



Units 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US

Tel: (01244) 528777
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

ARCADIS UK Ltd
Charter House
62-68 Hills Road
Cambridge
CB2 1LA

Attention: Lydia Potter

CERTIFICATE OF ANALYSIS

Date of report Generation: 16 October 2025
Customer: ARCADIS UK Ltd
Sample Delivery Group (SDG): 251009-35
Your Reference: 30224140-1.8
Location: Ford Bridgend
Report No: 780471
Order Number: 30224140 1.8

We received 1 sample on Thursday October 09, 2025 and 1 of these samples were scheduled for analysis which was completed on Thursday October 16, 2025. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Justin Keeton
Business Unit Leader - Land



1291



CERTIFICATE OF ANALYSIS

Validated

SDG: 251009-35
Client Ref.: 30224140-1.8

Report Number: 780471
Location: Ford Bridgend

Superseded Report:

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
32266109	SIGMA SOUTH W2			08/10/2025

Only received samples which have had analysis scheduled will be shown on the following pages.



CERTIFICATE OF ANALYSIS

Validated

SDG: 251009-35
Client Ref.: 30224140-1.8

Report Number: 780471
Location: Ford Bridgend

Superseded Report:

Results Legend <div style="display: flex; align-items: center; margin-bottom: 5px;"> <div style="width: 15px; height: 15px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></div> Test </div> <div style="display: flex; align-items: center; margin-bottom: 5px;"> <div style="width: 15px; height: 15px; background-color: red; color: white; border: 1px solid black; margin-right: 5px; display: flex; align-items: center; justify-content: center;">N</div> No Determination Possible </div> Sample Types - S - Soil/Solid UNS - Unspecified Solid GW - Ground Water SW - Surface Water LE - Land Leachate PL - Prepared Leachate PR - Process Water SA - Saline Water TE - Trade Effluent TS - Treated Sewage US - Untreated Sewage RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas OTH - Other	Lab Sample No(s)	32266109		
	Customer Sample Reference	SIGMA SOUTH W2		
	AGS Reference			
	Depth (m)			
	Container	0.5l glass bottle (ALEZ27)	Vial (ALEZ97)	
	Sample Type	GW	GW	
	EPH and CWG (Filtered) by FID	All	NDPs: 0 Tests: 1	X
GRO by GC-FID (W)	All	NDPs: 0 Tests: 1	X	
PAH in waters by GC-MS (diss.filt)	All	NDPs: 0 Tests: 1	X	
TPH CWG Filtered (W)	All	NDPs: 0 Tests: 1	X	
VOC MS (W)	All	NDPs: 0 Tests: 1	X	



CERTIFICATE OF ANALYSIS

Validated

SDG: 251009-35
Client Ref.: 30224140-1.8

Report Number: 780471
Location: Ford Bridgend

Superseded Report:

TPH CWG (W)

Results Legend		Customer Sample Ref.	SIGMA SOUTH W2				
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 08/10/2025 09/10/2025 251009-35 32266109				
M	mCERTS accredited.						
aq	Aqueous / settled sample.						
diss.filt	Dissolved / filtered sample.						
tot.unfilt	Total / unfiltered sample.						
*	Subcontracted - refer to subcontractor report for accreditation status.						
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery						
***	6:2 FTAB (see appendix)						
1-4*6@	Sample deviation (see appendix)						
Component	LOD/Units			Method			
GRO Surrogate % recovery**	%	TM245	92				
GRO >C5-C12 (HS_1D_TOTAL)	<50 µg/l	TM245	<50	#			
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/l	TM245	<10				
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/l	TM245	<10				
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/l	TM245	<10				
Aliphatics >C10-C12 (HS_1D_AL)	<10 µg/l	TM245	<10				
Aliphatics >C12-C16 (diss.filt) (EH_2D_AL)	<10 µg/l	TM439	<10				
Aliphatics >C16-C21 (diss.filt) (EH_2D_AL)	<10 µg/l	TM439	<10				
Aliphatics >C21-C35 (diss.filt) (EH_2D_AL)	<10 µg/l	TM439	<10				
Total Aliphatics >C12-C35 (diss.filt) (EH_2D_AL)	<10 µg/l	TM439	<10				
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/l	TM245	<10				
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/l	TM245	<10				
Aromatics >EC8-EC10	<10 µg/l	TM245	<10				
Aromatics >EC10-EC12	<10 µg/l	TM245	<10				
Aromatics >EC12-EC16 (diss.filt) (EH_2D_AR_#1)	<10 µg/l	TM439	<10				
Aromatics >EC16-EC21 (diss.filt) (EH_2D_AR_#1)	<10 µg/l	TM439	<10				
Aromatics >EC21-EC35 (diss.filt) (EH_2D_AR_#1)	<10 µg/l	TM439	<10				
Total Aromatics >EC12-EC35 (diss.filt) (EH_2D_AR_#1)	<10 µg/l	TM439	<10				
Total Aliphatics & Aromatics >C5-35 (diss. filt) (HS_1D_TOTAL_EH_2D_TOTAL_#1)	<10 µg/l	TM439	<10				



CERTIFICATE OF ANALYSIS

Validated

SDG: 251009-35
Client Ref.: 30224140-1.8

Report Number: 780471
Location: Ford Bridgend

Superseded Report:

VOC MS (W)

Results Legend		Customer Sample Ref.	SIGMA SOUTH W2					
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW)					
M	mCERTS accredited.		08/10/2025					
aq	Aqueous / settled sample.		09/10/2025					
diss,filtr	Dissolved / filtered sample.		251009-35					
tot.unfiltr	Total / unfiltered sample.		32266109					
*	Subcontracted - refer to subcontractor report for accreditation status.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
***	6:2 FTAB (see appendix)							
1-4*6@	Sample deviation (see appendix)							
Component	LOD/Units		Method					
Dibromofluoromethane**	%	TM208	112					
Toluene-d8**	%	TM208	98.2					
4-Bromofluorobenzene**	%	TM208	101					
Dichlorodifluoromethane	<1 µg/l	TM208	<1					
Chloromethane	<1 µg/l	TM208	<1	#				
Vinyl chloride	<1 µg/l	TM208	<1	#				
Bromomethane	<1 µg/l	TM208	<1	#				
Chloroethane	<1 µg/l	TM208	<1	#				
Trichlorofluoromethane	<1 µg/l	TM208	<1	#				
1,1-Dichloroethene	<1 µg/l	TM208	<1	#				
Carbon disulphide	<1 µg/l	TM208	<1	#				
Dichloromethane	<3 µg/l	TM208	<3	#				
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208	<1	#				
trans-1,2-Dichloroethene	<1 µg/l	TM208	<1	#				
1,1-Dichloroethane	<1 µg/l	TM208	<1	#				
cis-1,2-Dichloroethene	<1 µg/l	TM208	<1	#				
2,2-Dichloropropane	<1 µg/l	TM208	<1	#				
Bromochloromethane	<1 µg/l	TM208	<1	#				
Chloroform	<1 µg/l	TM208	<1	#				
1,1,1-Trichloroethane	<1 µg/l	TM208	<1	#				
1,1-Dichloropropene	<1 µg/l	TM208	<1	#				
Carbontetrachloride	<1 µg/l	TM208	<1	#				
1,2-Dichloroethane	<1 µg/l	TM208	<1	#				
Benzene	<1 µg/l	TM208	<1	#				
Trichloroethene	<1 µg/l	TM208	<1	#				
1,2-Dichloropropane	<1 µg/l	TM208	<1	#				
Dibromomethane	<1 µg/l	TM208	<1	#				
Bromodichloromethane	<1 µg/l	TM208	<1	#				
cis-1,3-Dichloropropene	<1 µg/l	TM208	<1	#				
Toluene	<1 µg/l	TM208	<1	#				
trans-1,3-Dichloropropene	<1 µg/l	TM208	<1	#				
1,1,2-Trichloroethane	<1 µg/l	TM208	<1	#				



CERTIFICATE OF ANALYSIS

Validated

SDG: 251009-35
Client Ref.: 30224140-1.8

Report Number: 780471
Location: Ford Bridgend

Superseded Report:

VOC MS (W)

Results Legend		Customer Sample Ref.	SIGMA SOUTH W2						
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Ground Water (GW) 08/10/2025 09/10/2025 251009-35 32266109						
M	mCERTS accredited.								
aq	Aqueous / settled sample.								
dis.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted - refer to subcontractor report for accreditation status.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
***	6:2 FTAB (see appendix)								
1-4	Sample deviation (see appendix)								
Component	LOD/Units			Method					
1,3-Dichloropropane	<1 µg/l	TM208	<1	#					
Tetrachloroethene	<1 µg/l	TM208	<1	#					
Dibromochloromethane	<1 µg/l	TM208	<1	#					
1,2-Dibromoethane	<1 µg/l	TM208	<1	#					
Chlorobenzene	<1 µg/l	TM208	<1	#					
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1	#					
Ethylbenzene	<1 µg/l	TM208	<1	#					
m,p-Xylene	<1 µg/l	TM208	<1	#					
o-Xylene	<1 µg/l	TM208	<1	#					
Styrene	<1 µg/l	TM208	<1	#					
Bromoform	<1 µg/l	TM208	<1	#					
Isopropylbenzene	<1 µg/l	TM208	<1	#					
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1	#					
1,2,3-Trichloropropane	<1 µg/l	TM208	<1	#					
Bromobenzene	<1 µg/l	TM208	<1	#					
Propylbenzene	<1 µg/l	TM208	<1	#					
2-Chlorotoluene	<1 µg/l	TM208	<1	#					
1,3,5-Trimethylbenzene	<1 µg/l	TM208	<1	#					
4-Chlorotoluene	<1 µg/l	TM208	<1	#					
tert-Butylbenzene	<1 µg/l	TM208	<1	#					
1,2,4-Trimethylbenzene	<1 µg/l	TM208	<1	#					
sec-Butylbenzene	<1 µg/l	TM208	<1	#					
4-iso-Propyltoluene	<1 µg/l	TM208	<1	#					
1,3-Dichlorobenzene	<1 µg/l	TM208	<1	#					
1,4-Dichlorobenzene	<1 µg/l	TM208	<1	#					
n-Butylbenzene	<1 µg/l	TM208	<1	#					
1,2-Dichlorobenzene	<1 µg/l	TM208	<1	#					
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208	<1	#					
1,2,4-Trichlorobenzene	<1 µg/l	TM208	<1	#					
Hexachlorobutadiene	<1 µg/l	TM208	<1	#					
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208	<1	#					
Naphthalene	<1 µg/l	TM208	<1	#					



CERTIFICATE OF ANALYSIS

Validated

SDG: 251009-35
Client Ref.: 30224140-1.8

Report Number: 780471
Location: Ford Bridgend

Superseded Report:

Table of Results - Appendix

Method No	Description
TM178	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM439	Determination of Extractable Petroleum Hydrocarbons (EPH) CWG banding by GC-FID on liquids
TM208	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM245	Determination of GRO by Headspace in waters

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden (Method codes TM).



CERTIFICATE OF ANALYSIS

Validated

SDG: 251009-35
Client Ref.: 30224140-1.8

Report Number: 780471
Location: Ford Bridgend

Superseded Report:

Test Completion Dates

Lab Sample No(s)	32266109
Customer Sample Ref.	SIGMA SOUTH W2
AGS Ref.	
Depth	
Type	Ground Water

EPH and CWG (Filtered) by FID	14-Oct-2025
GRO by GC-FID (W)	14-Oct-2025
PAH in waters by GC-MS (diss.filt)	16-Oct-2025
TPH CWG Filtered (W)	14-Oct-2025
VOC MS (W)	14-Oct-2025



CERTIFICATE OF ANALYSIS

Validated

SDG: 251009-35
Client Ref.: 30224140-1.8

Report Number: 780471
Location: Ford Bridgend

Superseded Report:

ASSOCIATED AQC DATA

EPH and CWG (Filtered) by FID

Component	Method Code	QC 3285
Total Aliphatics >C12-C35 (a)	TM439	115.8 83.60 : 123.94
Total Aromatics >C12-C35 (a)	TM439	126.81 78.21 : 128.66
Total EPH >C10-C40	TM439	102.43 75.37 : 110.89

GRO by GC-FID (W)

Component	Method Code	QC 3292
Benzene by GC	TM245	90.05 79.13 : 118.84
Ethylbenzene by GC	TM245	94.0 79.54 : 115.99
m & p Xylene by GC	TM245	92.47 78.44 : 116.32
MTBE GC-FID	TM245	90.35 78.79 : 117.79
o Xylene by GC	TM245	92.9 76.85 : 120.29
QC	TM245	112.19 74.52 : 122.16
Toluene by GC	TM245	95.45 79.00 : 121.96

PAH in waters by GC-MS (diss.filt)

Component	Method Code	QC 3252
Acenaphthene (diss.filt)	TM178	105.0 94.40 : 118.40
Acenaphthylene (diss.filt)	TM178	102.99 89.20 : 120.40
Anthracene (diss.filt)	TM178	101.07 92.40 : 118.80
Benzo(a)anthracene (diss.filt)	TM178	98.89 85.60 : 116.80
Benzo(a)pyrene (diss.filt)	TM178	93.68 84.80 : 113.60
Benzo(b)fluoranthene (diss.filt)	TM178	97.59 82.00 : 120.40
Benzo(g,h,i)perylene (diss.filt)	TM178	101.04 88.00 : 114.40
Benzo(k)fluoranthene (diss.filt)	TM178	108.35 94.40 : 128.00
Chrysene (diss.filt)	TM178	99.0 90.00 : 118.80
Dibenzo(a,h)anthracene (diss.filt)	TM178	102.29 89.60 : 118.40
Fluoranthene (diss.filt)	TM178	103.56 90.40 : 121.60
Fluorene (diss.filt)	TM178	106.17 91.60 : 120.40



CERTIFICATE OF ANALYSIS

Validated

SDG: 251009-35
Client Ref.: 30224140-1.8

Report Number: 780471
Location: Ford Bridgend

Superseded Report:

PAH in waters by GC-MS (diss.filt)

		QC 3252
Indeno(1,2,3-cd)pyrene (diss.filt)	TM178	93.16 84.40 : 113.20
Naphthalene (diss.filt)	TM178	101.02 89.60 : 118.40
Phenanthrene (diss.filt)	TM178	100.59 92.40 : 118.80
Pyrene (diss.filt)	TM178	105.62 90.80 : 126.80

VOC MS (W)

Component	Method Code	QC 3268
1,1,1,2-Tetrachloroethane	TM208	101.5 84.45 : 114.24
1,1,1-Trichloroethane	TM208	96.75 84.60 : 114.45
1,1,2-Tetrachloroethane	TM208	98.04 83.06 : 123.56
1,1,2-Trichloroethane	TM208	97.61 86.73 : 115.95
1,1-Dichloroethane	TM208	97.94 86.24 : 116.66
1,1-Dichloroethene	TM208	98.94 84.94 : 112.39
1,1-Dichloropropene	TM208	98.0 84.10 : 115.18
1,2,3-Trichlorobenzene	TM208	97.23 78.15 : 114.21
1,2,3-Trichloropropane	TM208	98.19 79.47 : 125.70
1,2,4-Trichlorobenzene	TM208	102.66 76.00 : 110.02
1,2,4-Trimethylbenzene	TM208	100.07 81.19 : 109.72
1,2-Dibromoethane	TM208	97.27 84.64 : 119.02
1,2-Dichlorobenzene	TM208	103.03 86.14 : 116.68
1,2-Dichloroethane	TM208	96.24 85.99 : 116.35
1,2-Dichloropropane	TM208	99.07 88.04 : 113.09
1,3,5-Trimethylbenzene	TM208	98.94 81.76 : 109.54
1,3-Dichlorobenzene	TM208	105.59 82.32 : 114.57
1,3-Dichloropropane	TM208	95.66 85.60 : 117.07
1,4-Dichlorobenzene	TM208	104.05 82.73 : 116.45
2-Chlorotoluene	TM208	99.72 83.13 : 112.47
4-Chlorotoluene	TM208	100.25 83.19 : 112.56



CERTIFICATE OF ANALYSIS

Validated

SDG: 251009-35
Client Ref.: 30224140-1.8

Report Number: 780471
Location: Ford Bridgend

Superseded Report:

VOC MS (W)

		QC 3268
4-Isopropyltoluene	TM208	97.75 81.78 : 115.29
Benzene	TM208	100.94 85.41 : 115.56
Bromobenzene	TM208	104.7 85.65 : 116.46
Bromochloromethane	TM208	102.98 87.55 : 117.34
Bromodichloromethane	TM208	102.58 83.78 : 124.25
Bromoform	TM208	98.22 77.09 : 127.73
Bromomethane	TM208	92.26 82.59 : 111.75
Carbon Disulphide	TM208	98.18 83.64 : 117.96
Carbontetrachloride	TM208	100.78 85.14 : 115.20
Chlorobenzene	TM208	101.55 84.32 : 114.08
Chloroethane	TM208	96.66 82.10 : 122.33
Chloroform	TM208	96.25 85.90 : 116.23
Chloromethane	TM208	96.36 81.54 : 122.46
Cis-1,2-Dichloroethene	TM208	97.7 86.19 : 117.21
Cis-1,3-Dichloropropene	TM208	85.31 64.89 : 121.92
Dibromochloromethane	TM208	98.64 85.76 : 115.61
Dibromomethane	TM208	100.31 86.32 : 116.62
Dichloromethane	TM208	96.22 86.56 : 117.10
Ethylbenzene	TM208	97.45 82.07 : 111.05
Hexachlorobutadiene	TM208	101.88 76.11 : 107.70
Isopropylbenzene	TM208	96.78 79.97 : 110.18
Naphthalene	TM208	95.39 76.41 : 116.13
n-Butylbenzene	TM208	97.1 80.74 : 108.73
o-Xylene	TM208	100.02 81.09 : 109.71
p/m-Xylene	TM208	98.82 80.88 : 109.43
Propylbenzene	TM208	97.43 80.74 : 108.73
Sec-Butylbenzene	TM208	94.92 81.15 : 116.37



CERTIFICATE OF ANALYSIS

Validated

SDG: 251009-35
Client Ref.: 30224140-1.8

Report Number: 780471
Location: Ford Bridgend

Superseded Report:

VOC MS (W)

		QC 3268
Styrene	TM208	99.46 82.69 : 111.40
Tert-amyl methyl ether	TM208	89.28 73.31 : 118.61
Tert-butyl methyl ether	TM208	88.82 80.41 : 116.71
Tert-Butylbenzene	TM208	99.0 80.77 : 109.63
Tetrachloroethene	TM208	99.03 83.00 : 112.28
Toluene	TM208	99.13 83.93 : 113.57
Trans-1,2-Dichloroethene	TM208	100.09 87.84 : 113.85
Trans-1,3-Dichloropropene	TM208	75.72 64.10 : 125.81
Trichloroethene	TM208	99.92 84.54 : 114.33
Trichlorofluoromethane	TM208	100.29 84.68 : 121.37
Vinyl Chloride	TM208	95.89 80.59 : 120.31

The above information details the reference name of the analytical quality control sample (AQC) that has been run with the samples contained in this report for the different methods of analysis.

The figure detailed is the percentage recovery result for the AQC.

The subscript numbers below are the percentage recovery lower control limit (LCL) and the upper control limit (UCL). The percentage recovery result for the AQC should be between these limits to be statistically in control.



CERTIFICATE OF ANALYSIS

Validated

SDG: 251009-35
Client Ref.: 30224140-1.8

Report Number: 780471
Location: Ford Bridgend

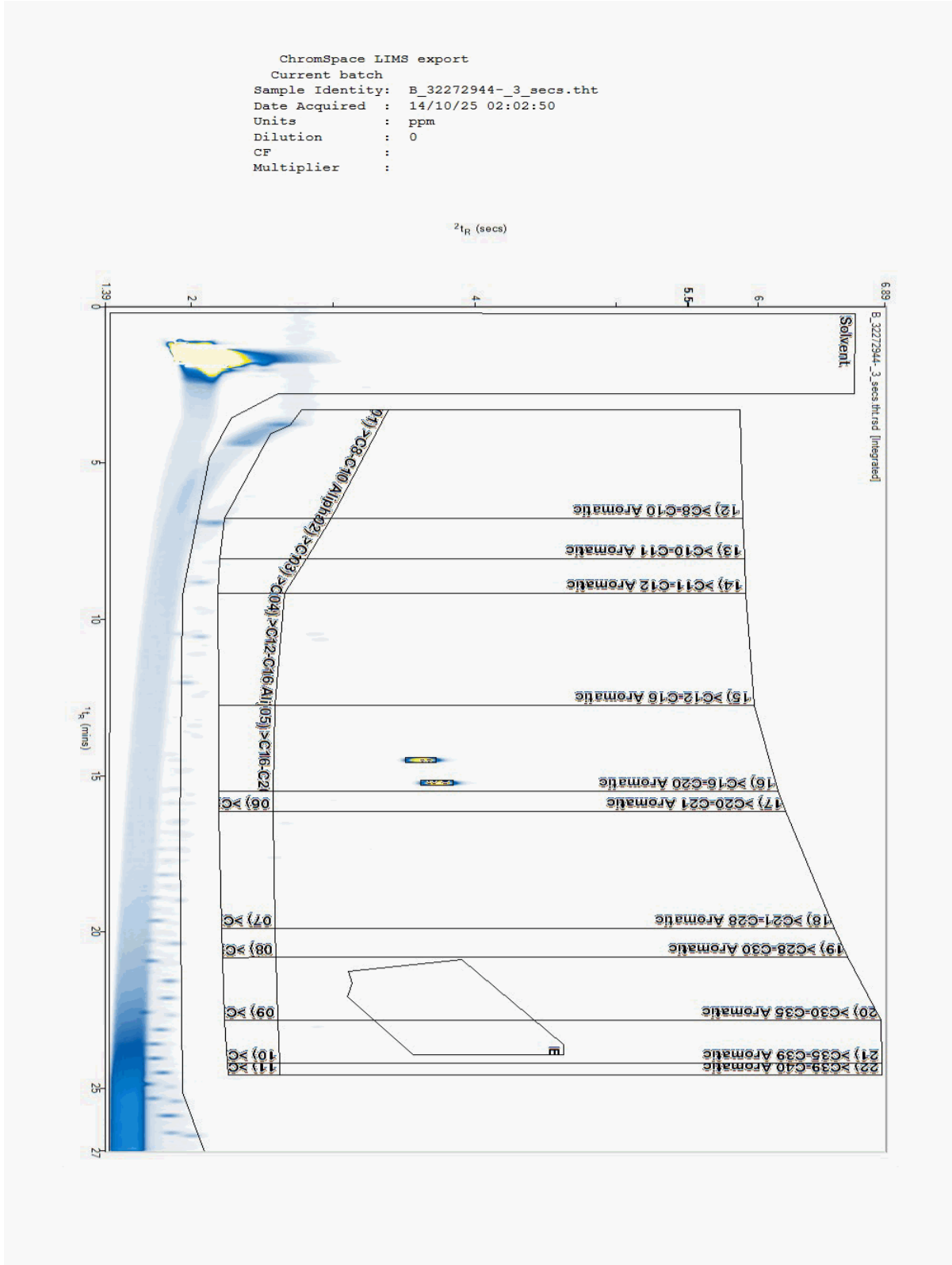
Superseded Report:

Chromatogram

Analysis: EPH and CWG (Filtered) by FID

Sample No : 32272944
Sample ID : SIGMA SOUTH W2

Depth :





CERTIFICATE OF ANALYSIS

Validated

SDG: 251009-35
Client Ref.: 30224140-1.8

Report Number: 780471
Location: Ford Bridgend

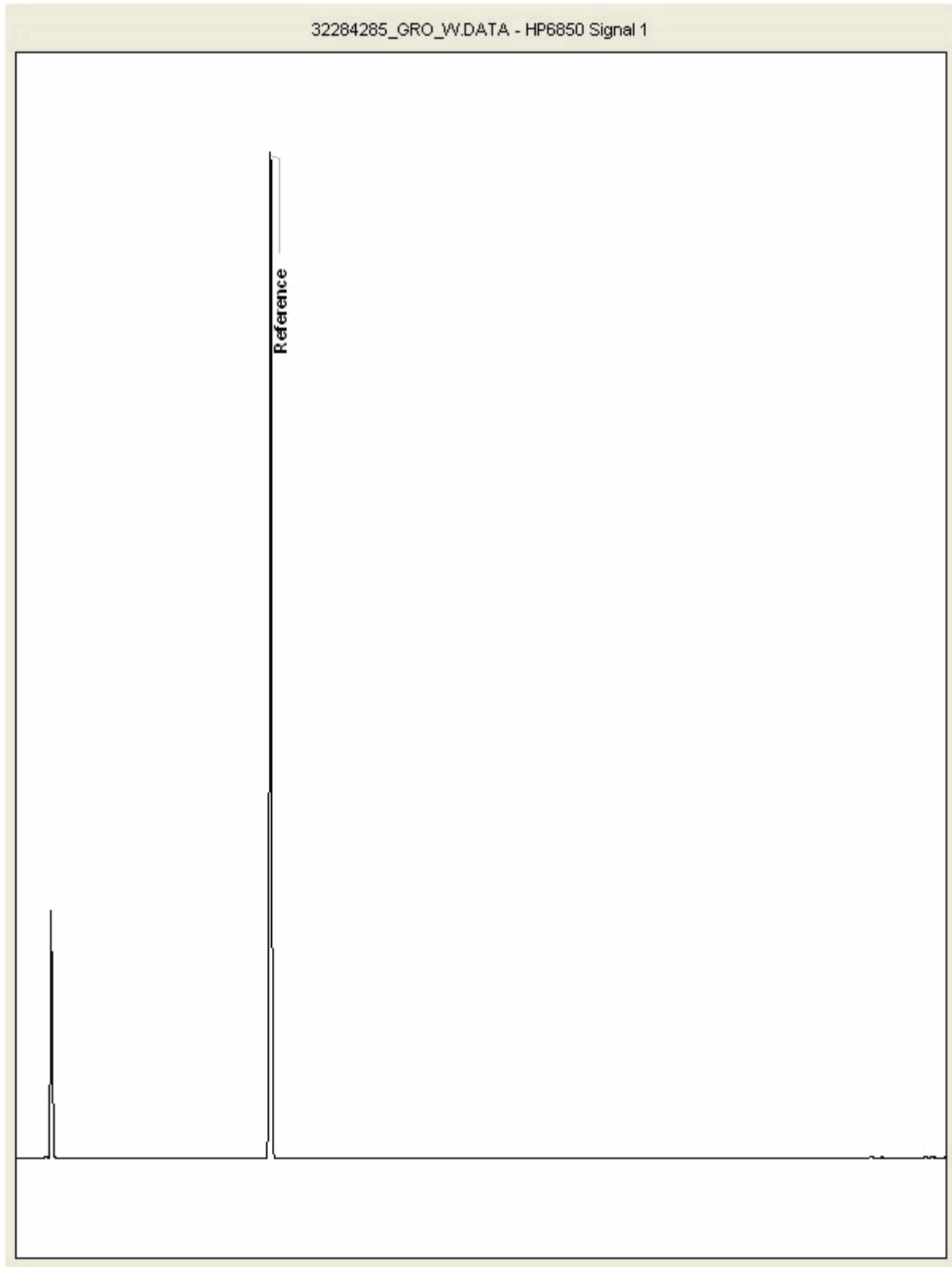
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (W)

Sample No : 32284285
Sample ID : SIGMA SOUTH W2

Depth :





CERTIFICATE OF ANALYSIS

SDG: 251009-35
Client Ref: 30224140-1.8

Report Number: 780471
Location: Ford Bridgend

Superseded Report:

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH₄ by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 15 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of 15 days after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur - e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Matrix interference
◆	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to late arrival of instructions or samples
§	Sampled on date not provided

20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

If during the search of the two 'pinch' samples by PLM only 1 or 2 fibres or fibre bundles are seen and identified as asbestos, the term 'trace asbestos identified' is reported.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials and soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anorthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Potentially respirable fibres are identified by using a Phase Contrast Microscope.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

21. 6:2 FTAB

Recovery of 6:2 FTAB in the quality control samples has been observed to be <50% of the target value. Please note the 6:2 FTAB result is supplied as indicative only.