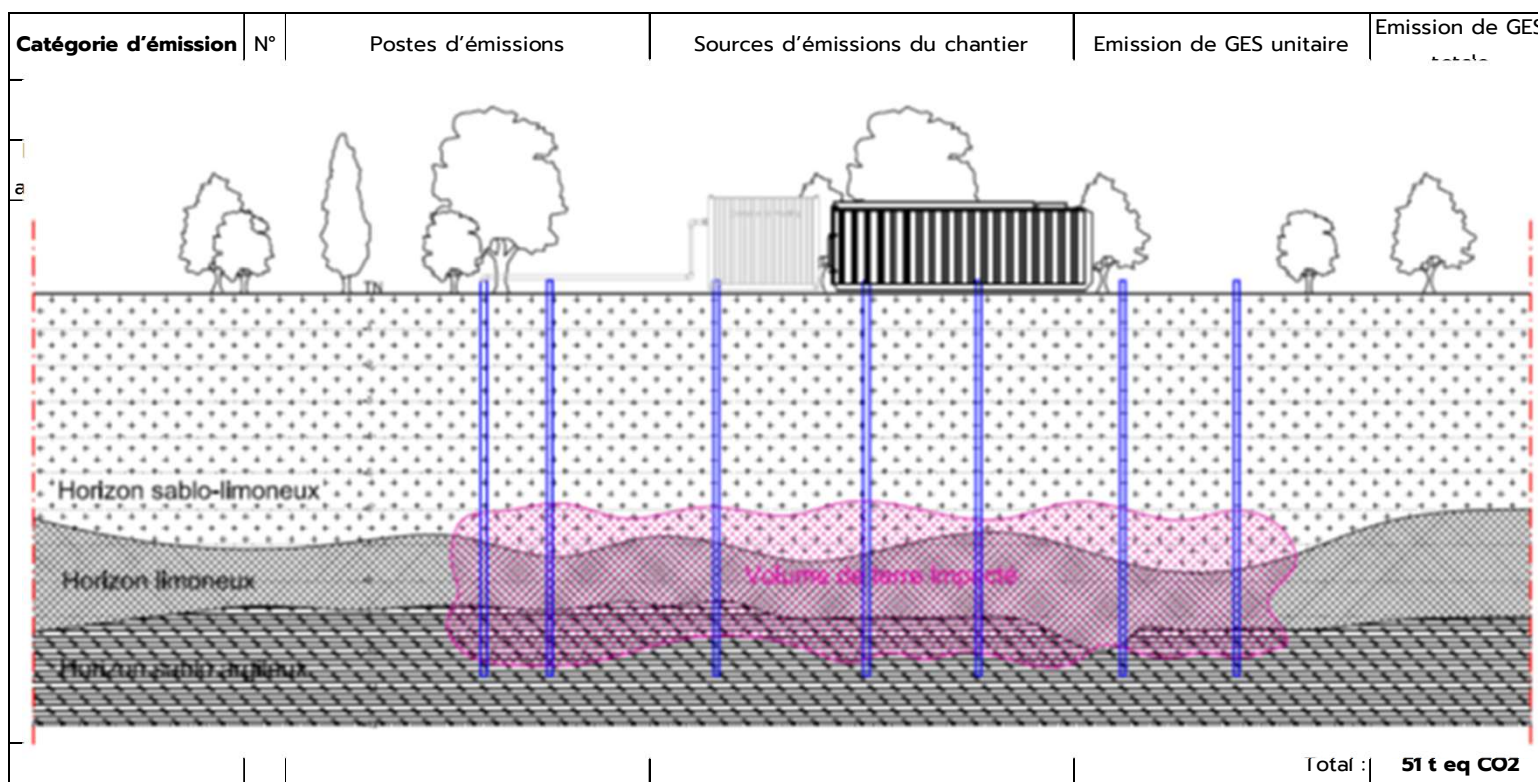


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GHG EMISSIONS ASSESSMENT

VENTING TREATMENT



DATA

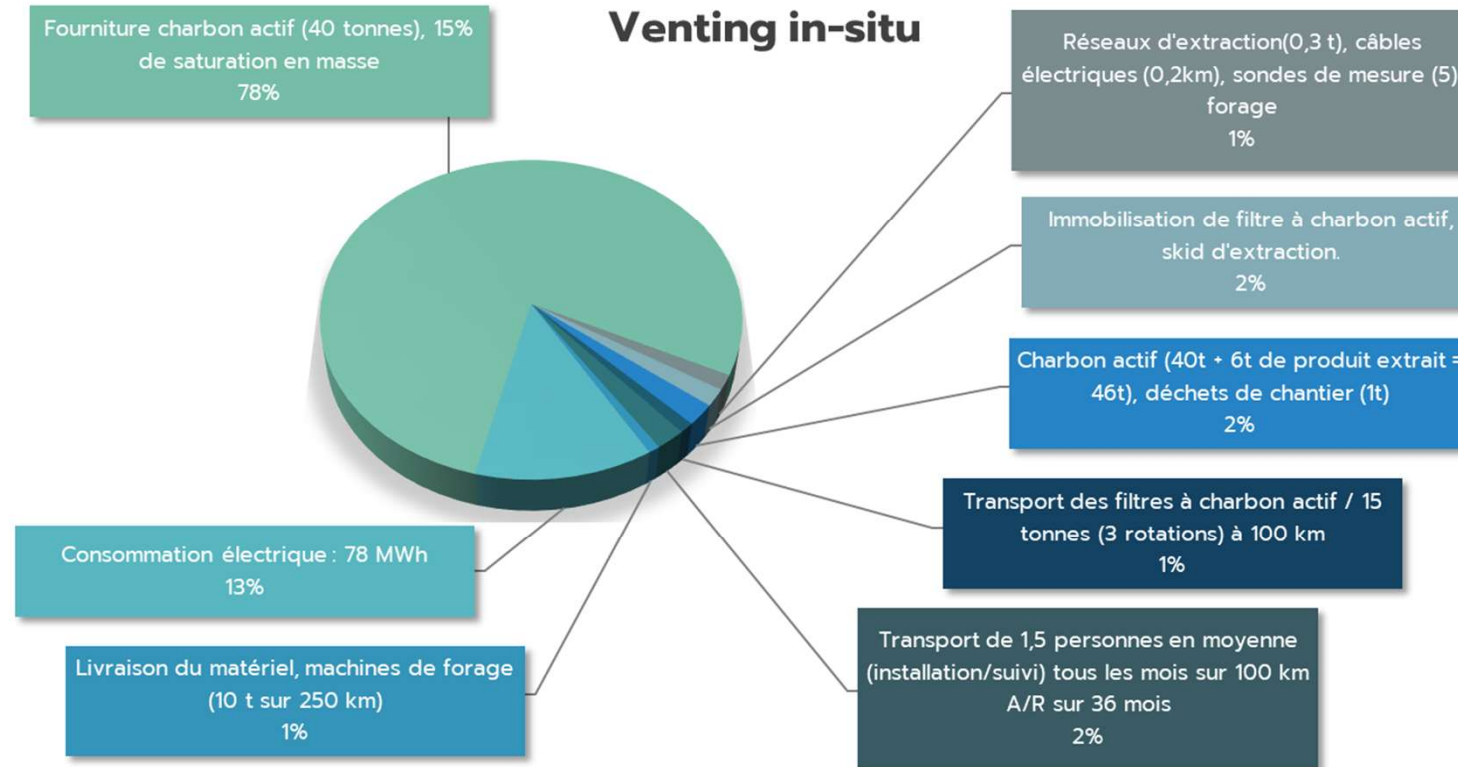
- 80 ml of drilling
- 78 MWh of electricity
- 3-year duration
- Extraction of 6 tonnes of pollutants
- Monthly treatment monitoring

GHG EMISSIONS ASSESSMENT

VENTING TREATMENT

Emission de GES totale

Venting in-situ



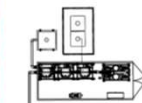
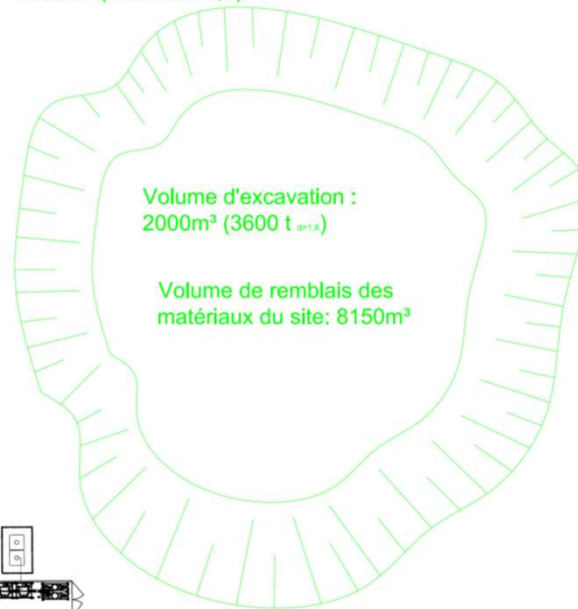
DATA

- 80 ml of drilling
- 78 MWh of electricity
- 3-year duration
- Extraction of 6 tonnes of pollutants
- Monthly treatment monitoring

GHG EMISSIONS ASSESSMENT

TREATMENT USING VENTILATED PILE

Volume de découverture :
6150m³ (11070t d=1,8)



BIOPILE VENTILEE 2000 m³

Catégorie d'émission	N°	Postes d'émission
Emissions directes de GES	2	Emissions directes des mobiles à moteur thermique
Emissions indirectes associées à l'énergie	6	Emissions indirectes liées à la consommation d'électricité
Autres émissions indirectes de GES*	8	Emissions liées à l'achat d'énergie incluse dans les émissions directes de GES « émissions de GES indirectes »
	9	Achats de produits ou services
	10	Immobilisations de biens
	11	Déchets
	12	Transport de marchandises
	13	Déplacements professionnels

Emission de GES unitaire	Emission de GES totale
kg eq CO2/ tonne/km	38263 kg eq CO2
kg eq CO2/ kWh	2460 kg eq CO2
kg eq CO2/kg pour du béton actif recyclé	50000 kg eq CO2
kg eq CO2/kg pour du béton actif neuf	
kg eq CO2 : 1920 kg eq CO2 /tonne	2000 kg eq CO2
Entretien des filtres, pompes, systèmes de ventilation	500 kg eq CO2
Génération non combustible : 1392 kg eq CO2/tonnes	1392 kg eq CO2
kg eq CO2/ tonne/km	878 kg eq CO2
kg eq CO2/ km	1080 kg eq CO2
Total :	97 t eq CO2

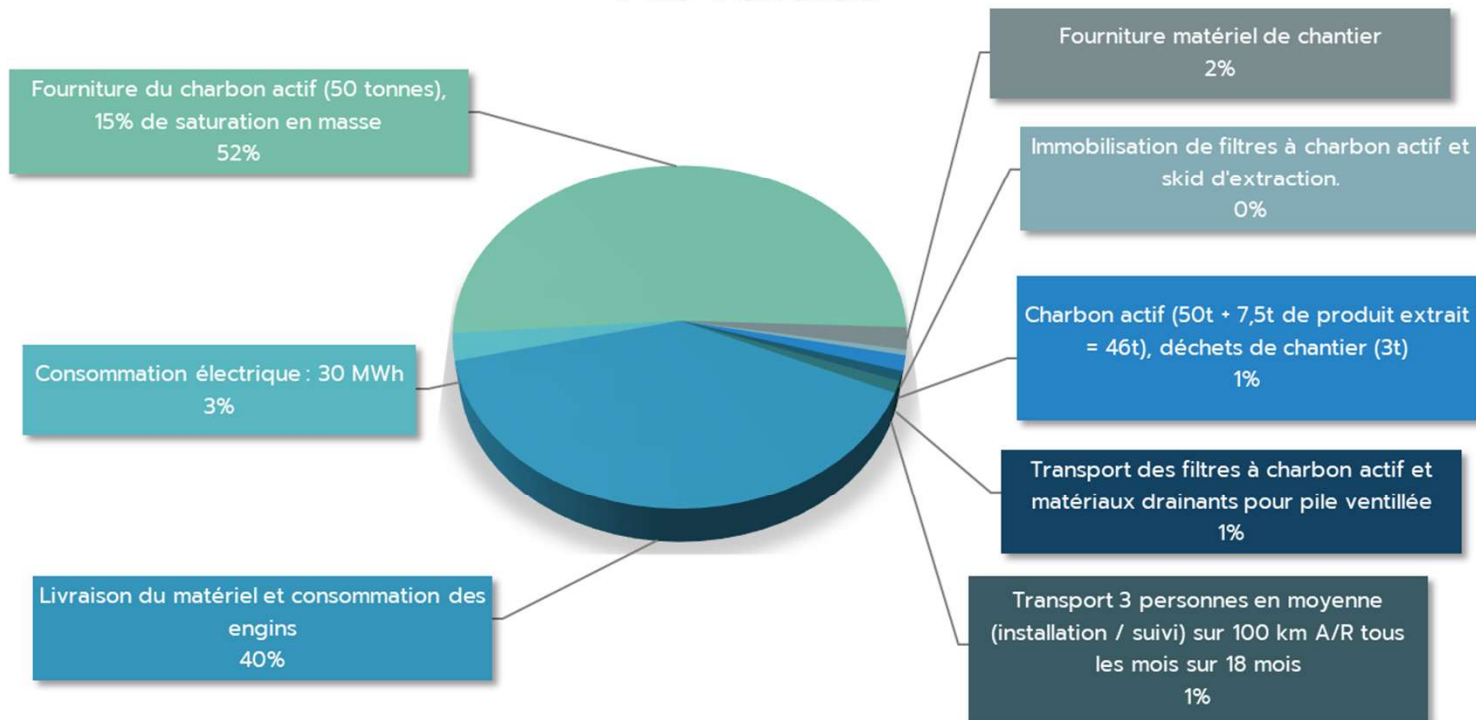
DATA

- 6,150 m³ excavated
- 2,000 m³ of soil treated on-site
- 30 MWh of electricity
- Duration: 18 months
- Extraction of 7.5 tonnes of pollutants
- Daily monitoring during earthworks / monthly monitoring

GHG EMISSIONS ASSESSMENT

TREATMENT USING VENTILATED PILE

Emission de GES totale
Pile ventilée



DATA

- 6,150 m³ excavated
- 2,000 m³ of soil treated on-site
- 30 MWh of electricity
- Duration: 18 months
- Extraction of 7.5 tonnes of pollutants
- Daily monitoring during earthworks / monthly monitoring

GHG EMISSIONS ASSESSMENT WITH REGENERATION

Type de chantier	Emissions de GES avec utilisation de CA neuf	Emissions de GES avec utilisation de CA recyclé	Emissions de GES avec régénération	Gain / CA neuf
Désorption thermique in-situ	774 t eq CO ₂	144 t eq CO ₂	96 t eq CO ₂	-87%
Excavation	235 t eq CO ₂	235 t eq CO ₂	S/O	S/O
Venting in-situ	451 t eq CO ₂	51 t eq CO ₂	26 t eq CO ₂	-94%
Pile ventilée sur site	597 t eq CO ₂	97 t eq CO ₂	63 t eq CO ₂	-89%



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DESSiCA
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