



Unit 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

Socotec  
Geotechnical House  
18 - 19 Drome Road  
Deeside Industrial Park  
Deeside  
Flintshire  
CH5 2NY

**Attention:** Chris Evans

## CERTIFICATE OF ANALYSIS

**Date of report Generation:** 18 December 2024  
**Customer:** Socotec  
**Sample Delivery Group (SDG):** 241114-12  
**Your Reference:**  
**Location:** Shotton Mill  
**Report No:** 750701  
**Order Number:** 214508NOR

**This report has been revised and directly supersedes 748891 in its entirety.**

We received 1 sample on Wednesday November 13, 2024 and 1 of these samples were scheduled for analysis which was completed on Wednesday December 18, 2024. 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:

**Lauren Ellis**

General Manager Western Europe Environmental





# CERTIFICATE OF ANALYSIS

Validated

SDG: 241114-12  
Client Ref.:

Report Number: 750701  
Location: Shotton Mill

Superseded Report: 748891

## Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
30665993	W1		1.00	13/11/2024

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



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Results Legend	Lab Sample No(s)					30665993	
<div style="margin-bottom: 10px;"> <span style="background-color: yellow; border: 1px solid black; padding: 2px;">X</span> Test         </div> <div> <span style="background-color: red; color: white; border: 1px solid black; padding: 2px;">N</span> No Determination Possible         </div> <p>Sample Types -</p> <ul style="list-style-type: none"> <li>S - Soil/Solid</li> <li>UNS - Unspecified Solid</li> <li>GW - Ground Water</li> <li>SW - Surface Water</li> <li>LE - Land Leachate</li> <li>PL - Prepared Leachate</li> <li>PR - Process Water</li> <li>SA - Saline Water</li> <li>TE - Trade Effluent</li> <li>TS - Treated Sewage</li> <li>US - Untreated Sewage</li> <li>RE - Recreational Water</li> <li>DW - Drinking Water</li> <li>Non-regulatory</li> <li>UNL - Unspecified Liquid</li> <li>SL - Sludge</li> <li>G - Gas</li> <li>OTH - Other</li> </ul>	Customer Sample Reference					W1	
	AGS Reference						
	Depth (m)					1.00	
	Container		Vial (ALE297)	HNO3 Filtered (ALE204)	250ml Amber Cl. PTFE/PE (ALE219)	0.5l glass bottle (ALE227)	
	Sample Type		TE	TE	TE	TE	
	Chloralkanes C10 - C13 by GCMS	All	NDPs: 0 Tests: 1	X			
COD Unfiltered	All	NDPs: 0 Tests: 1	X				
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 1		X			
Mercury Dissolved	All	NDPs: 0 Tests: 1		X			
Nonylphenol and Octylphenol*	All	NDPs: 0 Tests: 1	X				
Organotins in Aqueous Samples	All	NDPs: 0 Tests: 1	X				
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 1		X			
Pesticides (Suite I) by GCMS	All	NDPs: 0 Tests: 1	X				
Pesticides (Suite II) by GCMS	All	NDPs: 0 Tests: 1	X				
Pesticides (Suite III) by GCMS	All	NDPs: 0 Tests: 1	X				
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 1	X				
VOC MS (W)	All	NDPs: 0 Tests: 1				X	



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Results Legend		Customer Sample Ref.	W1			
#	ISO17025 accredited.		1.00			
M	mCERTS accredited.		Trade Effluent (TE)			
aq	Aqueous / settled sample.	Depth (m)	13/11/2024			
diss.filt	Dissolved / filtered sample.	Sample Type	13/11/2024			
tot.unfilt	Total / unfiltered sample.	Date Sampled	241114-12			
	* Subcontracted - refer to subcontractor report for accreditation status.	Sample Time	30665993			
	** % 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	Date Received				
	*** 6.2 FTAB (see appendix)	SDG Ref				
	1-4*@\$@Sample deviation (see appendix)	Lab Sample No.(s)				
		AGS Reference				
Component	LOD/Units	Method				
Chloroalkanes (C10-C13)*	µg/l	SUB	<0.4			
Nonylphenol*	<0.1 µg/l	SUB	<0.1			
4-t-Octylphenol*	<0.01 µg/l	SUB	<0.01			
4-n-Octylphenol*	<0.1 µg/l	SUB	<0.1			
4-Nonylphenol*	<0.1 µg/l	SUB	<0.1			
COD, unfiltered	<7 mg/l	TM107	15.6	#		
Cadmium (diss.filt)	<0.08 µg/l	TM152	<0.08			
Mercury (diss.filt)	<0.01 µg/l	TM183	<0.01	#		
Dibutyl tin	<5 ng/l	TM328	<5			
Tributyl tin	<1 ng/l	TM328	<1			
Tetrabutyl tin	<2 ng/l	TM328	<2			
Triphenyl tin	<1 ng/l	TM328	<1			
Surrogate**	%	TM328	64.3			
Trifluralin	<0.01 µg/l	TM343	<0.01			
alpha-HCH	<0.01 µg/l	TM343	<0.01			
gamma-HCH (Lindane)	<0.01 µg/l	TM343	<0.01			
Heptachlor	<0.01 µg/l	TM343	<0.01			
Aldrin	<0.01 µg/l	TM343	<0.01			
beta-HCH	<0.01 µg/l	TM343	<0.01			
Isodrin	<0.01 µg/l	TM343	<0.01			
delta-HCH	<0.01 µg/l	TM343	<0.01			
Heptachlor epoxide	<0.01 µg/l	TM343	<0.01			
o,p'-DDE	<0.01 µg/l	TM343	<0.01			
Endosulphan I	<0.01 µg/l	TM343	<0.01			
trans-Chlordane	<0.01 µg/l	TM343	<0.01			
cis-Chlordane	<0.01 µg/l	TM343	<0.01			
p,p'-DDE	<0.01 µg/l	TM343	<0.01			
Dieldrin	<0.01 µg/l	TM343	<0.01			
o,p'-DDD (TDE)	<0.01 µg/l	TM343	<0.01			
Endrin	<0.01 µg/l	TM343	<0.01			
o,p'-DDT	<0.01 µg/l	TM343	<0.01			
p,p'-DDD (TDE)	<0.01 µg/l	TM343	<0.01			
Endosulphan II	<0.02 µg/l	TM343	<0.02			



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SDG: 241114-12  
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Results Legend		Customer Sample Ref.	W1			
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfiltTotal / 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)		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	1.00 Trade Effluent (TE) 13/11/2024 . 13/11/2024 241114-12 30665993			
Component	LOD/Units	Method				
p,p'-DDT	<0.01 µg/l	TM343	<0.01			
o,p'-Methoxychlor	<0.01 µg/l	TM343	<0.01			
p,p'-Methoxychlor	<0.01 µg/l	TM343	<0.01			
Endosulphan Sulphate	<0.02 µg/l	TM343	<0.02			
Permethrin I	<0.01 µg/l	TM343	<0.01			
Permethrin II	<0.01 µg/l	TM343	<0.01			
1,3,5-Trichlorobenzene	<0.01 µg/l	TM344	<0.01			
Hexachlorobutadiene	<0.01 µg/l	TM344	<0.01			
1,2,4-Trichlorobenzene	<0.01 µg/l	TM344	<0.01			
1,2,3-Trichlorobenzene	<0.01 µg/l	TM344	<0.01			
Dichlorvos	<0.01 µg/l	TM344	<0.01			
Dichlobenil	<0.01 µg/l	TM344	<0.01			
Mevinphos	<0.01 µg/l	TM344	<0.01			
Tecnazene	<0.01 µg/l	TM344	<0.01			
Hexachlorobenzene	<0.01 µg/l	TM344	<0.01			
Demeton-S-methyl	<0.01 µg/l	TM344	<0.01			
Phorate	<0.01 µg/l	TM344	<0.01			
Diazinon	<0.01 µg/l	TM344	<0.01			
Triallate	<0.01 µg/l	TM344	<0.01			
Atrazine	<0.01 µg/l	TM344	<0.01			
Simazine	<0.01 µg/l	TM344	<0.01			
Disulfoton	<0.01 µg/l	TM344	<0.01			
Propetamphos	<0.01 µg/l	TM344	<0.01			
Chlorpyrifos-methyl	<0.01 µg/l	TM344	<0.01			
Dimethoate	<0.01 µg/l	TM344	<0.01			
Pirimiphos-methyl	<0.01 µg/l	TM344	<0.01			
Fenclorophos	<0.01 µg/l	TM344	<0.01			
Chlorpyrifos	<0.01 µg/l	TM344	<0.01			
Methyl Parathion	<0.01 µg/l	TM344	<0.01			
Malathion	<0.01 µg/l	TM344	<0.01			
Fenthion	<0.01 µg/l	TM344	<0.01			
Fenitrothion	<0.01 µg/l	TM344	<0.01			
Triadimefon	<0.01 µg/l	TM344	<0.01			



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Results Legend		Customer Sample Ref.	W1			
# ISO17025 accredited. 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* @ Sample deviation (see appendix)		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	1.00 Trade Effluent (TE) 13/11/2024 . 13/11/2024 241114-12 30665993			
Component	LOD/Units	Method				
Pendimethalin	<0.01 µg/l	TM344	<0.01			
Parathion	<0.01 µg/l	TM344	<0.01			
Chlorfenvinphos	<0.01 µg/l	TM344	<0.01			
trans-Chlordane	<0.01 µg/l	TM344	<0.01			
cis-Chlordane	<0.01 µg/l	TM344	<0.01			
Ethion	<0.01 µg/l	TM344	<0.01			
Carbophenothion	<0.01 µg/l	TM344	<0.01			
Triazophos	<0.01 µg/l	TM344	<0.01			
Phosalone	<0.01 µg/l	TM344	<0.01			
Azinphos methyl	<0.02 µg/l	TM344	<0.02			
Azinphos ethyl	<0.02 µg/l	TM344	<0.02			
Etridiazole	<0.01 µg/l	TM345	<0.01			
Pentachlorobenzene	<0.01 µg/l	TM345	<0.01			
Propachlor	<0.01 µg/l	TM345	<0.01			
Quintozene (PCNB)	<0.01 µg/l	TM345	<0.01			
Propazine	<0.01 µg/l	TM345	<0.01			
Propyzamide	<0.01 µg/l	TM345	<0.01			
Alachlor	<0.01 µg/l	TM345	<0.01			
Prometryn	<0.01 µg/l	TM345	<0.01			
Telodrin	<0.01 µg/l	TM345	<0.01			
Terbutryn	<0.01 µg/l	TM345	<0.01			
Chlorothalonil	<0.01 µg/l	TM345	<0.01			
Etrimphos	<0.01 µg/l	TM345	<0.01			
Metazachlor	<0.01 µg/l	TM345	<0.01			
Cyanazine	<0.01 µg/l	TM345	<0.01			
Trietazine	<0.01 µg/l	TM345	<0.01			
Coumaphos	<0.01 µg/l	TM345	<0.01			
Phosphamidon I	<0.01 µg/l	TM345	<0.01			
Phosphamidon II	<0.01 µg/l	TM345	<0.01			





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SDG: 241114-12  
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Superseded Report: 748891

## SVOC MS (W) - Aqueous

Results Legend		Customer Sample Ref.	W1				
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	1.00				
M	mCERTS accredited.		Trade Effluent (TE)	13/11/2024			
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*	Sample deviation (see appendix)						
Component	LOD/Units		Method				
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176	<1	◆			
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	◆			
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	◆			
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176	<1	◆			
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176	<1	◆			
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176	<1	◆			
2,4-Dichlorophenol (aq)	<1 µg/l	TM176	<1	◆			
2,4-Dimethylphenol (aq)	<1 µg/l	TM176	<1	◆			
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176	<1	◆			
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176	<1	◆			
2-Chloronaphthalene (aq)	<1 µg/l	TM176	<1	◆			
2-Chlorophenol (aq)	<1 µg/l	TM176	<1	◆			
2-Methylnaphthalene (aq)	<1 µg/l	TM176	<1	◆			
2-Methylphenol (aq)	<1 µg/l	TM176	<1	◆			
2-Nitroaniline (aq)	<1 µg/l	TM176	<1	◆			
2-Nitrophenol (aq)	<1 µg/l	TM176	<1	◆			
3-Nitroaniline (aq)	<1 µg/l	TM176	<1				
4-Bromophenylphenylether (aq)	<1 µg/l	TM176	<1	◆			
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176	<1	◆			
4-Chloroaniline (aq)	<1 µg/l	TM176	<1				
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176	<1	◆			
4-Methylphenol (aq)	<1 µg/l	TM176	<1	◆			
4-Nitroaniline (aq)	<1 µg/l	TM176	<1	◆			
4-Nitrophenol (aq)	<1 µg/l	TM176	<1				
Azobenzene (aq)	<1 µg/l	TM176	<1	◆			
Acenaphthylene (aq)	<1 µg/l	TM176	<1	◆			
Acenaphthene (aq)	<1 µg/l	TM176	<1	◆			
Anthracene (aq)	<1 µg/l	TM176	<1	◆			
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176	<1	◆			
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176	<1	◆			
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176	<2	◆			
Butylbenzyl phthalate (aq)	<1 µg/l	TM176	<1	◆			
Benzo(a)anthracene (aq)	<1 µg/l	TM176	<1	◆			





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## VOC MS (W)

Results Legend		Customer Sample Ref.	W1			
# ISO17025 accredited. 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*@\$@Sample deviation (see appendix)		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	1.00 Trade Effluent (TE) 13/11/2024 13/11/2024 241114-12 30665993			
Component	LOD/Units	Method				
Dibromofluoromethane**	%	TM208	96.5			
Toluene-d8**	%	TM208	97.8			
4-Bromofluorobenzene**	%	TM208	94.5			
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	#		
1,3-Dichloropropane	<1 µg/l	TM208	<1	#		



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SDG: 241114-12  
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Location: Shotton Mill

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## VOC MS (W)

Results Legend		Customer Sample Ref.	W1			
# ISO17025 accredited. 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 @@ Sample deviation (see appendix)		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	1.00 Trade Effluent (TE) 13/11/2024 . 13/11/2024 241114-12 30665993			
Component	LOD/Units	Method				
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	#		
1,2,3-Trichlorobenzene	<1 µg/l	TM208	<1	#		
1,3,5-Trichlorobenzene	<1 µg/l	TM208	<1	#		



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## Table of Results - Appendix

Method No	Description
SUB	Subcontracted Test
TM152	Analysis of Aqueous Samples by ICP-MS
TM208	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM328	Determination of Organotins in Aqueous Samples
TM107	Determination of Chemical Oxygen Demand using COD Dr Lange Kit
TM178	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM183	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM344	Determination of selected pesticides (Suite II) by GCMS
TM176	Determination of SVOCs in Water by GCMS
TM343	Determination of Selected Pesticides (Suite I) in Liquids by GCMS
TM345	Determination of selected pesticides (Suite III) by GCMS

NA = not applicable.

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



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## Test Completion Dates

Lab Sample No(s)	30665993
Customer Sample Ref.	W1
AGS Ref.	
Depth	1.00
Type	Trade Effluent

Chloralkanes C10 - C13 by GCMS	03-Dec-2024
COD Unfiltered	19-Nov-2024
Dissolved Metals by ICP-MS	18-Nov-2024
Mercury Dissolved	18-Nov-2024
Nonylphenol and Octylphenol*	03-Dec-2024
Organotins in Aqueous Samples	18-Dec-2024
PAH Spec MS - Aqueous (W)	22-Nov-2024
Pesticides (Suite I) by GCMS	19-Nov-2024
Pesticides (Suite II) by GCMS	20-Nov-2024
Pesticides (Suite III) by GCMS	22-Nov-2024
SVOC MS (W) - Aqueous	26-Nov-2024
VOC MS (W)	18-Nov-2024



## CERTIFICATE OF ANALYSIS

<b>Work Order</b>	: PR24E1795	<b>Issue Date</b>	: 03-Dec-2024
<b>Customer</b>	: ALS Laboratories (UK) Limited	<b>Laboratory</b>	: ALS Czech Republic, s.r.o.
<b>Contact</b>	: ALS Hawarden Reporting	<b>Contact</b>	: Client Service
<b>Address</b>	: Unit 7-8 Hawarden Business Park Manor Road, Hawarden CH5 3US Deeside	<b>Address</b>	: Na Harfe 336/9 Prague 9 - Vysocany 190 00 Czech Republic
<b>E-mail</b>	: euhdsubconresults@ALSGlobal.com	<b>E-mail</b>	: customer.support@alsglobal.com
<b>Telephone</b>	: ----	<b>Telephone</b>	: +420 226 226 228
<b>Project</b>	: 241114-12	<b>Page</b>	: 1 of 2
<b>Order number</b>	: ----	<b>Date Samples Received</b>	: 20-Nov-2024
		<b>Quote number</b>	: PR2022ALSEC-GB0002 (CZ-256-18-0022)
<b>Site</b>	: ----	<b>Date of test</b>	: 21-Nov-2024 - 03-Dec-2024
<b>Sampled by</b>	: customer	<b>QC Level</b>	: ALS CR Standard Quality Control Schedule

### General Comments

This report shall not be reproduced except in full, without prior written approval from the laboratory. The laboratory is not responsible for the sample data supplied by the customer and their impact on the validity of the result.

The laboratory declares that the test results relate only to the listed samples. If "ALS" is not included in the test report in the "Sampled by" section, then the results refer to the sample as received.

### Responsible for accuracy

Testing Laboratory No. 1163  
Accredited by CAI according to  
CSN EN ISO/IEC 17025:2018

#### Signatories

Lubomír Pokorný

#### Position

Country Manager



The company is certified according to ČSN EN ISO 14001 (Environmental management systems) and ČSN ISO 45001 (Occupational health and safety management systems)



## Analytical Results

Parameter	Method	LOR	Unit	Client sample ID		Laboratory sample ID		Client sampling date / time	
				30669992		30669982		---	
				W1	W1	PR24E1795001	PR24E1795002	---	---
				14-Nov-2024 11:27	14-Nov-2024 11:26			---	---
Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU
<b>Chlorinated Hydrocarbons</b>									
Chlorinated Alkanes C10-C13	W-CLAGMS01	0.40	µg/L	---	---	<0.40	---	---	---
<b>Alkylphenols</b>									
4-n-Octylphenol	W-AEOGMS01	0.100	µg/L	<0.100	---	---	---	---	---
4-Nonylphenol	W-AEOGMS01	0.100	µg/L	<0.100	---	---	---	---	---
4-t-Octylphenol	W-AEOGMS01	0.010	µg/L	<0.010	---	---	---	---	---
4-t-Octylphenol diethoxylate	W-AEOGMS01	0.010	µg/L	<0.010	---	---	---	---	---
4-t-Octylphenol monoethoxylate	W-AEOGMS01	0.010	µg/L	<0.010	---	---	---	---	---
4-t-Octylphenol triethoxylate	W-AEOGMS01	0.010	µg/L	<0.010	---	---	---	---	---
Nonylphenol (mixture of isomers)	W-AEOGMS01	0.100	µg/L	<0.100	---	---	---	---	---
Nonylphenol diethoxylate (mixture of isomers)	W-AEOGMS01	0.100	µg/L	<0.100	---	---	---	---	---
Nonylphenol monoethoxylate (mixture of isomers)	W-AEOGMS01	0.100	µg/L	<0.100	---	---	---	---	---
Nonylphenol triethoxylate (mixture of isomers)	W-AEOGMS01	0.100	µg/L	<0.100	---	---	---	---	---
Sum of 4 NP and NPE	W-AEOGMS01	0.40	µg/L	<0.40	---	---	---	---	---
Sum of 5 NP and NPE	W-AEOGMS01	0.500	µg/L	<0.500	---	---	---	---	---
Sum of 5 OP and OPE	W-AEOGMS01	0.140	µg/L	<0.140	---	---	---	---	---

When sampling date is not provided by the client, the laboratory determines it for procedural reasons, then it is equal to the date of receipt of the sample to the laboratory and is displayed in brackets. Measurement uncertainty is expressed as expanded measurement uncertainty with coverage factor  $k = 2$ , representing 95% confidence level.

Key: LOR = Limit of reporting; MU = Measurement Uncertainty. The MU does not include sampling uncertainty.

## Brief Method Summaries

Analytical Methods	Method Descriptions
<i>Location of test performance: Na Harfe 336/9 Prague 9 - Vysocany Czech Republic 190 00</i>	
W-AEOGMS01	CZ_SOP_D06_03_178 (CSN EN ISO 18857-2) Determination of alkylphenols and alkylphenol ethoxylates by gas chromatography method with MS or MS/MS detection and calculation of alkylphenols and alkylphenol ethoxylates sums from measured values
W-CLAGMS01	CZ_SOP_D06_03_192.A - (CSN EN ISO 12010) Determination of chlorinated alkanes by gas chromatography method with MS/MS detection

The symbol "\*" for the method indicates a test outside the scope of accreditation of the laboratory or subcontractor. If the UNICO-SUB code is stated in the method table, this only informs that the tests have been performed by a subcontractor and the results are given in an annex to the test report, including information on test accreditation. If the lab used for matrix outside the scope of accreditation or non-standard sample matrix procedure specified in the accredited method and issues non-accredited results, this fact is stated on the title page of this protocol in the section "Notes". If the test report shows the results of subcontracting, the place of performance of the test is outside the laboratories of ALS Czech Republic, s.r.o.

The method for calculating of the summation parameters is available on request in the customer service.

**The end of the certificate of analysis**



# CERTIFICATE OF ANALYSIS

SDG: 241114-12  
Client Ref:

Report Number: 750701  
Location: Shotton Mill

Superseded Report: 748891

## 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 NH<sub>4</sub> 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.

#### 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.

**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.