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Attention: Phil Garvey

CERTIFICATE OF ANALYSIS

Date of report Generation: 09 May 2019
Customer: H_RHASKON_PTB
Sample Delivery Group (SDG): 190418-87
Your Reference: Cole Green Supplementary Investigation - Burnside
Location: Cole Green
Report No: 504352

This report has been revised and directly supersedes 504295 in its entirety.

We received 22 samples on Thursday April 18, 2019 and 11 of these samples were scheduled for analysis which was completed on Wednesday May 01, 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 Environmental Hawarden (Method codes TM) or ALS Environmental 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

Validated

SDG: 190418-87 Client Reference: Cole Green Suppleme Report Number: 504352
 Location: Cole Green Order Number: 9Y0074-107-100 Superseded Report: 504295

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
19920030	RH-BH-25-ES-03		1.60	15/04/2019
19824242	RH-BH-26-ES-04		0.00 - 2.50	15/04/2019
19824243	RH-BH-26-ES-05		0.00 - 3.50	15/04/2019
19824244	RH-BH-26-ES-06		0.00 - 4.50	15/04/2019
19920026	RH-BH-24-ES-101		0.30	15/04/2019
19816177	RH-BH-24-ES-102		0.60	15/04/2019
19831198	RH-BH-24-ES-103		1.00	15/04/2019
19920032	RH-BH-24-ES-104		1.60	15/04/2019
19831200	RH-BH-24-ES-105		2.60	15/04/2019
19831206	RH-BH-24-ES-106		3.60	15/04/2019
19816193	RH-BH-24-ES107		5.60	15/04/2019
19831207	RH-BH-24-ES-107		4.60	15/04/2019
19831208	RH-BH-24-ES-108		5.60	15/04/2019
19816196	RH-BH-24-ES201			15/04/2019
19920025	RH-BH-25-ES-101		0.30	15/04/2019
19816178	RH-BH-25-ES-102		0.80	15/04/2019
19816185	RH-BH-25-ES-104		2.60	15/04/2019
19816187	RH-BH-25-ES-105		3.60	15/04/2019
19816189	RH-BH-25-ES-106		4.60	15/04/2019
19920029	RH-BH-26-ES-101		0.50	15/04/2019
19920028	RH-BH-26-ES-102		1.00	15/04/2019
19920033	RH-BH-26-ES-103		1.50	15/04/2019

Maximum Sample/Coolbox Temperature (°C) : 9.6

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.



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Validated

SDG:	190418-87	Client Reference: Cole Green Suppleme	Report Number: 504352
Location:	Cole Green	Order Number: 9Y0074-107-100	Superseded Report: 504295

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)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type															
						19816185	19816178	19920025	19920032	19831198	19920030	19920026	19816177	19831198	19920032	19920025				
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Boron Water Soluble	All	NDPs: 0 Tests: 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Chromium III	All	NDPs: 0 Tests: 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
EPH	All	NDPs: 0 Tests: 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
EPH by FID	All	NDPs: 0 Tests: 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Metals in solid samples by OES	All	NDPs: 0 Tests: 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PAH by GCMS	All	NDPs: 0 Tests: 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PCBs by GCMS	All	NDPs: 0 Tests: 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
pH	All	NDPs: 0 Tests: 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sample description	All	NDPs: 0 Tests: 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

19920033	RH-BH-26-ES-103		1.50	60g VOC (ALE215)	S			X
				250g Amber Jar (ALE210)	S	X		
				1kg TUB	S			
19920028	RH-BH-26-ES-102		1.00	60g VOC (ALE215)	S			X
				250g Amber Jar (ALE210)	S	X		
				1kg TUB	S			
19920029	RH-BH-26-ES-101		0.50	60g VOC (ALE215)	S			X
				250g Amber Jar (ALE210)	S	X		
				1kg TUB	S			
19816185	RH-BH-25-ES-104		2.60	60g VOC (ALE215)	S			X



CERTIFICATE OF ANALYSIS

Validated

SDG: 190418-87 Client Reference: Cole Green Suppleme Report Number: 504352
 Location: Cole Green Order Number: 9Y0074-107-100 Superseded Report: 504295

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
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Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
19920030	RH-BH-25-ES-03	1.60	Dark Brown	Sandy Clay	Stones	None
19816177	RH-BH-24-ES-102	0.60	Dark Brown	Sandy Clay Loam	Stones	Vegetation
19831198	RH-BH-24-ES-103	1.00	Dark Brown	Silty Clay Loam	Stones	Vegetation
19920032	RH-BH-24-ES-104	1.60	Dark Brown	Sandy Clay Loam	Stones	Vegetation
19920025	RH-BH-25-ES-101	0.30	Dark Brown	Sandy Loam	Stones	Vegetation
19816178	RH-BH-25-ES-102	0.80	Dark Brown	Silty Clay Loam	Stones	Vegetation
19816185	RH-BH-25-ES-104	2.60	Dark Brown	Sandy Clay Loam	Stones	Vegetation
19920029	RH-BH-26-ES-101	0.50	Dark Brown	Silt Loam	Stones	Vegetation
19920028	RH-BH-26-ES-102	1.00	Dark Brown	Sandy Clay Loam	Stones	Vegetation
19920033	RH-BH-26-ES-103	1.50	Dark Brown	Loamy Sand	Stones	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

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 materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.



CERTIFICATE OF ANALYSIS

Validated

SDG:	190418-87	Client Reference: Cole Green Suppleme	Report Number: 504352
Location:	Cole Green	Order Number: 9Y0074-107-100	Superseded Report: 504295

Results Legend			Customer Sample Ref.	RH-BH-25-ES-03	RH-BH-24-ES-102	RH-BH-24-ES-103	RH-BH-24-ES-104	RH-BH-25-ES-101	RH-BH-25-ES-102
# 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 1-3a5@ Sample deviation (see appendix)	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		1.60 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920030	0.60 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19816177	1.00 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19831198	1.60 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920032	0.30 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920025	0.80 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19816178	
Component	LOD/Units	Method							
Moisture Content Ratio (% of as received sample)	%	PM024	12	12	8.8	12	11	12	
EPH (C5-C40)	<35 mg/kg	TM061	113	<35	<35	357	64.5	<35	
EPH Range >C10 - C40	<35 mg/kg	TM061	113 @	<35 @	<35 @	356 @	64.5 @	<35 @	
Phenol	<0.01 mg/kg	TM062 (S)	<0.01 @	<0.01 @	<0.01 @	<0.01 @	<0.01 @	<0.01 @	
Cresols	<0.01 mg/kg	TM062 (S)	<0.01 @	<0.01 @	<0.01 @	0.0114 @	<0.01 @	<0.01 @	
Xylenols	<0.015 mg/kg	TM062 (S)	<0.015 @	<0.015 @	<0.015 @	<0.015 @	<0.015 @	<0.015 @	
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)	<0.035 @	<0.035 @	<0.035 @	<0.035 @	<0.035 @	<0.035 @	
Soil Organic Matter (SOM)	<0.35 %	TM132	1.14	1.05	0.531	0.567	2.03	0.834	
pH	1 pH Units	TM133	8.33	7.78	8.21	8.21	7.06	7.63	
CR6	<0.06 mg/l	TM151		<0.06					
Hexavalent Chromium	<0.6 mg/kg	TM151		<0.6					
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	
Cyanide, Total	<1 mg/kg	TM153	<1	<1	<1	<1	<1	<1	
PCB congener 118	<3 µg/kg	TM168	<3	<3	<3	<3	<3	<3	
PCB congener 81	<3 µg/kg	TM168	<3	<3	<3	<3	<3	<3	
PCB congener 77	<3 µg/kg	TM168	<3	<3	<3	<3	<3	<3	
PCB congener 123	<3 µg/kg	TM168	<3	<3	<3	<3	<3	<3	
PCB congener 114	<3 µg/kg	TM168	<3	<3	<3	<3	<3	<3	
PCB congener 105	<3 µg/kg	TM168	<3	<3	<3	<3	<3	<3	
PCB congener 126	<3 µg/kg	TM168	<3	<3	<3	<3	<3	<3	
PCB congener 167	<3 µg/kg	TM168	<3	<3	<3	<3	<3	<3	
PCB congener 156	<3 µg/kg	TM168	<3	<3	<3	<3	<3	<3	
PCB congener 157	<3 µg/kg	TM168	<3	<3	<3	<3	<3	<3	
PCB congener 169	<3 µg/kg	TM168	<3	<3	<3	<3	<3	<3	
PCB congener 189	<3 µg/kg	TM168	<3	<3	<3	<3	<3	<3	
Sum of detected WHO 12 PCBs	<36 µg/kg	TM168	<36	<36	<36	<36	<36	<36	
Chromium, Trivalent	<0.9 mg/kg	TM181	18.7	14.3	19.4	19.9	19	25.5	
Arsenic	<0.6 mg/kg	TM181	9.21	10.2	9.91	22.1	9.55	10.3	
Barium	<0.6 mg/kg	TM181	101	79.5	60.5	116	95.3	117	
Beryllium	<0.01 mg/kg	TM181	0.696	0.556	0.548	0.716	0.549	0.874	
Cadmium	<0.02 mg/kg	TM181	0.258	0.251	0.149	0.221	0.635	0.231	
Chromium	<0.9 mg/kg	TM181	18.7	14.3	19.4	19.9	19	25.5	



CERTIFICATE OF ANALYSIS

Validated

SDG: 190418-87	Client Reference: Cole Green Suppleme	Report Number: 504352	
Location: Cole Green	Order Number: 9Y0074-107-100	Superseded Report: 504295	

Results Legend			Customer Sample Ref.	RH-BH-25-ES-03	RH-BH-24-ES-102	RH-BH-24-ES-103	RH-BH-24-ES-104	RH-BH-25-ES-101	RH-BH-25-ES-102
# 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)			Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	1.60 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920030	0.60 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19816177	1.00 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19831198	1.60 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920032	0.30 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920025	0.80 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19816178
Component	LOD/Units	Method							
Copper	<1.4 mg/kg	TM181	19	13.5	13	18.7	36.6	20.4	
Lead	<0.7 mg/kg	TM181	34.4	30.9	17.4	24.5	48.7	35.5	
Mercury	<0.14 mg/kg	TM181	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	
Nickel	<0.2 mg/kg	TM181	21.1	16.7	17	29.5	17.7	32.4	
Selenium	<1 mg/kg	TM181	1.32	1.04	<1	<1	1.02	1.18	
Vanadium	<0.2 mg/kg	TM181	36.7	31.1	33.1	49.2	33.4	46.8	
Zinc	<1.9 mg/kg	TM181	77.2	44.9	41.7	71.5	81.2	81.3	
Boron, water soluble	<1 mg/kg	TM222	<1	<1	<1	1.16	<1	<1	



CERTIFICATE OF ANALYSIS

Validated

SDG:	190418-87	Client Reference: Cole Green Supplement	Report Number: 504352
Location:	Cole Green	Order Number: 9Y0074-107-100	Superseded Report: 504295

Results Legend		Customer Sample Ref.	RH-BH-25-ES-104	RH-BH-26-ES-101	RH-BH-26-ES-102	RH-BH-26-ES-103		
# 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*5@ Sample deviation (see appendix)		Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	2.60 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19816185	0.50 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920029	1.00 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920028	1.50 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920033		
Component	LOD/Units	Method						
Moisture Content Ratio (% of as received sample)	%	PM024	14	11	6.5	7		
EPH (C5-C40)	<35 mg/kg	TM061	96.4	79.5	<35	<35		
EPH Range >C10 - C40	<35 mg/kg	TM061	96.3 @	79.5 @	<35 @	<35 @		
Phenol	<0.01 mg/kg	TM062 (S)	<0.01 @	<0.01 @	<0.01 @	<0.01 @		
Cresols	<0.01 mg/kg	TM062 (S)	<0.01 @	<0.01 @	<0.01 @	<0.01 @		
Xylenols	<0.015 mg/kg	TM062 (S)	<0.015 @	<0.015 @	<0.015 @	<0.015 @		
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)	<0.035 @	<0.035 @	<0.035 @	<0.035 @		
Soil Organic Matter (SOM)	<0.35 %	TM132	1.32	1.37	<0.35	<0.35		
pH	1 pH Units	TM133	7.7	7.59	8.32	8.44		
CR6	<0.06 mg/l	TM151		<0.06		<0.06		
Hexavalent Chromium	<0.6 mg/kg	TM151		<0.6		<0.6		
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6	<0.6	<0.6	<0.6		
Cyanide, Total	<1 mg/kg	TM153	<1	<1	<1	<1		
PCB congener 118	<3 µg/kg	TM168	<3	<3	<3	<3		
PCB congener 81	<3 µg/kg	TM168	<3	<3	<3	<3		
PCB congener 77	<3 µg/kg	TM168	<3	<3	<3	<3		
PCB congener 123	<3 µg/kg	TM168	<3	<3	<3	<3		
PCB congener 114	<3 µg/kg	TM168	<3	<3	<3	<3		
PCB congener 105	<3 µg/kg	TM168	<3	<3	<3	<3		
PCB congener 126	<3 µg/kg	TM168	<3	<3	<3	<3		
PCB congener 167	<3 µg/kg	TM168	<3	<3	<3	<3		
PCB congener 156	<3 µg/kg	TM168	<3	<3	<3	<3		
PCB congener 157	<3 µg/kg	TM168	<3	<3	<3	<3		
PCB congener 169	<3 µg/kg	TM168	<3	<3	<3	<3		
PCB congener 189	<3 µg/kg	TM168	<3	<3	<3	<3		
Sum of detected WHO 12 PCBs	<36 µg/kg	TM168	<36	<36	<36	<36		
Chromium, Trivalent	<0.9 mg/kg	TM181	14.5	21.2	7.93	12.4		
Arsenic	<0.6 mg/kg	TM181	11.5	9.8	10.1	13.9		
Barium	<0.6 mg/kg	TM181	122	81.9	24.9	27.8		
Beryllium	<0.01 mg/kg	TM181	0.595	0.396	0.313	0.459		
Cadmium	<0.02 mg/kg	TM181	1.74	0.912	0.114	0.146		
Chromium	<0.9 mg/kg	TM181	14.5	21.2	7.93	12.4		



CERTIFICATE OF ANALYSIS

Validated

SDG: 190418-87
Location: Cole Green

Client Reference: Cole Green Suppleme
Order Number: 9Y0074-107-100

Report Number: 504352
Superseded Report: 504295

GRO by GC-FID (S)

Table with columns: Results Legend, Customer Sample Ref., RH-BH-25-ES-03, RH-BH-24-ES-101, RH-BH-24-ES-102, RH-BH-24-ES-103, RH-BH-24-ES-104, RH-BH-25-ES-102, Component, LOD/Units, Method. Row 1: GRO >C5-C10, <20 µg/kg, TM089, <20, <20, <20, <20, 185, <20.



CERTIFICATE OF ANALYSIS

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SDG: 190418-87 Client Reference: Cole Green Suppleme Report Number: 504352
 Location: Cole Green Order Number: 9Y0074-107-100 Superseded Report: 504295

PAH by GCMS

Results Legend			Customer Sample Ref.	RH-BH-25-ES-03	RH-BH-24-ES-102	RH-BH-24-ES-103	RH-BH-24-ES-104	RH-BH-25-ES-101	RH-BH-25-ES-102
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	1.60	0.60	1.00	1.60	0.30	0.80
M	mCERTS accredited.			Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)
aq	Aqueous / settled sample.		15/04/2019	15/04/2019	15/04/2019	15/04/2019	15/04/2019	15/04/2019	15/04/2019
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		18/04/2019	18/04/2019	18/04/2019	18/04/2019	18/04/2019	18/04/2019	18/04/2019
(F)	Trigger breach confirmed		190418-87	190418-87	190418-87	190418-87	190418-87	190418-87	190418-87
1-3*5@	Sample deviation (see appendix)		19920030	19816177	19831198	19920032	19920032	19920025	19816178
Component	LOD/Units	Method							
Naphthalene-d8 % recovery**	%	TM218	91.9	92.4	92.5	91.9	93.8	91.9	
Acenaphthene-d10 % recovery**	%	TM218	86.8	85.8	84.9	88.9	87.8	83.8	
Phenanthrene-d10 % recovery**	%	TM218	93.6	92.3	89.9	94	95.9	89.8	
Chrysene-d12 % recovery**	%	TM218	91.1	87.5	86.1	92.9	91.2	86.4	
Perylene-d12 % recovery**	%	TM218	96.2	90.8	90.7	96.1	96.2	91.5	
Naphthalene	<9 µg/kg	TM218	<9	<9	<9	647	<9	<9	
Acenaphthylene	<12 µg/kg	TM218	20.4	<12	<12	<60	<12	<12	
Acenaphthene	<8 µg/kg	TM218	<8	<8	<8	943	<8	<8	
Fluorene	<10 µg/kg	TM218	<10	<10	<10	1010	<10	<10	
Phenanthrene	<15 µg/kg	TM218	71.1	39.3	34.8	5370	63.1	28.9	
Anthracene	<16 µg/kg	TM218	27.3	<16	<16	1860	<16	<16	
Fluoranthene	<17 µg/kg	TM218	306	148	113	5520	191	82.7	
Pyrene	<15 µg/kg	TM218	311	138	105	4410	164	73	
Benz(a)anthracene	<14 µg/kg	TM218	257	94.2	69.8	2010	99.1	45.3	
Chrysene	<10 µg/kg	TM218	203	102	73.4	1550	101	46.9	
Benzo(b)fluoranthene	<15 µg/kg	TM218	483	153	122	1990	157	80	
Benzo(k)fluoranthene	<14 µg/kg	TM218	165	57.1	44.3	727	55.1	29.1	
Benzo(a)pyrene	<15 µg/kg	TM218	342	112	87.8	1650	108	54.6	
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218	203	61	58.7	800	53.8	35	
Dibenzo(a,h)anthracene	<23 µg/kg	TM218	48.8	<23	<23	183	<23	<23	
Benzo(g,h,i)perylene	<24 µg/kg	TM218	280	76.3	79.8	1040	80.9	50.2	
PAH, Total Detected USEPA 16	<118 µg/kg	TM218	2720	980	788	29700	1070	526	



CERTIFICATE OF ANALYSIS

Validated

SDG:	190418-87	Client Reference: Cole Green Supplement	Report Number: 504352
Location:	Cole Green	Order Number: 9Y0074-107-100	Superseded Report: 504295

PAH by GCMS

	Results Legend	Customer Sample Ref.	RH-BH-25-ES-104	RH-BH-26-ES-101	RH-BH-26-ES-102	RH-BH-26-ES-103		
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	2.60	0.50	1.00	1.50		
M	mCERTS accredited.		Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)		
aq	Aqueous / settled sample.		15/04/2019	15/04/2019	15/04/2019	15/04/2019		
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted - refer to subcontractor report for accreditation status.		18/04/2019	18/04/2019	18/04/2019	18/04/2019		
**	% 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		190418-87	190418-87	190418-87	190418-87		
(F)	Trigger breach confirmed	19816185	19920029	19920028	19920033			
1-3*5@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
Naphthalene-d8 % recovery**	%	TM218	91.1	93.1	93.7	92		
Acenaphthene-d10 % recovery**	%	TM218	86.9	82	86.4	86.4		
Phenanthrene-d10 % recovery**	%	TM218	95.1	91.5	92.1	90.3		
Chrysene-d12 % recovery**	%	TM218	92.6	88.5	87.3	84.7		
Perylene-d12 % recovery**	%	TM218	98.9	94.7	90.7	87.9		
Naphthalene	<9 µg/kg	TM218	11.1	<9	<9	<9		
Acenaphthylene	<12 µg/kg	TM218	47.3	<12	<12	<12		
Acenaphthene	<8 µg/kg	TM218	34.1	<8	<8	<8		
Fluorene	<10 µg/kg	TM218	33.2	<10	<10	<10		
Phenanthrene	<15 µg/kg	TM218	255	66.6	<15	<15		
Anthracene	<16 µg/kg	TM218	86.7	<16	<16	<16		
Fluoranthene	<17 µg/kg	TM218	821	168	<17	<17		
Pyrene	<15 µg/kg	TM218	729	141	<15	<15		
Benz(a)anthracene	<14 µg/kg	TM218	460	86.5	<14	<14		
Chrysene	<10 µg/kg	TM218	435	88.4	<10	<10		
Benzo(b)fluoranthene	<15 µg/kg	TM218	750	133	<15	<15		
Benzo(k)fluoranthene	<14 µg/kg	TM218	248	49	<14	<14		
Benzo(a)pyrene	<15 µg/kg	TM218	581	91.7	<15	<15		
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218	294	52.5	<18	<18		
Dibenzo(a,h)anthracene	<23 µg/kg	TM218	83.6	<23	<23	<23		
Benzo(g,h,i)perylene	<24 µg/kg	TM218	410	79.6	<24	<24		
PAH, Total Detected USEPA 16	<118 µg/kg	TM218	5280	957	<118	<118		



CERTIFICATE OF ANALYSIS

Validated

SDG:	190418-87	Client Reference:	Cole Green Supplement	Report Number:	504352
Location:	Cole Green	Order Number:	9Y0074-107-100	Superseded Report:	504295

Semi Volatile Organic Compounds

Results Legend			Customer Sample Ref.	RH-BH-25-ES-03	RH-BH-24-ES-102	RH-BH-24-ES-103	RH-BH-24-ES-104	RH-BH-25-ES-101	RH-BH-25-ES-102
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. Total / unfiltered sample. tot.unfilt * 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*5@ Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	1.60 Unspecified Solid (UNS) 15/04/2019	0.60 Unspecified Solid (UNS) 15/04/2019	1.00 Unspecified Solid (UNS) 15/04/2019	1.60 Unspecified Solid (UNS) 15/04/2019	0.30 Unspecified Solid (UNS) 15/04/2019	0.80 Unspecified Solid (UNS) 15/04/2019
Component	LOD/Units	Method							
Phenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
Pentachlorophenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
Nitrobenzene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
Isophorone	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
Hexachloroethane	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
Hexachlorocyclopentadiene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
Hexachlorobutadiene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
Hexachlorobenzene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
n-Dioctyl phthalate	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
Dimethyl phthalate	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
Diethyl phthalate	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
n-Dibutyl phthalate	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
Dibenzofuran	<100 µg/kg	TM157	<100	<100	<100	170	<100	<100	<100
Carbazole	<100 µg/kg	TM157	<100	<100	<100	141	<100	<100	<100
Butylbenzyl phthalate	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
bis(2-Chloroethyl)ether	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
Azobenzene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
4-Nitrophenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
4-Nitroaniline	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
4-Methylphenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
4-Chlorophenylphenylether	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
4-Chloroaniline	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
4-Chloro-3-methylphenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
4-Bromophenylphenylether	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
3-Nitroaniline	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
2-Nitrophenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
2-Nitroaniline	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
2-Methylphenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
1,2,4-Trichlorobenzene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100



CERTIFICATE OF ANALYSIS

Validated

SDG:	190418-87	Client Reference: Cole Green Suppleme	Report Number: 504352
Location:	Cole Green	Order Number: 9Y0074-107-100	Superseded Report: 504295

Semi Volatile Organic Compounds

Results Legend			Customer Sample Ref.	RH-BH-25-ES-03	RH-BH-24-ES-102	RH-BH-24-ES-103	RH-BH-24-ES-104	RH-BH-25-ES-101	RH-BH-25-ES-102
# 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*5@ Sample deviation (see appendix)	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		1.60 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920030	0.60 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19816177	1.00 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19831198	1.60 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920032	0.30 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920025	0.80 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19816178	
Component	LOD/Units	Method							
2-Chlorophenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
2,6-Dinitrotoluene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
2,4-Dinitrotoluene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
2,4-Dimethylphenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
2,4-Dichlorophenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
2,4,6-Trichlorophenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
2,4,5-Trichlorophenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
1,4-Dichlorobenzene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
1,3-Dichlorobenzene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
1,2-Dichlorobenzene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
2-Chloronaphthalene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
2-Methylnaphthalene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
Acenaphthylene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
Acenaphthene	<100 µg/kg	TM157	<100	<100	<100	<100	353	<100	<100
Anthracene	<100 µg/kg	TM157	<100	<100	<100	<100	709	<100	<100
Benzo(a)anthracene	<100 µg/kg	TM157	<100	<100	<100	<100	1320	<100	<100
Benzo(b)fluoranthene	<100 µg/kg	TM157	<100	<100	<100	<100	1320	120	<100
Benzo(k)fluoranthene	<100 µg/kg	TM157	<100	<100	<100	<100	576	<100	<100
Benzo(a)pyrene	<100 µg/kg	TM157	<100	<100	<100	<100	1060	<100	<100
Benzo(g,h,i)perylene	<100 µg/kg	TM157	<100	<100	<100	<100	638	<100	<100
Chrysene	<100 µg/kg	TM157	<100	<100	<100	<100	975	<100	<100
Fluoranthene	<100 µg/kg	TM157	<100	<100	<100	<100	3060	172	<100
Fluorene	<100 µg/kg	TM157	<100	<100	<100	<100	348	<100	<100
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157	<100	<100	<100	<100	1450	179	<100
Phenanthrene	<100 µg/kg	TM157	<100	<100	<100	<100	2310	<100	<100
Pyrene	<100 µg/kg	TM157	<100	<100	<100	<100	2780	176	<100
Naphthalene	<100 µg/kg	TM157	<100	<100	<100	<100	118	<100	<100
Dibenzo(a,h)anthracene	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157	<100	<100	<100	<100	<100	<100	<100



CERTIFICATE OF ANALYSIS

Validated

SDG:	190418-87	Client Reference:	Cole Green Supplement	Report Number:	504352
Location:	Cole Green	Order Number:	9Y0074-107-100	Superseded Report:	504295

Semi Volatile Organic Compounds

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*5@ Sample deviation (see appendix)			Customer Sample Ref.	RH-BH-25-ES-104	RH-BH-26-ES-101	RH-BH-26-ES-102	RH-BH-26-ES-103		
Component	LOD/Units	Method	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	2.60 Unspecified Solid (UNS) 15/04/2019	0.50 Unspecified Solid (UNS) 15/04/2019	1.00 Unspecified Solid (UNS) 15/04/2019	1.50 Unspecified Solid (UNS) 15/04/2019		
Phenol	<100 µg/kg	TM157		<100	<100	<100	<100		
Pentachlorophenol	<100 µg/kg	TM157		<100	<100	<100	<100		
n-Nitroso-n-dipropylamine	<100 µg/kg	TM157		<100	<100	<100	<100		
Nitrobenzene	<100 µg/kg	TM157		<100	<100	<100	<100		
Isophorone	<100 µg/kg	TM157		<100	<100	<100	<100		
Hexachloroethane	<100 µg/kg	TM157		<100	<100	<100	<100		
Hexachlorocyclopentadiene	<100 µg/kg	TM157		<100	<100	<100	<100		
Hexachlorobutadiene	<100 µg/kg	TM157		<100	<100	<100	<100		
Hexachlorobenzene	<100 µg/kg	TM157		<100	<100	<100	<100		
n-Dioctyl phthalate	<100 µg/kg	TM157		<100	<100	<100	<100		
Dimethyl phthalate	<100 µg/kg	TM157		<100	<100	<100	<100		
Diethyl phthalate	<100 µg/kg	TM157		<100	<100	<100	<100		
n-Dibutyl phthalate	<100 µg/kg	TM157		<100	<100	<100	<100		
Dibenzofuran	<100 µg/kg	TM157		<100	<100	<100	<100		
Carbazole	<100 µg/kg	TM157		<100	<100	<100	<100		
Butylbenzyl phthalate	<100 µg/kg	TM157		<100	<100	<100	<100		
bis(2-Ethylhexyl) phthalate	<100 µg/kg	TM157		<100	<100	<100	<100		
bis(2-Chloroethoxy)methane	<100 µg/kg	TM157		<100	<100	<100	<100		
bis(2-Chloroethyl)ether	<100 µg/kg	TM157		<100	<100	<100	<100		
Azobenzene	<100 µg/kg	TM157		<100	<100	<100	<100		
4-Nitrophenol	<100 µg/kg	TM157		<100	<100	<100	<100		
4-Nitroaniline	<100 µg/kg	TM157		<100	<100	<100	<100		
4-Methylphenol	<100 µg/kg	TM157		<100	<100	<100	<100		
4-Chlorophenylphenylether	<100 µg/kg	TM157		<100	<100	<100	<100		
4-Chloroaniline	<100 µg/kg	TM157		<100	<100	<100	<100		
4-Chloro-3-methylphenol	<100 µg/kg	TM157		<100	<100	<100	<100		
4-Bromophenylphenylether	<100 µg/kg	TM157		<100	<100	<100	<100		
3-Nitroaniline	<100 µg/kg	TM157		<100	<100	<100	<100		
2-Nitrophenol	<100 µg/kg	TM157		<100	<100	<100	<100		
2-Nitroaniline	<100 µg/kg	TM157		<100	<100	<100	<100		
2-Methylphenol	<100 µg/kg	TM157		<100	<100	<100	<100		
1,2,4-Trichlorobenzene	<100 µg/kg	TM157		<100	<100	<100	<100		



CERTIFICATE OF ANALYSIS

Validated

SDG:	190418-87	Client Reference:	Cole Green Suppleme	Report Number:	504352
Location:	Cole Green	Order Number:	9Y0074-107-100	Superseded Report:	504295

Semi Volatile Organic Compounds

Results Legend			Customer Sample Ref.	RH-BH-25-ES-104	RH-BH-26-ES-101	RH-BH-26-ES-102	RH-BH-26-ES-103		
# 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)	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		2.60 Unspecified Solid (UNS) 15/04/2019	0.50 Unspecified Solid (UNS) 15/04/2019	1.00 Unspecified Solid (UNS) 15/04/2019	1.50 Unspecified Solid (UNS) 15/04/2019			
Component	LOD/Units	Method							
2-Chlorophenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100		
2,6-Dinitrotoluene	<100 µg/kg	TM157	<100	<100	<100	<100	<100		
2,4-Dinitrotoluene	<100 µg/kg	TM157	<100	<100	<100	<100	<100		
2,4-Dimethylphenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100		
2,4-Dichlorophenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100		
2,4,6-Trichlorophenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100		
2,4,5-Trichlorophenol	<100 µg/kg	TM157	<100	<100	<100	<100	<100		
1,4-Dichlorobenzene	<100 µg/kg	TM157	<100	<100	<100	<100	<100		
1,3-Dichlorobenzene	<100 µg/kg	TM157	<100	<100	<100	<100	<100		
1,2-Dichlorobenzene	<100 µg/kg	TM157	<100	<100	<100	<100	<100		
2-Chloronaphthalene	<100 µg/kg	TM157	<100	<100	<100	<100	<100		
2-Methylnaphthalene	<100 µg/kg	TM157	<100	<100	<100	<100	<100		
Acenaphthylene	<100 µg/kg	TM157	<100	<100	<100	<100	<100		
Acenaphthene	<100 µg/kg	TM157	<100	<100	<100	<100	<100		
Anthracene	<100 µg/kg	TM157	<100	<100	<100	<100	<100		
Benzo(a)anthracene	<100 µg/kg	TM157	845	120	<100	<100	<100		
Benzo(b)fluoranthene	<100 µg/kg	TM157	1190	165	<100	<100	<100		
Benzo(k)fluoranthene	<100 µg/kg	TM157	529	<100	<100	<100	<100		
Benzo(a)pyrene	<100 µg/kg	TM157	1140	137	<100	<100	<100		
Benzo(g,h,i)perylene	<100 µg/kg	TM157	843	<100	<100	<100	<100		
Chrysene	<100 µg/kg	TM157	638	<100	<100	<100	<100		
Fluoranthene	<100 µg/kg	TM157	979	219	<100	<100	<100		
Fluorene	<100 µg/kg	TM157	<100	<100	<100	<100	<100		
Indeno(1,2,3-cd)pyrene	<100 µg/kg	TM157	1800	232	<100	<100	<100		
Phenanthrene	<100 µg/kg	TM157	243	<100	<100	<100	<100		
Pyrene	<100 µg/kg	TM157	1090	208	<100	<100	<100		
Naphthalene	<100 µg/kg	TM157	<100	<100	<100	<100	<100		
Dibenzo(a,h)anthracene	<100 µg/kg	TM157	<100	<100	<100	<100	<100		
Bis(2-chloroisopropyl) ether	<100 µg/kg	TM157	<100	<100	<100	<100	<100		



CERTIFICATE OF ANALYSIS

Validated

SDG:	190418-87	Client Reference: Cole Green Supplement	Report Number: 504352
Location:	Cole Green	Order Number: 9Y0074-107-100	Superseded Report: 504295

VOC MS (S)

Results Legend			Customer Sample Ref.	RH-BH-25-ES-03	RH-BH-24-ES-101	RH-BH-24-ES-102	RH-BH-24-ES-103	RH-BH-24-ES-104	RH-BH-25-ES-102
# 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*5@ Sample deviation (see appendix)	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		1.60 Unspecified Solid (UNS) 15/04/2019	0.30 Unspecified Solid (UNS) 15/04/2019	0.60 Unspecified Solid (UNS) 15/04/2019	1.00 Unspecified Solid (UNS) 15/04/2019	1.60 Unspecified Solid (UNS) 15/04/2019	0.80 Unspecified Solid (UNS) 15/04/2019	18/04/2019 190418-87 19920030
Component	LOD/Units	Method							
Dibromofluoromethane**	%	TM116	102	102	101	103	101	111	@
Toluene-d8**	%	TM116	92.3	91.7	96	98.5	95.1	98.2	@
4-Bromofluorobenzene**	%	TM116	74.4	75	91.2	89.9	89.9	90.7	@
Dichlorodifluoromethane	<6 µg/kg	TM116	<6	<6	<6	<6	<6	<6	@
Chloromethane	<7 µg/kg	TM116	<7	<7	<7	<7	<7	<7	@
Vinyl Chloride	<6 µg/kg	TM116	<6	<6	<6	<6	<6	<6	@
Bromomethane	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	@
Chloroethane	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	@
Trichlorofluoromethane	<6 µg/kg	TM116	<6	<6	<6	<6	<6	<6	@
1,1-Dichloroethene	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	@
Carbon Disulphide	<7 µg/kg	TM116	<7	<7	<7	<7	<7	<7	@
Dichloromethane	<10 µg/kg	TM116	37.1	<10	<10	14.5	<10	<10	@
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	@
trans-1,2-Dichloroethene	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	@
1,1-Dichloroethane	<8 µg/kg	TM116	<8	<8	<8	<8	<8	<8	@
cis-1,2-Dichloroethene	<6 µg/kg	TM116	<6	<6	<6	<6	<6	<6	@
2,2-Dichloropropane	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	@
Bromochloromethane	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	@
Chloroform	<8 µg/kg	TM116	<8	<8	<8	<8	<8	<8	@
1,1,1-Trichloroethane	<7 µg/kg	TM116	<7	<7	<7	<7	<7	<7	@
1,1-Dichloropropene	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	@
Carbontetrachloride	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	@
1,2-Dichloroethane	<5 µg/kg	TM116	<5	<5	<5	<5	<5	<5	@
Benzene	<9 µg/kg	TM116	<9	<9	<9	<9	<9	<9	@
Trichloroethene	<9 µg/kg	TM116	<9	<9	<9	<9	<9	<9	@
1,2-Dichloropropane	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	@
Dibromomethane	<9 µg/kg	TM116	<9	<9	<9	<9	<9	<9	@
Bromodichloromethane	<7 µg/kg	TM116	<7	<7	<7	<7	<7	<7	@
cis-1,3-Dichloropropene	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	@
Toluene	<7 µg/kg	TM116	<7	<7	<7	<7	<7	<7	@
trans-1,3-Dichloropropene	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	@
1,1,2-Trichloroethane	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	@



CERTIFICATE OF ANALYSIS

Validated

SDG:	190418-87	Client Reference: Cole Green Suppleme	Report Number: 504352
Location:	Cole Green	Order Number: 9Y0074-107-100	Superseded Report: 504295

VOC MS (S)

Results Legend			Customer Sample Ref.	RH-BH-25-ES-03	RH-BH-24-ES-101	RH-BH-24-ES-102	RH-BH-24-ES-103	RH-BH-24-ES-104	RH-BH-25-ES-102
# 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*5@ Sample deviation (see appendix)	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference			1.60 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920030	0.30 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920026	0.60 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19816177	1.00 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19831198	1.60 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920032	0.80 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19816178
Component	LOD/Units	Method							
1,3-Dichloropropane	<7 µg/kg	TM116	<7	<7	<7	<7	<7	<7	<7
Tetrachloroethene	<5 µg/kg	TM116	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	<10
1,2-Dibromoethane	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	<10
Chlorobenzene	<5 µg/kg	TM116	<5	<5	<5	<5	<5	<5	<5
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	<4 µg/kg	TM116	<4	<4	<4	<4	<4	<4	<4
p/m-Xylene	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	<10
o-Xylene	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	<10
Styrene	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	<10
Bromoform	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	<10
Isopropylbenzene	<5 µg/kg	TM116	<5	<5	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	<10
1,2,3-Trichloropropane	<16 µg/kg	TM116	<16	<16	<16	<16	<16	<16	<16
Bromobenzene	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	<10
Propylbenzene	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	<10
2-Chlorotoluene	<9 µg/kg	TM116	<9	<9	<9	<9	<9	<9	<9
1,3,5-Trimethylbenzene	<8 µg/kg	TM116	<8	<8	<8	<8	<8	<8	<8
4-Chlorotoluene	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	<10
tert-Butylbenzene	<14 µg/kg	TM116	<14	<14	<14	<14	<14	<14	<14
1,2,4-Trimethylbenzene	<9 µg/kg	TM116	<9	<9	<9	<9	<9	<9	<9
sec-Butylbenzene	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	<10
4-Isopropyltoluene	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	<10
1,3-Dichlorobenzene	<8 µg/kg	TM116	<8	<8	<8	<8	<8	<8	<8
1,4-Dichlorobenzene	<5 µg/kg	TM116	<5	<5	<5	<5	<5	<5	<5
n-Butylbenzene	<11 µg/kg	TM116	<11	<11	<11	<11	<11	<11	<11
1,2-Dichlorobenzene	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	<10
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116	<14	<14	<14	<14	<14	<14	<14
Tert-amyl methyl ether	<10 µg/kg	TM116	<10	<10	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	<20 µg/kg	TM116	<20	<20	<20	<20	<20	<20	<20
Hexachlorobutadiene	<20 µg/kg	TM116	<20	<20	<20	<20	<20	<20	<20
Naphthalene	<13 µg/kg	TM116	<13	<13	<13	<13	50.4	<13	<13



CERTIFICATE OF ANALYSIS

Validated

SDG: 190418-87 Client Reference: Cole Green Suppleme Report Number: 504352
 Location: Cole Green Order Number: 9Y0074-107-100 Superseded Report: 504295

VOC MS (S)

Results Legend			Customer Sample Ref.	RH-BH-25-ES-03	RH-BH-24-ES-101	RH-BH-24-ES-102	RH-BH-24-ES-103	RH-BH-24-ES-104	RH-BH-25-ES-102
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference						
M	mCERTS accredited.			1.60	0.30	0.60	1.00	1.60	0.80
aq	Aqueous / settled sample.			Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)
diss.filt	Dissolved / filtered sample.			15/04/2019	15/04/2019	15/04/2019	15/04/2019	15/04/2019	15/04/2019
tot.unfilt	Total / unfiltered sample.			18/04/2019	18/04/2019	18/04/2019	18/04/2019	18/04/2019	18/04/2019
*	Subcontracted - refer to subcontractor report for accreditation status.			190418-87	190418-87	190418-87	190418-87	190418-87	190418-87
**	% 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			19920030	19920026	19816177	19831198	19920032	19816178
(F)	Trigger breach confirmed								
1-3*S@	Sample deviation (see appendix)								
Component	LOD/Units	Method							
1,2,3-Trichlorobenzene	<20 µg/kg	TM116	<20	<20	<20	<20	<20	<20	<20 @
Sum of BTEX	<40 µg/kg	TM116	<40	<40	<40	<40	<40	<40	<40 @



CERTIFICATE OF ANALYSIS

Validated

SDG:	190418-87	Client Reference: Cole Green Suppleme	Report Number: 504352
Location:	Cole Green	Order Number: 9Y0074-107-100	Superseded Report: 504295

VOC MS (S)

Results Legend			Customer Sample Ref.	RH-BH-25-ES-104	RH-BH-26-ES-101	RH-BH-26-ES-102	RH-BH-26-ES-103		
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. Total / unfiltered 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)			Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	2.60 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19816185	0.50 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920029	1.00 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920028	1.50 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920033		
Component	LOD/Units	Method							
Dibromofluoromethane**	%	TM116	108	104	111	103	@		
Toluene-d8**	%	TM116	97.7	90.4	101	100	@		
4-Bromofluorobenzene**	%	TM116	80	71.3	106	102	@		
Dichlorodifluoromethane	<6 µg/kg	TM116	<6	<6	<6	<6	@		
Chloromethane	<7 µg/kg	TM116	<7	<7	<7	<7	@		
Vinyl Chloride	<6 µg/kg	TM116	<6	<6	<6	<6	@		
Bromomethane	<10 µg/kg	TM116	<10	<10	<10	<10	@		
Chloroethane	<10 µg/kg	TM116	<10	<10	<10	<10	@		
Trichlorofluoromethane	<6 µg/kg	TM116	<6	<6	<6	<6	@		
1,1-Dichloroethene	<10 µg/kg	TM116	<10	<10	<10	<10	@		
Carbon Disulphide	<7 µg/kg	TM116	<7	<7	<7	<7	@		
Dichloromethane	<10 µg/kg	TM116	20.2	<10	<10	<10	@		
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116	<10	<10	<10	<10	@		
trans-1,2-Dichloroethene	<10 µg/kg	TM116	<10	<10	<10	<10	@		
1,1-Dichloroethane	<8 µg/kg	TM116	<8	<8	<8	<8	@		
cis-1,2-Dichloroethene	<6 µg/kg	TM116	<6	<6	<6	<6	@		
2,2-Dichloropropane	<10 µg/kg	TM116	<10	<10	<10	<10	@		
Bromochloromethane	<10 µg/kg	TM116	<10	<10	<10	<10	@		
Chloroform	<8 µg/kg	TM116	<8	<8	<8	<8	@		
1,1,1-Trichloroethane	<7 µg/kg	TM116	<7	<7	<7	<7	@		
1,1-Dichloropropene	<10 µg/kg	TM116	<10	<10	<10	<10	@		
Carbontetrachloride	<10 µg/kg	TM116	<10	<10	<10	<10	@		
1,2-Dichloroethane	<5 µg/kg	TM116	<5	<5	<5	<5	@		
Benzene	<9 µg/kg	TM116	<9	<9	<9	<9	@		
Trichloroethene	<9 µg/kg	TM116	<9	<9	<9	<9	@		
1,2-Dichloropropane	<10 µg/kg	TM116	<10	<10	<10	<10	@		
Dibromomethane	<9 µg/kg	TM116	<9	<9	<9	<9	@		
Bromodichloromethane	<7 µg/kg	TM116	<7	<7	<7	<7	@		
cis-1,3-Dichloropropene	<10 µg/kg	TM116	<10	<10	<10	<10	@		
Toluene	<7 µg/kg	TM116	<7	<7	<7	<7	@		
trans-1,3-Dichloropropene	<10 µg/kg	TM116	<10	<10	<10	<10	@		
1,1,2-Trichloroethane	<10 µg/kg	TM116	<10	<10	<10	<10	@		



CERTIFICATE OF ANALYSIS

Validated

SDG:	190418-87	Client Reference: Cole Green Suppleme	Report Number: 504352
Location:	Cole Green	Order Number: 9Y0074-107-100	Superseded Report: 504295

VOC MS (S)

#	Customer Sample Ref.	RH-BH-25-ES-104	RH-BH-26-ES-101	RH-BH-26-ES-102	RH-BH-26-ES-103										
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; vertical-align: top;"> 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*5@ Sample deviation (see appendix) </td> <td style="width: 15%; vertical-align: top;"> Customer Sample Ref. Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference </td> <td style="width: 10%; vertical-align: top;"> 2.60 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19816185 </td> <td style="width: 10%; vertical-align: top;"> 0.50 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920029 </td> <td style="width: 10%; vertical-align: top;"> 1.00 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920028 </td> <td style="width: 10%; vertical-align: top;"> 1.50 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920033 </td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> </tr> </table>								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*5@ Sample deviation (see appendix)	Customer Sample Ref. Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	2.60 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19816185	0.50 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920029	1.00 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920028	1.50 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920033		
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*5@ Sample deviation (see appendix)	Customer Sample Ref. Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	2.60 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19816185	0.50 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920029	1.00 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920028	1.50 Unspecified Solid (UNS) 15/04/2019 18/04/2019 190418-87 19920033										
Component	LOD/Units	Method													
1,3-Dichloropropane	<7 µg/kg	TM116	<7	<7	<7	<7	@								
Tetrachloroethene	<5 µg/kg	TM116	<5	<5	<5	<5	@								
Dibromochloromethane	<10 µg/kg	TM116	<10	<10	<10	<10	@								
1,2-Dibromoethane	<10 µg/kg	TM116	<10	<10	<10	<10	@								
Chlorobenzene	<5 µg/kg	TM116	<5	<5	<5	<5	@								
1,1,1,2-Tetrachloroethane	<10 µg/kg	TM116	<10	<10	<10	<10	@								
Ethylbenzene	<4 µg/kg	TM116	<4	<4	<4	<4	@								
p/m-Xylene	<10 µg/kg	TM116	<10	<10	<10	<10	@								
o-Xylene	<10 µg/kg	TM116	<10	<10	<10	<10	@								
Styrene	<10 µg/kg	TM116	<10	<10	<10	<10	@								
Bromoform	<10 µg/kg	TM116	<10	<10	<10	<10	@								
Isopropylbenzene	<5 µg/kg	TM116	<5	<5	<5	<5	@								
1,1,2,2-Tetrachloroethane	<10 µg/kg	TM116	<10	<10	<10	<10	@								
1,2,3-Trichloropropane	<16 µg/kg	TM116	<16	<16	<16	<16	@								
Bromobenzene	<10 µg/kg	TM116	<10	<10	<10	<10	@								
Propylbenzene	<10 µg/kg	TM116	<10	<10	<10	<10	@								
2-Chlorotoluene	<9 µg/kg	TM116	<9	<9	<9	<9	@								
1,3,5-Trimethylbenzene	<8 µg/kg	TM116	<8	<8	<8	<8	@								
4-Chlorotoluene	<10 µg/kg	TM116	<10	<10	<10	<10	@								
tert-Butylbenzene	<14 µg/kg	TM116	<14	<14	<14	<14	@								
1,2,4-Trimethylbenzene	<9 µg/kg	TM116	<9	<9	<9	<9	@								
sec-Butylbenzene	<10 µg/kg	TM116	<10	<10	<10	<10	@								
4-Isopropyltoluene	<10 µg/kg	TM116	<10	<10	<10	<10	@								
1,3-Dichlorobenzene	<8 µg/kg	TM116	<8	<8	<8	<8	@								
1,4-Dichlorobenzene	<5 µg/kg	TM116	<5	<5	<5	<5	@								
n-Butylbenzene	<11 µg/kg	TM116	<11	<11	<11	<11	@								
1,2-Dichlorobenzene	<10 µg/kg	TM116	<10	<10	<10	<10	@								
1,2-Dibromo-3-chloropropane	<14 µg/kg	TM116	<14	<14	<14	<14	@								
Tert-amyl methyl ether	<10 µg/kg	TM116	<10	<10	<10	<10	@								
1,2,4-Trichlorobenzene	<20 µg/kg	TM116	<20	<20	<20	<20	@								
Hexachlorobutadiene	<20 µg/kg	TM116	<20	<20	<20	<20	@								
Naphthalene	<13 µg/kg	TM116	<13	<13	<13	<13	@								



CERTIFICATE OF ANALYSIS

Validated

SDG: 190418-87
Location: Cole Green

Client Reference: Cole Green Suppleme
Order Number: 9Y0074-107-100

Report Number: 504352
Superseded Report: 504295

VOC MS (S)

Results Legend		Customer Sample Ref.	RH-BH-25-ES-104	RH-BH-26-ES-101	RH-BH-26-ES-102	RH-BH-26-ES-103		
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference						
M	mCERTS accredited.		2.60	0.50	1.00	1.50		
aq	Aqueous / settled sample.		Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)	Unspecified Solid (UNS)		
diss.filt	Dissolved / filtered sample.		15/04/2019	15/04/2019	15/04/2019	15/04/2019		
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted - refer to subcontractor report for accreditation status.		18/04/2019	18/04/2019	18/04/2019	18/04/2019		
**	% 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		190418-87	190418-87	190418-87	190418-87		
(F)	Trigger breach confirmed		19816185	19920029	19920028	19920033		
1-3*\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
1,2,3-Trichlorobenzene	<20 µg/kg	TM116	<20	<20	<20	<20		
Sum of BTEX	<40 µg/kg	TM116	<40	<40	<40	<40	@	@



CERTIFICATE OF ANALYSIS

Validated

SDG:	190418-87	Client Reference: Cole Green Suppleme	Report Number: 504352
Location:	Cole Green	Order Number: 9Y0074-107-100	Superseded Report: 504295

Asbestos Identification - Solid Samples

Results Legend

ISO17025 accredited.
M mCERTS accredited.
* Subcontracted test.
(F) Trigger breach confirmed
1-5&*\$@ Sample deviation (see appendix)

Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre	
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	RH-BH-25-ES-03 1.60 MISC_SOLID 15/04/2019 00:00:00 18/04/2019 08:20:00 190418-87 19920030 TM048	30/04/2019	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	RH-BH-24-ES-102 0.60 MISC_SOLID 15/04/2019 00:00:00 18/04/2019 08:20:00 190418-87 19816177 TM048	30/04/19	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	RH-BH-24-ES-103 1.00 MISC_SOLID 15/04/2019 00:00:00 18/04/2019 08:20:00 190418-87 19831198 TM048	30/04/2019	Lucy Caroe	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	RH-BH-24-ES-104 1.60 MISC_SOLID 15/04/2019 00:00:00 18/04/2019 08:20:00 190418-87 19920032 TM048	30/04/2019	Lucy Caroe	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	RH-BH-25-ES-101 0.30 MISC_SOLID 15/04/2019 00:00:00 18/04/2019 08:20:00 190418-87 19920025 TM048	30/04/2019	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	RH-BH-25-ES-102 0.80 MISC_SOLID 15/04/2019 00:00:00 18/04/2019 08:20:00 190418-87 19816178 TM048	30/04/2019	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	RH-BH-25-ES-104 2.60 MISC_SOLID 15/04/2019 00:00:00 18/04/2019 08:20:00 190418-87 19816185 TM048	30/04/19	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	RH-BH-26-ES-101 0.50 MISC_SOLID 15/04/2019 00:00:00 18/04/2019 08:20:00 190418-87 19920029 TM048	30/04/2019	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected



CERTIFICATE OF ANALYSIS

Validated

SDG: 190418-87 Client Reference: Cole Green Suppleme Report Number: 504352
 Location: Cole Green Order Number: 9Y0074-107-100 Superseded Report: 504295

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	RH-BH-26-ES-102 1.00 MISC_SOLID 15/04/2019 00:00:00 18/04/2019 08:20:00 190418-87 19920028 TM048	30/04/2019	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	RH-BH-26-ES-103 1.50 MISC_SOLID 15/04/2019 00:00:00 18/04/2019 08:20:00 190418-87 19920033 TM048	30/04/2019	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected



CERTIFICATE OF ANALYSIS

Validated

SDG:	190418-87	Client Reference:	Cole Green Suppleme	Report Number:	504352
Location:	Cole Green	Order Number:	9Y0074-107-100	Superseded Report:	504295

Table of Results - Appendix

Method No	Reference	Description
PM001		Preparation of Samples for Metals Analysis
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM061	Method for the Determination of EPH, Massachusetts Dept. of EP, 1998	Determination of Extractable Petroleum Hydrocarbons by GC-FID (C10-C40)
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water:soil) by IRIS Emission Spectrometer

NA = not applicable.

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



CERTIFICATE OF ANALYSIS

Validated

SDG:	190418-87	Client Reference: Cole Green Suppleme	Report Number: 504352
Location:	Cole Green	Order Number: 9Y0074-107-100	Superseded Report: 504295

Test Completion Dates

	19920030	19920026	19816177	19831198	19920032	19920025	19816178	19816185	19920029	19920028
	RH-BH-25-ES-03	RH-BH-24-ES-101	RH-BH-24-ES-102	RH-BH-24-ES-103	RH-BH-24-ES-104	RH-BH-25-ES-101	RH-BH-25-ES-102	RH-BH-25-ES-104	RH-BH-26-ES-101	RH-BH-26-ES-102
Lab Sample No(s)										
Customer Sample Ref.										
AGS Ref.										
Depth	1.60	0.30	0.60	1.00	1.60	0.30	0.80	2.60	0.50	1.00
Type	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified
Asbestos ID in Solid Samples	30-Apr-2019		30-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019
Boron Water Soluble	25-Apr-2019									01-May-2019
Chromium III	30-Apr-2019		27-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019	27-Apr-2019	30-Apr-2019
Cyanide Comp/Free/Total/Thiocyanate	29-Apr-2019		29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019
EPH	29-Apr-2019		29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019
EPH by FID	29-Apr-2019		29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019
GRO by GC-FID (S)	29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019		29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019
Hexavalent Chromium (s)	30-Apr-2019		26-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019	26-Apr-2019	30-Apr-2019
Metals in solid samples by OES	29-Apr-2019		29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019	29-Apr-2019	26-Apr-2019	29-Apr-2019
PAH by GCMS	26-Apr-2019		26-Apr-2019	26-Apr-2019	26-Apr-2019	26-Apr-2019	26-Apr-2019	26-Apr-2019	26-Apr-2019	26-Apr-2019
PCBs by GCMS	30-Apr-2019		30-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019
pH	30-Apr-2019		30-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019
Phenols by HPLC (S)	30-Apr-2019		30-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019	01-May-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019
Sample description	24-Apr-2019		24-Apr-2019	24-Apr-2019	24-Apr-2019	24-Apr-2019	24-Apr-2019	24-Apr-2019	24-Apr-2019	24-Apr-2019
Semi Volatile Organic Compounds	30-Apr-2019		30-Apr-2019	29-Apr-2019	29-Apr-2019	30-Apr-2019	29-Apr-2019	30-Apr-2019	30-Apr-2019	30-Apr-2019
Total Organic Carbon	26-Apr-2019		26-Apr-2019	26-Apr-2019	26-Apr-2019	26-Apr-2019	26-Apr-2019	26-Apr-2019	26-Apr-2019	26-Apr-2019
VOC MS (S)	28-Apr-2019	28-Apr-2019	29-Apr-2019	28-Apr-2019	29-Apr-2019		29-Apr-2019	28-Apr-2019	28-Apr-2019	29-Apr-2019

Lab Sample No(s)	19920033
Customer Sample Ref.	RH-BH-26-ES-103
AGS Ref.	
Depth	1.50
Type	Unspecified
Asbestos ID in Solid Samples	30-Apr-2019
Boron Water Soluble	25-Apr-2019
Chromium III	26-Apr-2019
Cyanide Comp/Free/Total/Thiocyanate	29-Apr-2019
EPH	29-Apr-2019
EPH by FID	29-Apr-2019
GRO by GC-FID (S)	29-Apr-2019
Hexavalent Chromium (s)	26-Apr-2019
Metals in solid samples by OES	29-Apr-2019
PAH by GCMS	26-Apr-2019
PCBs by GCMS	30-Apr-2019
pH	30-Apr-2019
Phenols by HPLC (S)	01-May-2019
Sample description	24-Apr-2019
Semi Volatile Organic Compounds	30-Apr-2019
Total Organic Carbon	26-Apr-2019
VOC MS (S)	28-Apr-2019



CERTIFICATE OF ANALYSIS

Validated

SDG: 190418-87 Client Reference: Cole Green Suppleme Report Number: 504352
Location: Cole Green Order Number: 9Y0074-107-100 Superseded Report: 504295

Chromatogram

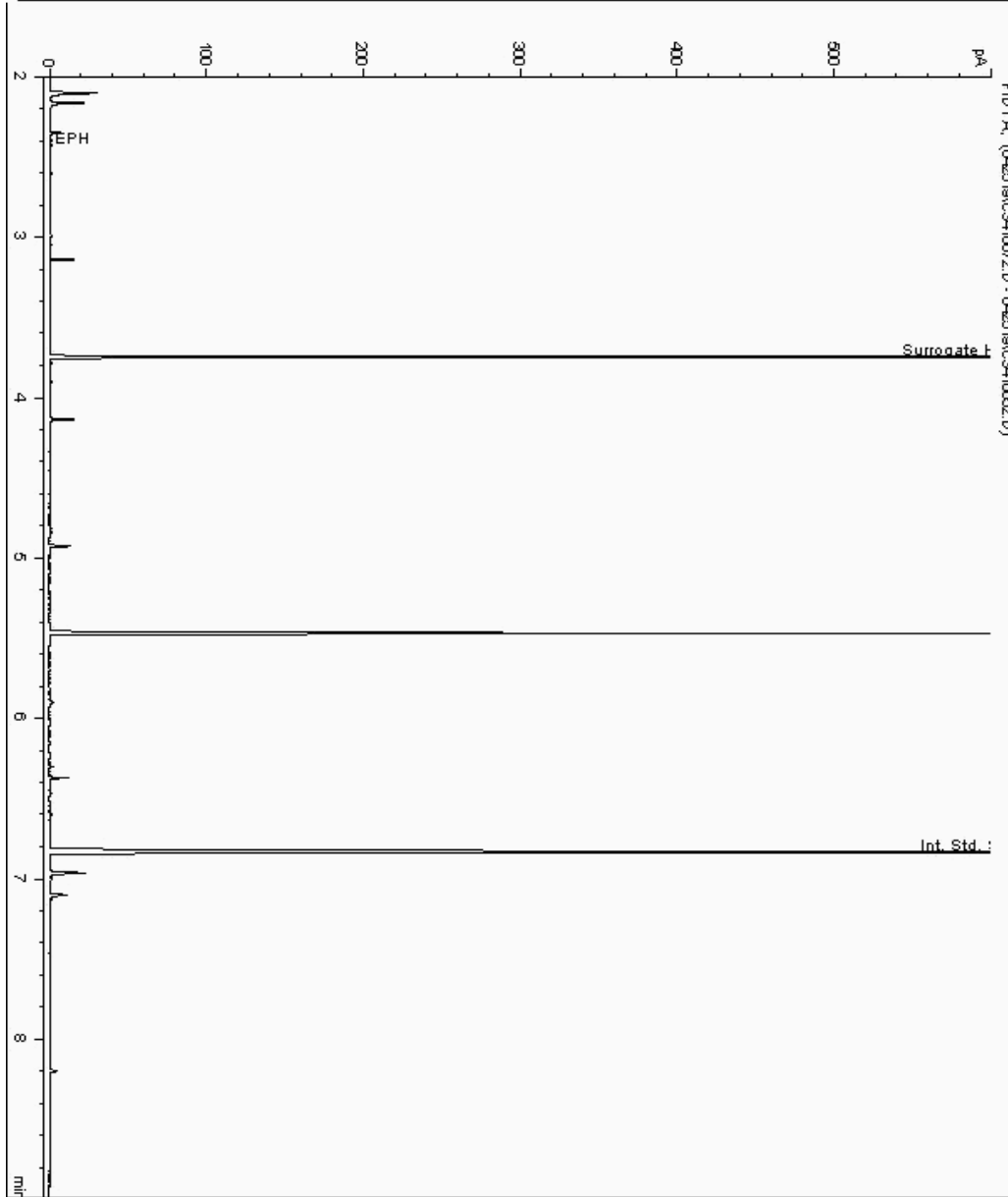
Analysis: EPH by FID

Sample No : 19838695
Sample ID : RH-BH-26-ES-103

Depth : 1.50

EPH Range Organics (C10 - C40)

Sample Identity : 18632371-
Date Acquired : 26/04/19 07:30:30 PM
Units : mg/kg
Sample Multiplier : 0.000
Dilution :





CERTIFICATE OF ANALYSIS

Validated

SDG: 190418-87 Client Reference: Cole Green Suppleme Report Number: 504352
Location: Cole Green Order Number: 9Y0074-107-100 Superseded Report: 504295

Chromatogram

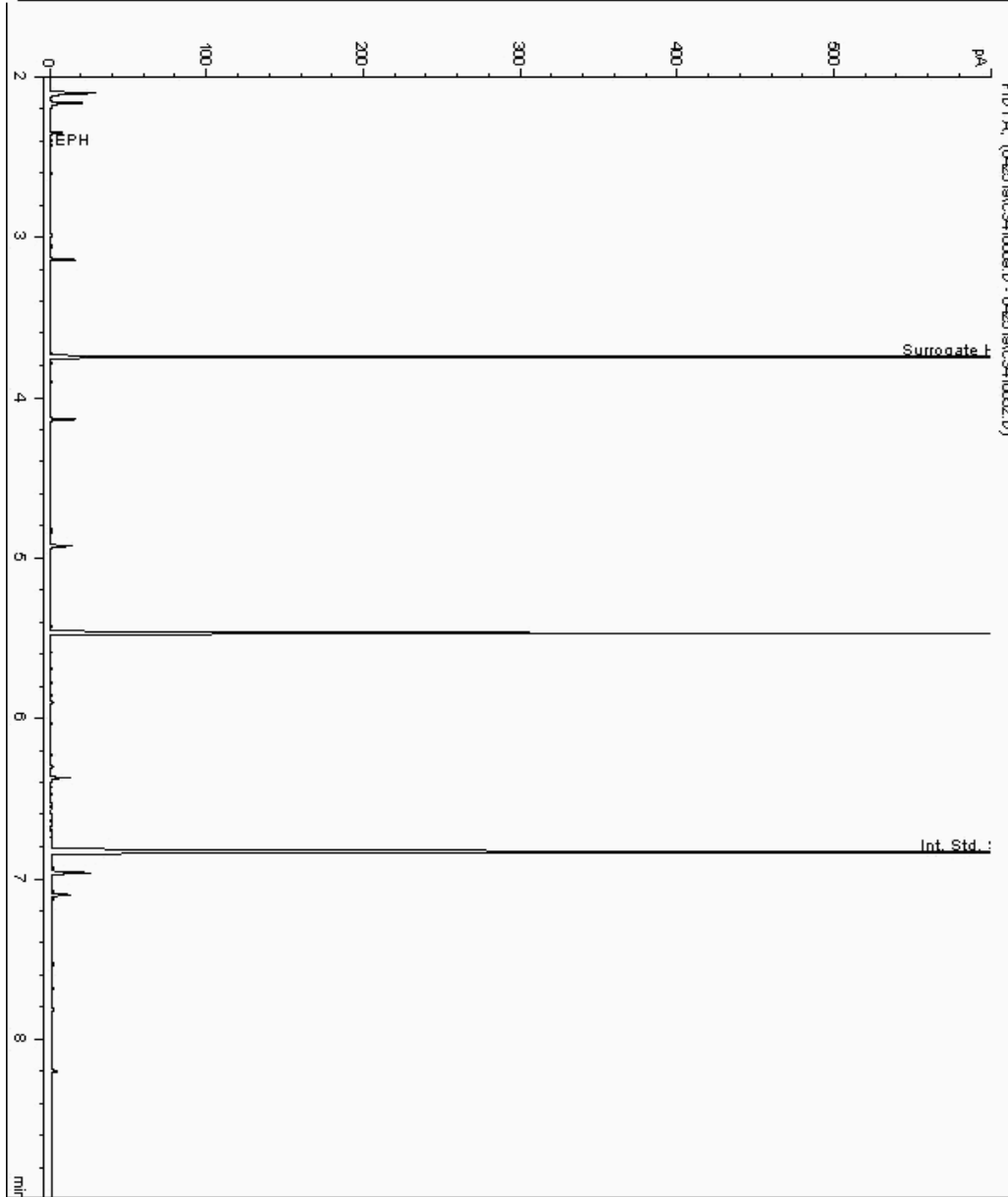
Analysis: EPH by FID

Sample No : 19838728
Sample ID : RH-BH-24-ES-103

Depth : 1.00

EPH Range Organics (C10 - C40)

Sample Identity : 18632521-
Date Acquired : 26/04/19 06:09:15 PM
Units : mg/kg
Sample Multiplier : 0.000
Dilution :





CERTIFICATE OF ANALYSIS

Validated

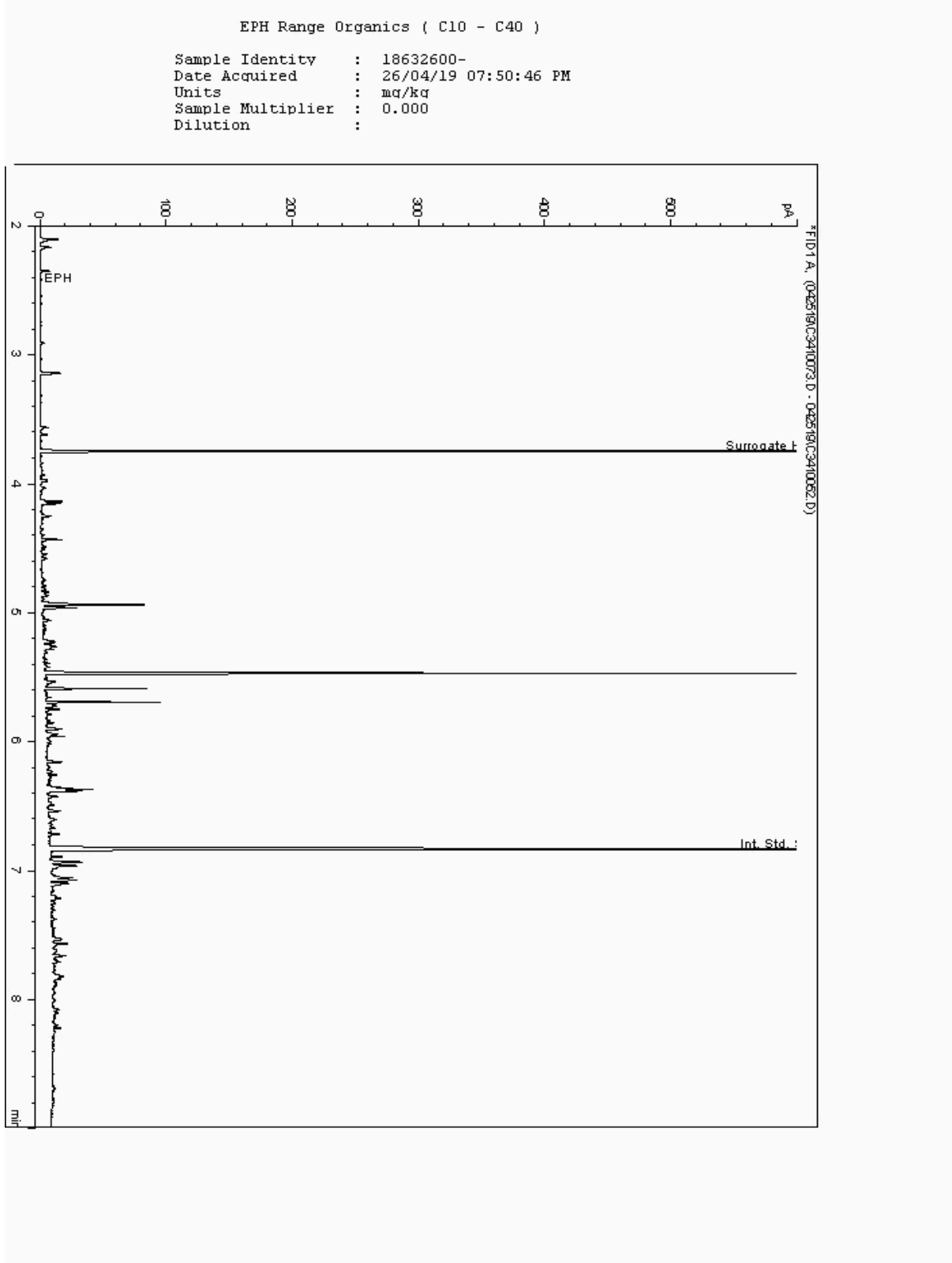
SDG: 190418-87 Client Reference: Cole Green Suppleme Report Number: 504352
Location: Cole Green Order Number: 9Y0074-107-100 Superseded Report: 504295

Chromatogram

Analysis: EPH by FID

Sample No : 19838841
Sample ID : RH-BH-24-ES-104

Depth : 1.60





CERTIFICATE OF ANALYSIS

Validated

SDG: 190418-87 Client Reference: Cole Green Suppleme Report Number: 504352
Location: Cole Green Order Number: 9Y0074-107-100 Superseded Report: 504295

Chromatogram

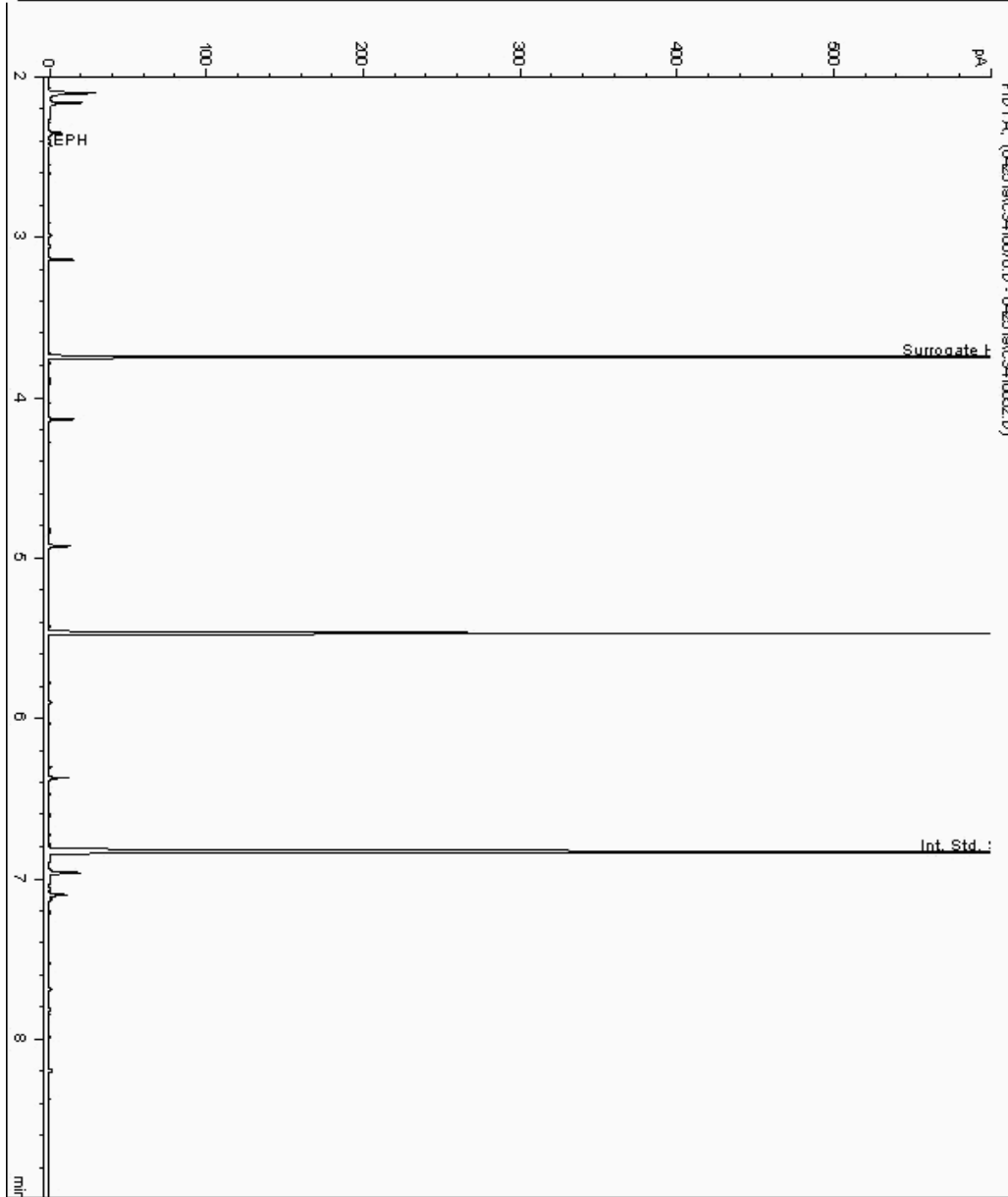
Analysis: EPH by FID

Sample No : 19838850
Sample ID : RH-BH-26-ES-102

Depth : 1.00

EPH Range Organics (C10 - C40)

Sample Identity : 18632338-
Date Acquired : 26/04/19 08:43:57 PM
Units : mg/kg
Sample Multiplier : 0.000
Dilution :





CERTIFICATE OF ANALYSIS

Validated

SDG: 190418-87 Client Reference: Cole Green Suppleme Report Number: 504352
Location: Cole Green Order Number: 9Y0074-107-100 Superseded Report: 504295

Chromatogram

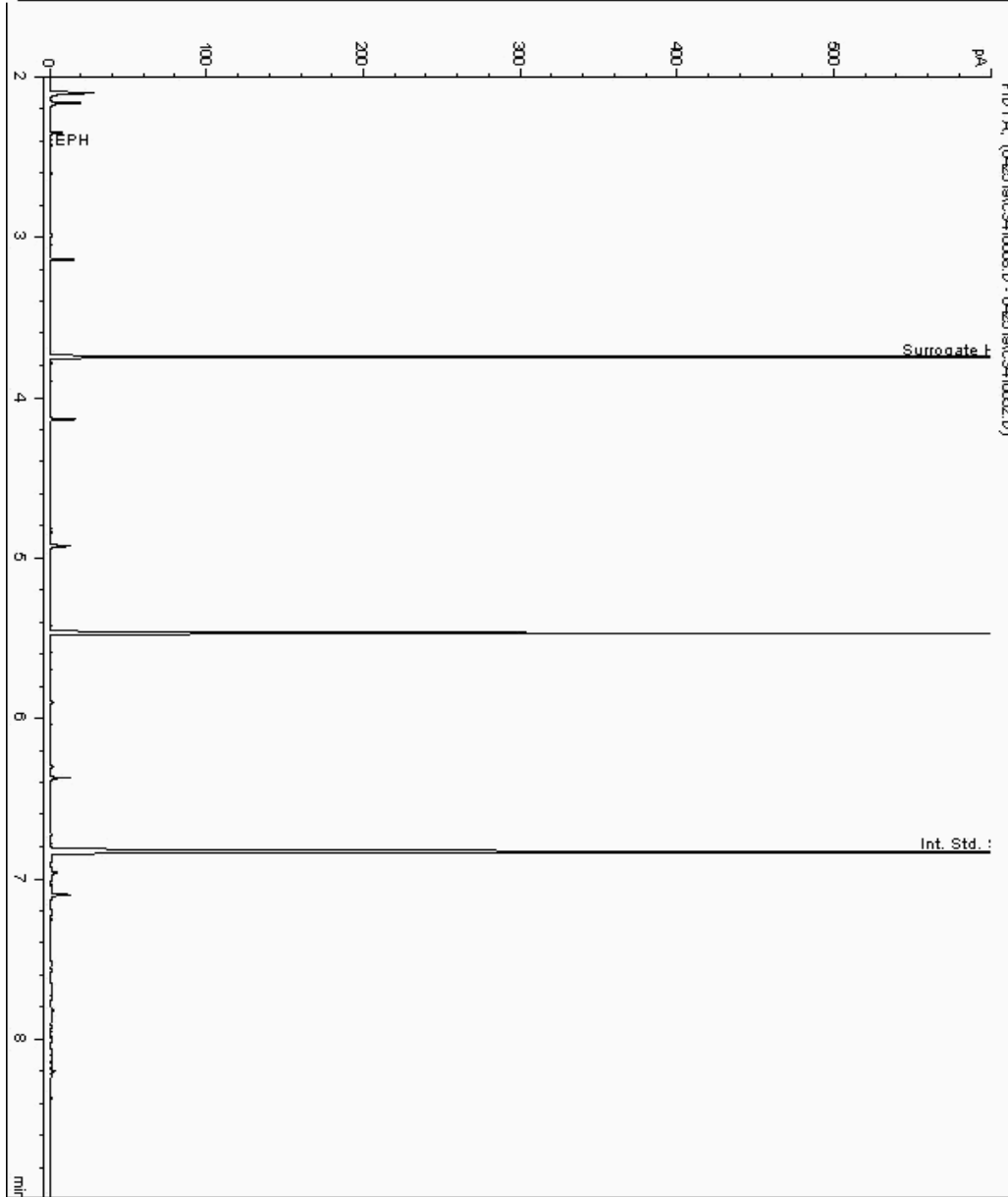
Analysis: EPH by FID

Sample No : 19838896
Sample ID : RH-BH-25-ES-102

Depth : 0.80

EPH Range Organics (C10 - C40)

Sample Identity : 18632308-
Date Acquired : 26/04/19 05:48:56 PM
Units : mg/kg
Sample Multiplier : 0.000
Dilution :





CERTIFICATE OF ANALYSIS

Validated

SDG: 190418-87 Client Reference: Cole Green Suppleme Report Number: 504352
Location: Cole Green Order Number: 9Y0074-107-100 Superseded Report: 504295

Chromatogram

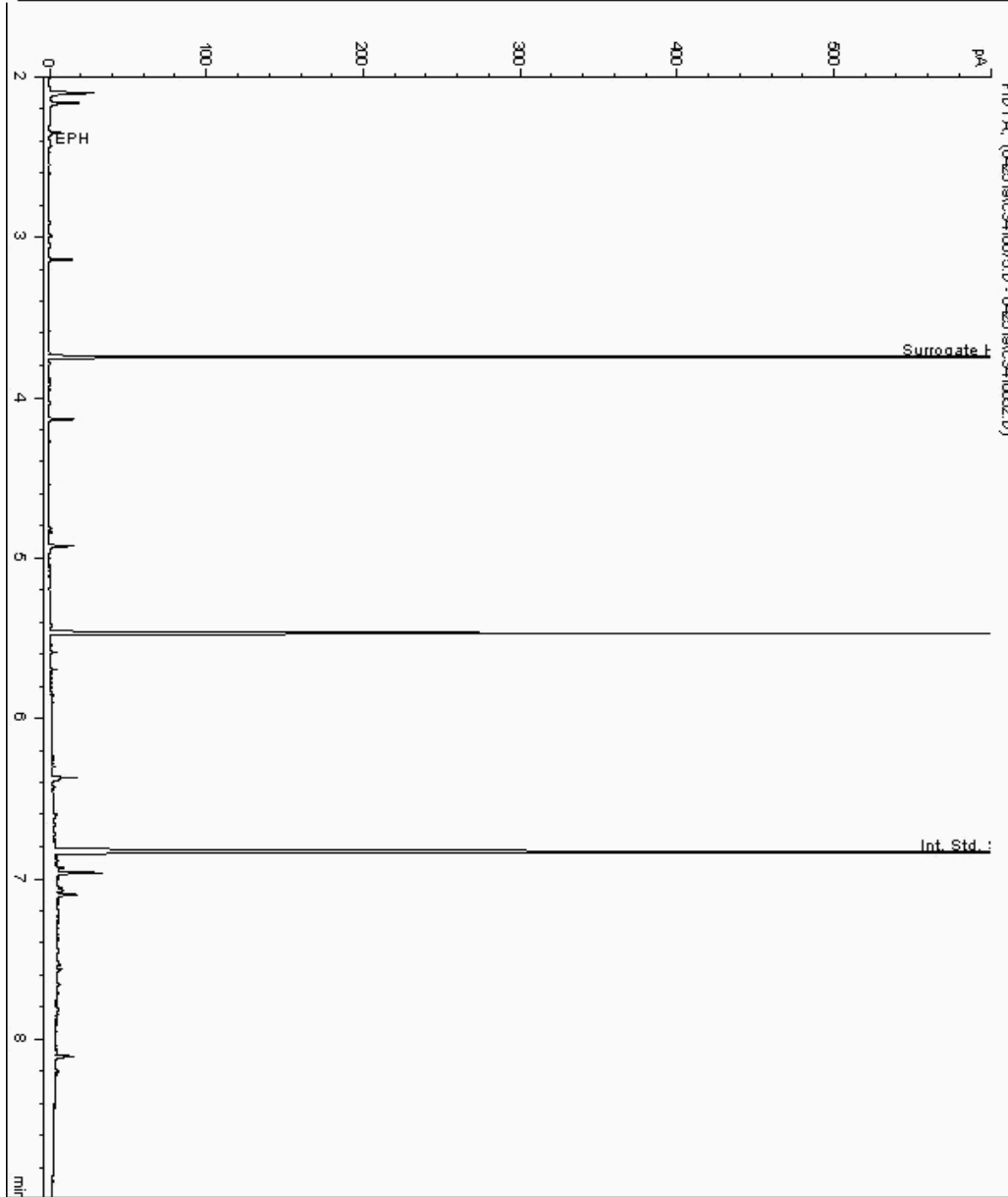
Analysis: EPH by FID

Sample No : 19838912
Sample ID : RH-BH-25-ES-03

Depth : 1.60

EPH Range Organics (C10 - C40)

Sample Identity : 18632404-
Date Acquired : 26/04/19 08:23:21 PM
Units : mg/kg
Sample Multiplier : 0.000
Dilution :





CERTIFICATE OF ANALYSIS

Validated

SDG: 190418-87 Client Reference: Cole Green Suppleme Report Number: 504352
Location: Cole Green Order Number: 9Y0074-107-100 Superseded Report: 504295

Chromatogram

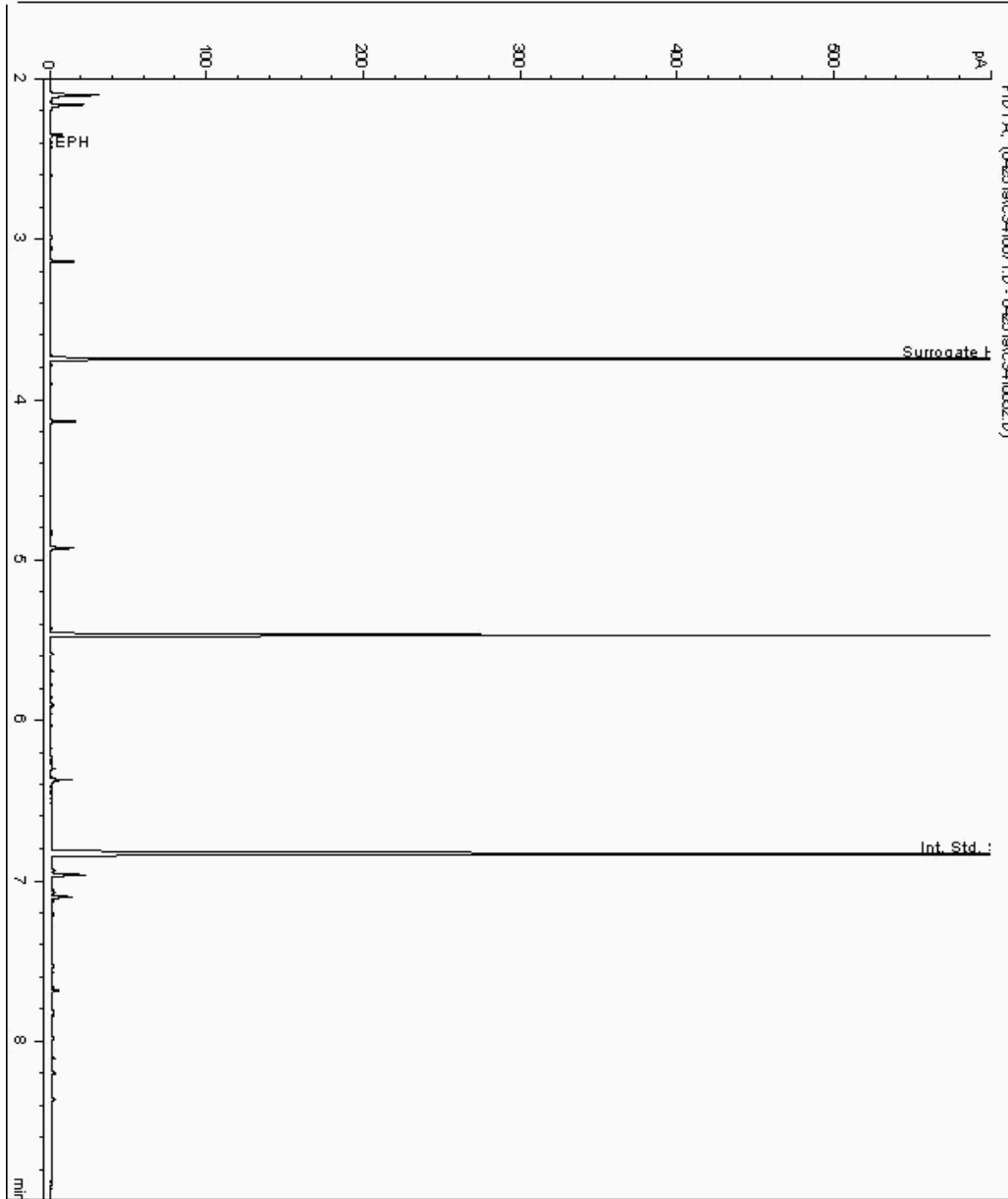
Analysis: EPH by FID

Sample No : 19838960
Sample ID : RH-BH-24-ES-102

Depth : 0.60

EPH Range Organics (C10 - C40)

Sample Identity : 18632276-
Date Acquired : 26/04/19 07:10:07 PM
Units : mg/kg
Sample Multiplier : 0.000
Dilution :





CERTIFICATE OF ANALYSIS

Validated

SDG: 190418-87 Client Reference: Cole Green Suppleme Report Number: 504352
Location: Cole Green Order Number: 9Y0074-107-100 Superseded Report: 504295

Chromatogram

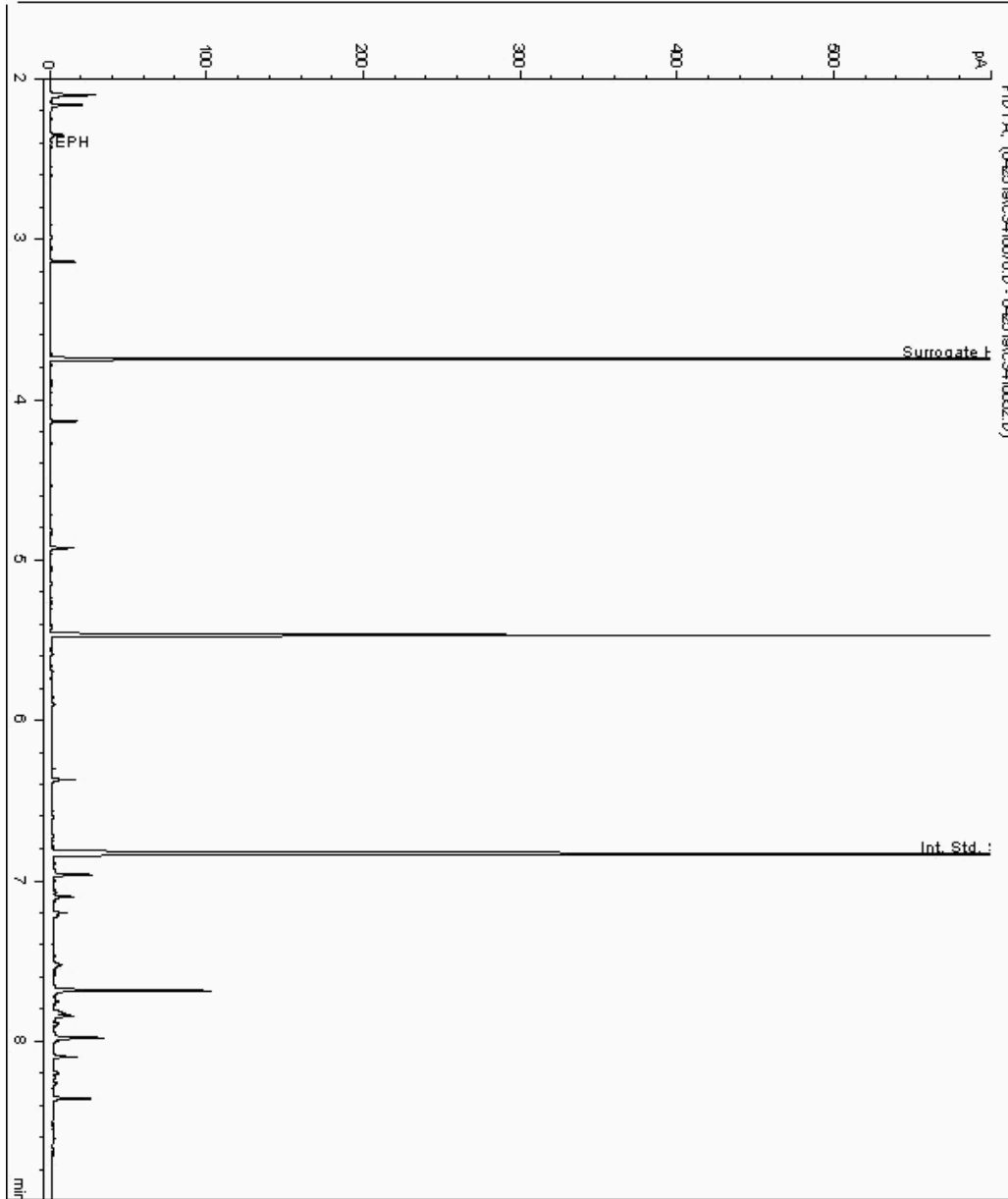
Analysis: EPH by FID

Sample No : 19839008
Sample ID : RH-BH-26-ES-101

Depth : 0.50

EPH Range Organics (C10 - C40)

Sample Identity : 18632247-
Date Acquired : 26/04/19 06:49:47 PM
Units : mg/kg
Sample Multiplier : 0.000
Dilution :





CERTIFICATE OF ANALYSIS

Validated

SDG: 190418-87 Client Reference: Cole Green Suppleme Report Number: 504352
Location: Cole Green Order Number: 9Y0074-107-100 Superseded Report: 504295

Chromatogram

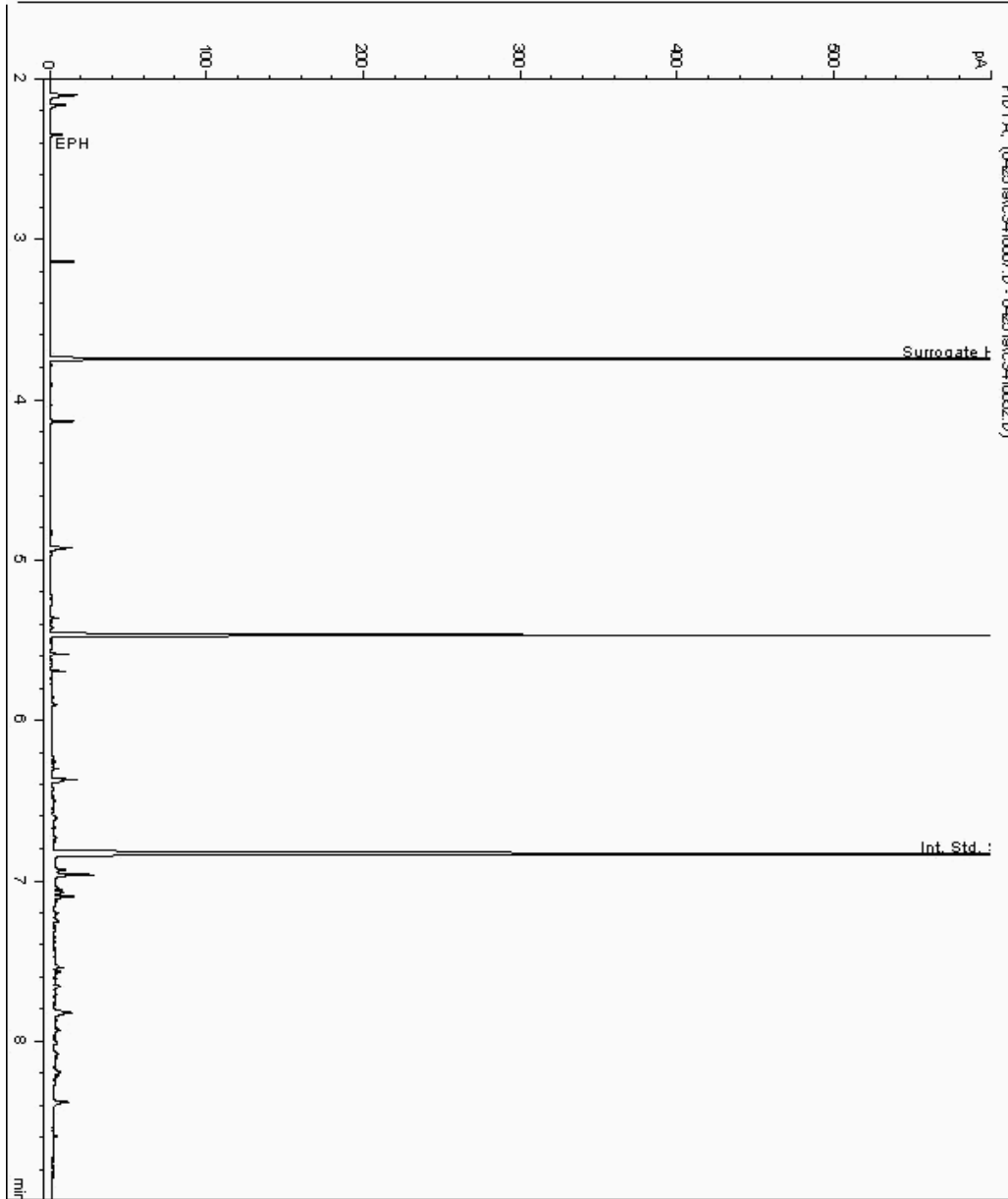
Analysis: EPH by FID

Sample No : 19839135
Sample ID : RH-BH-25-ES-104

Depth : 2.60

EPH Range Organics (C10 - C40)

Sample Identity : 18632492-
Date Acquired : 26/04/19 05:28:45 PM
Units : mg/kg
Sample Multiplier : 0.000
Dilution :





CERTIFICATE OF ANALYSIS

Validated

SDG: 190418-87 Client Reference: Cole Green Suppleme Report Number: 504352
Location: Cole Green Order Number: 9Y0074-107-100 Superseded Report: 504295

Chromatogram

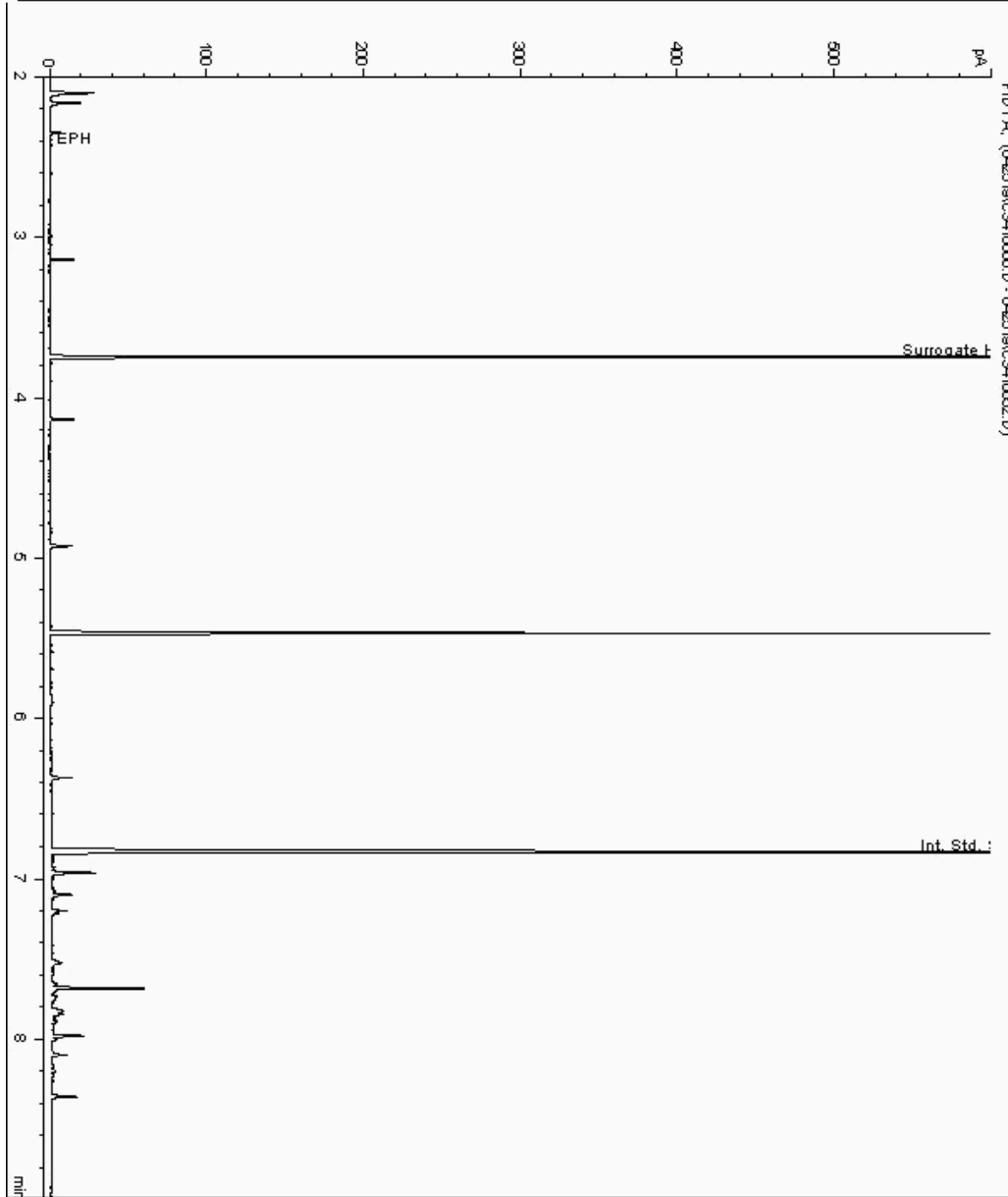
Analysis: EPH by FID

Sample No : 19839317
Sample ID : RH-BH-25-ES-101

Depth : 0.30

EPH Range Organics (C10 - C40)

Sample Identity : 18632220-
Date Acquired : 26/04/19 05:08:21 PM
Units : mg/kg
Sample Multiplier : 0.000
Dilution :





CERTIFICATE OF ANALYSIS

Validated

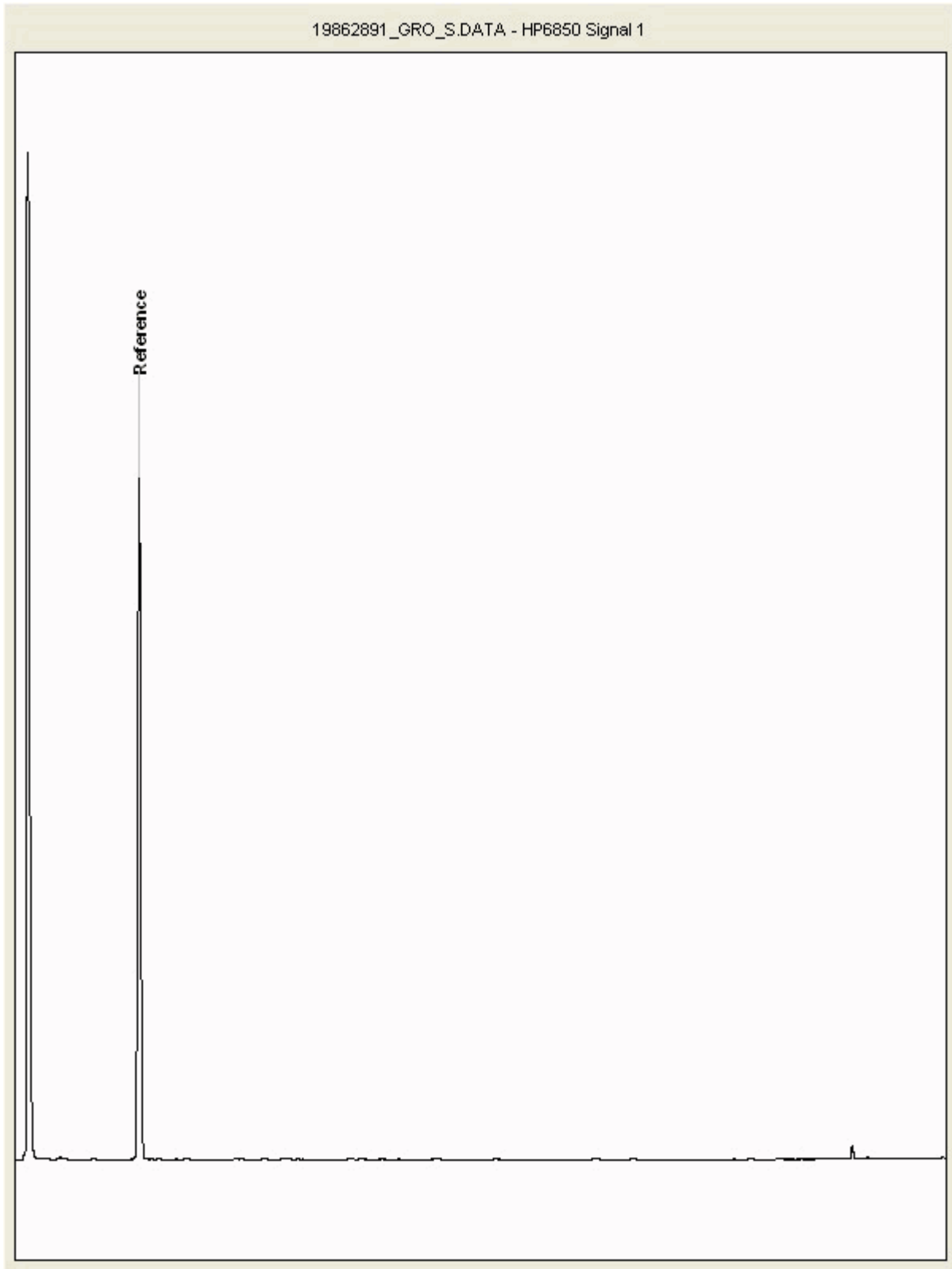
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Location:	Cole Green	Order Number:	9Y0074-107-100	Superseded Report:	504295

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 19862891
Sample ID : RH-BH-26-ES-102

Depth : 1.00





CERTIFICATE OF ANALYSIS

Validated

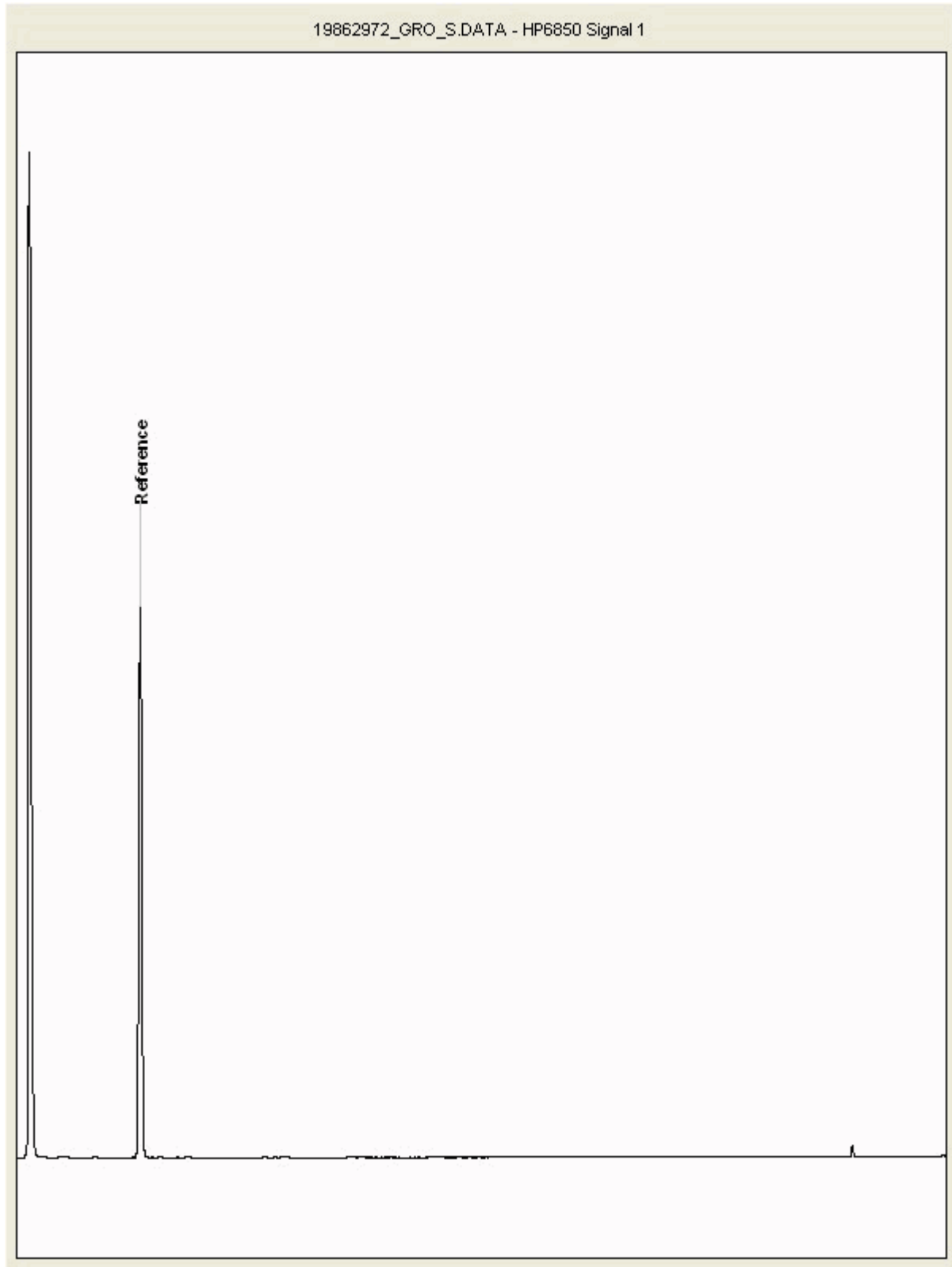
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Location:	Cole Green	Order Number:	9Y0074-107-100	Superseded Report:	504295

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 19862972
Sample ID : RH-BH-25-ES-102

Depth : 0.80





CERTIFICATE OF ANALYSIS

Validated

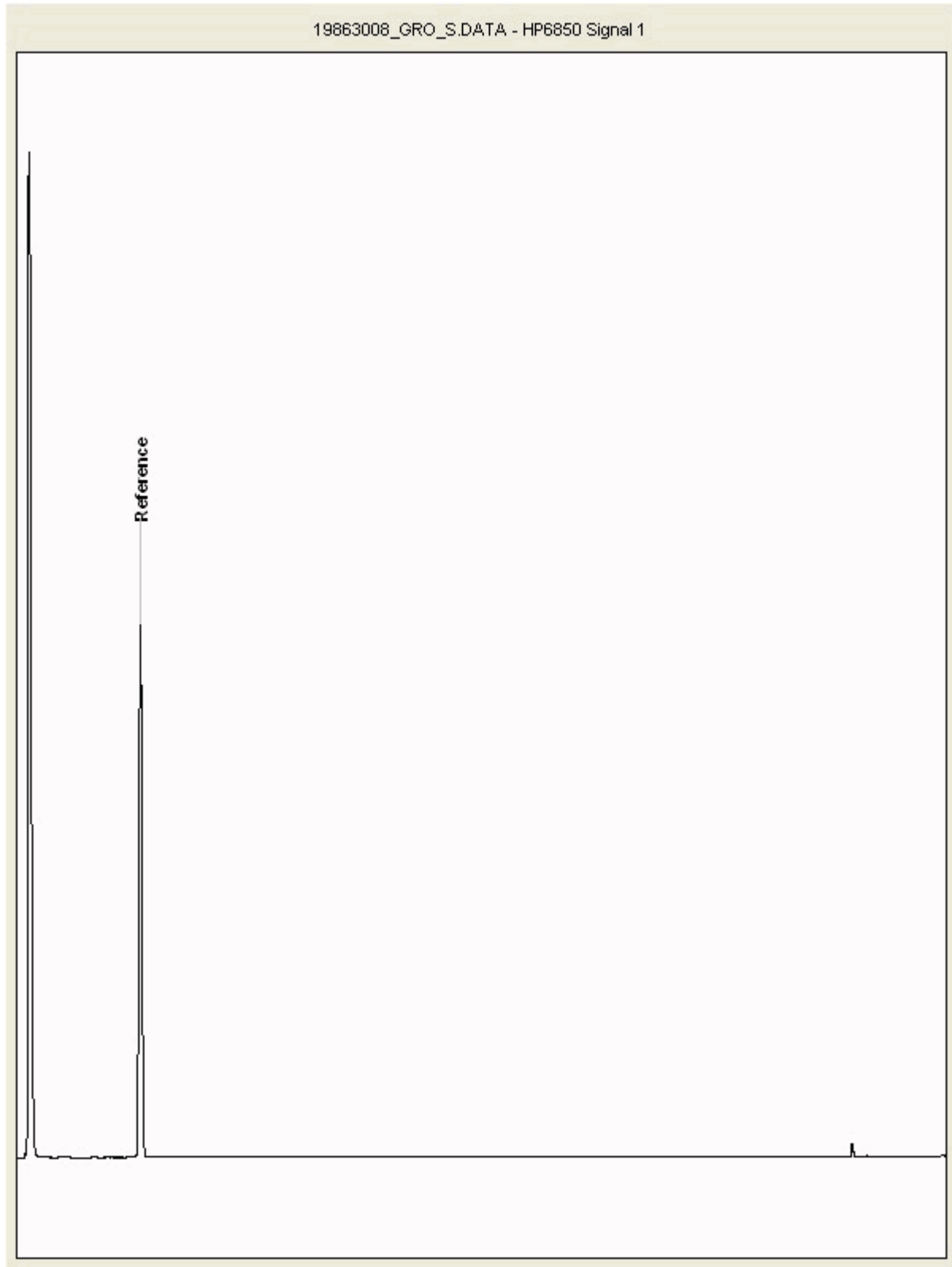
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Location:	Cole Green	Order Number:	9Y0074-107-100	Superseded Report:	504295

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 19863008
Sample ID : RH-BH-24-ES-101

Depth : 0.30





CERTIFICATE OF ANALYSIS

Validated

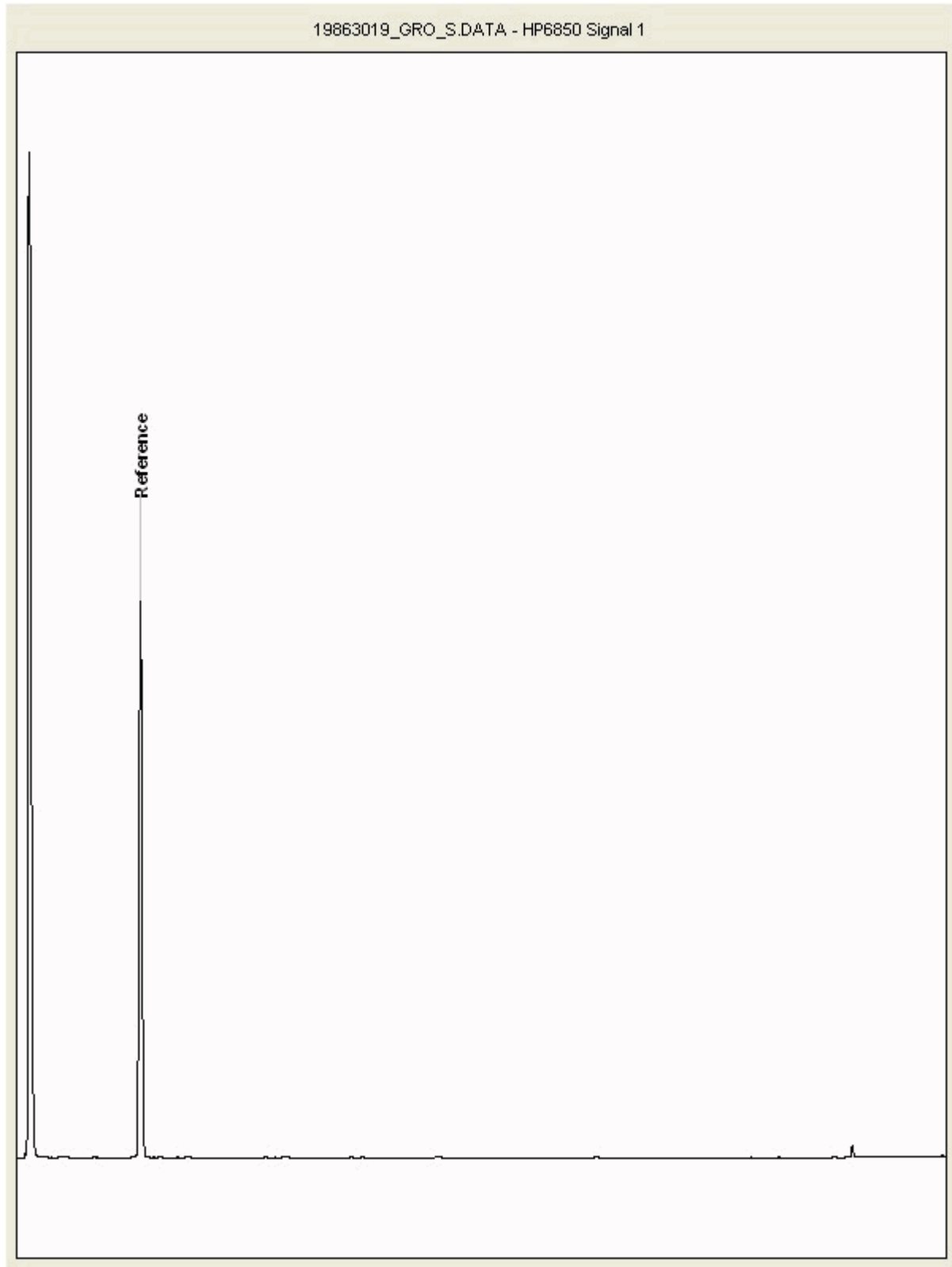
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Location:	Cole Green	Order Number:	9Y0074-107-100	Superseded Report:	504295

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 19863019
Sample ID : RH-BH-26-ES-101

Depth : 0.50





CERTIFICATE OF ANALYSIS

Validated

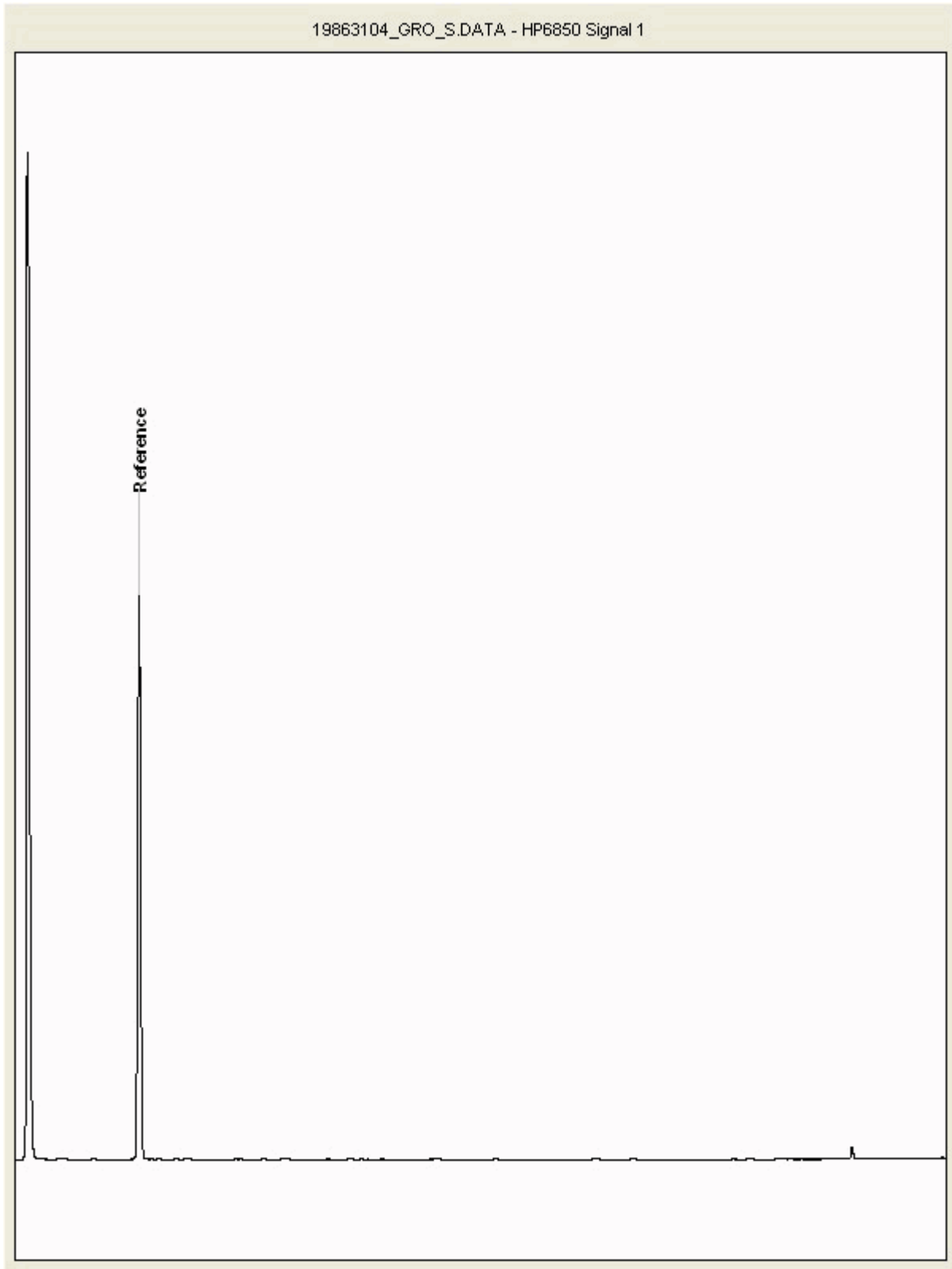
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Location:	Cole Green	Order Number:	9Y0074-107-100	Superseded Report:	504295

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 19863104
Sample ID : RH-BH-25-ES-03

Depth : 1.60





CERTIFICATE OF ANALYSIS

Validated

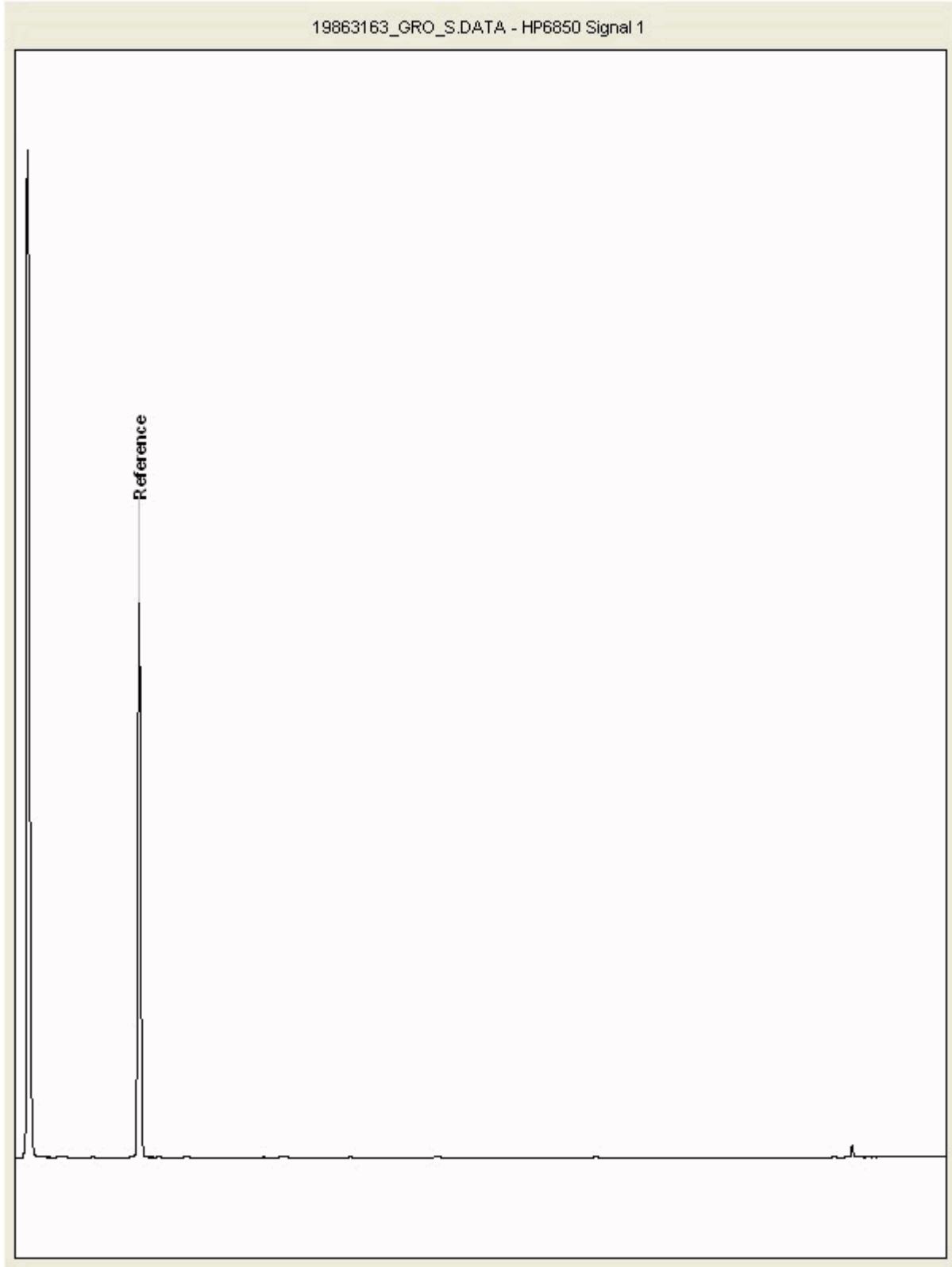
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Location:	Cole Green	Order Number:	9Y0074-107-100	Superseded Report:	504295

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 19863163
Sample ID : RH-BH-26-ES-103

Depth : 1.50





CERTIFICATE OF ANALYSIS

Validated

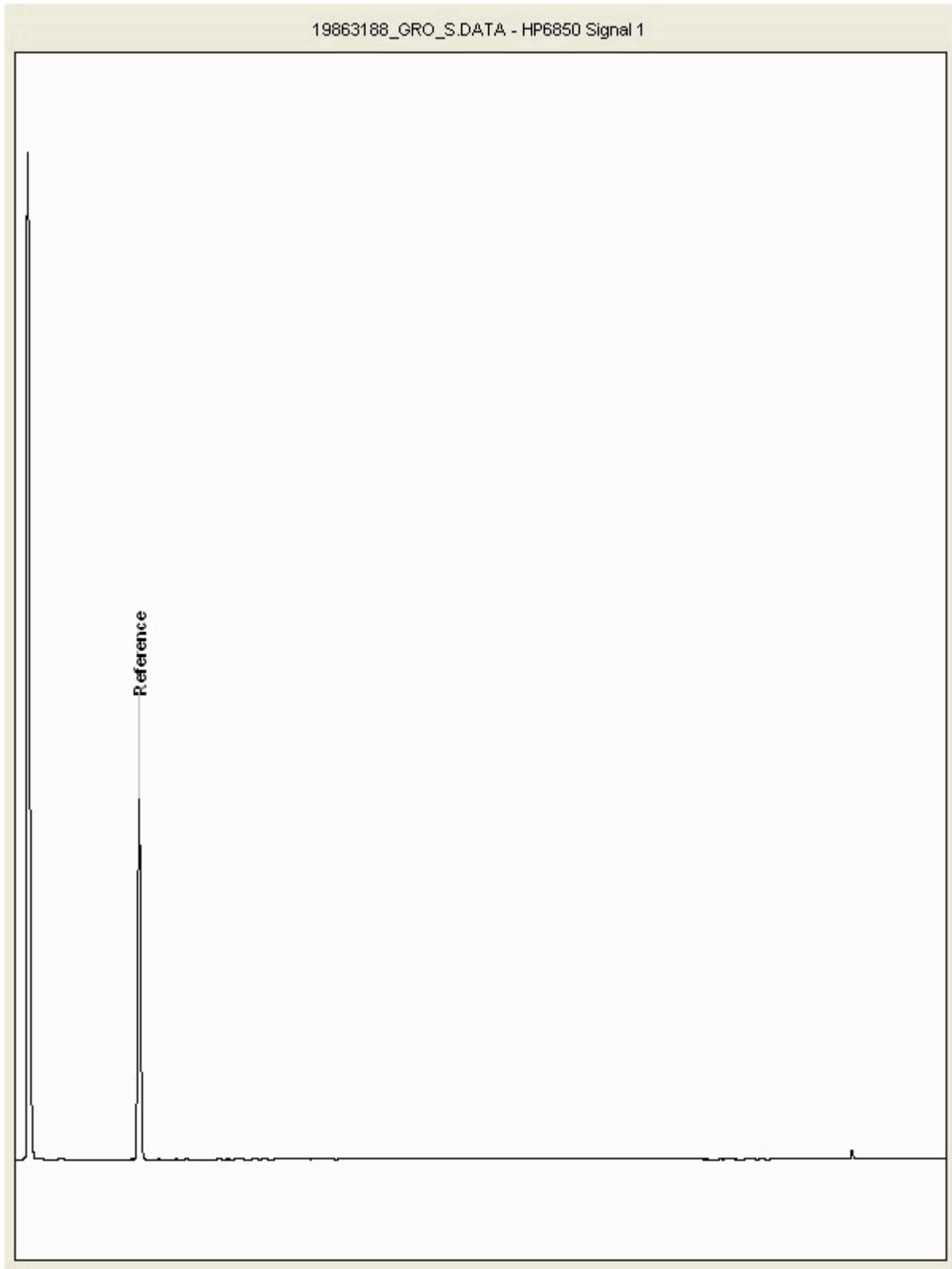
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Location:	Cole Green	Order Number:	9Y0074-107-100	Superseded Report:	504295

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 19863188
Sample ID : RH-BH-25-ES-104

Depth : 2.60





CERTIFICATE OF ANALYSIS

Validated

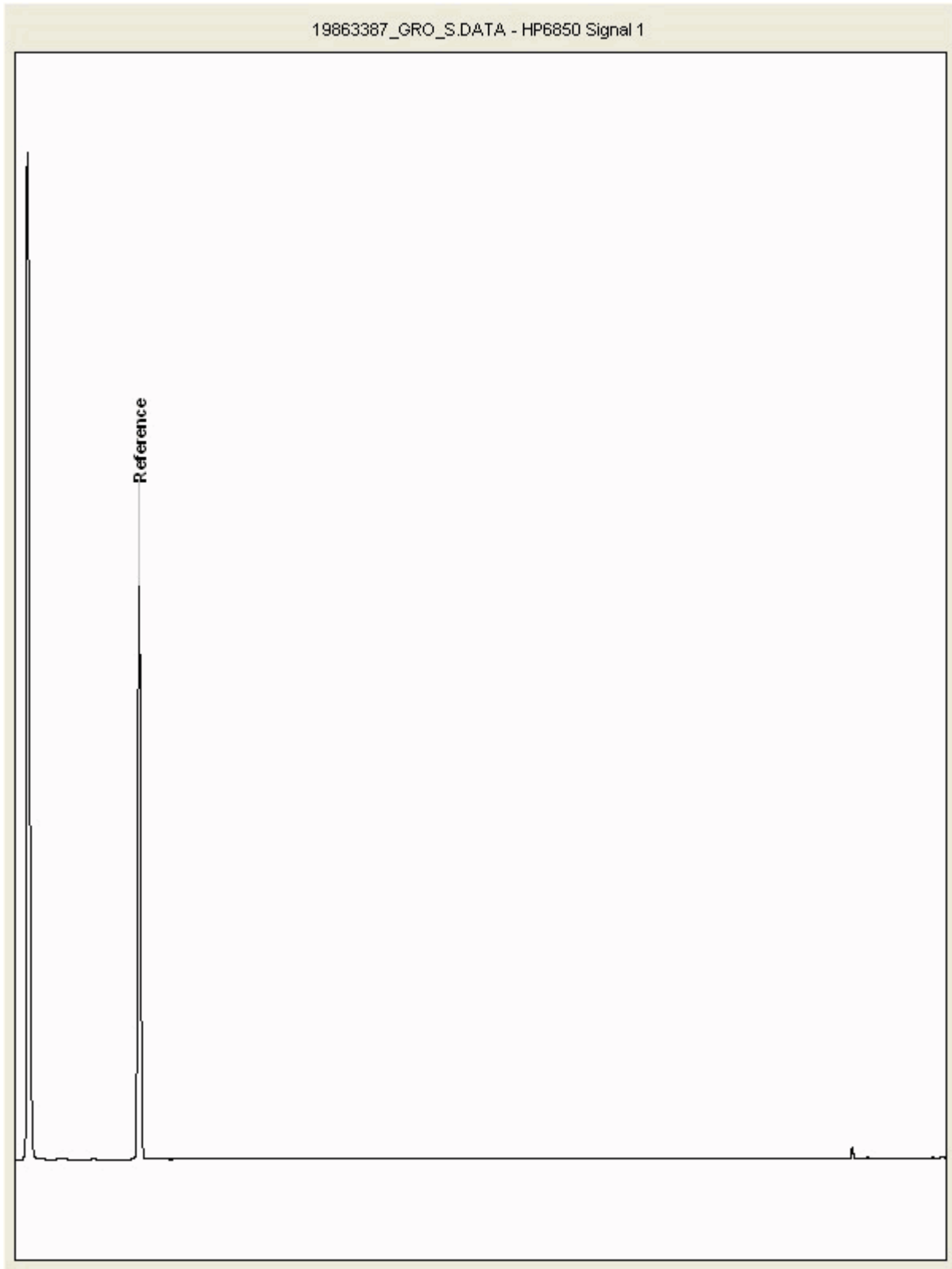
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Location:	Cole Green	Order Number:	9Y0074-107-100	Superseded Report:	504295

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 19863387
Sample ID : RH-BH-24-ES-103

Depth : 1.00





CERTIFICATE OF ANALYSIS

Validated

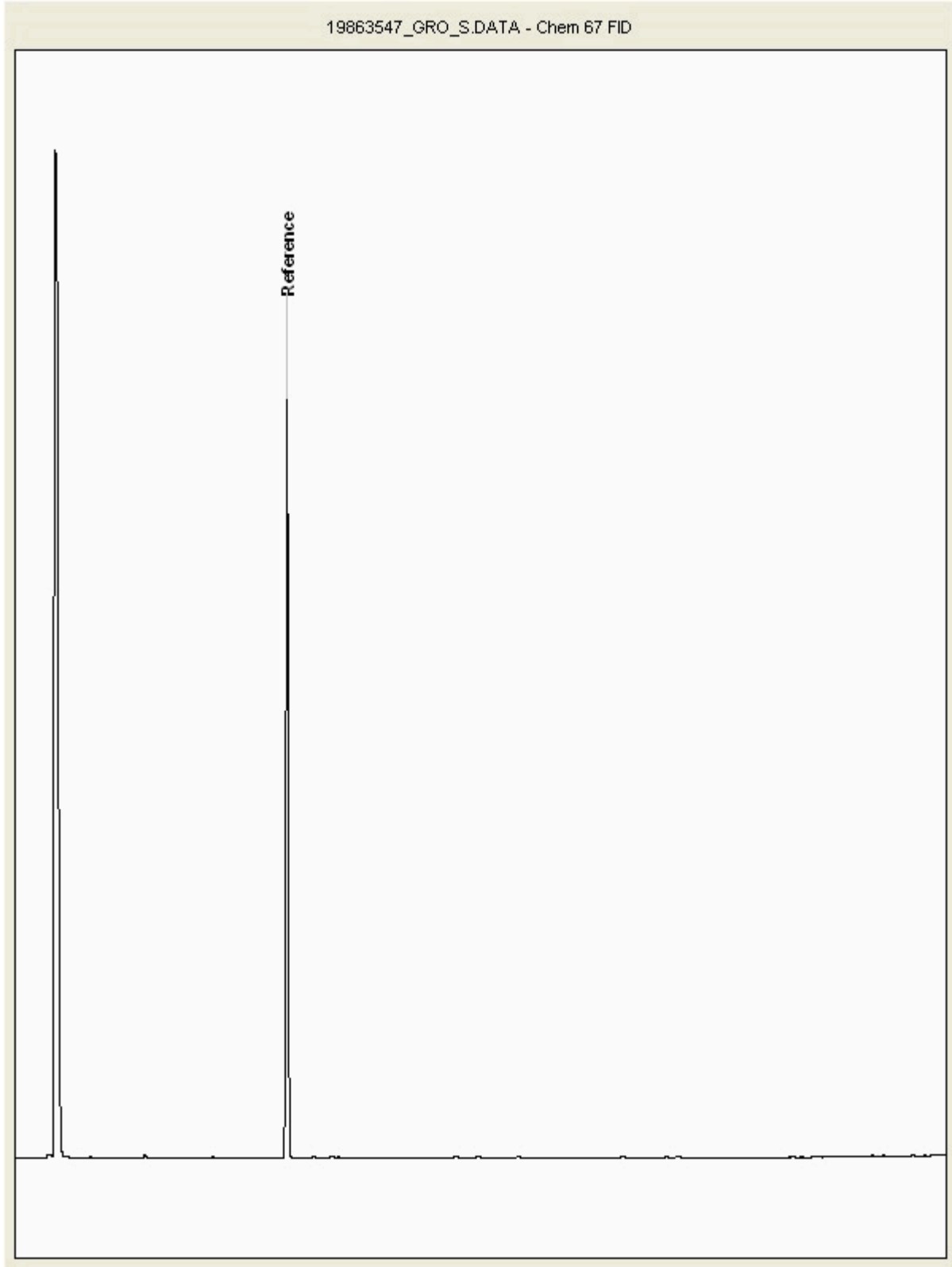
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Location:	Cole Green	Order Number:	9Y0074-107-100	Superseded Report:	504295

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 19863547
Sample ID : RH-BH-24-ES-102

Depth : 0.60





CERTIFICATE OF ANALYSIS

Validated

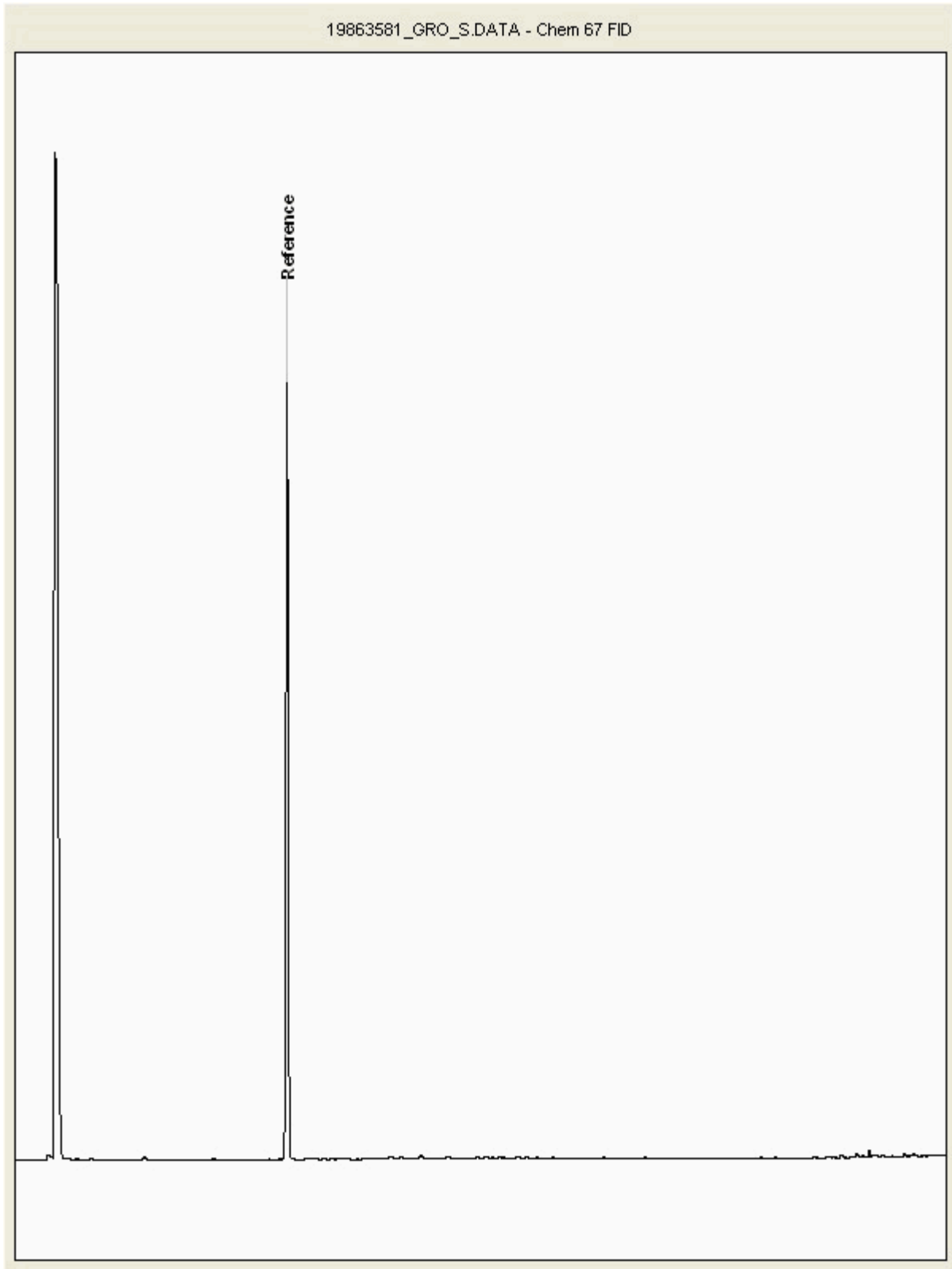
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Location:	Cole Green	Order Number:	9Y0074-107-100	Superseded Report:	504295

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 19863581
Sample ID : RH-BH-24-ES-104

Depth : 1.60





CERTIFICATE OF ANALYSIS

SDG:	19041 8-87	Client Reference:	Cole Green Supplement	Report Number:	504352
Location:	Cole Green	Order Number:	9Y0074-107-100	Superseded Report:	504295

Appendix

General

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

2. Samples will be run in duplicate upon request, but an additional charge may be incurred

3. 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.

4. 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.

5. 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.

6. 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 asbestos present is not determined unless specifically requested.

7. 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.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

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

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals - total metals must be requested separately.

11. Results relate only to the items tested.

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

13. **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.

14. **Product analyses** - Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

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

18. 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.

19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

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

21. 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.

22. 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.

23. 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.

24. **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.

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

Asbestos

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.

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.