

	<i>This Carbon Acceptance document is a legal requirement to comply article 4 of Chemviron Permit, 30532 & D3400/55050/PPEIE/2018/1/FVA/em - PU from December, 6th, 2018 for operating an industrial reactivation and recovering unit of spent carbon.</i> <i>The acceptance of the spent activated carbon is subject to the completion and certified signatures of this document.</i>	Chemviron Sales representative:
		Date:
		CAR Nr.:
		2024-2457

CARBON ACCEPTANCE REQUEST INDUSTRIAL APPLICATION

Fill in the required information (sections 1 to 6) and send the signed form (sections 7 reserved to Chemviron) + 2 litre representative sample, if applicable, to:

Chemviron S.A.
Laboratory
Zoning Industriel C de Feluy
B-7181 Feluy (Belgium)
E-mail: benoit.beaurir@kuraray.com

Section 1 - General Information about customer

Sold to Nr:		Phil Robinson / Dave Stephenson	
Company Name:		Perenco UK	
Address:		Dimlington terminal. Easington. HU12 0SU	
Contact person:	Name:	Phil Robinson	
	Title:	Operations Engineer	
	Tel.:	01946 652294	Mobile:
	E-mail:	Phil.robinson@perenco.com	

Ship to Nr:		As above 8049554	
Facility Name:		Perenco UK, Dimlington Site	
Address:		As above	
Contact person in charge of Waste document management (Identificatie formulier, Begeleidingsbrief, ...):	Name:	As above	
	Title:		
	Tel.:		Mobile:
	E-mail:		

Section 2 – Stream Profile (Process & Adsorbate Informations)

Description of industrial activity of ship to:
Gas terminal

Detailed description of the process generating adsorbate:
On site fire fighting pond water treatment

~~Ground water remediation~~

Rain Water → Concrete pond
(PFAS ?)

Application code: W54

Stream Components:

Main liquid or gas components:	Amount	Unit
Rain water.	1,000,000	Litres

Section 3 – Sample of spent carbon

If a sample is provided, please advise the following:

Describe where the sample was taken from:

N/A

Has the sample been pre-treated and how?

N/A

Section 4 – Safety and Environmental Information

Does the waste stream (gas or liquid) contain at the adsorber entrance point:

	☐	YES	☐	NO	Comments:
Dibromochloropropane?	☐	YES	☐	NO	No
Polychlorinated biphenyls (PCB)?	☐	YES	☐	NO	No
Polychlorinated terphenyls?	☐	YES	☐	NO	No
Dioxines?	☐	YES	☐	NO	No
Cyanides?	☐	YES	☐	NO	No
Heavy metals (Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V, Hg, Cd, Tl)? (*)	☐	YES	☐	NO	No
Explosive (pyrophoric/shock) material ? (*)	☐	YES	☐	NO	No
Radioactive materials? (*)	☐	YES	☐	NO	No
Known carcinogens?	☐	YES	☐	NO	No
Halogenated organics?	☐	YES	☐	NO	No <u>PFAS?</u>
Sulphur-containing organics?	☐	YES	☐	NO	No
Pesticides?	☐	YES	☐	NO	No
Biological or disease-causing agents?	☐	YES	☐	NO	No
Odorous compounds?	☐	YES	☐	NO	No
Highly toxic organics?	☐	YES	☐	NO	No

(*) If necessary, add here comments:

N/A

Please note that if the answer to one of the questions in the above Section 4 is Yes, a process adaptation or special carbon (pre)treatment such as washing or steaming may be carried out before the carbon can be taken back for reactivation. In order to review this (pre)treatment, please contact the Sales Representative or Applications Engineer at Chemviron.

Please attach any analysis, toxicological studies, material safety data sheets, etc., that are relevant.

Section 5 – Spent activated Carbon Information

Identify the waste code according to Commission Decision 2000/532/EC, “European Waste Catalogue and hazardous waste list” (OJL 226, 6.9.2000, p.3).

Use helping decision tool provided by Chemviron to find the waste code most adapted to your industry/application for spent carbon.

European Waste Code (EWC):

15 02 03

Acceptance requested for:

- ☐ Custom reactivation
☐ Pool reactivation/take back
☐ Dispose through Feluy Grouping Center

Estimated quantity:

Quantity (Dry*)/year:

* Wet basis = 2 x Dry weight

Kg

Number of Exchanges/year:

Quantity (WET)/delivery:

Kg

	Spent Carbon	React Carbon
Carbon Type :	GAC	
Packaging :		
Bulk	☐	☐
Drums	☐	☐
Big Bags	☐	☐
Mobile Service Adsorber (specify):	2 x adsorbers	HP2 (trial)
Other (specify) :		

Comments:

Section 6 – Customer certification

To the best of my knowledge and ability the information provided here above is complete, accurate and true.
I will inform Chemviron, without delay, of any modification.

Name

P Robinson.

Title

Operations Engineer

Date

13/7/24

Signature

P Robinson.

Section 7 – Approvals

Industrial spent carbon
corresponding to:

Ship to:	8049554
Product:	premier
Application code:	W54
CAR Nr:	2024-2457
EWC Code:	15 02 03

☒ **is accepted**

for

☐ Customer react

☒ Pool react

☐ Dispose via Chemviron Grouping Center, Feluy

Spent carbon shipments under:

☒ Green list

☐ Amber list

with

☒ Direct shipment

☐ Interim Storage:

Notification to set up:

☐ YES

☒ NO

☐ **is not accepted**

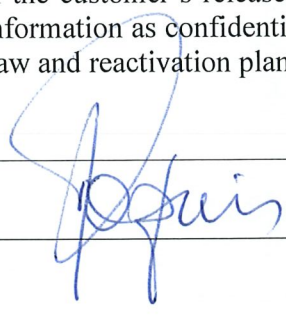
Proposed alternative:

Comments/Acceptance conditions :

Each delivery of spent carbon must conform to CAR, carbon acceptance conditions and analysis linked to the present document. Any change in application, adsorbate profile or spent carbon characteristics must be announced to Chemviron Sales representative and to Spent Carbon Manager before delivery.

Chemviron, as consideration of the customer's release of the above information, and any subsequent data provided, agrees to treat such information as confidential property and will not disclose such information to others except as is required by law and reactivation plant operating permit.

Environmental Manager



Date

09/01/2025

CARBON ACCEPTANCE REQUEST

RESULTS OF SPENT ANALYSIS

CAR N° : 2024 - 2457

CUSTOMER : PERENCO UK

PHYSICAL ANALYSES		
Moisture	%	40.2
V.M.	%	16.2
Ash	%	8.5
Corrected ash	%	10.1
Contact pH		7.4
Flashpoint	°C	>60
Iodine	mg/g	769

ANION ANALYSES		
F-	%	0.02 <1
Cl-	%	0.13 <10
Br-	%	<0.01 <1
NO3-	%	0.02
SO4- -	%	1.06 <10
I-	%	<0.01 <1
Sum Cl+SO4	%	1.18 <10

NITRIC EXTRACTION		
Elements	ppm	%
Mg	458.62	0.045862
P	244.87	0.024487
S	553.18	0.055318
Ca	1915.54	0.191554
Ti	197.45	0.019745
V	8.30	0.000830
Cr	3.59	0.000359
Mn	273.05	0.027305
Fe	5896.57	0.589657
Co	9.47	0.000947
Ni	13.35	0.001335
Cu	23.45	0.002345
Zn	97.78	0.009778
As	2.11	0.000211
Cd	0.16	0.000016
Sn	0.38	0.000038
Sb	0.26	0.000026
Hg	BDL	BDL
Tl	0.08	0.000008
Pb	1.83	0.000183
U	3.36	0.000336

FLUEGAS ANALYSES		
Elements	mg/Nm ³	mg/Nm ³
Mg	0.01775	
P	0.02084	
S	51.6896	
Ca	BDL	
Ti	0.02345	
V	0.00039	(*)
Cr	0.01484	(*)
Mn	0.00143	(*)
Fe	0.23211	
Co	0.00043	(*)
Ni	0.00265	(*)
Cu	0.01591	(*)
Zn	0.01622	
As	0.00105	(*)
Cd	0.00102	<0.025
Sn	0.00203	
Sb	0.00073	(*)
Hg	BDL	<0.05
Tl	0.00114	<0.025
Pb	0.00549	(*)
U	0.00	
SUM (*)	0.04291	<1

GC-MS	✓
Comments :	

COMMENTS	
Appearance	granular
Odour	none

RECOMMENDATION FOR THE COMMITTEE	
Following these analysis the spent will be	
Accepted	☐
Accepted with restriction :	
Refused	☐

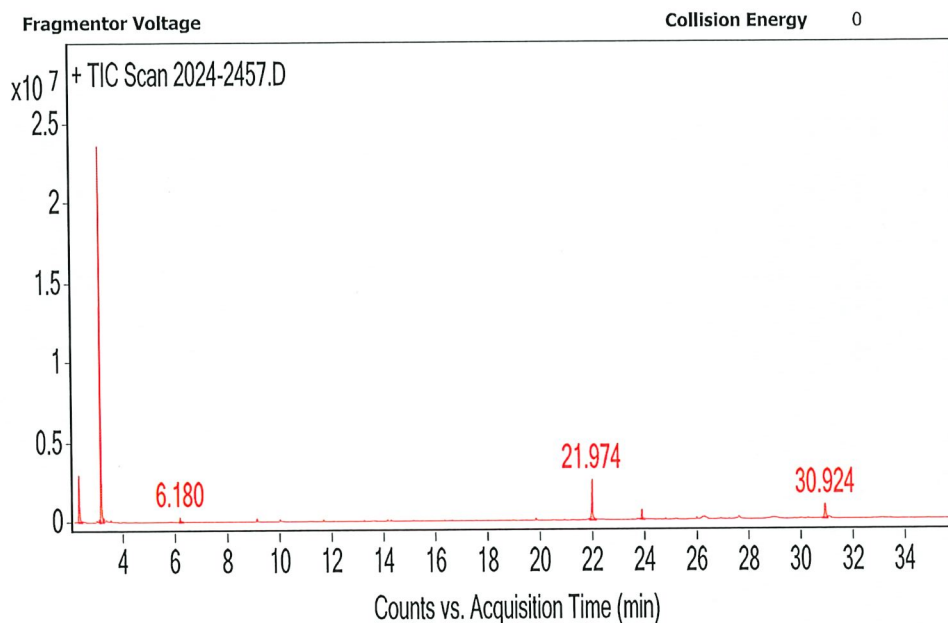
ANALYST
LEPINNE G.



GC-MS REPORT

Data File 2024-2457.D
Instrument Name GCMS TDSA
Acquired Time 12/12/2024 4:16:03 PM (UTC+01:00)
Comment

Sample Name PERENCO
Acq Method TDSSV1CIS10.M
DA Method BB190807.m



User Chromatogram Peak List

RT	Height	Area	Area %	Base Peak m/z	AreaSumPercent
2.305	2926710.33	6193256.62	17.64	43.1	11.44
3.139	23556215.09	35107641.27	100	57.1	64.83
6.18	272376.29	710440.02	2.02	207.1	1.31
21.974	2523715.23	7081973.73	20.17	41.1	13.08
23.88	595512.36	1493517.67	4.25	41.1	2.76
30.924	894299.77	3565593.91	10.16	69.1	6.58

Compound Table

Compound Label	RT	Name	CAS	DB Formula	Score (Lib)
Cpd 1: Acetone; C3 H6 O; 2.305	2.305	Acetone	67-64-1	C3H6O	98.52
Cpd 2: 2-Ethyl-oxetane; C5 H10 O; 3.139	3.139	2-Ethyl-oxetane	1000386-40-2	C5H10O	97.9
Cpd 3: Cyclotrisiloxane, hexamethyl-; C6 H18 O3 Si3; 6.180	6.18	Cyclotrisiloxane, hexamethyl-	541-05-9	C6H18O3Si3	91.55
Cpd 4: n-Hexadecanoic acid; C16 H32 O2; 21.974	21.974	n-Hexadecanoic acid	57-10-3	C16H32O2	96.4
Cpd 5: Octadecanoic acid; C18 H36 O2; 23.880	23.88	Octadecanoic acid	57-11-4	C18H36O2	87.98
Cpd 6: Squalene; C30 H50; 30.924	30.924	Squalene	111-02-4	C30H50	91.72



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LAB N° 0141 L

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Capitale Sociale € 46.800,00i.v. - **P.IVA IT 02560930279** - Cod. fisc. E iscrizione al Registro Imprese Venezia n° 02560930279 - R.E.A. n°VE - 225237
Società sottoposta all'attività di direzione e coordinamento di VERITAS Spa, S. Croce n. 489 - 30135 Venezia - Italia.

Rapporto di prova n°: **20245187-003**

Descrizione **SPENT CARBON 2024-2457**
Campione:

Matrice: **RIFIUTO SOLIDO**

Data Campionam.: **18-nov-24**

Data Ricevimento: **20-nov-24** Data Inizio Prova: **28-nov-24**

Data Rapp. Prova: **10-dic-24** Data Fine Prova: **09-dic-24**

Proveniente da: **CHEMVIRON S.A. - FELUY - BELGIUM**

Campionato da: **Cliente (escluso dall'accreditamento del lab.)**

Spettabile:

CHEMVIRON S.A.

**ZONE INDUSTRIELLE DE FELUY - ZONE C,
7181 FELUY BELGIUM**

Prova	U.M.	Metodo	Risultato	Incertezza	L.Max.
Umidità	% massa	CNR IRSA 2 Q 64 Vol 2 1984/Notiziario 2 2008	42,0	± 5,5	
Cloro totale (Cl)	mg/kg	UNI EN 14582:2016 + UNI EN ISO 10304-1:2009	400	± 100	
Fluoro totale (F)	(*) mg/kg	UNI EN 14582:2016 + UNI EN ISO 10304-1:2009	48		
Zolfo totale (S)	mg/kg	UNI EN 14582:2016 + UNI EN ISO 10304-1:2009	2300	± 530	
SOSTANZE ALCHILICHE POLIFLUORURATE (PFAS)		ASTM D7968-23			
Acido perfluorobutanoico (PFBA)	mg/kg	ASTM D7968-23	< 0,001		
Acido perfluoropentanoico (PFPeA)	mg/kg	ASTM D7968-23	< 0,001		
Acido perfluoroesanoico (PFHxA)	mg/kg	ASTM D7968-23	0,73	± 0,21	
Acido perfluoroeptanoico (PFHpA)	mg/kg	ASTM D7968-23	0,043	± 0,013	
Acido perfluoroottanoico (L-PFOA)	mg/kg	ASTM D7968-23	< 0,001		
Acido perfluoroottanoico isomeri ramificati espressi come PFOA lineare	mg/kg	ASTM D7968-23	< 0,001		
Acido perfluoroottanoico somma isomeri lineare e ramificati espressi come PFOA lineare	mg/kg	ASTM D7968-23	< 0,001	✓	
Acido perfluorononanoico (PFNA)	mg/kg	ASTM D7968-23	< 0,001		
Acido perfluorodecanoico (PFDA)	mg/kg	ASTM D7968-23	< 0,001		
Acido perfluoroundecanoico (PFUnA)	mg/kg	ASTM D7968-23	< 0,001		
Acido perfluorododecanoico (PFDoA)	mg/kg	ASTM D7968-23	< 0,001		
Perfluorobutansolfonato (PFBS)	mg/kg	ASTM D7968-23	< 0,001		
Perfluoroesansolfonato (PFHxS)	mg/kg	ASTM D7968-23	< 0,001	✓	
Perfluoroeptansolfonato (PFHpS)	(*) mg/kg	ASTM D7968-23	< 0,001		
Perfluoroottansolfonato (L-PFOS)	mg/kg	ASTM D7968-23	0,229	± 0,066	
Perfluoroottansolfonato isomeri ramificati espressi come PFOS lineare	mg/kg	ASTM D7968-23	< 0,001		
Perfluoroottansolfonato somma isomeri lineare e ramificati espressi come PFOS lineare	mg/kg	ASTM D7968-23	0,229	± 0,072	✓

I Risultati contenuti nel presente Rapporto si riferiscono esclusivamente al Campione provato.
Il presente Rapporto non può essere riprodotto parzialmente, salvo autorizzazione scritta del Laboratorio.

Documento firmato digitalmente ai sensi della normativa vigente.



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Società sottoposta all'attività di direzione e coordinamento di VERITAS Spa, S. Croce n. 489 - 30135 Venezia - Italia.

Segue Rapporto di prova n°:

20245187-003

Prova	U.M.	Metodo	Risultato	Incertezza	L.Max.
Somma PFAS	mg/kg	ASTM D7968-23	1,00	± 0,24	
Somma PFOS + PFOA e rispettivi derivati	mg/kg	ASTM D7968-23	0,229	± 0,072	
Somma PFAS esclusi PFOA e PFOS	mg/kg	ASTM D7968-23	0,77	± 0,23	
Somma PFAS esclusi PFOA, PFOS, PFBA, PFBS	mg/kg	ASTM D7968-23	0,77	± 0,23	
Somma PFAS esclusi PFOS, PFOA, PFBA, PFBS, PFPeA, PFHxA	mg/kg	ASTM D7968-23	0,043	± 0,013	
4:2 FTS (4:2-Fluorotelomero solfonato)	(*) mg/kg	ASTM D7968-23	< 0,001		
6:2 FTS (6:2-Fluorotelomero solfonato)	(*) mg/kg	ASTM D7968-23	3,3		
8:2 FTS (8:2-Fluorotelomero solfonato)	(*) mg/kg	ASTM D7968-23	< 0,001		
HFPO-DA (esafluoropropilene ossido acido dimerico)	(*) mg/Kg	ASTM D7968-23	< 0,001		
C6O4	(*) mg/kg	ASTM D7968-23	< 0,001		

Informazioni aggiuntive

Metodo: ASTM D7968-23- per le determinazioni effettuate con questo metodo, il recupero dei surrogati è risultato compreso tra 70% e 130% così come previsto dal metodo.

Per il calcolo del risultato non viene utilizzato il valore del recupero, se non diversamente indicato o prescritto dal metodo.

Le seguenti informazioni, se riportate nel presente rapporto di prova, sono state fornite dal cliente: descrizione del campione, data e ora prelievo, luogo del prelievo, produttore, modalità di campionamento, identificazione del prelevatore, temperatura del campione al prelievo, volume campionato. Il Laboratorio declina la responsabilità qualora tali informazioni possano aver influenzato i risultati delle prove.



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Segue Rapporto di prova n°:

20245187-003

Prova	U.M.	Metodo	Risultato	Incertezza	L.Max.
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Il Responsabile del Laboratorio
(o suo delegato)

Dr. GARDAN ITALO

Ordine dei Chimici e Fisici di Venezia
Numero di iscrizione: 000219

La prova contrassegnata con il simbolo (*) non è accreditata da Accredia.

L'incertezza di misura è riportata come incertezza estesa con fattore di copertura $K=2$ o come intervallo di confidenza corrispondente ad un livello di fiducia di circa il 95%.

I valori di incertezza riportati si riferiscono alla sola componente della fase analitica.

Se non diversamente specificato o concordato con il Cliente, il confronto del risultato con i valori di riferimento non considera l'intervallo di confidenza della misura, come stabilito dalle Regole decisionali riportate nel sito www.lecher.it.

Se non diversamente specificato le sommatorie sono calcolate mediante il criterio del lower bound.

Nel caso il campionamento non sia effettuato dal laboratorio, i risultati delle prove si riferiscono al campione così come ricevuto.

----- FINE RAPPORTO DI PROVA -----



Analytical report

Nr. IAC24-15268.043

Date: 31/12/2024

Page 1 of 3

Chemviron
Parc Industrien de Feluy, zone C
7181 Feluy
Belgium

The following sample(s) was/were submitted and identified by/on behalf of the client as: active coal

SGS job No. : IAC24-15268.043
Client reference : See next page(s)
Sample Receiving Date : 02/12/2024
Testing period : 11/12/2024-31/12/2024

2024 - 2457

Test Requested : GCMS screening of semi- and non-volatiles
Test Method : See next page(s)
Test Result(s) : See next page(s)

SGS Belgium NV
Division IAC

Sven Herremans
Lab Operations Manager

Unless otherwise agreed, all orders and documents are executed and issued in accordance with our General Conditions. Upon simple request the conditions will again be sent to you. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects SGS' findings at the time of its intervention only and within the limits of client's instructions, if any. SGS' sole responsibility is to its client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Analyses marked with an (E) were performed in an external lab.

SGS Belgium NV

Institute for Applied Chromatography Haven 407 Polderdijkweg 16 B-2030 Antwerpen
t +32 (0)3 545 85 90 f +32 (0)3 545 85 99 e be_iac@sgs.com url www.sgs.be

Member of the SGS Group (Société Générale de Surveillance)



Analytical report

Nr. IAC24-15268.043

Date: 31/12/2024

Page 2 of 3

1. Method

A certain amount of sample was extracted with dichloromethane. The resulting solution was analyzed by GC/MS. The gas chromatograph was equipped with a DB-5 column with dimensions 30 m x 0.25 mm x 0.25 µm and identification of the detected peaks was done by comparing their mass spectra with the mass spectra from the library software of the GC/MS system.

The reported concentration is only a rough estimation of the real concentration.

2. Sample information

Table 1: Received samples

IAC ID	Client ID
IAC24-15268.043	2024-2457

3. Results

IAC24-15268.043 – 2024-2457	
Component	Estimated concentration (mg/kg)
Butanoic acid, ethyl ester	1
5,5-Dimethyl-1,3-dioxane	0,3
Acetic acid, butyl ester	0,2
Benzene, chloro-	3
1,2-Ethanediol, monoacetate	0,4
Sum of C8-Aromatic components	17
Benzaldehyde	3
Sum of C9-Aromatic components	3
2-Propanol, 1-(2-methoxy-1-methylethoxy)-	2
o-Cymene	3
2-Ethylhexanol	1
Benzyl alcohol	5
Sum of C10-Aromatic components	2
Ethane, 1,1'-oxybis[2-methoxy-	0,2
Unidentified component	1
Unidentified component	0

SGS Belgium NV

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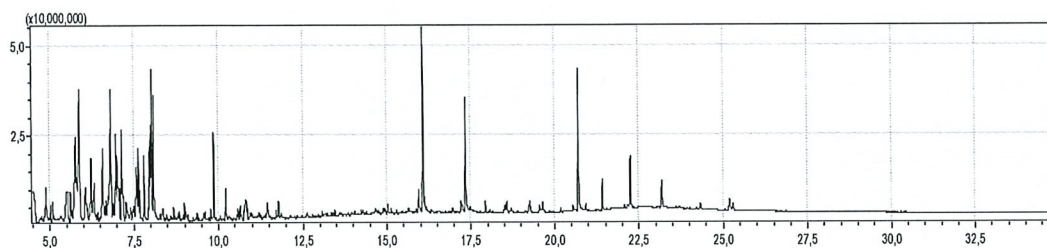
Analytical report

Nr. IAC24-15268.043

Date: 31/12/2024

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2-Propanol, 1-[2-(2-methoxy-1-methylethoxy)-1-methylethoxy]-	1
n-Hexadecanoic acid	3
Octadecanoic acid	2



*** end of the report ***

SGS Belgium NV

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t +32 (0)3 545 85 90 f +32 (0)3 545 85 99 e be_iac@sgs.com url www.sgs.be

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