Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Atkins Global Ltd
Project Jonah site office
Llan Coed House
Suite 24
Coed Darcy
Llandarcy
SA10 6HJ

Attention: Scott Bowler

CERTIFICATE OF ANALYSIS

Date of report Generation:	19 September 2019
Customer:	Atkins Global Ltd
Sample Delivery Group (SDG):	190904-21
Your Reference:	
Location:	Llanwern
Report No:	522080

We received 29 samples on Wednesday September 04, 2019 and 29 of these samples were scheduled for analysis which was completed on Thursday September 19, 2019. 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 Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

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:

Sonia McWhan
Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
20642023	D0-C		0.00 - 0.00	03/09/2019
20642396	D1-C		0.00 - 0.00	03/09/2019
20642407	D2-C		0.00 - 0.00	03/09/2019
20642267	D1-N		0.00 - 0.00	03/09/2019
20642231	D2-N		0.00 - 0.00	03/09/2019
20642244	D3-N		0.00 - 0.00	03/09/2019
20642034	D0-N/R1-W		0.00 - 0.00	03/09/2019
20642012	D1-S		0.00 - 0.00	03/09/2019
20642418	D2-S		0.00 - 0.00	03/09/2019
20642256	D3-S		0.00 - 0.00	03/09/2019
20642001	KW-C		0.00 - 0.00	03/09/2019
20642161	KW-N		0.00 - 0.00	03/09/2019
20642045	R1-C		0.00 - 0.00	03/09/2019
20642172	R2-C		0.00 - 0.00	03/09/2019
20642122	R3-C		0.00 - 0.00	03/09/2019
20642067	R4-C		0.00 - 0.00	03/09/2019
20642362	R5-C		0.00 - 0.00	03/09/2019
20642056	R1-E		0.00 - 0.00	03/09/2019
20642201	R2-E		0.00 - 0.00	03/09/2019
20642101	R3-E		0.00 - 0.00	03/09/2019
20642385	R4-E		0.00 - 0.00	03/09/2019
20642348	R5-E		0.00 - 0.00	03/09/2019
20642140	R2-W		0.00 - 0.00	03/09/2019
20642213	R3-W		0.00 - 0.00	03/09/2019
20642078	R4-W		0.00 - 0.00	03/09/2019
20642373	R5-W		0.00 - 0.00	03/09/2019
20642320	SL-N		0.00 - 0.00	03/09/2019
20642282	SL-S		0.00 - 0.00	03/09/2019
20642299	SL-W		0.00 - 0.00	03/09/2019

Maximum Sample/Coolbox Temperature (°C) : **11.0**

ISO5667-3 Water quality - Sampling - Part3 -
During Transportation samples shall be stored in a cooling device capable of maintaining a temperature of (5±3)°C.

ALS have data which show that a cool box with 4 frozen icepacks is capable of maintaining pre-chilled samples at a temperature of (5±3)°C for a period of up to 24hrs.

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

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)									20642023									20642396			
	Customer Sample Reference									D0-C									D1-C			
	AGS Reference																					
	Depth (m)									0.00 - 0.00									0.00 - 0.00			
	Container									0.5l glass bottle (ALE227)	1plastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1plastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)
	Sample Type									SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 29											X								X	
Anions by Kone (w)	All	NDPs: 0 Tests: 29									X								X			
BOD True Total	All	NDPs: 0 Tests: 29									X								X			
COD Unfiltered	All	NDPs: 0 Tests: 29									X								X			
Conductivity (at 20 deg.C)	All	NDPs: 0 Tests: 29									X								X			
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 29							X							X						
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 29					X							X								
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 29	X								X							X				
Dissolved Oxygen by Probe	All	NDPs: 0 Tests: 29		X							X								X			
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 29			X							X								X		
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 29			X							X								X		
Fluoride	All	NDPs: 0 Tests: 29		X							X								X			
GRO by GC-FID (W)	All	NDPs: 0 Tests: 29							X								X					
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 29		X							X								X			
Mercury Dissolved	All	NDPs: 0 Tests: 29					X							X								

20642231	D2-N		0.00 - 0.00	Vial (ALE297)	SW													X		
				NaOH (ALE245)	SW						X									
				HNO3 Unfiltered (ALE204)	SW															
				HNO3 Filtered (ALE204)	SW							X								X
				H2SO4 (ALE244)	SW	X														
				250ml Amber Gl. PTFE/PE (ALE219)	SW										X	X				
				1lplastic (ALE221)	SW		X	X	X	X				X			X		X	
				0.5l glass bottle (ALE227)	SW								X							
20642267	D1-N		0.00 - 0.00	Vial (ALE297)	SW													X		
				NaOH (ALE245)	SW						X									
				HNO3 Unfiltered (ALE204)	SW															
				HNO3 Filtered (ALE204)	SW							X								X
				H2SO4 (ALE244)	SW	X														
				250ml Amber Gl. PTFE/PE (ALE219)	SW										X	X				
				1lplastic (ALE221)	SW		X	X	X	X				X			X		X	
				0.5l glass bottle (ALE227)	SW								X							
20642407	D2-C		0.00 - 0.00	Vial (ALE297)	SW													X		
				NaOH (ALE245)	SW						X									
				HNO3 Unfiltered (ALE204)	SW															
				HNO3 Filtered (ALE204)	SW							X								X
				H2SO4 (ALE244)	SW	X														

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend

- X Test
- N No Determination Possible

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)			20642023								20642396								20642407		
Customer Sample Reference			D0-C								D1-C								D2-C		
AGS Reference																					
Depth (m)			0.00 - 0.00								0.00 - 0.00								0.00 - 0.00		
Container			0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)
Sample Type			SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Mercury Unfiltered	All	NDPs: 0 Tests: 29						X								X					
PAH in waters by GC-MS (diss.filt)	All	NDPs: 0 Tests: 29	X								X								X		
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 29			X								X								X
pH Value	All	NDPs: 0 Tests: 29		X								X								X	
Phenols by HPLC (W)	All	NDPs: 0 Tests: 29				X								X							
Phosphate by Kone (w)	All	NDPs: 0 Tests: 29		X								X								X	
Redox Potential	All	NDPs: 0 Tests: 29	X								X								X		
Sulphide	All	NDPs: 0 Tests: 29		X								X								X	
Sulphur Dissolved by ICP-OES	All	NDPs: 0 Tests: 29		X								X								X	
Suspended Solids	All	NDPs: 0 Tests: 29		X								X								X	
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 29	X								X								X		
Total Dissolved Solids	All	NDPs: 0 Tests: 29		X								X								X	
Total Metals by ICP-MS	All	NDPs: 0 Tests: 29						X								X					
Total Organic and Inorganic Carbon	All	NDPs: 0 Tests: 29				X								X							
TPH CWG (W)	All	NDPs: 0 Tests: 29	X								X								X		

15:45:35 19/09/2019

20642231	D2-N		0.00 - 0.00	Vial (ALE297)	SW																
				NaOH (ALE245)	SW																
				HNO3 Unfiltered (ALE204)	SW	X														X		
				HNO3 Filtered (ALE204)	SW																
				H2SO4 (ALE244)	SW					X										X	
				250ml Amber Gl. PTFE/PE (ALE219)	SW			X													
				1lplastic (ALE221)	SW				X		X		X	X	X		X				
				0.5l glass bottle (ALE227)	SW		X					X				X					X
20642267	D1-N		0.00 - 0.00	Vial (ALE297)	SW																
				NaOH (ALE245)	SW																
				HNO3 Unfiltered (ALE204)	SW	X														X		
				HNO3 Filtered (ALE204)	SW																
				H2SO4 (ALE244)	SW					X										X	
				250ml Amber Gl. PTFE/PE (ALE219)	SW			X													
				1lplastic (ALE221)	SW				X		X		X	X	X		X				
				0.5l glass bottle (ALE227)	SW		X					X				X					X
20642407	D2-C		0.00 - 0.00	Vial (ALE297)	SW																
				NaOH (ALE245)	SW																
				HNO3 Unfiltered (ALE204)	SW	X														X		
				HNO3 Filtered (ALE204)	SW																
				H2SO4 (ALE244)	SW					X										X	

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend

X **Test**

N **No Determination Possible**

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)									20642023										20642396			
Customer Sample Reference									D0-C										D1-C			
AGS Reference																						
Depth (m)									0.00 - 0.00										0.00 - 0.00			
Container	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)			
Sample Type	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW			
Turbidity in waters	All	NDPs: 0 Tests: 29		X							X								X			
VOC MS (W)	All	NDPs: 0 Tests: 29							X							X						

20642231	D2-N		0.00 - 0.00	Vial (ALE297)	SW				X
				NaOH (ALE245)	SW				
				HNO3 Unfiltered (ALE204)	SW				
				HNO3 Filtered (ALE204)	SW				
				H2SO4 (ALE244)	SW				
				250ml Amber Gl. PTFE/PE (ALE219)	SW				
				1lplastic (ALE221)	SW		X		
				0.5l glass bottle (ALE227)	SW				
20642267	D1-N		0.00 - 0.00	Vial (ALE297)	SW				X
				NaOH (ALE245)	SW				
				HNO3 Unfiltered (ALE204)	SW				
				HNO3 Filtered (ALE204)	SW				
				H2SO4 (ALE244)	SW				
				250ml Amber Gl. PTFE/PE (ALE219)	SW				
				1lplastic (ALE221)	SW		X		
				0.5l glass bottle (ALE227)	SW				
20642407	D2-C		0.00 - 0.00	Vial (ALE297)	SW				X
				NaOH (ALE245)	SW				
				HNO3 Unfiltered (ALE204)	SW				
				HNO3 Filtered (ALE204)	SW				
				H2SO4 (ALE244)	SW				

CERTIFICATE OF ANALYSIS

SDG: 190904-21	**Client Reference:**	**Report Number:** 522080	
Location: Llanwern	**Order Number:** LLA661	**Superseded Report:**	

Results Legend

- X — Test
- N — No Determination Possible

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)			20642244								20642034								20642012		
Customer Sample Reference			D3-N								D0-N/R1-W								D1-S		
AGS Reference																					
Depth (m)			0.00 - 0.00								0.00 - 0.00								0.00 - 0.00		
Container			0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)
Sample Type			SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 29				X								X							
Anions by Kone (w)	All	NDPs: 0 Tests: 29		X								X								X	
BOD True Total	All	NDPs: 0 Tests: 29		X								X								X	
COD Unfiltered	All	NDPs: 0 Tests: 29		X								X								X	
Conductivity (at 20 deg.C)	All	NDPs: 0 Tests: 29		X								X								X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 29							X								X				
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 29					X								X						
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 29	X								X								X		
Dissolved Oxygen by Probe	All	NDPs: 0 Tests: 29		X								X								X	
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 29			X								X								X
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 29			X								X								X
Fluoride	All	NDPs: 0 Tests: 29		X								X								X	
GRO by GC-FID (W)	All	NDPs: 0 Tests: 29								X								X			
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 29		X								X								X	
Mercury Dissolved	All	NDPs: 0 Tests: 29					X								X						

20642256	D3-S		0.00 - 0.00	Vial (ALE297)	SW													X		
				NaOH (ALE245)	SW						X									
				HNO3 Unfiltered (ALE204)	SW															
				HNO3 Filtered (ALE204)	SW							X								X
				H2SO4 (ALE244)	SW	X														
				250ml Amber Gl. PTFE/PE (ALE219)	SW										X	X				
				1lplastic (ALE221)	SW		X	X	X	X				X			X		X	
				0.5l glass bottle (ALE227)	SW								X							
20642418	D2-S		0.00 - 0.00	Vial (ALE297)	SW													X		
				NaOH (ALE245)	SW						X									
				HNO3 Unfiltered (ALE204)	SW															
				HNO3 Filtered (ALE204)	SW							X								X
				H2SO4 (ALE244)	SW	X														
				250ml Amber Gl. PTFE/PE (ALE219)	SW										X	X				
				1lplastic (ALE221)	SW		X	X	X	X				X			X		X	
				0.5l glass bottle (ALE227)	SW								X							
20642012	D1-S		0.00 - 0.00	Vial (ALE297)	SW													X		
				NaOH (ALE245)	SW						X									
				HNO3 Unfiltered (ALE204)	SW															
				HNO3 Filtered (ALE204)	SW							X								X
				H2SO4 (ALE244)	SW	X														

Results Legend

X Test

N No Determination Possible

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)			20642244								20642034								20642012		
Customer Sample Reference			D3-N								D0-N/R1-W								D1-S		
AGS Reference																					
Depth (m)			0.00 - 0.00								0.00 - 0.00								0.00 - 0.00		
Container			0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)
Sample Type			SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Mercury Unfiltered	All	NDPs: 0 Tests: 29						X								X					
PAH in waters by GC-MS (diss.filt)	All	NDPs: 0 Tests: 29	X								X								X		
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 29			X								X								X
pH Value	All	NDPs: 0 Tests: 29		X								X								X	
Phenols by HPLC (W)	All	NDPs: 0 Tests: 29				X								X							
Phosphate by Kone (w)	All	NDPs: 0 Tests: 29		X								X								X	
Redox Potential	All	NDPs: 0 Tests: 29	X								X								X		
Sulphide	All	NDPs: 0 Tests: 29		X								X								X	
Sulphur Dissolved by ICP-OES	All	NDPs: 0 Tests: 29		X								X								X	
Suspended Solids	All	NDPs: 0 Tests: 29		X								X								X	
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 29	X								X								X		
Total Dissolved Solids	All	NDPs: 0 Tests: 29		X								X								X	
Total Metals by ICP-MS	All	NDPs: 0 Tests: 29						X								X					
Total Organic and Inorganic Carbon	All	NDPs: 0 Tests: 29				X								X							
TPH CWG (W)	All	NDPs: 0 Tests: 29	X								X								X		

20642256	D3-S		0.00 - 0.00	Vial (ALE297)	SW															
				NaOH (ALE245)	SW															
				HNO3 Unfiltered (ALE204)	SW	X													X		
				HNO3 Filtered (ALE204)	SW															
				H2SO4 (ALE244)	SW					X									X	
				250ml Amber Gl. PTFE/PE (ALE219)	SW			X												
				1lplastic (ALE221)	SW				X		X		X	X	X		X			
				0.5l glass bottle (ALE227)	SW		X					X				X				X
20642418	D2-S		0.00 - 0.00	Vial (ALE297)	SW															
				NaOH (ALE245)	SW															
				HNO3 Unfiltered (ALE204)	SW	X													X		
				HNO3 Filtered (ALE204)	SW															
				H2SO4 (ALE244)	SW					X									X	
				250ml Amber Gl. PTFE/PE (ALE219)	SW															
				1lplastic (ALE221)	SW				X		X		X	X	X		X			
				0.5l glass bottle (ALE227)	SW		X	X				X				X				X
20642012	D1-S		0.00 - 0.00	Vial (ALE297)	SW															
				NaOH (ALE245)	SW															
				HNO3 Unfiltered (ALE204)	SW	X													X		
				HNO3 Filtered (ALE204)	SW															
				H2SO4 (ALE244)	SW					X									X	

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend

- X Test
- N No Determination Possible

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)			20642244								20642034								20642012		
Customer Sample Reference			D3-N								D0-N/R1-W								D1-S		
AGS Reference																					
Depth (m)			0.00 - 0.00								0.00 - 0.00								0.00 - 0.00		
Container			0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)
Sample Type			SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Turbidity in waters	All	NDPs: 0 Tests: 29		X								X								X	
VOC MS (W)	All	NDPs: 0 Tests: 29								X								X			

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20642256	D3-S		0.00 - 0.00	Vial (ALE297)	SW			x
				NaOH (ALE245)	SW			
				HNO3 Unfiltered (ALE204)	SW			
				HNO3 Filtered (ALE204)	SW			
				H2SO4 (ALE244)	SW			
				250ml Amber Gl. PTFE/PE (ALE219)	SW			
				1lplastic (ALE221)	SW		x	
				0.5l glass bottle (ALE227)	SW			
20642418	D2-S		0.00 - 0.00	Vial (ALE297)	SW			x
				NaOH (ALE245)	SW			
				HNO3 Unfiltered (ALE204)	SW			
				HNO3 Filtered (ALE204)	SW			
				H2SO4 (ALE244)	SW			
				250ml Amber Gl. PTFE/PE (ALE219)	SW			
				1lplastic (ALE221)	SW		x	
				0.5l glass bottle (ALE227)	SW			
20642012	D1-S		0.00 - 0.00	Vial (ALE297)	SW			x
				NaOH (ALE245)	SW			
				HNO3 Unfiltered (ALE204)	SW			
				HNO3 Filtered (ALE204)	SW			
				H2SO4 (ALE244)	SW			

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend

- X — Test
- N — No Determination Possible

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)			20642001								20642161								20642045		
Customer Sample Reference			KW-C								KW-N								R1-C		
AGS Reference																					
Depth (m)			0.00 - 0.00								0.00 - 0.00								0.00 - 0.00		
Container			0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)
Sample Type			SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 29				X								X							
Anions by Kone (w)	All	NDPs: 0 Tests: 29		X								X								X	
BOD True Total	All	NDPs: 0 Tests: 29		X								X								X	
COD Unfiltered	All	NDPs: 0 Tests: 29		X								X								X	
Conductivity (at 20 deg.C)	All	NDPs: 0 Tests: 29		X								X								X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 29							X								X				
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 29					X								X						
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 29	X								X								X		
Dissolved Oxygen by Probe	All	NDPs: 0 Tests: 29		X								X								X	
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 29			X								X								X
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 29			X								X								X
Fluoride	All	NDPs: 0 Tests: 29		X								X								X	
GRO by GC-FID (W)	All	NDPs: 0 Tests: 29								X								X			
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 29		X								X								X	
Mercury Dissolved	All	NDPs: 0 Tests: 29					X								X						

20642122	R3-C		0.00 - 0.00	Vial (ALE297)	SW													X		
				NaOH (ALE245)	SW						X									
				HNO3 Unfiltered (ALE204)	SW															
				HNO3 Filtered (ALE204)	SW							X								X
				H2SO4 (ALE244)	SW	X														
				250ml Amber Gl. PTFE/PE (ALE219)	SW										X	X				
				1lplastic (ALE221)	SW		X	X	X	X				X			X		X	
				0.5l glass bottle (ALE227)	SW								X							
20642172	R2-C		0.00 - 0.00	Vial (ALE297)	SW													X		
				NaOH (ALE245)	SW						X									
				HNO3 Unfiltered (ALE204)	SW															
				HNO3 Filtered (ALE204)	SW							X								X
				H2SO4 (ALE244)	SW	X														
				250ml Amber Gl. PTFE/PE (ALE219)	SW										X	X				
				1lplastic (ALE221)	SW		X	X	X	X				X			X		X	
				0.5l glass bottle (ALE227)	SW								X							
20642045	R1-C		0.00 - 0.00	Vial (ALE297)	SW													X		
				NaOH (ALE245)	SW						X									
				HNO3 Unfiltered (ALE204)	SW															
				HNO3 Filtered (ALE204)	SW							X								X
				H2SO4 (ALE244)	SW	X														

CERTIFICATE OF ANALYSIS

SDG: 190904-21
Location: Llanwern
Client Reference:
Order Number: LLA661
Report Number: 522080
Superseded Report:

Results Legend

- X — Test
- N — No Determination Possible

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)			20642001								20642161								20642045		
Customer Sample Reference			KW-C								KW-N								R1-C		
AGS Reference																					
Depth (m)			0.00 - 0.00								0.00 - 0.00								0.00 - 0.00		
Container			0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)
Sample Type			SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Mercury Unfiltered	All	NDPs: 0 Tests: 29						X								X					
PAH in waters by GC-MS (diss.filt)	All	NDPs: 0 Tests: 29	X								X								X		
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 29	X										X								X
pH Value	All	NDPs: 0 Tests: 29		X								X								X	
Phenols by HPLC (W)	All	NDPs: 0 Tests: 29				X								X							
Phosphate by Kone (w)	All	NDPs: 0 Tests: 29		X								X								X	
Redox Potential	All	NDPs: 0 Tests: 29	X								X								X		
Sulphide	All	NDPs: 0 Tests: 29		X								X								X	
Sulphur Dissolved by ICP-OES	All	NDPs: 0 Tests: 29		X								X								X	
Suspended Solids	All	NDPs: 0 Tests: 29		X								X								X	
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 29	X								X								X		
Total Dissolved Solids	All	NDPs: 0 Tests: 29		X								X								X	
Total Metals by ICP-MS	All	NDPs: 0 Tests: 29						X								X					
Total Organic and Inorganic Carbon	All	NDPs: 0 Tests: 29				X								X							
TPH CWG (W)	All	NDPs: 0 Tests: 29	X								X								X		

20642122	R3-C		0.00 - 0.00	Vial (ALE297)	SW																
				NaOH (ALE245)	SW																
				HNO3 Unfiltered (ALE204)	SW	X														X		
				HNO3 Filtered (ALE204)	SW																
				H2SO4 (ALE244)	SW					X										X	
				250ml Amber Gl. PTFE/PE (ALE219)	SW			X													
				1lplastic (ALE221)	SW				X		X		X	X	X		X				
				0.5l glass bottle (ALE227)	SW		X					X				X					X
20642172	R2-C		0.00 - 0.00	Vial (ALE297)	SW																
				NaOH (ALE245)	SW																
				HNO3 Unfiltered (ALE204)	SW	X														X		
				HNO3 Filtered (ALE204)	SW																
				H2SO4 (ALE244)	SW					X										X	
				250ml Amber Gl. PTFE/PE (ALE219)	SW			X													
				1lplastic (ALE221)	SW				X		X		X	X	X		X				
				0.5l glass bottle (ALE227)	SW		X					X				X					X
20642045	R1-C		0.00 - 0.00	Vial (ALE297)	SW																
				NaOH (ALE245)	SW																
				HNO3 Unfiltered (ALE204)	SW	X														X		
				HNO3 Filtered (ALE204)	SW																
				H2SO4 (ALE244)	SW					X										X	

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

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)			20642001								20642161								20642045		
Customer Sample Reference			KW-C								KW-N								R1-C		
AGS Reference																					
Depth (m)			0.00 - 0.00								0.00 - 0.00								0.00 - 0.00		
Container			0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)
Sample Type			SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Turbidity in waters	All	NDPs: 0 Tests: 29		X								X								X	
VOC MS (W)	All	NDPs: 0 Tests: 29								X								X			

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20642122	R3-C	0.00 - 0.00	Vial (ALE297)	SW			
			NaOH (ALE245)	SW			
			HNO3 Unfiltered (ALE204)	SW			
			HNO3 Filtered (ALE204)	SW			
			H2SO4 (ALE244)	SW			
			250ml Amber Gl. PTFE/PE (ALE219)	SW			
			1lplastic (ALE221)	SW	X		
			0.5l glass bottle (ALE227)	SW			
20642172	R2-C	0.00 - 0.00	Vial (ALE297)	SW	X		
			NaOH (ALE245)	SW			
			HNO3 Unfiltered (ALE204)	SW			
			HNO3 Filtered (ALE204)	SW			
			H2SO4 (ALE244)	SW			
			250ml Amber Gl. PTFE/PE (ALE219)	SW			
			1lplastic (ALE221)	SW		X	
			0.5l glass bottle (ALE227)	SW			
20642045	R1-C	0.00 - 0.00	Vial (ALE297)	SW	X		
			NaOH (ALE245)	SW			
			HNO3 Unfiltered (ALE204)	SW			
			HNO3 Filtered (ALE204)	SW			
			H2SO4 (ALE244)	SW			

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

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)			20642067								20642362								20642056		
Customer Sample Reference			R4-C								R5-C								R1-E		
AGS Reference																					
Depth (m)			0.00 - 0.00								0.00 - 0.00								0.00 - 0.00		
Container			0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)
Sample Type			SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 29				X								X							
Anions by Kone (w)	All	NDPs: 0 Tests: 29		X								X								X	
BOD True Total	All	NDPs: 0 Tests: 29		X								X								X	
COD Unfiltered	All	NDPs: 0 Tests: 29		X								X								X	
Conductivity (at 20 deg.C)	All	NDPs: 0 Tests: 29		X								X								X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 29							X								X				
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 29					X								X						
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 29	X								X								X		
Dissolved Oxygen by Probe	All	NDPs: 0 Tests: 29		X								X								X	
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 29			X								X								X
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 29			X								X								X
Fluoride	All	NDPs: 0 Tests: 29		X								X								X	
GRO by GC-FID (W)	All	NDPs: 0 Tests: 29								X								X			
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 29		X								X								X	
Mercury Dissolved	All	NDPs: 0 Tests: 29					X								X						

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20642101	R3-E		0.00 - 0.00	Vial (ALE297)	SW													X		
				NaOH (ALE245)	SW						X									
				HNO3 Unfiltered (ALE204)	SW															
				HNO3 Filtered (ALE204)	SW							X								X
				H2SO4 (ALE244)	SW	X														
				250ml Amber Gl. PTFE/PE (ALE219)	SW										X	X				
				1lplastic (ALE221)	SW		X	X	X	X				X			X		X	
				0.5l glass bottle (ALE227)	SW								X							
20642201	R2-E		0.00 - 0.00	Vial (ALE297)	SW													X		
				NaOH (ALE245)	SW						X									
				HNO3 Unfiltered (ALE204)	SW															
				HNO3 Filtered (ALE204)	SW							X								X
				H2SO4 (ALE244)	SW	X														
				250ml Amber Gl. PTFE/PE (ALE219)	SW										X	X				
				1lplastic (ALE221)	SW		X	X	X	X				X			X		X	
				0.5l glass bottle (ALE227)	SW								X							
20642056	R1-E		0.00 - 0.00	Vial (ALE297)	SW													X		
				NaOH (ALE245)	SW						X									
				HNO3 Unfiltered (ALE204)	SW															
				HNO3 Filtered (ALE204)	SW							X								X
				H2SO4 (ALE244)	SW	X														

	Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	Client Reference:		Report Number:	522080
Location:	Llanwern	Order Number:	LLA661	Superseded Report:	

Results Legend

- X — Test
- N — No Determination Possible

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)			20642067								20642362								20642056		
Customer Sample Reference			R4-C								R5-C								R1-E		
AGS Reference																					
Depth (m)			0.00 - 0.00								0.00 - 0.00								0.00 - 0.00		
Container			0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)
Sample Type			SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Mercury Unfiltered	All	NDPs: 0 Tests: 29						X								X					
PAH in waters by GC-MS (diss.filt)	All	NDPs: 0 Tests: 29	X								X								X		
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 29			X								X								X
pH Value	All	NDPs: 0 Tests: 29		X								X								X	
Phenols by HPLC (W)	All	NDPs: 0 Tests: 29				X								X							
Phosphate by Kone (w)	All	NDPs: 0 Tests: 29		X								X								X	
Redox Potential	All	NDPs: 0 Tests: 29	X								X								X		
Sulphide	All	NDPs: 0 Tests: 29		X								X								X	
Sulphur Dissolved by ICP-OES	All	NDPs: 0 Tests: 29		X								X								X	
Suspended Solids	All	NDPs: 0 Tests: 29		X								X								X	
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 29	X								X								X		
Total Dissolved Solids	All	NDPs: 0 Tests: 29		X								X								X	
Total Metals by ICP-MS	All	NDPs: 0 Tests: 29						X								X					
Total Organic and Inorganic Carbon	All	NDPs: 0 Tests: 29				X								X							
TPH CWG (W)	All	NDPs: 0 Tests: 29	X								X								X		

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20642101	R3-E		0.00 - 0.00	Vial (ALE297)	SW															
				NaOH (ALE245)	SW															
				HNO3 Unfiltered (ALE204)	SW	X													X		
				HNO3 Filtered (ALE204)	SW															
				H2SO4 (ALE244)	SW					X									X	
				250ml Amber Gl. PTFE/PE (ALE219)	SW			X												
				1lplastic (ALE221)	SW				X		X		X	X	X		X			
				0.5l glass bottle (ALE227)	SW		X					X				X				X
20642201	R2-E		0.00 - 0.00	Vial (ALE297)	SW															
				NaOH (ALE245)	SW															
				HNO3 Unfiltered (ALE204)	SW	X													X		
				HNO3 Filtered (ALE204)	SW															
				H2SO4 (ALE244)	SW					X									X	
				250ml Amber Gl. PTFE/PE (ALE219)	SW			X												
				1lplastic (ALE221)	SW				X		X		X	X	X		X			
				0.5l glass bottle (ALE227)	SW		X					X				X				X
20642056	R1-E		0.00 - 0.00	Vial (ALE297)	SW															
				NaOH (ALE245)	SW															
				HNO3 Unfiltered (ALE204)	SW	X													X		
				HNO3 Filtered (ALE204)	SW															
				H2SO4 (ALE244)	SW					X									X	

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend

X **Test**

N **No Determination Possible**

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)									20642067											20642362					20642056
Customer Sample Reference									R4-C											R5-C					R1-E
AGS Reference																									
Depth (m)									0.00 - 0.00											0.00 - 0.00					0.00 - 0.00
Container									0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)
Sample Type									SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Turbidity in waters	All	NDPs: 0 Tests: 29								X										X						X	
VOC MS (W)	All	NDPs: 0 Tests: 29														X								X			

20642101	R3-E		0.00 - 0.00	Vial (ALE297)	SW			x
				NaOH (ALE245)	SW			
				HNO3 Unfiltered (ALE204)	SW			
				HNO3 Filtered (ALE204)	SW			
				H2SO4 (ALE244)	SW			
				250ml Amber Gl. PTFE/PE (ALE219)	SW			
				1lplastic (ALE221)	SW		x	
				0.5l glass bottle (ALE227)	SW			
20642201	R2-E		0.00 - 0.00	Vial (ALE297)	SW			x
				NaOH (ALE245)	SW			
				HNO3 Unfiltered (ALE204)	SW			
				HNO3 Filtered (ALE204)	SW			
				H2SO4 (ALE244)	SW			
				250ml Amber Gl. PTFE/PE (ALE219)	SW			
				1lplastic (ALE221)	SW		x	
				0.5l glass bottle (ALE227)	SW			
20642056	R1-E		0.00 - 0.00	Vial (ALE297)	SW			x
				NaOH (ALE245)	SW			
				HNO3 Unfiltered (ALE204)	SW			
				HNO3 Filtered (ALE204)	SW			
				H2SO4 (ALE244)	SW			

CERTIFICATE OF ANALYSIS

SDG:	190904-21	Client Reference:		Report Number:	522080
Location:	Llanwern	Order Number:	LLA661	Superseded Report:	

Results Legend

X Test

N No Determination Possible

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)											20642385								20642348		20642140
Customer Sample Reference											R4-E								R5-E		R2-W
AGS Reference																					
Depth (m)											0.00 - 0.00								0.00 - 0.00		0.00 - 0.00
Container			0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)
Sample Type			SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 29				X								X							
Anions by Kone (w)	All	NDPs: 0 Tests: 29		X								X								X	
BOD True Total	All	NDPs: 0 Tests: 29		X								X								X	
COD Unfiltered	All	NDPs: 0 Tests: 29		X								X								X	
Conductivity (at 20 deg.C)	All	NDPs: 0 Tests: 29		X								X								X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 29							X								X				
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 29					X								X						
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 29	X								X								X		
Dissolved Oxygen by Probe	All	NDPs: 0 Tests: 29		X								X								X	
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 29			X								X								X
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 29			X								X								X
Fluoride	All	NDPs: 0 Tests: 29		X								X								X	
GRO by GC-FID (W)	All	NDPs: 0 Tests: 29								X								X			
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 29		X								X								X	
Mercury Dissolved	All	NDPs: 0 Tests: 29					X								X						

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20642078	R4-W		0.00 - 0.00	Vial (ALE297)	SW													X		
				NaOH (ALE245)	SW						X									
				HNO3 Unfiltered (ALE204)	SW															
				HNO3 Filtered (ALE204)	SW							X								X
				H2SO4 (ALE244)	SW	X														
				250ml Amber Gl. PTFE/PE (ALE219)	SW										X	X				
				1lplastic (ALE221)	SW		X	X	X	X				X			X		X	
				0.5l glass bottle (ALE227)	SW								X							
20642213	R3-W		0.00 - 0.00	Vial (ALE297)	SW													X		
				NaOH (ALE245)	SW						X									
				HNO3 Unfiltered (ALE204)	SW															
				HNO3 Filtered (ALE204)	SW							X								X
				H2SO4 (ALE244)	SW	X														
				250ml Amber Gl. PTFE/PE (ALE219)	SW										X	X				
				1lplastic (ALE221)	SW		X	X	X	X				X			X		X	
				0.5l glass bottle (ALE227)	SW								X							
20642140	R2-W		0.00 - 0.00	Vial (ALE297)	SW													X		
				NaOH (ALE245)	SW						X									
				HNO3 Unfiltered (ALE204)	SW															
				HNO3 Filtered (ALE204)	SW							X								X
				H2SO4 (ALE244)	SW	X														

CERTIFICATE OF ANALYSIS

Validated

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend

- X — Test
- N — No Determination Possible

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)										20642385								20642348			20642140
Customer Sample Reference										R4-E								R5-E			R2-W
AGS Reference																					
Depth (m)										0.00 - 0.00								0.00 - 0.00			0.00 - 0.00
Container			0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)
Sample Type			SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Mercury Unfiltered	All	NDPs: 0 Tests: 29						X								X					
PAH in waters by GC-MS (diss.filt)	All	NDPs: 0 Tests: 29	X								X								X		
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 29			X								X								X
pH Value	All	NDPs: 0 Tests: 29		X								X								X	
Phenols by HPLC (W)	All	NDPs: 0 Tests: 29				X								X							
Phosphate by Kone (w)	All	NDPs: 0 Tests: 29		X								X								X	
Redox Potential	All	NDPs: 0 Tests: 29	X								X								X		
Sulphide	All	NDPs: 0 Tests: 29		X								X								X	
Sulphur Dissolved by ICP-OES	All	NDPs: 0 Tests: 29		X								X								X	
Suspended Solids	All	NDPs: 0 Tests: 29		X								X								X	
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 29	X								X								X		
Total Dissolved Solids	All	NDPs: 0 Tests: 29		X								X								X	
Total Metals by ICP-MS	All	NDPs: 0 Tests: 29						X								X					
Total Organic and Inorganic Carbon	All	NDPs: 0 Tests: 29				X								X							
TPH CWG (W)	All	NDPs: 0 Tests: 29	X								X								X		

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20642078	R4-W		0.00 - 0.00	Vial (ALE297)	SW																
				NaOH (ALE245)	SW																
				HNO3 Unfiltered (ALE204)	SW	X														X		
				HNO3 Filtered (ALE204)	SW																
				H2SO4 (ALE244)	SW					X										X	
				250ml Amber Gl. PTFE/PE (ALE219)	SW			X													
				1lplastic (ALE221)	SW				X		X		X	X	X		X				
				0.5l glass bottle (ALE227)	SW		X					X				X					X
20642213	R3-W		0.00 - 0.00	Vial (ALE297)	SW																
				NaOH (ALE245)	SW																
				HNO3 Unfiltered (ALE204)	SW	X														X		
				HNO3 Filtered (ALE204)	SW																
				H2SO4 (ALE244)	SW					X										X	
				250ml Amber Gl. PTFE/PE (ALE219)	SW			X													
				1lplastic (ALE221)	SW				X		X		X	X	X		X				
				0.5l glass bottle (ALE227)	SW		X					X				X					X
20642140	R2-W		0.00 - 0.00	Vial (ALE297)	SW																
				NaOH (ALE245)	SW																
				HNO3 Unfiltered (ALE204)	SW	X														X		
				HNO3 Filtered (ALE204)	SW																
				H2SO4 (ALE244)	SW					X										X	

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend

X **Test**

N **No Determination Possible**

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)				20642385	20642348	20642140
Customer Sample Reference				R4-E	R5-E	R2-W
AGS Reference						
Depth (m)				0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Container				0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)
Sample Type				SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Turbidity in waters	All	NDPs: 0 Tests: 29			X								X								X	
VOC MS (W)	All	NDPs: 0 Tests: 29									X								X			

20642078	R4-W		0.00 - 0.00	Vial (ALE297)	SW				X
				NaOH (ALE245)	SW				
				HNO3 Unfiltered (ALE204)	SW				
				HNO3 Filtered (ALE204)	SW				
				H2SO4 (ALE244)	SW				
				250ml Amber Gl. PTFE/PE (ALE219)	SW				
				1lplastic (ALE221)	SW		X		
				0.5l glass bottle (ALE227)	SW				
20642213	R3-W		0.00 - 0.00	Vial (ALE297)	SW				X
				NaOH (ALE245)	SW				
				HNO3 Unfiltered (ALE204)	SW				
				HNO3 Filtered (ALE204)	SW				
				H2SO4 (ALE244)	SW				
				250ml Amber Gl. PTFE/PE (ALE219)	SW				
				1lplastic (ALE221)	SW		X		
				0.5l glass bottle (ALE227)	SW				
20642140	R2-W		0.00 - 0.00	Vial (ALE297)	SW				X
				NaOH (ALE245)	SW				
				HNO3 Unfiltered (ALE204)	SW				
				HNO3 Filtered (ALE204)	SW				
				H2SO4 (ALE244)	SW				

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

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)										20642373								20642320				20642282
Customer Sample Reference										R5-W								SL-N				SL-S
AGS Reference																						
Depth (m)										0.00 - 0.00								0.00 - 0.00				0.00 - 0.00
Container										0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)
Sample Type										SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 29											X					X										
Anions by Kone (w)	All	NDPs: 0 Tests: 29									X							X									X	
BOD True Total	All	NDPs: 0 Tests: 29									X							X									X	
COD Unfiltered	All	NDPs: 0 Tests: 29									X							X									X	
Conductivity (at 20 deg.C)	All	NDPs: 0 Tests: 29									X							X									X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 29														X									X			
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 29													X									X				
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 29								X								X									X	
Dissolved Oxygen by Probe	All	NDPs: 0 Tests: 29									X							X									X	
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 29										X								X								X
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 29										X								X								X
Fluoride	All	NDPs: 0 Tests: 29									X							X									X	
GRO by GC-FID (W)	All	NDPs: 0 Tests: 29															X									X		
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 29									X							X									X	
Mercury Dissolved	All	NDPs: 0 Tests: 29													X									X				

20642299	SL-W		0.00 - 0.00	Vial (ALE297)	SW													X		
				NaOH (ALE245)	SW						X									
				HNO3 Unfiltered (ALE204)	SW															
				HNO3 Filtered (ALE204)	SW							X								X
				H2SO4 (ALE244)	SW	X														
				250ml Amber Gl. PTFE/PE (ALE219)	SW										X	X				
				1lplastic (ALE221)	SW		X	X	X	X				X			X		X	
				0.5l glass bottle (ALE227)	SW								X							
20642282	SL-S		0.00 - 0.00	Vial (ALE297)	SW													X		
				NaOH (ALE245)	SW						X									
				HNO3 Unfiltered (ALE204)	SW															
				HNO3 Filtered (ALE204)	SW							X								X
				H2SO4 (ALE244)	SW	X														

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend

- X — Test
- N — No Determination Possible

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)										20642373								20642320			20642282
Customer Sample Reference										R5-W								SL-N			SL-S
AGS Reference																					
Depth (m)										0.00 - 0.00								0.00 - 0.00			0.00 - 0.00
Container			0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)	0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)
Sample Type			SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Mercury Unfiltered	All	NDPs: 0 Tests: 29						X								X					
PAH in waters by GC-MS (diss.filt)	All	NDPs: 0 Tests: 29	X								X								X		
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 29			X								X								X
pH Value	All	NDPs: 0 Tests: 29		X								X								X	
Phenols by HPLC (W)	All	NDPs: 0 Tests: 29				X								X							
Phosphate by Kone (w)	All	NDPs: 0 Tests: 29		X								X								X	
Redox Potential	All	NDPs: 0 Tests: 29	X								X								X		
Sulphide	All	NDPs: 0 Tests: 29		X								X								X	
Sulphur Dissolved by ICP-OES	All	NDPs: 0 Tests: 29		X								X								X	
Suspended Solids	All	NDPs: 0 Tests: 29		X								X								X	
SVOC MS (W) - Aqueous	All	NDPs: 0 Tests: 29	X								X								X		
Total Dissolved Solids	All	NDPs: 0 Tests: 29		X								X								X	
Total Metals by ICP-MS	All	NDPs: 0 Tests: 29						X								X					
Total Organic and Inorganic Carbon	All	NDPs: 0 Tests: 29				X								X							
TPH CWG (W)	All	NDPs: 0 Tests: 29	X								X								X		

20642299	SL-W		0.00 - 0.00	Vial (ALE297)	SW															
				NaOH (ALE245)	SW															
				HNO3 Unfiltered (ALE204)	SW	X													X		
				HNO3 Filtered (ALE204)	SW															
				H2SO4 (ALE244)	SW					X									X	
				250ml Amber Gl. PTFE/PE (ALE219)	SW			X												
				1lplastic (ALE221)	SW				X		X		X	X	X		X			
				0.5l glass bottle (ALE227)	SW		X					X				X				X
20642282	SL-S		0.00 - 0.00	Vial (ALE297)	SW															
				NaOH (ALE245)	SW															
				HNO3 Unfiltered (ALE204)	SW	X													X		
				HNO3 Filtered (ALE204)	SW															
				H2SO4 (ALE244)	SW					X									X	

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend

X **Test**

N **No Determination Possible**

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)									20642373											20642320					20642282
Customer Sample Reference									R5-W											SL-N					SL-S
AGS Reference																									
Depth (m)									0.00 - 0.00											0.00 - 0.00					0.00 - 0.00
Container									0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)				0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)	H2SO4 (ALE244)	HNO3 Filtered (ALE204)	HNO3 Unfiltered (ALE204)	NaOH (ALE245)	Vial (ALE297)				0.5l glass bottle (ALE227)	1lplastic (ALE221)	250ml Amber Gl. PTFE/PE (ALE219)
Sample Type									SW	SW	SW	SW	SW	SW	SW	SW				SW	SW	SW	SW	SW	SW	SW	SW				SW	SW	SW
Turbidity in waters	All	NDPs: 0 Tests: 29								X											X											X	
VOC MS (W)	All	NDPs: 0 Tests: 29														X											X						

20642299	SL-W		0.00 - 0.00	Vial (ALE297)	SW				X
				NaOH (ALE245)	SW				
				HNO3 Unfiltered (ALE204)	SW				
				HNO3 Filtered (ALE204)	SW				
				H2SO4 (ALE244)	SW				
				250ml Amber Gl. PTFE/PE (ALE219)	SW				
				1lplastic (ALE221)	SW		X		
				0.5l glass bottle (ALE227)	SW				
20642282	SL-S		0.00 - 0.00	Vial (ALE297)	SW				X
				NaOH (ALE245)	SW				
				HNO3 Unfiltered (ALE204)	SW				
				HNO3 Filtered (ALE204)	SW				
				H2SO4 (ALE244)	SW				

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	D0-C	D1-C	D2-C	D1-N	D2-N	D3-N
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642023	20642396	20642407	20642267	20642231	20642244
			AGS Reference						
Suspended solids, Total	<2 mg/l	TM022		4.5 #	10.5 #	<2 #	13 #	7.5 #	44.7 #
BOD, unfiltered	<1 mg/l	TM045		2.7 #	2.68 #	<1 #	2.08 #	3.02 #	3.41 #
Oxygen, dissolved	<0.3 mg/l	TM046		10.3	9.06	7.56	10.9	10.6	8.12
Carbon, Organic (diss.filt)	<3 mg/l	TM090		9.8	10.3	9.78	9.98	10.4	8.38
Organic Carbon, Total	<3 mg/l	TM090		9.91 #	10 #	9.41 #	10 #	10.3 #	7.87 #
Ammoniacal Nitrogen as NH4	<0.3 mg/l	TM099		<0.3 #	<0.3 #	<0.3 #	<0.3 #	<0.3 #	1.95 #
Sulphide	<0.01 mg/l	TM101		<0.01 2	<0.01 2	<0.01 2	0.0116 2	<0.01 2	0.0221 2
Fluoride	<0.5 mg/l	TM104		0.635	0.845	0.789	0.814	0.793	1.24
COD, unfiltered	<7 mg/l	TM107		20 #	35.2 #	31.9 #	24.3 #	27.6 #	39.4 #
Redox potential	mV	TM110		181	140	165	139	125	141
Conductivity @ 20 deg.C (diss.filt)	<0.014 mS/cm	TM120		0.701	0.684	0.606	0.652	0.572	1.63
Dissolved solids, Total (meter)	<5 mg/l	TM123		572 #	536 #	493 #	530 #	467 #	1420 #
Antimony (diss.filt)	<1 µg/l	TM152		<1	<1	<1	<1	<1	<1
Antimony (tot.unfilt)	<4 µg/l	TM152		<4	<4	<4	<4	<4	<4
Arsenic (diss.filt)	<0.5 µg/l	TM152		3.76 #	3.13 #	2.36 #	3.21 #	3.8 #	3.67 #
Arsenic (tot.unfilt)	<2 µg/l	TM152		4.26 #	3.4 #	2.66 #	3.15 #	3.96 #	4.13 #
Barium (diss.filt)	<0.2 µg/l	TM152		52.6 #	53.8 #	63.3 #	50.9 #	40.9 #	191 #
Barium (tot.unfilt)	<0.5 µg/l	TM152		55.9 #	58.6 #	66.3 #	55.3 #	47.6 #	225 #
Beryllium (diss.filt)	<0.1 µg/l	TM152		<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #
Beryllium (tot.unfilt)	<1 µg/l	TM152		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Boron (diss.filt)	<10 µg/l	TM152		179 #	194 #	93.2 #	185 #	205 #	73.5 #
Boron (tot.unfilt)	<20 µg/l	TM152		183 #	203 #	95.8 #	196 #	214 #	76.1 #
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08 #	<0.08 #	<0.08 #	<0.08 #	<0.08 #	<0.08 #
Cadmium (tot.unfilt)	<0.5 µg/l	TM152		<0.5 #	<0.5 #	<0.5 #	<0.5 #	<0.5 #	<0.5 #
Chromium (tot.unfilt)	<3 µg/l	TM152		<3 #	<3 #	<3 #	<3 #	<3 #	8.36 #
Chromium (diss.filt)	<1 µg/l	TM152		<1 #	<1 #	<1 #	<1 #	<1 #	1.98 #
Copper (tot.unfilt)	<1 µg/l	TM152		5.56 #	2.68 #	2.52 #	2.35 #	1.8 #	6.6 #
Copper (diss.filt)	<0.3 µg/l	TM152		3.06 #	2.16 #	2.57 #	2.5 #	0.896 #	4.67 #
Manganese (tot.unfilt)	<1 µg/l	TM152		157 #	124 #	171 #	55.8 #	58.1 #	56.1 #
Lead (diss.filt)	<0.2 µg/l	TM152		<0.2 #	<0.2 #	0.398 #	<0.2 #	<0.2 #	0.58 #
Nickel (tot.unfilt)	<1 µg/l	TM152		3.95 #	2.2 #	5.36 #	2.05 #	3.17 #	5 #
Manganese (diss.filt)	<3 µg/l	TM152		32.9 #	65.9 #	151 #	12 #	12.5 #	<3 #
Phosphorus (tot.unfilt)	<20 µg/l	TM152		194 #	72 #	56.8 #	53.8 #	67.6 #	53.4 #

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend	
#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	D0-C	D1-C	D2-C	D1-N	D2-N	D3-N
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642023	20642396	20642407	20642267	20642231	20642244
			AGS Reference						
Selenium (tot.unfilt)	<1 µg/l	TM152		1.65 #	1.46 #	1.71 #	1.31 #	<1 #	3.22 #
Nickel (diss.filt)	<0.4 µg/l	TM152		2.22 #	1.61 #	4.67 #	1.45 #	0.913 #	2.22 #
Phosphorus (diss.filt)	<10 µg/l	TM152		10.5 #	<10 #	33.1 #	<10 #	<10 #	<10 #
Selenium (diss.filt)	<1 µg/l	TM152		1.55 #	1.45 #	1.76 #	1.28 #	<1 #	3.25 #
Vanadium (tot.unfilt)	<5 µg/l	TM152		15.4 #	8.14 #	26.6 #	7.92 #	5.86 #	23.7 #
Zinc (tot.unfilt)	<5 µg/l	TM152		35.6 #	11.6 #	7.79 #	6.77 #	19.6 #	20.4 #
Vanadium (diss.filt)	<1 µg/l	TM152		15 #	7.28 #	25.9 #	7.31 #	5.5 #	22.4 #
Zinc (diss.filt)	<1 µg/l	TM152		2.18 #	2.29 #	7.74 #	1.64 #	<1 #	6.66 #
Lead (tot.unfilt)	<0.001 mg/l	TM152		0.00407 #	0.0016 #	0.002 #	0.00124 #	0.00141 #	0.00546 #
Magnesium (Dis.Filt)	<0.036 mg/l	TM152		8.1 #	12.5 #	2.96 #	12.5 #	13.4 #	0.083 #
Calcium (Dis.Filt)	<0.2 mg/l	TM152		68.7 #	84.7 #	41.8 #	83.4 #	65.5 #	196 #
Iron (Dis.Filt)	<0.019 mg/l	TM152		<0.019 #	0.0192 #	0.0762 #	<0.019 #	<0.019 #	<0.019 #
Hardness, Total as CaCO3	<0.65 mg/l	TM152		205	263	117	260	219	489
Magnesium (Tot. Unfilt.)	<0.05 mg/l	TM152		8.34 #	12.7 #	3.05 #	12.8 #	13.5 #	0.488 #
Calcium (Tot. Unfilt.)	<0.057 mg/l	TM152		69.1 #	87.5 #	42.5 #	85.6 #	67.8 #	235 #
Iron (Tot. Unfilt.)	<0.024 mg/l	TM152		0.498 #	0.359 #	0.21 #	0.356 #	0.27 #	0.667 #
Naphthalene (diss.filt)	<0.01 µg/l	TM178		<0.01	<0.01	<0.01	<0.01	<0.01	0.0172
Acenaphthene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	0.0123	0.0126	0.258
Acenaphthylene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	0.156
Fluoranthene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	0.00808	<0.005	0.32
Anthracene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	0.018
Phenanthrene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	0.00773	0.00923	0.28
Fluorene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	0.00645	0.12
Chrysene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	0.0149
Pyrene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	0.00567	<0.005	0.181
Benzo(a)anthracene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(b)fluoranthene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	0.00649
Benzo(k)fluoranthene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(a)pyrene (diss.filt)	<0.002 µg/l	TM178		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Dibenzo(a,h)anthracene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(g,h,i)perylene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Indeno(1,2,3-cd)pyrene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend	
#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	D0-C	D1-C	D2-C	D1-N	D2-N	D3-N
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642023	20642396	20642407	20642267	20642231	20642244
			AGS Reference						
PAH Sum of EPA 16 detected (Diss filt)	<0.082 µg/l	TM178		<0.082	<0.082	<0.082	<0.082	<0.082	1.37
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01	<0.01	<0.01	<0.01	<0.01	0.0212
Mercury (tot.unfilt)	<0.02 µg/l	TM183		<0.02	<0.02	<0.02	<0.02	<0.02	0.0262
Phosphate (Ortho as PO4)	<0.05 mg/l	TM184		<0.05 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #
Sulphate	<2 mg/l	TM184		168 #	206 #	79.5 #	202 #	197 #	119 #
Chloride	<2 mg/l	TM184		77.3 #	41.8 #	50.8 #	36.3 #	35.4 #	51.8 #
Turbidity	<0.1 ntu	TM195		4.82 #	10.2 #	3.04 #	9.19 #	4.03 #	97.2 #
Cyanide, Total	<0.05 mg/l	TM227		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cyanide, Free	<0.05 mg/l	TM227		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cyanide, Complex	<0.05 mg/l	TM227		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphur Dissolved	<1 mg/l	TM228		51.2	57.9	23.6	61.3	55.4	36
Chromium, Hexavalent	<0.03 mg/l	TM241		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
pH	<1 pH Units	TM256		8.2 #	7.92 #	7.98 #	7.95 #	7.91 #	12.1 #
Phenol	<0.002 mg/l	TM259		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cresols	<0.006 mg/l	TM259		<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
Xylenols	<0.008 mg/l	TM259		<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
Phenols, Total Detected monohydric	<0.016 mg/l	TM259		<0.016	<0.016	<0.016	<0.016	<0.016	<0.016

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
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*	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
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1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	D0-N/R1-W	D1-S	D2-S	D3-S	KW-C	KW-N
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642034	20642012	20642418	20642256	20642001	20642161
			AGS Reference						
Suspended solids, Total	<2 mg/l	TM022		16.5 #	4 #	52.5 #	4 #	20 #	18 #
BOD, unfiltered	<1 mg/l	TM045		<1 #	<1 #	7.08 #	<1 #	4.46 #	4.99 #
Oxygen, dissolved	<0.3 mg/l	TM046		9.89	7.99	6.61	7.28	9.5	9.49
Carbon, Organic (diss.filt)	<3 mg/l	TM090		10.3	10.1	12.8	9.38	10.8	11.2
Organic Carbon, Total	<3 mg/l	TM090		10.1 #	9.54 #	15.2 #	9.39 #	9.34 #	9.56 #
Ammoniacal Nitrogen as NH4	<0.3 mg/l	TM099		<0.3 #	<0.3 #	0.706 #	1.32 #	<0.3 #	<0.3 #
Sulphide	<0.01 mg/l	TM101		<0.01 2	<0.01 2	<0.01 2	<0.01 2	<0.01 2	0.0246 2
Fluoride	<0.5 mg/l	TM104		0.899	0.791	0.893	1.18	1.07	1.11
COD, unfiltered	<7 mg/l	TM107		31.8 #	25.4 #	61.6 #	24.6 #	40.2 #	54.5 #
Redox potential	mV	TM110		185	145	142	184	140	128
Conductivity @ 20 deg.C (diss.filt)	<0.014 mS/cm	TM120		0.764	0.72	0.672	0.537	0.582	0.636
Dissolved solids, Total (meter)	<5 mg/l	TM123		630 #	588 #	542 #	439 #	492 #	508 #
Antimony (diss.filt)	<1 µg/l	TM152		<1	<1	<1	<1	<1	<1
Antimony (tot.unfilt)	<4 µg/l	TM152		<4	<4	<4	<4	<4	<4
Arsenic (diss.filt)	<0.5 µg/l	TM152		3.59 #	2.68 #	3.46 #	5.18 #	3.28 #	3.26 #
Arsenic (tot.unfilt)	<2 µg/l	TM152		4.09 #	2.99 #	4.34 #	5.34 #	3.53 #	3.61 #
Barium (diss.filt)	<0.2 µg/l	TM152		54.1 #	60.9 #	88 #	57.1 #	56.9 #	57 #
Barium (tot.unfilt)	<0.5 µg/l	TM152		62 #	63.1 #	115 #	62 #	62.1 #	62.2 #
Beryllium (diss.filt)	<0.1 µg/l	TM152		<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #
Beryllium (tot.unfilt)	<1 µg/l	TM152		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Boron (diss.filt)	<10 µg/l	TM152		227 #	193 #	132 #	91.1 #	188 #	209 #
Boron (tot.unfilt)	<20 µg/l	TM152		253 #	199 #	153 #	101 #	208 #	214 #
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08 #	<0.08 #	<0.08 #	<0.08 #	<0.08 #	<0.08 #
Cadmium (tot.unfilt)	<0.5 µg/l	TM152		<0.5 #	<0.5 #	<0.5 #	<0.5 #	<0.5 #	<0.5 #
Chromium (tot.unfilt)	<3 µg/l	TM152		<3 #	<3 #	<3 #	<3 #	<3 #	<3 #
Chromium (diss.filt)	<1 µg/l	TM152		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Copper (tot.unfilt)	<1 µg/l	TM152		5.54 #	1.3 #	4.1 #	2.09 #	2.25 #	2.13 #
Lead (tot.unfilt)	<1 µg/l	TM152				12.7 #	<1 #		
Copper (diss.filt)	<0.3 µg/l	TM152		4.62 #	1.15 #	0.828 #	1.38 #	1.93 #	1.68 #
Manganese (tot.unfilt)	<1 µg/l	TM152		91.7 #	167 #	957 #	31.5 #	133 #	74.2 #
Lead (diss.filt)	<0.2 µg/l	TM152		<0.2 #	<0.2 #	<0.2 #	<0.2 #	<0.2 #	0.296 #
Nickel (tot.unfilt)	<1 µg/l	TM152		3.04 #	1.55 #	5.21 #	2.26 #	1.89 #	1.94 #
Manganese (diss.filt)	<3 µg/l	TM152		8.42 #	123 #	342 #	23.7 #	13.6 #	10.5 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend	
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Component	LOD/Units	Method	Customer Sample Ref.	D0-N/R1-W	D1-S	D2-S	D3-S	KW-C	KW-N
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642034	20642012	20642418	20642256	20642001	20642161
			AGS Reference						
Phosphorus (tot.unfilt)	<20 µg/l	TM152		46.2 #	153 #	416 #	41.2 #	78.7 #	84.1 #
Selenium (tot.unfilt)	<1 µg/l	TM152		2.33 #	<1 #	1.22 #	2.54 #	1.99 #	1.62 #
Nickel (diss.filt)	<0.4 µg/l	TM152		1.83 #	1.37 #	2.96 #	1.82 #	1.2 #	1.22 #
Phosphorus (diss.filt)	<10 µg/l	TM152		10.7 #	74 #	99.1 #	27.3 #	<10 #	11.9 #
Selenium (diss.filt)	<1 µg/l	TM152		1.79 #	<1 #	1.21 #	2.22 #	1.89 #	2.29 #
Vanadium (tot.unfilt)	<5 µg/l	TM152		15.7 #	<5 #	24.1 #	26 #	19 #	15.6 #
Zinc (tot.unfilt)	<5 µg/l	TM152		12 #	6.16 #	51.6 #	5.86 #	5.94 #	8.01 #
Vanadium (diss.filt)	<1 µg/l	TM152		13.3 #	4.28 #	15.9 #	26.6 #	17.5 #	15 #
Zinc (diss.filt)	<1 µg/l	TM152		1.59 #	1.77 #	2.05 #	<1 #	<1 #	<1 #
Lead (tot.unfilt)	<0.001 mg/l	TM152		0.00337 #	<0.001 #			<0.001 #	<0.001 #
Magnesium (Dis.Filt)	<0.036 mg/l	TM152		8.95 #	14.7 #	3.48 #	0.706 #	8.83 #	9.69 #
Calcium (Dis.Filt)	<0.2 mg/l	TM152		108 #	85.8 #	65.5 #	57.2 #	82.5 #	84.2 #
Iron (Dis.Filt)	<0.019 mg/l	TM152		<0.019 #	0.0442 #	0.092 #	<0.019 #	<0.019 #	0.043 #
Hardness, Total as CaCO3	<0.65 mg/l	TM152		306	275	178	146	243	250
Magnesium (Tot. Unfilt.)	<0.05 mg/l	TM152		9.57 #	14.5 #	3.87 #	0.747 #	9.12 #	9.98 #
Calcium (Tot. Unfilt.)	<0.057 mg/l	TM152		113 #	87.7 #	70.7 #	61.6 #	84.1 #	86.7 #
Iron (Tot. Unfilt.)	<0.024 mg/l	TM152		0.659 #	0.219 #	1.28 #	0.0569 #	0.206 #	0.204 #
Naphthalene (diss.filt)	<0.01 µg/l	TM178		<0.01	<0.01	<0.01	<0.01	0.0116	0.0287
Acenaphthene (diss.filt)	<0.005 µg/l	TM178		0.0109	<0.005	<0.005	<0.005	0.0285	0.024
Acenaphthylene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	0.00922
Fluoranthene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	0.00993	<0.005	<0.005
Anthracene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Phenanthrene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	0.0383	0.0175	0.00802
Fluorene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	0.0141	0.0108
Chrysene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Pyrene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	0.0148	<0.005	<0.005
Benzo(a)anthracene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(b)fluoranthene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(k)fluoranthene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(a)pyrene (diss.filt)	<0.002 µg/l	TM178		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Dibenzo(a,h)anthracene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(g,h,i)perylene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend	
#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	D0-N/R1-W	D1-S	D2-S	D3-S	KW-C	KW-N
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642034	20642012	20642418	20642256	20642001	20642161
			AGS Reference						
Indeno(1,2,3-cd)pyrene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
PAH Sum of EPA 16 detected (Diss filt)	<0.082 µg/l	TM178		<0.082	<0.082	<0.082	<0.082	<0.082	<0.082
Mercury (diss.filt)	<0.01 µg/l	TM183		0.0116	<0.01	<0.01	0.0118	<0.01	<0.01
Mercury (tot.unfilt)	<0.02 µg/l	TM183		<0.02	<0.02	0.0209	<0.02	<0.02	<0.02
Phosphate (Ortho as PO4)	<0.05 mg/l	TM184		<0.05 #	0.173 #	0.128 #	<0.05 #	<0.05 #	<0.05 #
Sulphate	<2 mg/l	TM184		270 #	191 #	114 #	156 #	238 #	250 #
Chloride	<2 mg/l	TM184		54.7 #	51.7 #	54.3 #	50 #	28.3 #	28.6 #
Turbidity	<0.1 ntu	TM195		18.5 #	3.61 #	24.9 #	2.71 #	5.95 #	5.8 #
Cyanide, Total	<0.05 mg/l	TM227		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cyanide, Free	<0.05 mg/l	TM227		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cyanide, Complex	<0.05 mg/l	TM227		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphur Dissolved	<1 mg/l	TM228		85.5	52.8	31.4	46.5	68.9	69.9
Chromium, Hexavalent	<0.03 mg/l	TM241		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
pH	<1 pH Units	TM256		7.87 #	7.9 #	7.75 #	9.09 #	8.94 #	7.82 #
Phenol	<0.002 mg/l	TM259		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cresols	<0.006 mg/l	TM259		<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
Xylenols	<0.008 mg/l	TM259		<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
Phenols, Total Detected monohydric	<0.016 mg/l	TM259		<0.016	<0.016	<0.016	<0.016	<0.016	<0.016

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R1-C	R2-C	R3-C	R4-C	R5-C	R1-E
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642045	20642172	20642122	20642067	20642362	20642056
			AGS Reference						
Suspended solids, Total	<2 mg/l	TM022		23.5 #	8.5 #	14 #	19 #	19 #	13.5 #
BOD, unfiltered	<1 mg/l	TM045		<1 #	3.16 #	3.72 #	4.21 #	3.98 #	2.18 #
Oxygen, dissolved	<0.3 mg/l	TM046		9.99	9.7	10.2	10.7	9.92	10.7
Carbon, Organic (diss.filt)	<3 mg/l	TM090		10	9.97	8.6	10.3	10.9	9.87
Organic Carbon, Total	<3 mg/l	TM090		9.42 #	9.43 #	8.56 #	9.55 #	10.6 #	9.14 #
Ammoniacal Nitrogen as NH4	<0.3 mg/l	TM099		<0.3 #	<0.3 #	<0.3 #	2.49 #	0.588 #	<0.3 #
Sulphide	<0.01 mg/l	TM101		<0.01 2	<0.01 2	<0.01 2	0.0101 2	<0.01 2	<0.01 2
Fluoride	<0.5 mg/l	TM104		2.62	0.944	1.3	1.18	1.13	0.758
COD, unfiltered	<7 mg/l	TM107		25.9 #	29.7 #	45.9 #	44 #	40.4 #	29.2 #
Redox potential	mV	TM110		137	125	133	183	130	141
Conductivity @ 20 deg.C (diss.filt)	<0.014 mS/cm	TM120		0.752	0.651	0.573	0.674	0.679	0.737
Dissolved solids, Total (meter)	<5 mg/l	TM123		636 #	536 #	474 #	551 #	562 #	557 #
Antimony (diss.filt)	<1 µg/l	TM152		<1	<1	<1	<1	<1	<1
Antimony (tot.unfilt)	<4 µg/l	TM152		<4	<4	<4	<4	<4	<4
Arsenic (diss.filt)	<0.5 µg/l	TM152		2.91 #	3.2 #	3.96 #	3.45 #	3.25 #	2.98 #
Arsenic (tot.unfilt)	<2 µg/l	TM152		3.44 #	3.43 #	4.17 #	3.77 #	3.45 #	3.24 #
Barium (diss.filt)	<0.2 µg/l	TM152		51.3 #	55.4 #	51.4 #	64.9 #	69 #	52.3 #
Barium (tot.unfilt)	<0.5 µg/l	TM152		57.9 #	57.3 #	53.7 #	69.7 #	76.8 #	59.6 #
Beryllium (diss.filt)	<0.1 µg/l	TM152		<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #
Beryllium (tot.unfilt)	<1 µg/l	TM152		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Boron (diss.filt)	<10 µg/l	TM152		244 #	196 #	182 #	199 #	226 #	202 #
Boron (tot.unfilt)	<20 µg/l	TM152		256 #	201 #	188 #	213 #	240 #	205 #
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08 #	<0.08 #	<0.08 #	<0.08 #	<0.08 #	<0.08 #
Cadmium (tot.unfilt)	<0.5 µg/l	TM152		<0.5 #	<0.5 #	<0.5 #	<0.5 #	<0.5 #	<0.5 #
Chromium (tot.unfilt)	<3 µg/l	TM152		<3 #	<3 #	<3 #	<3 #	<3 #	<3 #
Chromium (diss.filt)	<1 µg/l	TM152		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Copper (tot.unfilt)	<1 µg/l	TM152		4.57 #	1.2 #	1.35 #	1.75 #	2.16 #	3.54 #
Lead (tot.unfilt)	<1 µg/l	TM152			<1 #		<1 #	1.27 #	
Copper (diss.filt)	<0.3 µg/l	TM152		3.81 #	1.35 #	1.16 #	1.25 #	3.23 #	3.2 #
Manganese (tot.unfilt)	<1 µg/l	TM152		108 #	61.4 #	75 #	94.8 #	91.3 #	73.9 #
Lead (diss.filt)	<0.2 µg/l	TM152		<0.2 #	<0.2 #	<0.2 #	<0.2 #	<0.2 #	<0.2 #
Nickel (tot.unfilt)	<1 µg/l	TM152		2.73 #	1.34 #	1.42 #	2.56 #	1.89 #	2.27 #
Manganese (diss.filt)	<3 µg/l	TM152		38.2 #	24.6 #	35.3 #	51.4 #	31.9 #	21.7 #

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R1-C	R2-C	R3-C	R4-C	R5-C	R1-E
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642045	20642172	20642122	20642067	20642362	20642056
			AGS Reference						
Phosphorus (tot.unfilt)	<20 µg/l	TM152		49 #	77.3 #	112 #	93.7 #	92.5 #	48.4 #
Selenium (tot.unfilt)	<1 µg/l	TM152		1.64 #	1.06 #	2.81 #	2.21 #	2.38 #	1.42 #
Nickel (diss.filt)	<0.4 µg/l	TM152		1.87 #	1.13 #	1.12 #	1.53 #	1.41 #	1.77 #
Phosphorus (diss.filt)	<10 µg/l	TM152		<10 #	<10 #	11.7 #	<10 #	<10 #	11.4 #
Selenium (diss.filt)	<1 µg/l	TM152		1.47 #	1.17 #	2.78 #	2.29 #	1.98 #	1.4 #
Vanadium (tot.unfilt)	<5 µg/l	TM152		8.64 #	5.15 #	16 #	15.2 #	15.5 #	9.46 #
Zinc (tot.unfilt)	<5 µg/l	TM152		18.5 #	5.07 #	6.28 #	10.5 #	7.2 #	10.4 #
Vanadium (diss.filt)	<1 µg/l	TM152		6.53 #	4.24 #	14.2 #	14 #	15.7 #	8.82 #
Zinc (diss.filt)	<1 µg/l	TM152		1.38 #	1.75 #	<1 #	<1 #	<1 #	4.98 #
Lead (tot.unfilt)	<0.001 mg/l	TM152		0.00182 #		<0.001 #			0.00162 #
Magnesium (Dis.Filt)	<0.036 mg/l	TM152		13.3 #	13.3 #	7.95 #	8.78 #	9.91 #	12.8 #
Calcium (Dis.Filt)	<0.2 mg/l	TM152		107 #	93.3 #	81.6 #	91.2 #	103 #	84.3 #
Iron (Dis.Filt)	<0.019 mg/l	TM152		<0.019 #	0.0261 #	0.0283 #	0.0453 #	0.0471 #	0.0367 #
Hardness, Total as CaCO3	<0.65 mg/l	TM152		322	288	237	264	299	263
Magnesium (Tot. Unfilt.)	<0.05 mg/l	TM152		13.6 #	13.4 #	8.01 #	8.96 #	10.3 #	13.3 #
Calcium (Tot. Unfilt.)	<0.057 mg/l	TM152		110 #	95 #	81.4 #	95.5 #	108 #	87.4 #
Iron (Tot. Unfilt.)	<0.024 mg/l	TM152		0.786 #	0.188 #	0.413 #	0.358 #	0.367 #	0.519 #
Naphthalene (diss.filt)	<0.01 µg/l	TM178		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Acenaphthene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	0.00876	<0.005	0.0452	<0.005
Acenaphthylene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	0.0175	<0.005
Fluoranthene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	0.00939	<0.005	0.0205	<0.005
Anthracene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	0.0103	<0.005
Phenanthrene (diss.filt)	<0.005 µg/l	TM178		<0.005	0.0112	0.0127	<0.005	0.00925	<0.005
Fluorene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	0.0134	<0.005
Chrysene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Pyrene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	0.0102	0.00812	0.0172	<0.005
Benzo(a)anthracene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(b)fluoranthene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(k)fluoranthene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(a)pyrene (diss.filt)	<0.002 µg/l	TM178		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Dibenzo(a,h)anthracene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(g,h,i)perylene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend	
#	ISO17025 accredited.
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1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R1-C	R2-C	R3-C	R4-C	R5-C	R1-E
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642045	20642172	20642122	20642067	20642362	20642056
			AGS Reference						
Indeno(1,2,3-cd)pyrene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
PAH Sum of EPA 16 detected (Diss filt)	<0.082 µg/l	TM178		<0.082	<0.082	<0.082	<0.082	0.133	<0.082
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mercury (tot.unfilt)	<0.02 µg/l	TM183		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phosphate (Ortho as PO4)	<0.05 mg/l	TM184		<0.05 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #
Sulphate	<2 mg/l	TM184		264 #	211 #	201 #	263 #	282 #	195 #
Chloride	<2 mg/l	TM184		47.9 #	28.4 #	33.8 #	30.7 #	28.2 #	50.7 #
Turbidity	<0.1 ntu	TM195		18.6 #	4.16 #	4.39 #	6.01 #	5.8 #	13.1 #
Cyanide, Total	<0.05 mg/l	TM227		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cyanide, Free	<0.05 mg/l	TM227		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cyanide, Complex	<0.05 mg/l	TM227		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphur Dissolved	<1 mg/l	TM228		81.5	64.2	56.6	79.8	85.9	59.4
Chromium, Hexavalent	<0.03 mg/l	TM241		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
pH	<1 pH Units	TM256		7.8 #	7.81 #	8.13 #	7.88 #	7.89 #	8.01 #
Phenol	<0.002 mg/l	TM259		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cresols	<0.006 mg/l	TM259		<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
Xylenols	<0.008 mg/l	TM259		<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
Phenols, Total Detected monohydric	<0.016 mg/l	TM259		<0.016	<0.016	<0.016	<0.016	<0.016	<0.016

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend	
#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R2-E	R3-E	R4-E	R5-E	R2-W	R3-W
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642201	20642101	20642385	20642348	20642140	20642213
			AGS Reference						
Suspended solids, Total	<2 mg/l	TM022		7 #	12 #	18.5 #	72.5 #	10.5 #	6.5 #
BOD, unfiltered	<1 mg/l	TM045		2.94 #	3.5 #	4.24 #	6.86 #	3.14 #	3.02 #
Oxygen, dissolved	<0.3 mg/l	TM046		8.78	9.9	10.2	8.85	9.24	8.29
Carbon, Organic (diss.filt)	<3 mg/l	TM090		9.9	8.56	10.5	11.3	9.69	9.84
Organic Carbon, Total	<3 mg/l	TM090		9.14 #	8.03 #	9.77 #	15.4 #	9.22 #	9.26 #
Ammoniacal Nitrogen as NH4	<0.3 mg/l	TM099		<0.3 #	0.888 #	1.76 #	<0.3 #	<0.3 #	<0.3 #
Sulphide	<0.01 mg/l	TM101		<0.01 2	<0.01 2	<0.01 2	0.0201 2	<0.01 2	0.0528 2
Fluoride	<0.5 mg/l	TM104		1.06	1.34	1.17	1.09	0.868	1.07
COD, unfiltered	<7 mg/l	TM107		34.9 #	44.6 #	49.7 #	50.4 #	28.7 #	39.9 #
Redox potential	mV	TM110		140	145	187	142	140	131
Conductivity @ 20 deg.C (diss.filt)	<0.014 mS/cm	TM120		0.67	0.627	0.69	0.647	0.664	0.601
Dissolved solids, Total (meter)	<5 mg/l	TM123		505 #	485 #	549 #	546 #	551 #	496 #
Antimony (diss.filt)	<1 µg/l	TM152		<1	<1	<1	<1	<1	<1
Antimony (tot.unfilt)	<4 µg/l	TM152		<4	<4	<4	<4	<4	<4
Arsenic (diss.filt)	<0.5 µg/l	TM152		3.32 #	4.12 #	3.34 #	3.19 #	3.14 #	3.37 #
Arsenic (tot.unfilt)	<2 µg/l	TM152		3.64 #	4.52 #	3.88 #	14.4 #	3.38 #	3.59 #
Barium (diss.filt)	<0.2 µg/l	TM152		53.3 #	55.9 #	65.8 #	65 #	60.3 #	53 #
Barium (tot.unfilt)	<0.5 µg/l	TM152		56.2 #	58.6 #	73.7 #	192 #	62.9 #	55.4 #
Beryllium (diss.filt)	<0.1 µg/l	TM152		<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #
Beryllium (tot.unfilt)	<1 µg/l	TM152		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Boron (diss.filt)	<10 µg/l	TM152		194 #	183 #	216 #	214 #	199 #	191 #
Boron (tot.unfilt)	<20 µg/l	TM152		226 #	187 #	223 #	1030 #	210 #	201 #
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08 #	<0.08 #	<0.08 #	<0.08 #	<0.08 #	<0.08 #
Cadmium (tot.unfilt)	<0.5 µg/l	TM152		<0.5 #	<0.5 #	<0.5 #	<0.5 #	<0.5 #	<0.5 #
Chromium (tot.unfilt)	<3 µg/l	TM152		<3 #	<3 #	<3 #	5.19 #	<3 #	<3 #
Chromium (diss.filt)	<1 µg/l	TM152		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Copper (tot.unfilt)	<1 µg/l	TM152		1.11 #	1.37 #	1.84 #	15.4 #	1.39 #	1.19 #
Lead (tot.unfilt)	<1 µg/l	TM152		<1 #				<1 #	
Copper (diss.filt)	<0.3 µg/l	TM152		0.857 #	1.27 #	1.55 #	1.61 #	1.45 #	0.914 #
Manganese (tot.unfilt)	<1 µg/l	TM152		94.2 #	82.2 #	88.6 #	2980 #	57.8 #	77.1 #
Lead (diss.filt)	<0.2 µg/l	TM152		<0.2 #	<0.2 #	<0.2 #	<0.2 #	<0.2 #	<0.2 #
Nickel (tot.unfilt)	<1 µg/l	TM152		1.5 #	1.78 #	1.82 #	7.22 #	1.84 #	1.63 #
Manganese (diss.filt)	<3 µg/l	TM152		29.2 #	54.3 #	40.7 #	16 #	28.9 #	30.9 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend	
#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R2-E	R3-E	R4-E	R5-E	R2-W	R3-W
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642201	20642101	20642385	20642348	20642140	20642213
			AGS Reference						
Phosphorus (tot.unfilt)	<20 µg/l	TM152		93 #	90.9 #	83.2 #	3580 #	65.1 #	90.9 #
Selenium (tot.unfilt)	<1 µg/l	TM152		1.76 #	2.42 #	2.26 #	7.91 #	<1 #	1.34 #
Nickel (diss.filt)	<0.4 µg/l	TM152		1.14 #	1.2 #	1.44 #	1.34 #	0.964 #	1.63 #
Phosphorus (diss.filt)	<10 µg/l	TM152		15.3 #	<10 #	11.1 #	<10 #	<10 #	18.8 #
Selenium (diss.filt)	<1 µg/l	TM152		1.86 #	2.71 #	2.32 #	1.81 #	1.17 #	1.52 #
Vanadium (tot.unfilt)	<5 µg/l	TM152		7.52 #	18.6 #	16.4 #	37.2 #	<5 #	7.36 #
Zinc (tot.unfilt)	<5 µg/l	TM152		7.15 #	6.54 #	5.82 #	79.2 #	9.8 #	6.86 #
Vanadium (diss.filt)	<1 µg/l	TM152		6.64 #	18.4 #	14.5 #	15 #	3.89 #	6.45 #
Zinc (diss.filt)	<1 µg/l	TM152		1.07 #	<1 #	<1 #	<1 #	1.8 #	<1 #
Lead (tot.unfilt)	<0.001 mg/l	TM152			<0.001 #	<0.001 #	0.00982 #		<0.001 #
Magnesium (Dis.Filt)	<0.036 mg/l	TM152		11.3 #	6.72 #	9.36 #	10.2 #	15 #	11.1 #
Calcium (Dis.Filt)	<0.2 mg/l	TM152		86.7 #	82.3 #	95.3 #	92.4 #	101 #	85.7 #
Iron (Dis.Filt)	<0.019 mg/l	TM152		0.0267 #	0.0432 #	0.059 #	0.0301 #	0.0267 #	0.0359 #
Hardness, Total as CaCO3	<0.65 mg/l	TM152		263	233	277	273	313	260
Magnesium (Tot. Unfilt.)	<0.05 mg/l	TM152		11.5 #	6.81 #	9.31 #	13.8 #	15.3 #	11.1 #
Calcium (Tot. Unfilt.)	<0.057 mg/l	TM152		88.2 #	84 #	99 #	128 #	102 #	88 #
Iron (Tot. Unfilt.)	<0.024 mg/l	TM152		0.207 #	0.306 #	0.392 #	4.81 #	0.172 #	0.146 #
Naphthalene (diss.filt)	<0.01 µg/l	TM178		<0.01	<0.01	<0.01	0.01	<0.01	<0.01
Acenaphthene (diss.filt)	<0.005 µg/l	TM178		0.0118	<0.005	<0.005	0.0346	<0.005	0.011
Acenaphthylene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	0.0131	<0.005	<0.005
Fluoranthene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	0.0057
Anthracene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	0.00584	<0.005	<0.005
Phenanthrene (diss.filt)	<0.005 µg/l	TM178		0.0152	0.0233	<0.005	0.0105	<0.005	0.0111
Fluorene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	0.0144	<0.005	0.00532
Chrysene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Pyrene (diss.filt)	<0.005 µg/l	TM178		<0.005	0.0115	0.0194	<0.005	<0.005	<0.005
Benzo(a)anthracene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(b)fluoranthene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(k)fluoranthene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(a)pyrene (diss.filt)	<0.002 µg/l	TM178		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Dibenzo(a,h)anthracene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(g,h,i)perylene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend	
#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R2-E	R3-E	R4-E	R5-E	R2-W	R3-W
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642201	20642101	20642385	20642348	20642140	20642213
			AGS Reference						
Indeno(1,2,3-cd)pyrene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
PAH Sum of EPA 16 detected (Diss filt)	<0.082 µg/l	TM178		<0.082	<0.082	<0.082	0.0885	<0.082	<0.082
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mercury (tot.unfilt)	<0.02 µg/l	TM183		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phosphate (Ortho as PO4)	<0.05 mg/l	TM184		<0.05 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #
Sulphate	<2 mg/l	TM184		207 #	207 #	271 #	265 #	217 #	208 #
Chloride	<2 mg/l	TM184		29.7 #	34.2 #	30.3 #	28.7 #	29.1 #	30 #
Turbidity	<0.1 ntu	TM195		3.02 #	4.22 #	5.77 #	8.7 #	4.51 #	2.86 #
Cyanide, Total	<0.05 mg/l	TM227		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cyanide, Free	<0.05 mg/l	TM227		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cyanide, Complex	<0.05 mg/l	TM227		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphur Dissolved	<1 mg/l	TM228		59.4	57.9	80.7	75.3	65.6	58.8
Chromium, Hexavalent	<0.03 mg/l	TM241		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
pH	<1 pH Units	TM256		7.73 #	7.85 #	8.27 #	7.61 #	7.81 #	7.64 #
Phenol	<0.002 mg/l	TM259		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cresols	<0.006 mg/l	TM259		<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
Xylenols	<0.008 mg/l	TM259		<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
Phenols, Total Detected monohydric	<0.016 mg/l	TM259		<0.016	<0.016	<0.016	<0.016	<0.016	<0.016

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R4-W	R5-W	SL-N	SL-S	SL-W
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642078	20642373	20642320	20642282	20642299
			AGS Reference					
Suspended solids, Total	<2 mg/l	TM022		12.5 #	16.5 #	19 #	17.5 #	17 #
BOD, unfiltered	<1 mg/l	TM045		3.33 #	3.55 #	3.8 #	4.1 #	3.4 #
Oxygen, dissolved	<0.3 mg/l	TM046		9.65	10.5	10	9.6	9.63
Carbon, Organic (diss.filt)	<3 mg/l	TM090		8.47	10.7	10.8	10.3	10.9
Organic Carbon, Total	<3 mg/l	TM090		8.1 #	10.1 #	9.45 #	9.77 #	9.53 #
Ammoniacal Nitrogen as NH4	<0.3 mg/l	TM099		0.913 #	1.99 #	0.599 #	0.661 #	0.606 #
Sulphide	<0.01 mg/l	TM101		0.0144 2	<0.01 2	<0.01 2	<0.01 2	<0.01 2
Fluoride	<0.5 mg/l	TM104		1.36	1.11	0.973	0.963	0.963
COD, unfiltered	<7 mg/l	TM107		35.3 #	40.5 #	40.8 #	40.5 #	42.8 #
Redox potential	mV	TM110		136	137	135	125	126
Conductivity @ 20 deg.C (diss.filt)	<0.014 mS/cm	TM120		0.627	0.678	0.583	0.569	0.558
Dissolved solids, Total (meter)	<5 mg/l	TM123		477 #	554 #	467 #	456 #	466 #
Antimony (diss.filt)	<1 µg/l	TM152		<1	<1	<1	<1	<1
Antimony (tot.unfilt)	<4 µg/l	TM152		<4	<4	<4	<4	<4
Arsenic (diss.filt)	<0.5 µg/l	TM152		4.08 #	3.36 #	4 #	4.14 #	4.01 #
Arsenic (tot.unfilt)	<2 µg/l	TM152		4.58 #	3.56 #	4.57 #	4.37 #	4.16 #
Barium (diss.filt)	<0.2 µg/l	TM152		55.1 #	67.6 #	65.9 #	67.9 #	67.5 #
Barium (tot.unfilt)	<0.5 µg/l	TM152		61.2 #	73.6 #	72.9 #	73.5 #	70.2 #
Beryllium (diss.filt)	<0.1 µg/l	TM152		<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #
Beryllium (tot.unfilt)	<1 µg/l	TM152		<1 #	<1 #	<1 #	<1 #	<1 #
Boron (diss.filt)	<10 µg/l	TM152		174 #	209 #	159 #	166 #	165 #
Boron (tot.unfilt)	<20 µg/l	TM152		186 #	226 #	179 #	174 #	174 #
Cadmium (diss.filt)	<0.08 µg/l	TM152		<0.08 #	<0.08 #	<0.08 #	<0.08 #	<0.08 #
Cadmium (tot.unfilt)	<0.5 µg/l	TM152		<0.5 #	<0.5 #	<0.5 #	<0.5 #	<0.5 #
Chromium (tot.unfilt)	<3 µg/l	TM152		<3 #	<3 #	<3 #	<3 #	<3 #
Chromium (diss.filt)	<1 µg/l	TM152		<1 #	<1 #	<1 #	<1 #	<1 #
Copper (tot.unfilt)	<1 µg/l	TM152		1.65 #	2.3 #	3.49 #	2.84 #	2.5 #
Lead (tot.unfilt)	<1 µg/l	TM152						1.45 #
Copper (diss.filt)	<0.3 µg/l	TM152		1.18 #	1.4 #	2.56 #	2.46 #	2.53 #
Manganese (tot.unfilt)	<1 µg/l	TM152		85.7 #	89.6 #	59 #	31.5 #	33.4 #
Lead (diss.filt)	<0.2 µg/l	TM152		<0.2 #	<0.2 #	<0.2 #	<0.2 #	<0.2 #
Nickel (tot.unfilt)	<1 µg/l	TM152		1.65 #	1.78 #	3.5 #	2.76 #	2.62 #
Manganese (diss.filt)	<3 µg/l	TM152		56.9 #	37.2 #	<3 #	<3 #	<3 #

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Results Legend	
#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R4-W	R5-W	SL-N	SL-S	SL-W
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642078	20642373	20642320	20642282	20642299
			AGS Reference					
Phosphorus (tot.unfilt)	<20 µg/l	TM152		85.4 #	76.2 #	66.3 #	51.6 #	47.1 #
Selenium (tot.unfilt)	<1 µg/l	TM152		2.98 #	2.25 #	2.21 #	2.36 #	2.48 #
Nickel (diss.filt)	<0.4 µg/l	TM152		1.37 #	1.36 #	2.06 #	2.15 #	2.14 #
Phosphorus (diss.filt)	<10 µg/l	TM152		<10 #	<10 #	<10 #	<10 #	<10 #
Selenium (diss.filt)	<1 µg/l	TM152		3 #	2.35 #	2.25 #	1.82 #	1.77 #
Vanadium (tot.unfilt)	<5 µg/l	TM152		21.7 #	15.5 #	25.6 #	23.6 #	23.9 #
Zinc (tot.unfilt)	<5 µg/l	TM152		22 #	7.72 #	18.1 #	13.7 #	9.17 #
Vanadium (diss.filt)	<1 µg/l	TM152		17 #	14.6 #	24.2 #	23.3 #	24.1 #
Zinc (diss.filt)	<1 µg/l	TM152		1.36 #	1.23 #	<1 #	<1 #	<1 #
Lead (tot.unfilt)	<0.001 mg/l	TM152		0.00157 #	<0.001 #	0.00404 #	0.00176 #	
Magnesium (Dis.Filt)	<0.036 mg/l	TM152		6.42 #	9.2 #	8.11 #	8.16 #	8.15 #
Calcium (Dis.Filt)	<0.2 mg/l	TM152		82.1 #	98.4 #	73.7 #	74.8 #	76 #
Iron (Dis.Filt)	<0.019 mg/l	TM152		0.0523 #	0.0519 #	<0.019 #	<0.019 #	0.0243 #
Hardness, Total as CaCO3	<0.65 mg/l	TM152		232	284	218	221	223
Magnesium (Tot. Unfilt.)	<0.05 mg/l	TM152		6.52 #	9.45 #	8.46 #	8.53 #	8.25 #
Calcium (Tot. Unfilt.)	<0.057 mg/l	TM152		84.2 #	102 #	77.4 #	77.5 #	76.5 #
Iron (Tot. Unfilt.)	<0.024 mg/l	TM152		0.324 #	0.383 #	0.569 #	0.348 #	0.32 #
Naphthalene (diss.filt)	<0.01 µg/l	TM178		<0.01	<0.01	0.0283	0.0291	0.0298
Acenaphthene (diss.filt)	<0.005 µg/l	TM178		<0.005	0.0108	0.0235	0.0231	0.0248
Acenaphthylene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	0.00731	0.00858	<0.005
Fluoranthene (diss.filt)	<0.005 µg/l	TM178		0.00608	0.021	0.0149	0.0165	0.013
Anthracene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	0.0052	0.00515	0.00578
Phenanthrene (diss.filt)	<0.005 µg/l	TM178		0.0225	<0.005	0.0189	0.0189	0.0208
Fluorene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	0.0164	0.018	0.0157
Chrysene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005
Pyrene (diss.filt)	<0.005 µg/l	TM178		0.0137	0.0253	0.00633	0.00847	0.00651
Benzo(a)anthracene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(b)fluoranthene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(k)fluoranthene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(a)pyrene (diss.filt)	<0.002 µg/l	TM178		<0.002	<0.002	<0.002	<0.002	<0.002
Dibenzo(a,h)anthracene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(g,h,i)perylene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005

CERTIFICATE OF ANALYSIS

SDG: 190904-21 **Client Reference:** **Report Number:** 522080
Location: Llanwern **Order Number:** LLA661 **Superseded Report:**

Results Legend	
#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R4-W	R5-W	SL-N	SL-S	SL-W
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642078	20642373	20642320	20642282	20642299
			AGS Reference					
Indeno(1,2,3-cd)pyrene (diss.filt)	<0.005 µg/l	TM178		<0.005	<0.005	<0.005	<0.005	<0.005
PAH Sum of EPA 16 detected (Diss filt)	<0.082 µg/l	TM178		<0.082	<0.082	0.121	0.128	0.116
Mercury (diss.filt)	<0.01 µg/l	TM183		<0.01	<0.01	<0.01	<0.01	<0.01
Mercury (tot.unfilt)	<0.02 µg/l	TM183		<0.02	<0.02	<0.02	<0.02	<0.02
Phosphate (Ortho as PO4)	<0.05 mg/l	TM184		<0.05 #	<0.05 #	<0.05 #	<0.05 #	<0.05 #
Sulphate	<2 mg/l	TM184		205 #	279 #	222 #	224 #	226 #
Chloride	<2 mg/l	TM184		35.4 #	29.8 #	27.3 #	27.4 #	27.5 #
Turbidity	<0.1 ntu	TM195		4.67 #	5.63 #	17.2 #	8.84 #	7.66 #
Cyanide, Total	<0.05 mg/l	TM227		<0.05	<0.05	<0.05	<0.05	<0.05
Cyanide, Free	<0.05 mg/l	TM227		<0.05	<0.05	<0.05	<0.05	<0.05
Cyanide, Complex	<0.05 mg/l	TM227		<0.05	<0.05	<0.05	<0.05	<0.05
Sulphur Dissolved	<1 mg/l	TM228		61.9	82.3	62.6	63.4	63.1
Chromium, Hexavalent	<0.03 mg/l	TM241		<0.03	<0.03	<0.03	<0.03	<0.03
pH	<1 pH Units	TM256		8.23 #	8.51 #	9.56 #	8.42 #	9.32 #
Phenol	<0.002 mg/l	TM259		<0.002	<0.002	<0.002	<0.002	<0.002
Cresols	<0.006 mg/l	TM259		<0.006	<0.006	<0.006	<0.006	<0.006
Xylenols	<0.008 mg/l	TM259		<0.008	<0.008	<0.008	<0.008	<0.008
Phenols, Total Detected monohydric	<0.016 mg/l	TM259		<0.016	<0.016	<0.016	<0.016	<0.016

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

PAH Spec MS - Aqueous (W)

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	D0-C	D1-C	D2-C	D1-N	D2-N	D3-N
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642023	20642396	20642407	20642267	20642231	20642244
			AGS Reference						
Naphthalene (aq)	<0.01 µg/l	TM178		0.0228 #	0.015 #	<0.01 #	0.0251 #	0.024 #	0.71 #
Acenaphthene (aq)	<0.005 µg/l	TM178		0.0136 #	0.0108 #	<0.005 #	0.0156 #	0.0159 #	0.373 #
Acenaphthylene (aq)	<0.005 µg/l	TM178		0.00591 #	0.00724 #	<0.005 #	0.00596 #	<0.005 #	0.319 #
Fluoranthene (aq)	<0.005 µg/l	TM178		0.0182 #	0.0318 #	0.0176 #	0.0263 #	0.0322 #	1.4 #
Anthracene (aq)	<0.005 µg/l	TM178		0.00608 #	0.00862 #	0.00917 #	0.00627 #	0.00725 #	0.209 #
Phenanthrene (aq)	<0.005 µg/l	TM178		0.0144 #	0.0221 #	0.0146 #	0.0234 #	0.0249 #	1.29 #
Fluorene (aq)	<0.005 µg/l	TM178		0.00617 #	0.00767 #	<0.005 #	0.0103 #	0.0107 #	0.326 #
Chrysene (aq)	<0.005 µg/l	TM178		<0.005 #	0.011 #	<0.005 #	<0.005 #	0.0157 #	0.279 #
Pyrene (aq)	<0.005 µg/l	TM178		0.0169 #	0.031 #	0.0185 #	0.0215 #	0.0259 #	0.913 #
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178		<0.005 #	0.0144 #	<0.005 #	<0.005 #	0.0169 #	0.26 #
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178		0.00883 #	0.0221 #	0.00887 #	0.0216 #	0.0241 #	0.312 #
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178		<0.005 #	0.0108 #	<0.005 #	0.00877 #	0.0123 #	0.13 #
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178		0.00538 #	0.0135 #	0.00539 #	0.0111 #	0.0143 #	0.182 #
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178		<0.005 #	0.00806 #	<0.005 #	<0.005 #	0.00666 #	0.0408 #
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178		<0.005 #	0.0193 #	<0.005 #	<0.005 #	0.018 #	0.178 #
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178		<0.005 #	0.0143 #	<0.005 #	0.0175 #	0.0107 #	0.134 #
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178		0.118 #	0.248 #	<0.082 #	0.194 #	0.26 #	7.05 #

Validated

CERTIFICATE OF ANALYSIS

SDG: 190904-21 **Client Reference:** **Report Number:** 522080
Location: Llanwern **Order Number:** LLA661 **Superseded Report:**

PAH Spec MS - Aqueous (W)

Results Legend	
#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	D0-N/R1-W	D1-S	D2-S	D3-S	KW-C	KW-N
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642034	20642012	20642418	20642256	20642001	20642161
			AGS Reference						
Naphthalene (aq)	<0.01 µg/l	TM178		0.0244 #	<0.01 #	0.0243 ♦ #	0.0159 #	0.0318 ♦ #	0.0338 #
Acenaphthene (aq)	<0.005 µg/l	TM178		0.0152 #	0.00575 #	0.0101 ♦ #	<0.005 #	0.0419 ♦ #	0.0312 #
Acenaphthylene (aq)	<0.005 µg/l	TM178		0.00987 #	<0.005 #	0.013 ♦ #	<0.005 #	0.0101 ♦ #	0.0155 #
Fluoranthene (aq)	<0.005 µg/l	TM178		0.0407 #	0.017 #	0.0731 ♦ #	0.0225 #	0.0178 ♦ #	0.017 #
Anthracene (aq)	<0.005 µg/l	TM178		0.00879 #	0.00613 #	0.0152 ♦ #	0.00843 #	0.0112 ♦ #	0.0084 #
Phenanthrene (aq)	<0.005 µg/l	TM178		0.0331 #	0.0124 #	0.0558 ♦ #	0.0508 #	0.0267 ♦ #	0.0205 #
Fluorene (aq)	<0.005 µg/l	TM178		0.0113 #	<0.005 #	0.0131 ♦ #	<0.005 #	0.0158 ♦ #	0.0162 #
Chrysene (aq)	<0.005 µg/l	TM178		0.0173 #	<0.005 #	0.0306 ♦ #	<0.005 #	0.0147 ♦ #	<0.005 #
Pyrene (aq)	<0.005 µg/l	TM178		0.03 #	0.0155 #	0.0643 ♦ #	0.032 #	0.0109 ♦ #	0.0136 #
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178		0.0191 #	<0.005 #	0.0283 ♦ #	<0.005 #	0.0169 ♦ #	<0.005 #
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178		0.0264 #	0.0206 #	0.0434 ♦ #	0.00845 #	<0.005 ♦ #	0.0134 #
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178		0.0135 #	0.0189 #	0.0176 ♦ #	0.0055 #	<0.005 ♦ #	<0.005 #
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178		0.0165 #	0.0147 #	0.0236 ♦ #	0.00494 #	<0.002 ♦ #	0.0073 #
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178		0.00669 #	0.0236 #	0.00594 ♦ #	<0.005 #	<0.005 ♦ #	<0.005 #
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178		0.0221 #	<0.005 #	0.031 ♦ #	<0.005 #	0.0213 ♦ #	<0.005 #
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178		0.0128 #	0.027 #	0.0183 ♦ #	<0.005 #	<0.005 ♦ #	0.00615 #
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178		0.308 #	0.162 #	0.468 ♦ #	0.148 #	0.219 ♦ #	0.183 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

PAH Spec MS - Aqueous (W)

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R1-C	R2-C	R3-C	R4-C	R5-C	R1-E
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642045	20642172	20642122	20642067	20642362	20642056
			AGS Reference						
Naphthalene (aq)	<0.01 µg/l	TM178		0.0192 #	<0.01 #	0.0177 #	0.0108 #	<0.01 ♦ #	0.0189 #
Acenaphthene (aq)	<0.005 µg/l	TM178		0.0149 #	<0.005 #	0.0139 #	0.00827 #	<0.005 ♦ #	0.0106 #
Acenaphthylene (aq)	<0.005 µg/l	TM178		0.0071 #	<0.005 #	0.00793 #	0.0062 #	<0.005 ♦ #	0.00784 #
Fluoranthene (aq)	<0.005 µg/l	TM178		0.0288 #	0.0118 #	0.0265 #	0.0315 #	0.0196 ♦ #	0.0321 #
Anthracene (aq)	<0.005 µg/l	TM178		0.00713 #	<0.005 #	0.00806 #	0.0145 #	0.012 ♦ #	0.00633 #
Phenanthrene (aq)	<0.005 µg/l	TM178		0.0233 #	0.0128 #	0.0271 #	0.0188 #	0.0215 ♦ #	0.0222 #
Fluorene (aq)	<0.005 µg/l	TM178		0.00759 #	<0.005 #	0.00641 #	<0.005 #	<0.005 ♦ #	0.00533 #
Chrysene (aq)	<0.005 µg/l	TM178		0.0116 #	<0.005 #	<0.005 #	<0.005 #	<0.005 ♦ #	0.0122 #
Pyrene (aq)	<0.005 µg/l	TM178		0.0253 #	<0.005 #	0.0216 #	0.033 #	0.0272 ♦ #	0.0297 #
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178		0.0182 #	<0.005 #	<0.005 #	<0.005 #	<0.005 ♦ #	0.0156 #
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178		0.02 #	<0.005 #	0.0123 #	0.0141 #	0.00914 ♦ #	0.0186 #
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178		0.012 #	<0.005 #	0.00544 #	0.00678 #	<0.005 ♦ #	0.0103 #
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178		0.012 #	<0.002 #	<0.002 #	0.00766 #	0.00449 ♦ #	0.0128 #
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178		0.00511 #	<0.005 #	<0.005 #	<0.005 #	<0.005 ♦ #	0.00523 #
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178		0.0145 #	<0.005 #	<0.005 #	0.00851 #	<0.005 ♦ #	0.019 #
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178		0.0113 #	<0.005 #	0.00823 #	0.0082 #	<0.005 ♦ #	0.0117 #
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178		0.238 #	<0.082 #	0.155 #	0.168 #	0.0939 ♦ #	0.238 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

PAH Spec MS - Aqueous (W)

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R2-E	R3-E	R4-E	R5-E	R2-W	R3-W
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642201	20642101	20642385	20642348	20642140	20642213
			AGS Reference						
Naphthalene (aq)	<0.01 µg/l	TM178		0.0156 #	0.0178 #	<0.01 #	0.114 #	<0.01 #	0.0126 #
Acenaphthene (aq)	<0.005 µg/l	TM178		0.0159 #	<0.005 #	0.00798 #	0.066 #	<0.005 #	0.00968 #
Acenaphthylene (aq)	<0.005 µg/l	TM178		0.00781 #	0.00784 #	0.00769 #	0.0263 #	<0.005 #	<0.005 #
Fluoranthene (aq)	<0.005 µg/l	TM178		0.0195 #	0.0358 #	0.0331 #	0.24 #	0.0126 #	0.0115 #
Anthracene (aq)	<0.005 µg/l	TM178		0.00877 #	0.00916 #	0.00822 #	0.0436 #	<0.005 #	0.0059 #
Phenanthrene (aq)	<0.005 µg/l	TM178		0.024 #	0.0354 #	0.0151 #	0.166 #	0.012 #	0.0149 #
Fluorene (aq)	<0.005 µg/l	TM178		0.00774 #	0.0068 #	0.00554 #	0.0712 #	<0.005 #	0.00549 #
Chrysene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	<0.005 #	0.0672 #	<0.005 #	<0.005 #
Pyrene (aq)	<0.005 µg/l	TM178		0.0135 #	0.0384 #	0.0456 #	0.139 #	0.00964 #	0.00831 #
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	<0.005 #	0.0346 #	<0.005 #	<0.005 #
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178		0.00823 #	0.0117 #	0.0143 #	0.0993 #	<0.005 #	<0.005 #
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178		<0.005 #	0.00685 #	0.0067 #	0.0388 #	<0.005 #	<0.005 #
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178		0.00513 #	0.00697 #	0.00764 #	0.0418 #	<0.002 #	<0.002 #
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	<0.005 #	0.02 #	<0.005 #	<0.005 #
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	0.0123 #	0.0272 #	<0.005 #	0.00563 #
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178		0.126 #	0.177 #	0.164 #	1.2 #	<0.082 #	<0.082 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

PAH Spec MS - Aqueous (W)

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R4-W	R5-W	SL-N	SL-S	SL-W
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642078	20642373	20642320	20642282	20642299
			AGS Reference					
Naphthalene (aq)	<0.01 µg/l	TM178		0.258 #	<0.01 #	0.034 #	0.0379 #	0.0383 #
Acenaphthene (aq)	<0.005 µg/l	TM178		0.0879 #	0.042 #	0.0226 #	0.029 #	0.0285 #
Acenaphthylene (aq)	<0.005 µg/l	TM178		0.047 #	0.0137 #	0.00948 #	0.0126 #	0.0101 #
Fluoranthene (aq)	<0.005 µg/l	TM178		0.0681 #	0.0513 #	0.0345 #	0.0324 #	0.0311 #
Anthracene (aq)	<0.005 µg/l	TM178		0.0128 #	0.0115 #	0.00997 #	0.0106 #	0.00656 #
Phenanthrene (aq)	<0.005 µg/l	TM178		0.0505 #	0.0167 #	0.0332 #	0.0298 #	0.028 #
Fluorene (aq)	<0.005 µg/l	TM178		0.0249 #	0.00595 #	0.0224 #	0.022 #	0.0212 #
Chrysene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	<0.005 #	0.0051 #	<0.005 #
Pyrene (aq)	<0.005 µg/l	TM178		0.0482 #	0.0549 #	0.0206 #	0.0209 #	0.0165 #
Benzo(a)anthracene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	<0.005 #	0.00924 #	<0.005 #
Benzo(b)fluoranthene (aq)	<0.005 µg/l	TM178		0.0202 #	0.0114 #	0.0122 #	0.0102 #	<0.005 #
Benzo(k)fluoranthene (aq)	<0.005 µg/l	TM178		0.00925 #	0.00676 #	0.00634 #	0.00544 #	<0.005 #
Benzo(a)pyrene (aq)	<0.002 µg/l	TM178		0.0102 #	0.00814 #	0.0094 #	0.00656 #	<0.002 #
Dibenzo(a,h)anthracene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	<0.005 #	<0.005 #	<0.005 #
Benzo(g,h,i)perylene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	<0.005 #	0.0129 #	<0.005 #
Indeno(1,2,3-cd)pyrene (aq)	<0.005 µg/l	TM178		<0.005 #	<0.005 #	0.0125 #	<0.005 #	<0.005 #
PAH, Total Detected USEPA 16 (aq)	<0.082 µg/l	TM178		0.637 #	0.222 #	0.227 #	0.245 #	0.18 #

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

SVOC MS (W) - Aqueous

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	D0-C	D1-C	D2-C	D1-N	D2-N	D3-N
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642023	20642396	20642407	20642267	20642231	20642244
			AGS Reference						
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4-Dichlorophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4-Dimethylphenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Chloronaphthalene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Chlorophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Methylnaphthalene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Methylphenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Nitroaniline (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Nitrophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
3-Nitroaniline (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Bromophenylphenylether (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Chloroaniline (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1	<1
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Methylphenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Nitroaniline (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Nitrophenol (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1	<1
Azobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176		<2 ♦ #	<2 ♦ #	<2 ♦ #	<2 ♦ #	<2 ♦ #	<2 ♦ #
Butylbenzyl phthalate (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Carbazole (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Dibenzofuran (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
n-Dibutyl phthalate (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

SVOC MS (W) - Aqueous

Results Legend	
#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	D0-C	D1-C	D2-C	D1-N	D2-N	D3-N
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642023	20642396	20642407	20642267	20642231	20642244
			AGS Reference						
Diethyl phthalate (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Dimethyl phthalate (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
n-Dioctyl phthalate (aq)	<5 µg/l	TM176		<5 ♦ #	<5 ♦ #	<5 ♦ #	<5 ♦ #	<5 ♦ #	<5 ♦ #
Hexachlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Hexachlorobutadiene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Pentachlorophenol (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1	<1
Phenol (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1	<1
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Hexachloroethane (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Nitrobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Isophorone (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1	<1
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
SVOC TIC (aq)		TM176		Detected ♦	Not Detected ♦	Not Detected ♦	Not Detected ♦	Not Detected ♦	Detected ♦
Total SVOC TIC	<10 µg/l	TM176		20.7	<10	<10	<10	<10	139
Butyl ester hexadecanoic acid	µg/l	TM176		10.4					
Butyl ester octadecanoic acid	µg/l	TM176		10.3					
Hexadecanoic acid	µg/l	TM176							56.8
Octadecanoic acid	µg/l	TM176							82.2

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

SVOC MS (W) - Aqueous

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	D0-N/R1-W	D1-S	D2-S	D3-S	KW-C	KW-N
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642034	20642012	20642418	20642256	20642001	20642161
			AGS Reference						
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4-Dichlorophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4-Dimethylphenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Chloronaphthalene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Chlorophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Methylnaphthalene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Methylphenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Nitroaniline (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Nitrophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
3-Nitroaniline (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Bromophenylphenylether (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Chloroaniline (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1	<1
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Methylphenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Nitroaniline (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Nitrophenol (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1	<1
Azobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176		<2 ♦ #	<2 ♦ #	<2 ♦ #	<2 ♦ #	<2 ♦ #	<2 ♦ #
Butylbenzyl phthalate (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Carbazole (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Dibenzofuran (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
n-Dibutyl phthalate (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #

Validated

CERTIFICATE OF ANALYSIS

SDG: 190904-21 **Client Reference:** **Report Number:** 522080
Location: Llanwern **Order Number:** LLA661 **Superseded Report:**

SVOC MS (W) - Aqueous

Results Legend	
#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	D0-N/R1-W	D1-S	D2-S	D3-S	KW-C	KW-N
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642034	20642012	20642418	20642256	20642001	20642161
			AGS Reference						
Diethyl phthalate (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Dimethyl phthalate (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
n-Dioctyl phthalate (aq)	<5 µg/l	TM176		<5 ♦ #	<5 ♦ #	<5 ♦ #	<5 ♦ #	<5 ♦ #	<5 ♦ #
Hexachlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Hexachlorobutadiene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Pentachlorophenol (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1	<1
Phenol (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1	<1
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Hexachloroethane (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Nitrobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Isophorone (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1	<1
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
SVOC TIC (aq)		TM176		Not Detected ♦	Not Detected ♦	Not Detected ♦	Not Detected ♦	Not Detected ♦	Not Detected ♦
Total SVOC TIC	<10 µg/l	TM176		<10	<10	<10	<10	<10	<10

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

SVOC MS (W) - Aqueous

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R1-C	R2-C	R3-C	R4-C	R5-C	R1-E
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642045	20642172	20642122	20642067	20642362	20642056
			AGS Reference						
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4-Dichlorophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4-Dimethylphenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Chloronaphthalene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Chlorophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Methylnaphthalene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Methylphenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Nitroaniline (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Nitrophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
3-Nitroaniline (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Bromophenylphenylether (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Chloroaniline (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1	<1
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Methylphenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Nitroaniline (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Nitrophenol (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1	<1
Azobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176		<2 ♦ #	<2 ♦ #	<2 ♦ #	<2 ♦ #	<2 ♦ #	<2 ♦ #
Butylbenzyl phthalate (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Carbazole (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Dibenzofuran (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
n-Dibutyl phthalate (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

SVOC MS (W) - Aqueous

Results Legend	
#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received	SDG Ref	Lab Sample No.(s)	AGS Reference
			R1-C	0.00 - 0.00	Surface Water (SW)	03/09/2019	00:00	04/09/2019	190904-21	20642045	
Diethyl phthalate (aq)	<1 µg/l	TM176	<1 ♦ #								
Dimethyl phthalate (aq)	<1 µg/l	TM176	<1 ♦ #								
n-Dioctyl phthalate (aq)	<5 µg/l	TM176	<5 ♦ #								
Hexachlorobenzene (aq)	<1 µg/l	TM176	<1 ♦ #								
Hexachlorobutadiene (aq)	<1 µg/l	TM176	<1 ♦ #								
Pentachlorophenol (aq)	<1 µg/l	TM176	<1								
Phenol (aq)	<1 µg/l	TM176	<1								
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176	<1 ♦ #								
Hexachloroethane (aq)	<1 µg/l	TM176	<1 ♦ #								
Nitrobenzene (aq)	<1 µg/l	TM176	<1 ♦ #								
Isophorone (aq)	<1 µg/l	TM176	<1 ♦ #								
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176	<1								
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176	<1 ♦ #								
SVOC TIC (aq)		TM176	Not Detected ♦								
Total SVOC TIC	<10 µg/l	TM176	<10								
Mixed Hydrocarbons	µg/l	TM176									

Component	LOD/Units	Method	R2-C	R3-C	R4-C	R5-C	R1-E
			0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			00:00	00:00	00:00	00:00	00:00
			04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			190904-21	190904-21	190904-21	190904-21	190904-21
			20642172	20642122	20642067	20642362	20642056
Diethyl phthalate (aq)	<1 µg/l	TM176	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Dimethyl phthalate (aq)	<1 µg/l	TM176	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
n-Dioctyl phthalate (aq)	<5 µg/l	TM176	<5 ♦ #	<5 ♦ #	<5 ♦ #	<5 ♦ #	<5 ♦ #
Hexachlorobenzene (aq)	<1 µg/l	TM176	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Hexachlorobutadiene (aq)	<1 µg/l	TM176	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Pentachlorophenol (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1
Phenol (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Hexachloroethane (aq)	<1 µg/l	TM176	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Nitrobenzene (aq)	<1 µg/l	TM176	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Isophorone (aq)	<1 µg/l	TM176	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176	<1	<1	<1	<1	<1
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
SVOC TIC (aq)		TM176	Detected ♦	Not Detected ♦	Not Detected ♦	Not Detected ♦	Not Detected ♦
Total SVOC TIC	<10 µg/l	TM176	12.2	<10	<10	<10	<10
Mixed Hydrocarbons	µg/l	TM176	12.2				

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

SVOC MS (W) - Aqueous

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R2-E	R3-E	R4-E	R5-E	R2-W	R3-W
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642201	20642101	20642385	20642348	20642140	20642213
			AGS Reference						
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4-Dichlorophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4-Dimethylphenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Chloronaphthalene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Chlorophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Methylnaphthalene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Methylphenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Nitroaniline (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Nitrophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
3-Nitroaniline (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Bromophenylphenylether (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Chloroaniline (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1	<1
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Methylphenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Nitroaniline (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Nitrophenol (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1	<1
Azobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176		<2 ♦ #	<2 ♦ #	<2 ♦ #	<2 ♦ #	<2 ♦ #	<2 ♦ #
Butylbenzyl phthalate (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Carbazole (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Dibenzofuran (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
n-Dibutyl phthalate (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

SVOC MS (W) - Aqueous

Results Legend	
#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R2-E	R3-E	R4-E	R5-E	R2-W	R3-W
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642201	20642101	20642385	20642348	20642140	20642213
			AGS Reference						
Diethyl phthalate (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Dimethyl phthalate (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
n-Dioctyl phthalate (aq)	<5 µg/l	TM176		<5 ♦ #	<5 ♦ #	<5 ♦ #	<5 ♦ #	<5 ♦ #	<5 ♦ #
Hexachlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Hexachlorobutadiene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Pentachlorophenol (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1	<1
Phenol (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1	<1
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Hexachloroethane (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Nitrobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Isophorone (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1	<1
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
SVOC TIC (aq)		TM176		Not Detected ♦	Not Detected ♦	Not Detected ♦	Not Detected ♦	Not Detected ♦	Not Detected ♦
Total SVOC TIC	<10 µg/l	TM176		<10	<10	<10	<10	<10	<10

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

SVOC MS (W) - Aqueous

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R4-W	R5-W	SL-N	SL-S	SL-W
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642078	20642373	20642320	20642282	20642299
			AGS Reference					
1,2,4-Trichlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
1,2-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
1,3-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
1,4-Dichlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4,5-Trichlorophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4,6-Trichlorophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4-Dichlorophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4-Dimethylphenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,4-Dinitrotoluene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2,6-Dinitrotoluene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Chloronaphthalene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Chlorophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Methylnaphthalene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Methylphenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Nitroaniline (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
2-Nitrophenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
3-Nitroaniline (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Bromophenylphenylether (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Chloro-3-methylphenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Chloroaniline (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1
4-Chlorophenylphenylether (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Methylphenol (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Nitroaniline (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
4-Nitrophenol (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1
Azobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
bis(2-Chloroethyl)ether (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
bis(2-Chloroethoxy)methane (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
bis(2-Ethylhexyl) phthalate (aq)	<2 µg/l	TM176		<2 ♦ #	<2 ♦ #	<2 ♦ #	<2 ♦ #	<2 ♦ #
Butylbenzyl phthalate (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Benzo(k)fluoranthene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Carbazole (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Dibenzofuran (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
n-Dibutyl phthalate (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

SVOC MS (W) - Aqueous

Results Legend	
#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R4-W	R5-W	SL-N	SL-S	SL-W
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642078	20642373	20642320	20642282	20642299
			AGS Reference					
Diethyl phthalate (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Dimethyl phthalate (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
n-Dioctyl phthalate (aq)	<5 µg/l	TM176		<5 ♦ #	<5 ♦ #	<5 ♦ #	<5 ♦ #	<5 ♦ #
Hexachlorobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Hexachlorobutadiene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Pentachlorophenol (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1
Phenol (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1
n-Nitroso-n-dipropylamine (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Hexachloroethane (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Nitrobenzene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Isophorone (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
Hexachlorocyclopentadiene (aq)	<1 µg/l	TM176		<1	<1	<1	<1	<1
Indeno(1,2,3-cd)pyrene (aq)	<1 µg/l	TM176		<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #	<1 ♦ #
SVOC TIC (aq)		TM176		Not Detected ♦	Not Detected ♦	Not Detected ♦	Not Detected ♦	Not Detected ♦
Total SVOC TIC	<10 µg/l	TM176		<10	<10	<10	<10	<10

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

TPH CWG (W)

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	D0-C	D1-C	D2-C	D1-N	D2-N	D3-N
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642023	20642396	20642407	20642267	20642231	20642244
			AGS Reference						
GRO Surrogate % recovery**	%	TM245		100	103	92	111	97	117
GRO >C5-C12	<50 µg/l	TM245		<50 #	<50 #	<50 #	<50 #	<50 #	<50 #
Methyl tertiary butyl ether (MTBE)	<3 µg/l	TM245		<3 #	<3 #	<3 #	<3 #	<3 #	<3 #
Benzene	<7 µg/l	TM245		<7 #	<7 #	<7 #	<7 #	<7 #	<7 #
Toluene	<4 µg/l	TM245		<4 #	<4 #	<4 #	<4 #	<4 #	<4 #
Ethylbenzene	<5 µg/l	TM245		<5 #	<5 #	<5 #	<5 #	<5 #	<5 #
m,p-Xylene	<8 µg/l	TM245		<8 #	<8 #	<8 #	<8 #	<8 #	<8 #
o-Xylene	<3 µg/l	TM245		<3 #	<3 #	<3 #	<3 #	<3 #	<3 #
Sum of detected Xylenes	<11 µg/l	TM245		<11	<11	<11	<11	<11	<11
Sum of detected BTEX	<28 µg/l	TM245		<28	<28	<28	<28	<28	<28
Aliphatics >C5-C6	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aliphatics >C8-C10	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aliphatics >C10-C12	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	<10
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	46
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	41
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	87
Aromatics >EC5-EC7	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aromatics >EC10-EC12	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	<10
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	<10
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	<10
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	<10
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	87
Aliphatics >C16-C35 Aqueous	<10 µg/l	TM174		<10	<10	<10	<10	<10	87

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

TPH CWG (W)

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	D0-N/R1-W	D1-S	D2-S	D3-S	KW-C	KW-N
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642034	20642012	20642418	20642256	20642001	20642161
			AGS Reference						
GRO Surrogate % recovery**	%	TM245		99	93	95	108	102	97
GRO >C5-C12	<50 µg/l	TM245		<50 #	<50 #	<50 #	62 #	<50 #	<50 #
Methyl tertiary butyl ether (MTBE)	<3 µg/l	TM245		<3 #	<3 #	<3 #	<3 #	<3 #	<3 #
Benzene	<7 µg/l	TM245		<7 #	<7 #	<7 #	15 #	<7 #	<7 #
Toluene	<4 µg/l	TM245		<4 #	<4 #	<4 #	<4 #	<4 #	<4 #
Ethylbenzene	<5 µg/l	TM245		<5 #	<5 #	<5 #	<5 #	<5 #	<5 #
m,p-Xylene	<8 µg/l	TM245		<8 #	<8 #	<8 #	<8 #	<8 #	<8 #
o-Xylene	<3 µg/l	TM245		<3 #	<3 #	<3 #	<3 #	<3 #	<3 #
Sum of detected Xylenes	<11 µg/l	TM245		<11	<11	<11	<11	<11	<11
Sum of detected BTEX	<28 µg/l	TM245		<28	<28	<28	<28	<28	<28
Aliphatics >C5-C6	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aliphatics >C8-C10	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aliphatics >C10-C12	<10 µg/l	TM245		<10	<10	<10	11	<10	<10
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	<10
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	<10
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174		<10	<10	17	<10	<10	<10
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174		<10	<10	17	<10	<10	<10
Aromatics >EC5-EC7	<10 µg/l	TM245		<10	<10	<10	15	<10	<10
Aromatics >EC7-EC8	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/l	TM245		<10	<10	<10	15	<10	<10
Aromatics >EC10-EC12	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	<10
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	<10
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174		<10	<10	14	<10	<10	<10
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174		<10	<10	14	<10	<10	<10
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174		<10	<10	31	60	<10	<10
Aliphatics >C16-C35 Aqueous	<10 µg/l	TM174		<10	<10	17	<10	<10	<10

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

TPH CWG (W)

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R1-C	R2-C	R3-C	R4-C	R5-C	R1-E
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642045	20642172	20642122	20642067	20642362	20642056
			AGS Reference						
GRO Surrogate % recovery**	%	TM245		95	113	107 3	90	120	91
GRO >C5-C12	<50 µg/l	TM245		<50 #	<50 #	<50 3 #	<50 #	<50 #	<50 #
Methyl tertiary butyl ether (MTBE)	<3 µg/l	TM245		<3 #	<3 #	<3 3 #	<3 #	<3 #	<3 #
Benzene	<7 µg/l	TM245		<7 #	<7 #	<7 3 #	<7 #	<7 #	<7 #
Toluene	<4 µg/l	TM245		<4 #	<4 #	<4 3 #	<4 #	<4 #	<4 #
Ethylbenzene	<5 µg/l	TM245		<5 #	<5 #	<5 3 #	<5 #	<5 #	<5 #
m,p-Xylene	<8 µg/l	TM245		<8 #	<8 #	<8 3 #	<8 #	<8 #	<8 #
o-Xylene	<3 µg/l	TM245		<3 #	<3 #	<3 3 #	<3 #	<3 #	<3 #
Sum of detected Xylenes	<11 µg/l	TM245		<11	<11	<11 3	<11	<11	<11
Sum of detected BTEX	<28 µg/l	TM245		<28	<28	<28 3	<28	<28	<28
Aliphatics >C5-C6	<10 µg/l	TM245		<10	<10	<10 3	<10	<10	<10
Aliphatics >C6-C8	<10 µg/l	TM245		<10	<10	<10 3	<10	<10	<10
Aliphatics >C8-C10	<10 µg/l	TM245		<10	<10	<10 3	<10	<10	<10
Aliphatics >C10-C12	<10 µg/l	TM245		<10	<10	<10 3	<10	<10	<10
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	<10
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	<10
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	<10
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	<10
Aromatics >EC5-EC7	<10 µg/l	TM245		<10	<10	<10 3	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/l	TM245		<10	<10	<10 3	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/l	TM245		<10	<10	<10 3	<10	<10	<10
Aromatics >EC10-EC12	<10 µg/l	TM245		<10	<10	<10 3	<10	<10	<10
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	<10
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	<10
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	<10
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	<10
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10	<10
Aliphatics >C16-C35 Aqueous	<10 µg/l	TM174		<10	<10	<10	<10	<10	<10

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

TPH CWG (W)

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R2-E	R3-E	R4-E	R5-E	R2-W	R3-W
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642201	20642101	20642385	20642348	20642140	20642213
			AGS Reference						
GRO Surrogate % recovery**	%	TM245		106	87	97	103	114	115 3
GRO >C5-C12	<50 µg/l	TM245		<50 #	<50 #	<50 #	<50 #	<50 #	<50 3 #
Methyl tertiary butyl ether (MTBE)	<3 µg/l	TM245		<3 #	<3 #	<3 #	<3 #	<3 #	<3 3 #
Benzene	<7 µg/l	TM245		<7 #	<7 #	<7 #	<7 #	<7 #	<7 3 #
Toluene	<4 µg/l	TM245		<4 #	<4 #	<4 #	<4 #	<4 #	<4 3 #
Ethylbenzene	<5 µg/l	TM245		<5 #	<5 #	<5 #	<5 #	<5 #	<5 3 #
m,p-Xylene	<8 µg/l	TM245		<8 #	<8 #	<8 #	<8 #	<8 #	<8 3 #
o-Xylene	<3 µg/l	TM245		<3 #	<3 #	<3 #	<3 #	<3 #	<3 3 #
Sum of detected Xylenes	<11 µg/l	TM245		<11	<11	<11	<11	<11	<11 3
Sum of detected BTEX	<28 µg/l	TM245		<28	<28	<28	<28	<28	<28 3
Aliphatics >C5-C6	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10 3
Aliphatics >C6-C8	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10 3
Aliphatics >C8-C10	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10 3
Aliphatics >C10-C12	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10 3
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174		<20	<10	<10	<10	<10	<10
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174		<20	<10	<10	<10	<10	<10
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174		<20	<10	<10	28	<10	<10
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174		<20	<10	<10	28	<10	<10
Aromatics >EC5-EC7	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10 3
Aromatics >EC7-EC8	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10 3
Aromatics >EC8-EC10	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10 3
Aromatics >EC10-EC12	<10 µg/l	TM245		<10	<10	<10	<10	<10	<10 3
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174		<20	<10	<10	<10	<10	<10
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174		<20	<10	<10	23	<10	<10
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174		<20	<10	<10	114	<10	<10
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174		<20	<10	<10	137	<10	<10
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174		<10	<10	<10	165	<10	<10
Aliphatics >C16-C35 Aqueous	<10 µg/l	TM174		<20	<10	<10	28	<10	<10

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

TPH CWG (W)

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R4-W	R5-W	SL-N	SL-S	SL-W
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642078	20642373	20642320	20642282	20642299
			AGS Reference					
GRO Surrogate % recovery**	%	TM245		92	96	102	107	100
GRO >C5-C12	<50 µg/l	TM245		<50 #	<50 #	<50 #	<50 #	<50 #
Methyl tertiary butyl ether (MTBE)	<3 µg/l	TM245		<3 #	<3 #	<3 #	<3 #	<3 #
Benzene	<7 µg/l	TM245		<7 #	<7 #	<7 #	<7 #	<7 #
Toluene	<4 µg/l	TM245		<4 #	<4 #	<4 #	<4 #	<4 #
Ethylbenzene	<5 µg/l	TM245		<5 #	<5 #	<5 #	<5 #	<5 #
m,p-Xylene	<8 µg/l	TM245		<8 #	<8 #	<8 #	<8 #	<8 #
o-Xylene	<3 µg/l	TM245		<3 #	<3 #	<3 #	<3 #	<3 #
Sum of detected Xylenes	<11 µg/l	TM245		<11	<11	<11	<11	<11
Sum of detected BTEX	<28 µg/l	TM245		<28	<28	<28	<28	<28
Aliphatics >C5-C6	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aliphatics >C8-C10	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aliphatics >C10-C12	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aliphatics >C12-C16 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10
Aliphatics >C16-C21 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10
Aliphatics >C21-C35 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10
Total Aliphatics >C12-C35 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10
Aromatics >EC5-EC7	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aromatics >EC10-EC12	<10 µg/l	TM245		<10	<10	<10	<10	<10
Aromatics >EC12-EC16 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10
Aromatics >EC16-EC21 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10
Aromatics >EC21-EC35 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10
Total Aromatics >EC12-EC35 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10
Total Aliphatics & Aromatics >C5-35 (aq)	<10 µg/l	TM174		<10	<10	<10	<10	<10
Aliphatics >C16-C35 Aqueous	<10 µg/l	TM174		<10	<10	<10	<10	<10

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

VOC MS (W)

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	D0-C	D1-C	D2-C	D1-N	D2-N	D3-N
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642023	20642396	20642407	20642267	20642231	20642244
			AGS Reference						
Dibromofluoromethane**	%	TM208		108	115	114	112	134	0.47
Toluene-d8**	%	TM208		98.3	105	98.6	98.8	100	101
4-Bromofluorobenzene**	%	TM208		103	99.1	98.8	101	102	96.8
Dichlorodifluoromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Chloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vinyl chloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Trichlorofluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Carbon disulphide	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dichloromethane	<3 µg/l	TM208		<3 #	<3 #	<3 #	<3 #	<3 #	<3 #
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Bromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chloroform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,1-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Carbontetrachloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Benzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Trichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dibromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromodichloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Toluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

VOC MS (W)

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	D0-C	D1-C	D2-C	D1-N	D2-N	D3-N
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642023	20642396	20642407	20642267	20642231	20642244
			AGS Reference						
Tetrachloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dibromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromoethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Ethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
m,p-Xylene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
o-Xylene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Styrene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromoform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Isopropylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,3-Trichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Propylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3,5-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
tert-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,4-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
sec-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-iso-Propyltoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,4-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
n-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Hexachlorobutadiene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Naphthalene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,3-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

VOC MS (W)

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	D0-C	D1-C	D2-C	D1-N	D2-N	D3-N
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642023	20642396	20642407	20642267	20642231	20642244
			AGS Reference						
1,3,5-Trichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1

Validated

CERTIFICATE OF ANALYSIS

SDG: 190904-21 **Client Reference:** **Report Number:** 522080
Location: Llanwern **Order Number:** LLA661 **Superseded Report:**

VOC MS (W)

Results Legend	
#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	D0-N/R1-W	D1-S	D2-S	D3-S	KW-C	KW-N
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642034	20642012	20642418	20642256	20642001	20642161
			AGS Reference						
Dibromofluoromethane**	%	TM208		117	110	115	110	115	106
Toluene-d8**	%	TM208		99	98.2	98.7	97.3	98.1	98.6
4-Bromofluorobenzene**	%	TM208		102	102	100	100	99	102
Dichlorodifluoromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Chloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vinyl chloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Trichlorofluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Carbon disulphide	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dichloromethane	<3 µg/l	TM208		<3 #	<3 #	<3 #	<3 #	<3 #	<3 #
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Bromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chloroform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,1-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Carbontetrachloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Benzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	14.2 #	<1 #	<1 #
Trichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dibromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromodichloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Toluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	1.13 #	<1 #	<1 #
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

VOC MS (W)

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	D0-N/R1-W	D1-S	D2-S	D3-S	KW-C	KW-N
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642034	20642012	20642418	20642256	20642001	20642161
			AGS Reference						
Tetrachloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dibromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromoethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Ethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	2.36 #	<1 #	<1 #
m,p-Xylene	<1 µg/l	TM208		<1 #	<1 #	<1 #	4.2 #	<1 #	<1 #
o-Xylene	<1 µg/l	TM208		<1 #	<1 #	<1 #	1.36 #	<1 #	<1 #
Styrene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromoform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Isopropylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,3-Trichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Propylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3,5-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
tert-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,4-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
sec-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-iso-Propyltoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,4-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
n-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Hexachlorobutadiene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Naphthalene	<1 µg/l	TM208		<1 #	<1 #	<1 #	1.14 #	<1 #	<1 #
1,2,3-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

VOC MS (W)

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	D0-N/R1-W	D1-S	D2-S	D3-S	KW-C	KW-N
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642034	20642012	20642418	20642256	20642001	20642161
			AGS Reference						
1,3,5-Trichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1

CERTIFICATE OF ANALYSIS

SDG: 190904-21 **Client Reference:** **Report Number:** 522080
Location: Llanwern **Order Number:** LLA661 **Superseded Report:**

VOC MS (W)

Results Legend	
#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R1-C	R2-C	R3-C	R4-C	R5-C	R1-E
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642045	20642172	20642122	20642067	20642362	20642056
			AGS Reference						
Dibromofluoromethane**	%	TM208		111	113	120	112	111	113
Toluene-d8**	%	TM208		97.9	98.8	98.9	98	98.5	97.2
4-Bromofluorobenzene**	%	TM208		101	101	96.3	98.7	99.8	100
Dichlorodifluoromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Chloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vinyl chloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Trichlorofluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Carbon disulphide	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dichloromethane	<3 µg/l	TM208		<3 #	<3 #	<3 #	<3 #	<3 #	<3 #
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Bromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chloroform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,1-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Carbontetrachloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Benzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Trichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dibromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromodichloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Toluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

VOC MS (W)

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R1-C	R2-C	R3-C	R4-C	R5-C	R1-E
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642045	20642172	20642122	20642067	20642362	20642056
			AGS Reference						
Tetrachloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dibromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromoethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Ethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
m,p-Xylene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
o-Xylene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Styrene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromoform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Isopropylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,3-Trichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Propylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3,5-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
tert-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,4-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
sec-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-iso-Propyltoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,4-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
n-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Hexachlorobutadiene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Naphthalene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,3-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

VOC MS (W)

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R1-C	R2-C	R3-C	R4-C	R5-C	R1-E
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642045	20642172	20642122	20642067	20642362	20642056
			AGS Reference						
1,3,5-Trichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

VOC MS (W)

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R2-E	R3-E	R4-E	R5-E	R2-W	R3-W
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642201	20642101	20642385	20642348	20642140	20642213
			AGS Reference						
Dibromofluoromethane**	%	TM208		114	113	112	112	111	108
Toluene-d8**	%	TM208		98.2	98.4	98	98	98.9	99
4-Bromofluorobenzene**	%	TM208		96.8	99.3	98.5	98.2	99.6	98.3
Dichlorodifluoromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Chloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Vinyl chloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Trichlorofluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Carbon disulphide	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dichloromethane	<3 µg/l	TM208		<3 #	<3 #	<3 #	<3 #	<3 #	<3 #
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
Bromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chloroform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,1-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Carbontetrachloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Benzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Trichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dibromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromodichloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Toluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

VOC MS (W)

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R2-E	R3-E	R4-E	R5-E	R2-W	R3-W
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642201	20642101	20642385	20642348	20642140	20642213
			AGS Reference						
Tetrachloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Dibromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromoethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Chlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Ethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
m,p-Xylene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
o-Xylene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Styrene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromoform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Isopropylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,3-Trichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Bromobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Propylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
2-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3,5-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
tert-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,4-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
sec-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
4-iso-Propyltoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,4-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
n-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Hexachlorobutadiene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
Naphthalene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #
1,2,3-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #	<1 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

VOC MS (W)

Results Legend

#	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
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1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R2-E	R3-E	R4-E	R5-E	R2-W	R3-W
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642201	20642101	20642385	20642348	20642140	20642213
			AGS Reference						
1,3,5-Trichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1	<1

CERTIFICATE OF ANALYSIS

SDG: 190904-21 **Client Reference:** **Report Number:** 522080
Location: Llanwern **Order Number:** LLA661 **Superseded Report:**

VOC MS (W)

Results Legend	
#	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
(F)	Trigger breach confirmed
1-3+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R4-W	R5-W	SL-N	SL-S	SL-W
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642078	20642373	20642320	20642282	20642299
			AGS Reference					
Dibromofluoromethane**	%	TM208		113	113	122	108	109
Toluene-d8**	%	TM208		98	97.7	99.2	97.8	98.5
4-Bromofluorobenzene**	%	TM208		100	99	101	98.5	98.3
Dichlorodifluoromethane	<1 µg/l	TM208		<1	<1	<1	<1	<1
Chloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Vinyl chloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Bromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Chloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Trichlorofluoromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Carbon disulphide	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Dichloromethane	<3 µg/l	TM208		<3 #	<3 #	<3 #	<3 #	<3 #
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
trans-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,2-Dichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
2,2-Dichloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1
Bromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Chloroform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1,1-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Carbontetrachloride	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Benzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Trichloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Dibromomethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Bromodichloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
cis-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Toluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
trans-1,3-Dichloropropene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2-Trichloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

VOC MS (W)

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R4-W	R5-W	SL-N	SL-S	SL-W
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642078	20642373	20642320	20642282	20642299
			AGS Reference					
Tetrachloroethene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Dibromochloromethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromoethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Chlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Ethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
m,p-Xylene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
o-Xylene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Styrene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Bromoform	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Isopropylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,1,2,2-Tetrachloroethane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2,3-Trichloropropane	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Bromobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Propylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
2-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,3,5-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
4-Chlorotoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
tert-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2,4-Trimethylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
sec-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
4-iso-Propyltoluene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,3-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,4-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
n-Butylbenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2-Dibromo-3-chloropropane	<1 µg/l	TM208		<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Hexachlorobutadiene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
tert-Amyl methyl ether (TAME)	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
Naphthalene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #
1,2,3-Trichlorobenzene	<1 µg/l	TM208		<1 #	<1 #	<1 #	<1 #	<1 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

VOC MS (W)

Results Legend

#	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
(F)	Trigger breach confirmed
1-3+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R4-W	R5-W	SL-N	SL-S	SL-W
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)	Surface Water (SW)
			Date Sampled	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
			Sample Time	00:00	00:00	00:00	00:00	00:00
			Date Received	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
			SDG Ref	190904-21	190904-21	190904-21	190904-21	190904-21
			Lab Sample No.(s)	20642078	20642373	20642320	20642282	20642299
			AGS Reference					
1,3,5-Trichlorobenzene	<1 µg/l	TM208		<1	<1	<1	<1	<1

Table of Results - Appendix

Method No	Reference	Description
TM022	Method 2540D, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part120 1981;BS EN 872	Determination of total suspended solids in waters
TM045	MEWAM BOD5 2nd Ed.HMSO 1988 / Method 5210B, AWWA/APHA, 20th Ed., 1999; SCA Blue Book 130	Determination of BOD5 (ATU) Filtered by Oxygen Meter on liquids
TM046	Method 4500G, AWWA/APHA, 20th Ed., 1999	Measurement of Dissolved Oxygen by Oxygen Meter
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM099	BS 2690: Part 7:1968 / BS 6068: Part2.11:1984	Determination of Ammonium in Water Samples using the Kone Analyser
TM101	Method 4500B & C, AWWA/APHA, 20th Ed., 1999	Determination of Sulphide in soil and water samples using the Kone Analyser
TM104	Method 4500F, AWWA/APHA, 20th Ed., 1999	Determination of Fluoride using the Kone Analyser
TM107	ISO 6060-1989	Determination of Chemical Oxygen Demand using COD Dr Lange Kit
TM110	BS 1377: Part 3 1990	Redox Potential
TM120	Method 2510B, AWWA/APHA, 20th Ed., 1999 / BS 2690: Part 9:1970	Determination of Electrical Conductivity using a Conductivity Meter
TM123	BS 2690: Part 121:1981	The Determination of Total Dissolved Solids in Water
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM176	EPA 8270D Semi-Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	Determination of SVOCs in Water by GCMS
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM195	Colour and Turbidity of water. Methods for the Examination of Waters and Associated Materials. HMSO, 1981, ISBN 0 11 751955 3.	Determination of Turbidity in Waters & Associated Matrices
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM228	US EPA Method 6010B	Determination of Major Cations in Water by iCap 6500 Duo ICP-OES
TM241	Methods for the Examination of Waters and Associated Materials; Chromium in Raw and Potable Waters and Sewage Effluents 1980.	The Determination of Hexavalent Chromium in Waters and Leachates using the Kone Analyser
TM245	By GC-FID	Determination of GRO by Headspace in waters
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4.	Determination of pH in Water and Leachate using the GLpH pH Meter
TM259	by HPLC	Determination of Phenols in Waters and Leachates by HPLC

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	190904-21	**Client Reference:**		**Report Number:**	522080
Location:	Llanwern	**Order Number:**	LLA661	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	20642023	20642396	20642407	20642267	20642231	20642244	20642034	20642012	20642418	20642256
Customer Sample Ref.	D0-C	D1-C	D2-C	D1-N	D2-N	D3-N	D0-N/R1-W	D1-S	D2-S	D3-S
AGS Ref.										
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Ammoniacal Nitrogen	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019
Anions by Kone (w)	13-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	13-Sep-2019	13-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019
BOD True Total	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	11-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019
COD Unfiltered	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019
Conductivity (at 20 deg.C)	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019
Cyanide Comp/Free/Total/Thiocyanate	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019
Dissolved Metals by ICP-MS	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019
Dissolved Organic/Inorganic Carbon	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019
Dissolved Oxygen by Probe	04-Sep-2019	04-Sep-2019	04-Sep-2019	04-Sep-2019	04-Sep-2019	04-Sep-2019	04-Sep-2019	04-Sep-2019	04-Sep-2019	04-Sep-2019
EPH CWG (Aliphatic) Aqueous GC (W)	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019
EPH CWG (Aromatic) Aqueous GC (W)	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019
Fluoride	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019
GRO by GC-FID (W)	13-Sep-2019	12-Sep-2019	13-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	13-Sep-2019	13-Sep-2019	12-Sep-2019
Hexavalent Chromium (w)	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019
Mercury Dissolved	06-Sep-2019	06-Sep-2019	06-Sep-2019	06-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019	06-Sep-2019	09-Sep-2019	09-Sep-2019
Mercury Unfiltered	06-Sep-2019	06-Sep-2019	06-Sep-2019	06-Sep-2019	06-Sep-2019	06-Sep-2019	06-Sep-2019	06-Sep-2019	09-Sep-2019	06-Sep-2019
PAH in waters by GC-MS (diss.filt)	15-Sep-2019	15-Sep-2019	15-Sep-2019	15-Sep-2019	15-Sep-2019	15-Sep-2019	15-Sep-2019	15-Sep-2019	15-Sep-2019	15-Sep-2019
PAH Spec MS - Aqueous (W)	13-Sep-2019	13-Sep-2019	13-Sep-2019	16-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	16-Sep-2019	17-Sep-2019	13-Sep-2019
pH Value	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019
Phenols by HPLC (W)	09-Sep-2019	16-Sep-2019	09-Sep-2019	16-Sep-2019	14-Sep-2019	16-Sep-2019	14-Sep-2019	16-Sep-2019	09-Sep-2019	09-Sep-2019
Phosphate by Kone (w)	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019
Redox Potential	12-Sep-2019	06-Sep-2019	10-Sep-2019	10-Sep-2019	06-Sep-2019	10-Sep-2019	12-Sep-2019	10-Sep-2019	06-Sep-2019	12-Sep-2019
Sulphide	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019
Sulphur Dissolved by ICP-OES	09-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019
Suspended Solids	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	05-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019
SVOC MS (W) - Aqueous	18-Sep-2019	19-Sep-2019	18-Sep-2019	19-Sep-2019	19-Sep-2019	19-Sep-2019	18-Sep-2019	18-Sep-2019	19-Sep-2019	19-Sep-2019
Total Dissolved Solids	11-Sep-2019	10-Sep-2019	11-Sep-2019	11-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	11-Sep-2019
Total Metals by ICP-MS	14-Sep-2019	14-Sep-2019	14-Sep-2019	14-Sep-2019	14-Sep-2019	14-Sep-2019	14-Sep-2019	14-Sep-2019	14-Sep-2019	14-Sep-2019
Total Organic and Inorganic Carbon	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019
TPH CWG (W)	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019
Turbidity in waters	05-Sep-2019	05-Sep-2019	04-Sep-2019	05-Sep-2019	04-Sep-2019	05-Sep-2019	05-Sep-2019	04-Sep-2019	05-Sep-2019	04-Sep-2019
VOC MS (W)	12-Sep-2019	13-Sep-2019	12-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	12-Sep-2019	12-Sep-2019	13-Sep-2019

Validated

CERTIFICATE OF ANALYSIS

SDG: 190904-21 **Client Reference:** **Report Number:** 522080
Location: Llanwern **Order Number:** LLA661 **Superseded Report:**

Lab Sample No(s)	20642001	20642161	20642045	20642172	20642122	20642067	20642362	20642056	20642201	20642101
Customer Sample Ref.	KW-C	KW-N	R1-C	R2-C	R3-C	R4-C	R5-C	R1-E	R2-E	R3-E
AGS Ref.										
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Ammoniacal Nitrogen	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019
Anions by Kone (w)	13-Sep-2019	13-Sep-2019	13-Sep-2019	12-Sep-2019	12-Sep-2019	13-Sep-2019	13-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019
BOD True Total	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	09-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019
COD Unfiltered	10-Sep-2019	11-Sep-2019	10-Sep-2019	10-Sep-2019	05-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	05-Sep-2019	05-Sep-2019
Conductivity (at 20 deg.C)	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019
Cyanide Comp/Free/Total/Thiocyanate	05-Sep-2019	06-Sep-2019	05-Sep-2019	06-Sep-2019	05-Sep-2019	05-Sep-2019	06-Sep-2019	05-Sep-2019	05-Sep-2019	06-Sep-2019
Dissolved Metals by ICP-MS	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019
Dissolved Organic/Inorganic Carbon	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019
Dissolved Oxygen by Probe	04-Sep-2019	04-Sep-2019	04-Sep-2019	04-Sep-2019	04-Sep-2019	04-Sep-2019	04-Sep-2019	04-Sep-2019	04-Sep-2019	04-Sep-2019
EPH CWG (Aliphatic) Aqueous GC (W)	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	17-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019
EPH CWG (Aromatic) Aqueous GC (W)	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	17-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019
Fluoride	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019
GRO by GC-FID (W)	12-Sep-2019	13-Sep-2019	13-Sep-2019	12-Sep-2019	17-Sep-2019	12-Sep-2019	12-Sep-2019	13-Sep-2019	16-Sep-2019	12-Sep-2019
Hexavalent Chromium (w)	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019
Mercury Dissolved	06-Sep-2019	06-Sep-2019	06-Sep-2019	06-Sep-2019	09-Sep-2019	06-Sep-2019	09-Sep-2019	06-Sep-2019	09-Sep-2019	09-Sep-2019
Mercury Unfiltered	06-Sep-2019	09-Sep-2019	06-Sep-2019	09-Sep-2019	06-Sep-2019	06-Sep-2019	09-Sep-2019	06-Sep-2019	09-Sep-2019	06-Sep-2019
PAH in waters by GC-MS (diss.filt)	15-Sep-2019	15-Sep-2019	15-Sep-2019	15-Sep-2019	15-Sep-2019	15-Sep-2019	15-Sep-2019	15-Sep-2019	15-Sep-2019	15-Sep-2019
PAH Spec MS - Aqueous (W)	17-Sep-2019	16-Sep-2019	13-Sep-2019	13-Sep-2019	16-Sep-2019	13-Sep-2019	17-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019
pH Value	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	12-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019
Phenols by HPLC (W)	09-Sep-2019	09-Sep-2019	14-Sep-2019	14-Sep-2019	09-Sep-2019	09-Sep-2019	14-Sep-2019	13-Sep-2019	09-Sep-2019	16-Sep-2019
Phosphate by Kone (w)	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019
Redox Potential	12-Sep-2019	06-Sep-2019	10-Sep-2019	06-Sep-2019	10-Sep-2019	12-Sep-2019	06-Sep-2019	06-Sep-2019	10-Sep-2019	10-Sep-2019
Sulphide	09-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019
Sulphur Dissolved by ICP-OES	09-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019
Suspended Solids	13-Sep-2019	13-Sep-2019	12-Sep-2019	13-Sep-2019	05-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	12-Sep-2019	05-Sep-2019
SVOC MS (W) - Aqueous	18-Sep-2019	19-Sep-2019	19-Sep-2019	18-Sep-2019	19-Sep-2019	18-Sep-2019	19-Sep-2019	19-Sep-2019	19-Sep-2019	18-Sep-2019
Total Dissolved Solids	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	10-Sep-2019	10-Sep-2019	11-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019
Total Metals by ICP-MS	14-Sep-2019	14-Sep-2019	14-Sep-2019	14-Sep-2019	14-Sep-2019	14-Sep-2019	14-Sep-2019	14-Sep-2019	14-Sep-2019	14-Sep-2019
Total Organic and Inorganic Carbon	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	06-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	06-Sep-2019
TPH CWG (W)	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	17-Sep-2019	16-Sep-2019	17-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019
Turbidity in waters	04-Sep-2019	04-Sep-2019	05-Sep-2019	05-Sep-2019	04-Sep-2019	05-Sep-2019	04-Sep-2019	05-Sep-2019	04-Sep-2019	04-Sep-2019
VOC MS (W)	13-Sep-2019	12-Sep-2019	12-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	12-Sep-2019	13-Sep-2019	13-Sep-2019

Lab Sample No(s)	20642385	20642348	20642140	20642213	20642078	20642373	20642320	20642282	20642299
Customer Sample Ref.	R4-E	R5-E	R2-W	R3-W	R4-W	R5-W	SL-N	SL-S	SL-W
AGS Ref.									
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Ammoniacal Nitrogen	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019
Anions by Kone (w)	13-Sep-2019	13-Sep-2019	12-Sep-2019	12-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019
BOD True Total	11-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019
COD Unfiltered	10-Sep-2019	11-Sep-2019	10-Sep-2019	05-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019	10-Sep-2019
Conductivity (at 20 deg.C)	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019
Cyanide Comp/Free/Total/Thiocyanate	05-Sep-2019	06-Sep-2019	06-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019
Dissolved Metals by ICP-MS	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019
Dissolved Organic/Inorganic Carbon	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019
Dissolved Oxygen by Probe	04-Sep-2019	04-Sep-2019	04-Sep-2019	04-Sep-2019	04-Sep-2019	04-Sep-2019	04-Sep-2019	04-Sep-2019	04-Sep-2019
EPH CWG (Aliphatic) Aqueous GC (W)	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	11-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019
EPH CWG (Aromatic) Aqueous GC (W)	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	11-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019
Fluoride	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019
GRO by GC-FID (W)	12-Sep-2019	12-Sep-2019	12-Sep-2019	16-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019	12-Sep-2019
Hexavalent Chromium (w)	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019
Mercury Dissolved	06-Sep-2019	06-Sep-2019	09-Sep-2019	09-Sep-2019	06-Sep-2019	06-Sep-2019	06-Sep-2019	06-Sep-2019	06-Sep-2019
Mercury Unfiltered	06-Sep-2019	09-Sep-2019	06-Sep-2019	06-Sep-2019	06-Sep-2019	06-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019
PAH in waters by GC-MS (diss.filt)	15-Sep-2019	15-Sep-2019	15-Sep-2019	15-Sep-2019	15-Sep-2019	15-Sep-2019	15-Sep-2019	15-Sep-2019	15-Sep-2019
PAH Spec MS - Aqueous (W)	16-Sep-2019	13-Sep-2019	13-Sep-2019	16-Sep-2019	11-Sep-2019	13-Sep-2019	16-Sep-2019	13-Sep-2019	13-Sep-2019
pH Value	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	12-Sep-2019	13-Sep-2019	13-Sep-2019
Phenols by HPLC (W)	09-Sep-2019	14-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	09-Sep-2019
Phosphate by Kone (w)	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019
Redox Potential	12-Sep-2019	06-Sep-2019	06-Sep-2019	10-Sep-2019	06-Sep-2019	10-Sep-2019	12-Sep-2019	06-Sep-2019	06-Sep-2019
Sulphide	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019	11-Sep-2019
Sulphur Dissolved by ICP-OES	09-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019	09-Sep-2019
Suspended Solids	12-Sep-2019	13-Sep-2019	12-Sep-2019	13-Sep-2019	12-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	12-Sep-2019
SVOC MS (W) - Aqueous	19-Sep-2019	18-Sep-2019	19-Sep-2019	19-Sep-2019	19-Sep-2019	19-Sep-2019	19-Sep-2019	18-Sep-2019	19-Sep-2019
Total Dissolved Solids	11-Sep-2019	10-Sep-2019	11-Sep-2019	10-Sep-2019	11-Sep-2019	11-Sep-2019	10-Sep-2019	10-Sep-2019	11-Sep-2019
Total Metals by ICP-MS	14-Sep-2019	14-Sep-2019	14-Sep-2019	14-Sep-2019	14-Sep-2019	14-Sep-2019	14-Sep-2019	14-Sep-2019	14-Sep-2019
Total Organic and Inorganic Carbon	06-Sep-2019	05-Sep-2019	05-Sep-2019	05-Sep-2019	06-Sep-2019	06-Sep-2019	06-Sep-2019	06-Sep-2019	06-Sep-2019
TPH CWG (W)	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	12-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019	16-Sep-2019
Turbidity in waters	05-Sep-2019	04-Sep-2019	05-Sep-2019	04-Sep-2019	04-Sep-2019	05-Sep-2019	05-Sep-2019	04-Sep-2019	04-Sep-2019
VOC MS (W)	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019	13-Sep-2019

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) 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 30 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 one month 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. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

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. **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.

18. **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**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**

19. **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 (2005), 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

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials 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 (2005).

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, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
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.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2107).*

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.