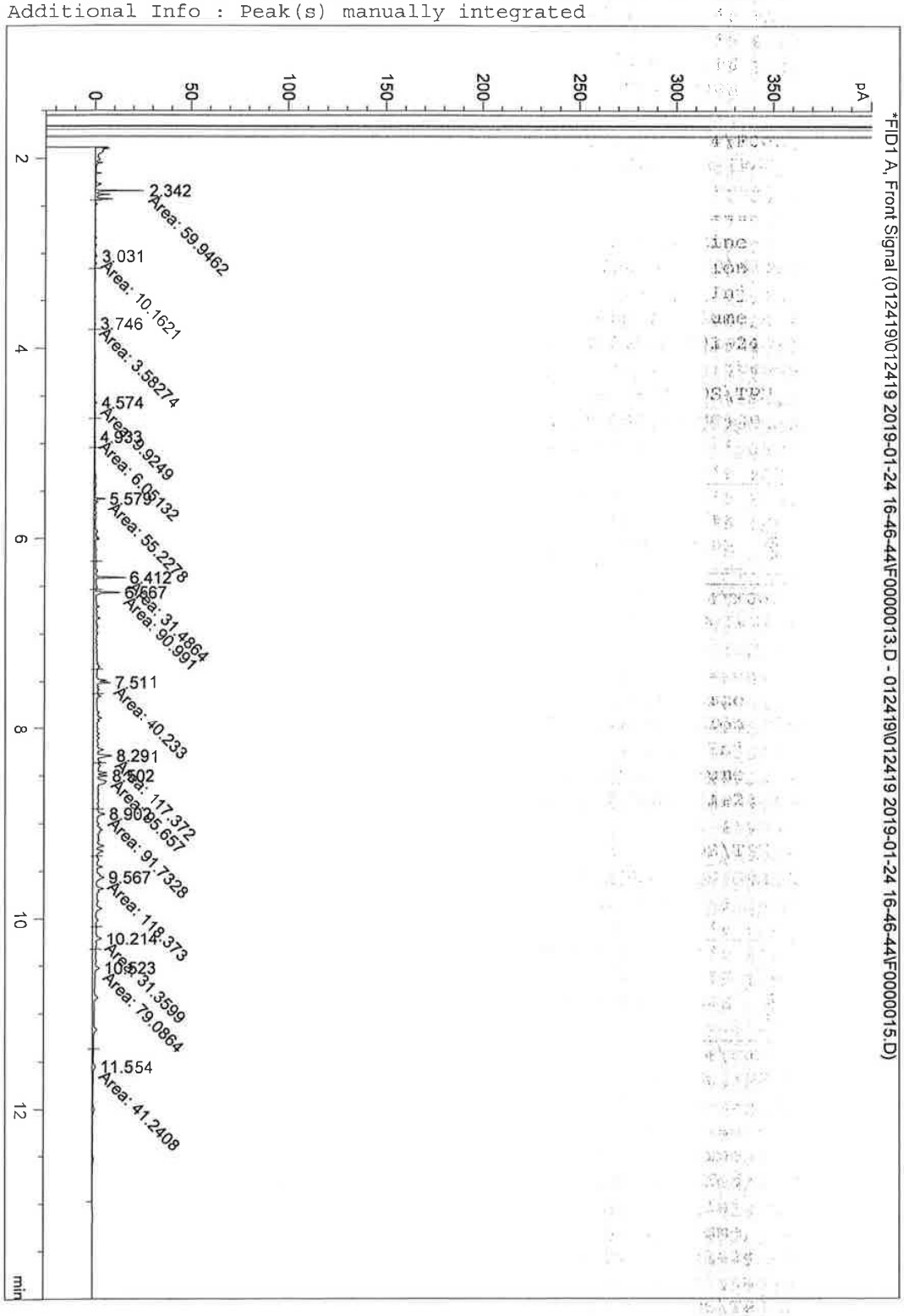
APPENDIX L
LABORATORY CERTIFICATES FOR CHEMICAL SOIL ANALYSIS

Data File C:\CHEM32\1\DATA\012419\012419 2019-01-24 16-46-44\F0000013.D
Sample Name: 00318-1 TPHS

==========

Acq. Operator : MIM Seq. Line : 13
Acq. Instrument : Instrument 1 Location : Vial 11
Injection Date : 24/01/2019 20:44:59 Inj : 1
Inj Volume : 2 µl

Acq. Method : C:\CHEM32\1\DATA\012419\012419 2019-01-24 16-46-44\TPH.M
Last changed : 02/03/2018 08:21:05 by NH
Analysis Method : C:\CHEM32\1\METHODS\AQUISITION METHODS\TPH_012319.M
Last changed : 25/01/2019 12:13:14 by MIM
(modified after loading)
Additional Info : Peak(s) manually integrated

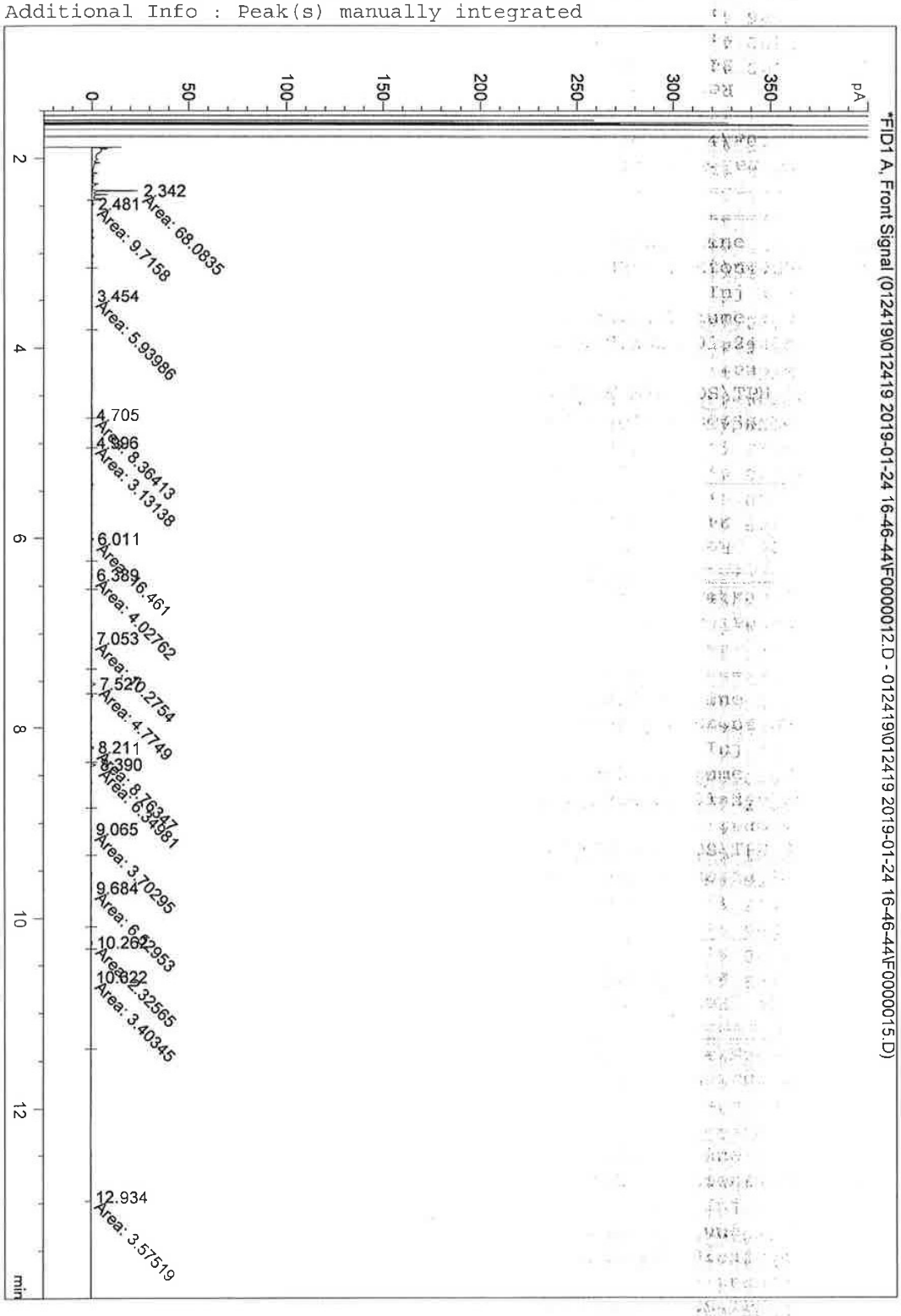


Data File C:\CHEM32\1\DATA\012419\012419 2019-01-24 16-46-44\F0000012.D
Sample Name: 00318-2 TPHS

==========

Acq. Operator : MIM Seq. Line : 12
Acq. Instrument : Instrument 1 Location : Vial 10
Injection Date : 24/01/2019 20:25:18 Inj : 1
Inj Volume : 2 µl

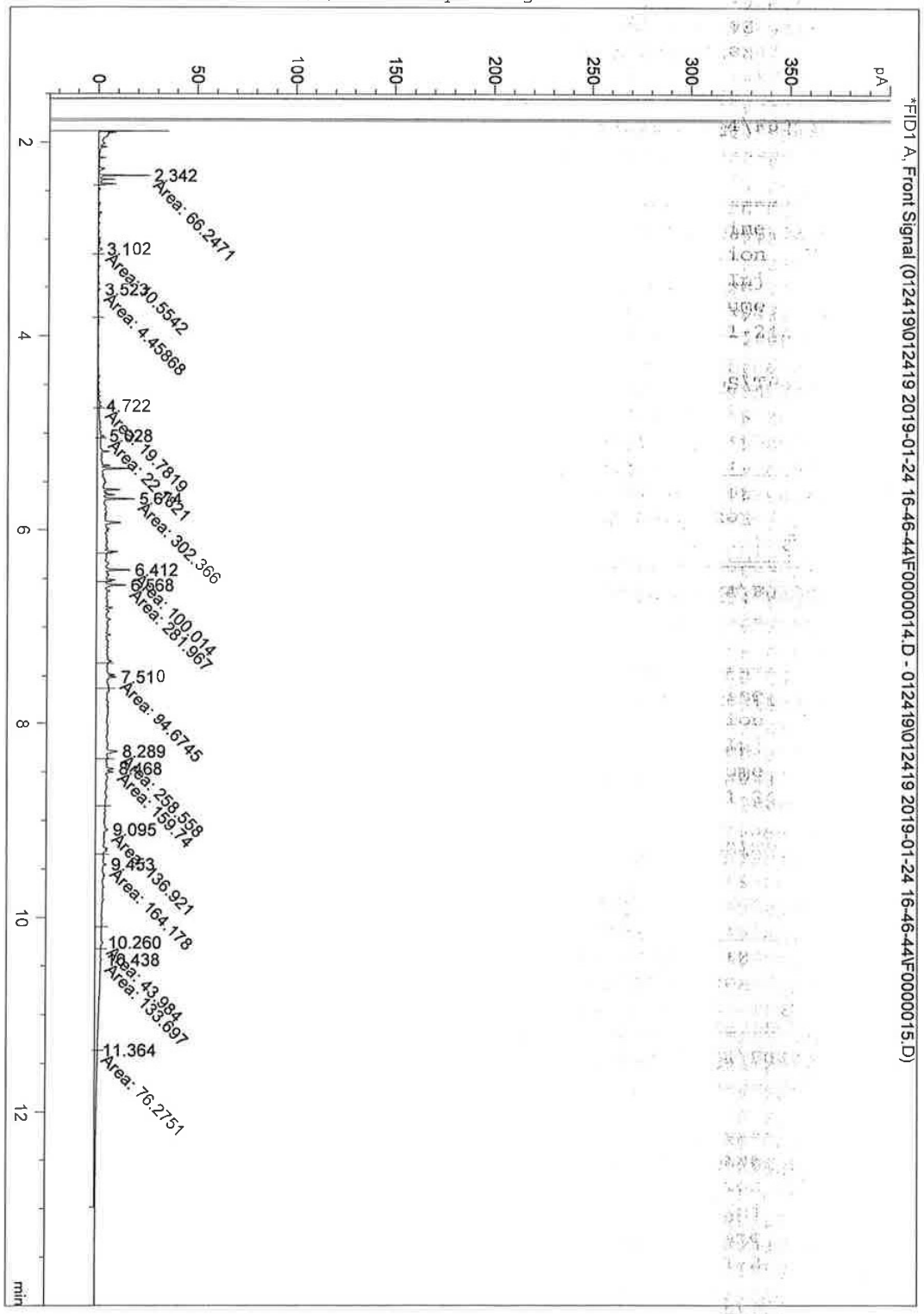
Acq. Method : C:\CHEM32\1\DATA\012419\012419 2019-01-24 16-46-44\TPH.M
Last changed : 02/03/2018 08:21:05 by NH
Analysis Method : C:\CHEM32\1\METHODS\AQUISITION METHODS\TPH_012319.M
Last changed : 25/01/2019 12:11:54 by MIM
(modified after loading)
Additional Info : Peak(s) manually integrated



Data File C:\CHEM32\1\DATA\012419\012419 2019-01-24 16-46-44\F0000014.D
Sample Name: 00318-4 TPHS

==========

Acq. Operator : MIM
Seq. Line : 14
Acq. Instrument : Instrument 1
Location : Vial 12
Injection Date : 24/01/2019 21:04:33
Inj : 1
Inj Volume : 2 µl
Acq. Method : C:\CHEM32\1\DATA\012419\012419 2019-01-24 16-46-44\TPH.M
Last changed : 02/03/2018 08:21:05 by NH
Analysis Method : C:\CHEM32\1\METHODS\AQUISITION METHODS\TPH_012319.M
Last changed : 25/01/2019 12:14:30 by MIM
(modified after loading)
Additional Info : Peak(s) manually integrated



envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 19/00318
Issue Number: 1 **Date:** 30 January, 2019

Client: RSK Environment Ltd Hemel
18 Frogmore Road
Hemel Hempstead
Hertfordshire
UK
HP3 9RT

Project Manager: Claire Siberry/Nigel Austin
Project Name: Ugly Brown Building
Project Ref: 371654
Order No: N/A
Date Samples Received: 15/01/19
Date Instructions Received: 15/01/19
Date Analysis Completed: 29/01/19

Prepared by:

Kate Keningale
Sales Executive

Approved by:

Danielle Bescoby
Quality Manager

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME
UKAS TESTING 1247

Envirolab Job Number: 19/00318

Client Project Name: Ugly Brown Building

Client Project Ref: 371654

Lab Sample ID	19/00318/1	19/00318/2	19/00318/4						Units	Method ref
Client Sample No	1	2	1							
Client Sample ID	BH02	BH02	BH05							
Depth to Top	0.30	0.60	0.70							
Depth To Bottom										
Date Sampled	07-Jan-19	07-Jan-19	10-Jan-19							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	6E	6E							
% Moisture at <40C$_A$	13.6	18.1	16.8						% w/w	A-T-044
% Stones >10mm$_A$	7.1	<0.1	<0.1						% w/w	A-T-044
pH$_D^{M\#}$	8.13	8.29	8.33						pH	A-T-031s
Total Organic Carbon$_D^{M\#}$	0.78	0.78	0.33						% w/w	A-T-032s
Arsenic$_D^{M\#}$	6	4	4						mg/kg	A-T-024s
Cadmium$_D^{M\#}$	<0.5	<0.5	<0.5						mg/kg	A-T-024s
Copper$_D^{M\#}$	17	23	21						mg/kg	A-T-024s
Chromium$_D^{M\#}$	21	33	26						mg/kg	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1						mg/kg	A-T-040s
Lead$_D^{M\#}$	47	15	19						mg/kg	A-T-024s
Mercury$_D$	0.51	<0.17	<0.17						mg/kg	A-T-024s
Nickel$_D^{M\#}$	9	35	30						mg/kg	A-T-024s
Selenium$_D^{\#}$	<1	1	<1						mg/kg	A-T-024s
Zinc$_D^{M\#}$	53	67	59						mg/kg	A-T-024s
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_A^{\#}$	NAD	NAD	Amosite							A-T-045
Asbestos Matrix (microscope)$_A$	-	-	loose fibres							A-T-045
Asbestos ACM - Suitable for Water Absorption Test?	N/A	N/A	N/A							
Asbestos in Soil Quantification % (Hand Picking & Weighing)										
Asbestos in soil % composition (hand picking and weighing)$_D$	-	-	0.006						% w/w	A-T-054

Envirolab Job Number: 19/00318

Client Project Name: Ugly Brown Building

Client Project Ref: 371654

Lab Sample ID	19/00318/1	19/00318/2	19/00318/4						Units	Method ref
Client Sample No	1	2	1							
Client Sample ID	BH02	BH02	BH05							
Depth to Top	0.30	0.60	0.70							
Depth To Bottom										
Date Sampled	07-Jan-19	07-Jan-19	10-Jan-19							
Sample Type	Soil - ES	Soil - ES	Soil - ES							
Sample Matrix Code	4AE	6E	6E							
PAH-16MS plus Coronene										
Acenaphthene$_A^{M\#}$	<0.01	<0.01	<0.01						mg/kg	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01						mg/kg	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	<0.02						mg/kg	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.09	<0.04	<0.04						mg/kg	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.10	<0.04	<0.04						mg/kg	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.13	<0.05	<0.05						mg/kg	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.06	<0.05	<0.05						mg/kg	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07						mg/kg	A-T-019s
Chrysene$_A^{M\#}$	0.11	<0.06	<0.06						mg/kg	A-T-019s
Coronene$_A$	0.02	<0.01	<0.01						mg/kg	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04						mg/kg	A-T-019s
Fluoranthene$_A^{M\#}$	0.16	<0.08	<0.08						mg/kg	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01						mg/kg	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.08	<0.03	<0.03						mg/kg	A-T-019s
Naphthalene$_A^{M\#}$	<0.03	<0.03	<0.03						mg/kg	A-T-019s
Phenanthrene$_A^{M\#}$	0.05	<0.03	<0.03						mg/kg	A-T-019s
Pyrene$_A^{M\#}$	0.14	<0.07	<0.07						mg/kg	A-T-019s
Total PAH-16MS plus Coronene$_A$	0.94	<0.08	<0.08						mg/kg	A-T-019s
TPH Total with ID + GC Trace										
TPH total (>C6-C40)$_A^{M\#}$	31	<10	83						mg/kg	A-T-007s
TPH FID Chromatogram$_A$	Appended	Appended	Appended							A-T-007s
TPH ID (for FID characterisations)$_A$	Possible PAHs + other unknown heavier hydrocarbons	NDP	Unknown profile							A-T-007s

REPORT NOTES

General:
This report shall not be reproduced, except in full, without written approval from Envirolab.
All samples contained within this report, and any received with the same delivery, will be disposed of one month after the date of this report.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and interpretations expressed are outside the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Soil chemical analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any “A” subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:
Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis.
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

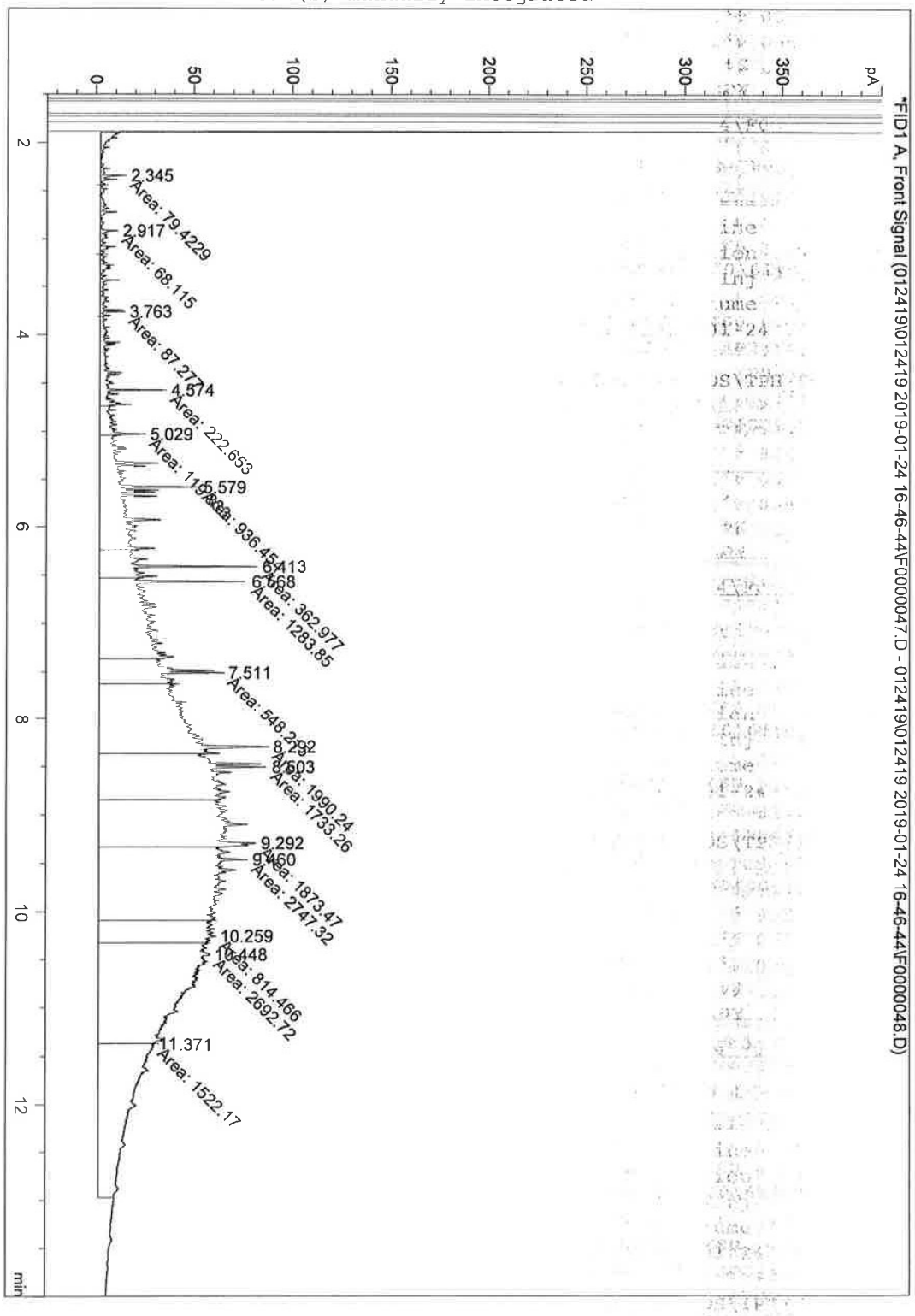
Predominant Matrix Codes:
1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.
Secondary Matrix Codes:
A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:
IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Please contact us if you need any further information.

Data File C:\CHEM32\1\DATA\012419\012419 2019-01-24 16-46-44\F0000047.D
Sample Name: 00430-1 TPHS

Acq. Operator	: MIM	Seq. Line	: 47
Acq. Instrument	: Instrument 1	Location	: Vial 45
Injection Date	: 25/01/2019 07:52:36	Inj	: 1
		Inj Volume	: 2 µl
Acq. Method	: C:\CHEM32\1\DATA\012419\012419 2019-01-24 16-46-44\TPH.M		
Last changed	: 02/03/2018 08:21:05 by NH		
Analysis Method	: C:\CHEM32\1\METHODS\AQUISITION METHODS\TPH_012319.M		
Last changed	: 25/01/2019 12:56:57 by MIM (modified after loading)		
Additional Info	: Peak(s) manually integrated		

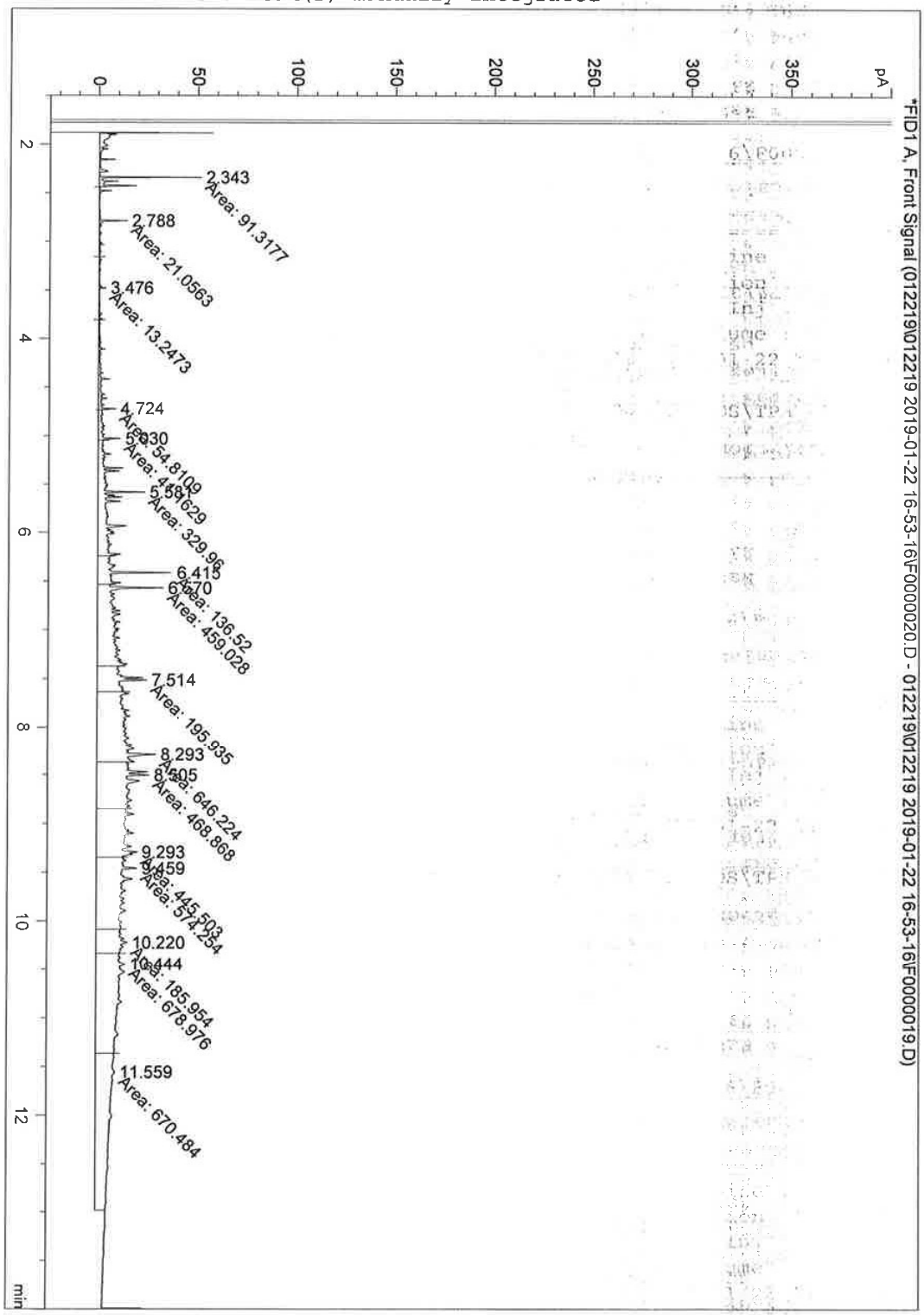


Data File C:\CHEM32\1\DATA\012219\012219 2019-01-22 16-53-16\F0000020.D
Sample Name: 00430-3 TPH

==========

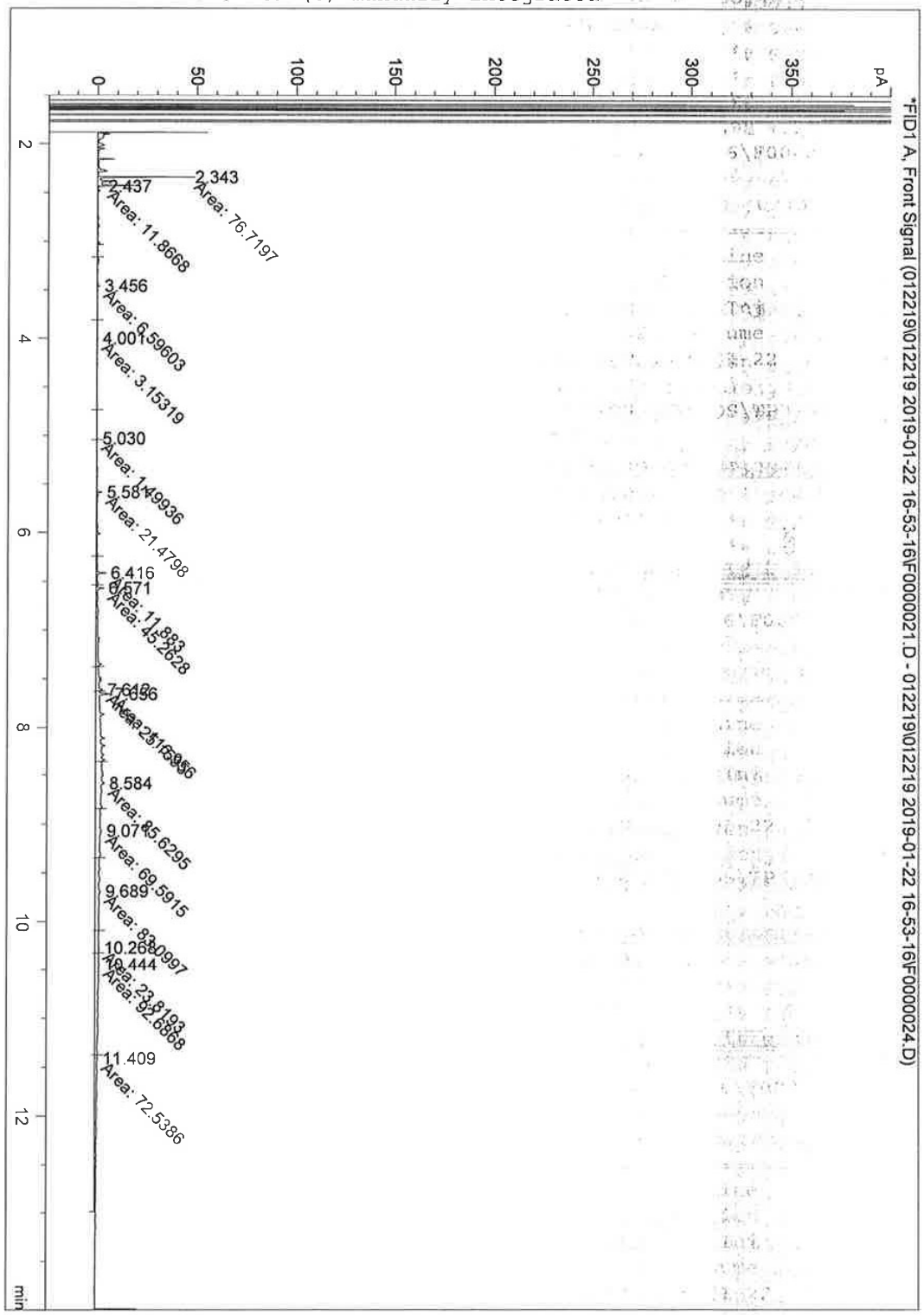
Acq. Operator : NM
Seq. Line : 20
Acq. Instrument : Instrument 1
Location : Vial 18
Injection Date : 22/01/2019 23:11:29
Inj : 1
Inj Volume : 2 µl

Acq. Method : C:\CHEM32\1\DATA\012219\012219 2019-01-22 16-53-16\TPH.M
Last changed : 02/03/2018 08:21:05 by NH
Analysis Method : C:\CHEM32\1\METHODS\AQUISITION METHODS\TPH_012219.M
Last changed : 23/01/2019 08:28:24 by MIM
Additional Info : Peak(s) manually integrated



Data File C:\CHEM32\1\DATA\012219\012219 2019-01-22 16-53-16\F0000021.D
Sample Name: 00430-4 TPH

Acq. Operator	: NM	Seq. Line	: 21
Acq. Instrument	: Instrument 1	Location	: Vial 19
Injection Date	: 22/01/2019 23:31:30	Inj	: 1
		Inj Volume	: 2 µl
Acq. Method	: C:\CHEM32\1\DATA\012219\012219 2019-01-22 16-53-16\TPH.M		
Last changed	: 02/03/2018 08:21:05 by NH		
Analysis Method	: C:\CHEM32\1\METHODS\AQUISITION METHODS\TPH_012219.M		
Last changed	: 23/01/2019 08:28:24 by MIM		
Additional Info	: Peak(s) manually integrated		



envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 19/00430
Issue Number: 1 **Date:** 28 February, 2019

Client: RSK Environment Ltd Hemel
18 Frogmore Road
Hemel Hempstead
Hertfordshire
UK
HP3 9RT

Project Manager: Claire Siberry
Project Name: Ugly Brown Building
Project Ref: 371654
Order No: N/A
Date Samples Received: 17/01/19
Date Instructions Received: 17/01/19
Date Analysis Completed: 28/02/19

Prepared by:

Holly Neary-King
Sales Executive

Approved by:

John Gustafson
Managing Director

Envirolab Job Number: 19/00430

Client Project Name: Ugly Brown Building

Client Project Ref: 371654

Lab Sample ID	19/00430/1	19/00430/3	19/00430/4						Units	Method ref
Client Sample No	1	3	4							
Client Sample ID	BH01	BH01	BH01							
Depth to Top	1.00	3.00	4.00							
Depth To Bottom										
Date Sampled	11-Jan-19	11-Jan-19	11-Jan-19							
Sample Type	Solid	Soil - ES	Soil - ES							
Sample Matrix Code	7	5ABE	5E							
% Moisture at <40C$_A$	7.1	10.3	17.5						% w/w	A-T-044
% Stones >10mm$_A$	<0.1	47.6	<0.1						% w/w	A-T-044
pH$_D$$^{M\#}$	11.60	10.77	8.86						pH	A-T-031s
Total Organic Carbon$_D$$^{M\#}$	1.56	-	0.17						% w/w	A-T-032s
Arsenic$_D$$^{M\#}$	2	3	<1						mg/kg	A-T-024s
Cadmium$_D$$^{M\#}$	<0.5	<0.5	0.6						mg/kg	A-T-024s
Copper$_D$$^{M\#}$	24	15	30						mg/kg	A-T-024s
Chromium$_D$$^{M\#}$	19	13	38						mg/kg	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1						mg/kg	A-T-040s
Lead$_D$$^{M\#}$	57	40	14						mg/kg	A-T-024s
Mercury$_D$	0.30	0.47	<0.17						mg/kg	A-T-024s
Nickel$_D$$^{M\#}$	14	9	40						mg/kg	A-T-024s
Selenium$_D$$^{\#}$	<1	<1	1						mg/kg	A-T-024s
Zinc$_D$$^{M\#}$	81	39	83						mg/kg	A-T-024s
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_A$$^{\#}$	NAD	NAD	NAD							A-T-045
Asbestos ACM - Suitable for Water Absorption Test?	N/A	N/A	N/A							

Envirolab Job Number: 19/00430

Client Project Name: Ugly Brown Building

Client Project Ref: 371654

Lab Sample ID	19/00430/1	19/00430/3	19/00430/4						Units	Method ref
Client Sample No	1	3	4							
Client Sample ID	BH01	BH01	BH01							
Depth to Top	1.00	3.00	4.00							
Depth To Bottom										
Date Sampled	11-Jan-19	11-Jan-19	11-Jan-19							
Sample Type	Solid	Soil - ES	Soil - ES							
Sample Matrix Code	7	5ABE	5E							
PAH-16MS plus Coronene										
Acenaphthene$_{A}^{M\#}$	0.03	0.01	<0.01						mg/kg	A-T-019s
Acenaphthylene$_{A}^{M\#}$	0.04	<0.01	<0.01						mg/kg	A-T-019s
Anthracene$_{A}^{M\#}$	0.15	0.05	<0.02						mg/kg	A-T-019s
Benzo(a)anthracene$_{A}^{M\#}$	0.57	0.18	<0.04						mg/kg	A-T-019s
Benzo(a)pyrene$_{A}^{M\#}$	0.53	0.16	<0.04						mg/kg	A-T-019s
Benzo(b)fluoranthene$_{A}^{M\#}$	0.59	0.20	<0.05						mg/kg	A-T-019s
Benzo(ghi)perylene$_{A}^{M\#}$	0.38	0.12	<0.05						mg/kg	A-T-019s
Benzo(k)fluoranthene$_{A}^{M\#}$	0.22	0.07	<0.07						mg/kg	A-T-019s
Chrysene$_{A}^{M\#}$	0.61	0.20	<0.06						mg/kg	A-T-019s
Coronene$_{A}$	0.13	0.03	<0.01						mg/kg	A-T-019s
Dibenzo(ah)anthracene$_{A}^{M\#}$	0.09	<0.04	<0.04						mg/kg	A-T-019s
Fluoranthene$_{A}^{M\#}$	1.13	0.35	<0.08						mg/kg	A-T-019s
Fluorene$_{A}^{M\#}$	0.03	0.01	<0.01						mg/kg	A-T-019s
Indeno(123-cd)pyrene$_{A}^{M\#}$	0.41	0.12	<0.03						mg/kg	A-T-019s
Naphthalene$_{A}^{M\#}$	0.04	<0.03	<0.03						mg/kg	A-T-019s
Phenanthrene$_{A}^{M\#}$	0.59	0.22	0.05						mg/kg	A-T-019s
Pyrene$_{A}^{M\#}$	0.98	0.31	<0.07						mg/kg	A-T-019s
Total PAH-16MS plus Coronene$_{A}$	6.52	2.03	<0.08						mg/kg	A-T-019s
TPH Total with ID + GC Trace										
TPH total (>C6-C40)$_{A}^{M\#}$	682	102	28						mg/kg	A-T-007s
TPH FID Chromatogram$_{A}$	Appended	Appended	Appended							A-T-007s
TPH ID (for FID characterisations)$_{A}$	Possible PAHs + other unknown heavier hydrocarbons	Possible PAHs + other unknown heavier hydrocarbons	Unknown profile							A-T-007s

REPORT NOTES

General:
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The results reported herein relate only to the material supplied to the laboratlry.
All samples contained within this report, and any received with the same delivery, will be disposed of one month after the date of this report.
Analytical results reflect the quality of the sample at the time of analysis only.
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A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Soil chemical analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any “A” subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:
Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis.
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed.
Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:
1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.
Secondary Matrix Codes:
A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:
IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Please contact us if you need any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: RSK Environment Ltd Hemel, 18 Frogmore Road, Hemel Hempstead, Hertfordshire, UK, HP3 9RT

Project: Ugly Brown Building

Clients Project No: 371654

Project No: 19/00430

Date Received: 17/01/2019 (am)

Cool Box Temperatures (oC): 5.5

Lab Sample ID	19/00430/1
Client Sample No	1
Client Sample ID/Depth	BH01 1.00m
Date Sampled	11/01/19
Deviation Code	
F	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	19/00430/1
Client Sample No	1
Client Sample ID/Depth	BH01 1.00m
Date Sampled	11/01/19
Mineral Oil (>C10-C40)	✓
PAH (total 17)	✓
PCB Total	✓
BTEX (total)	✓

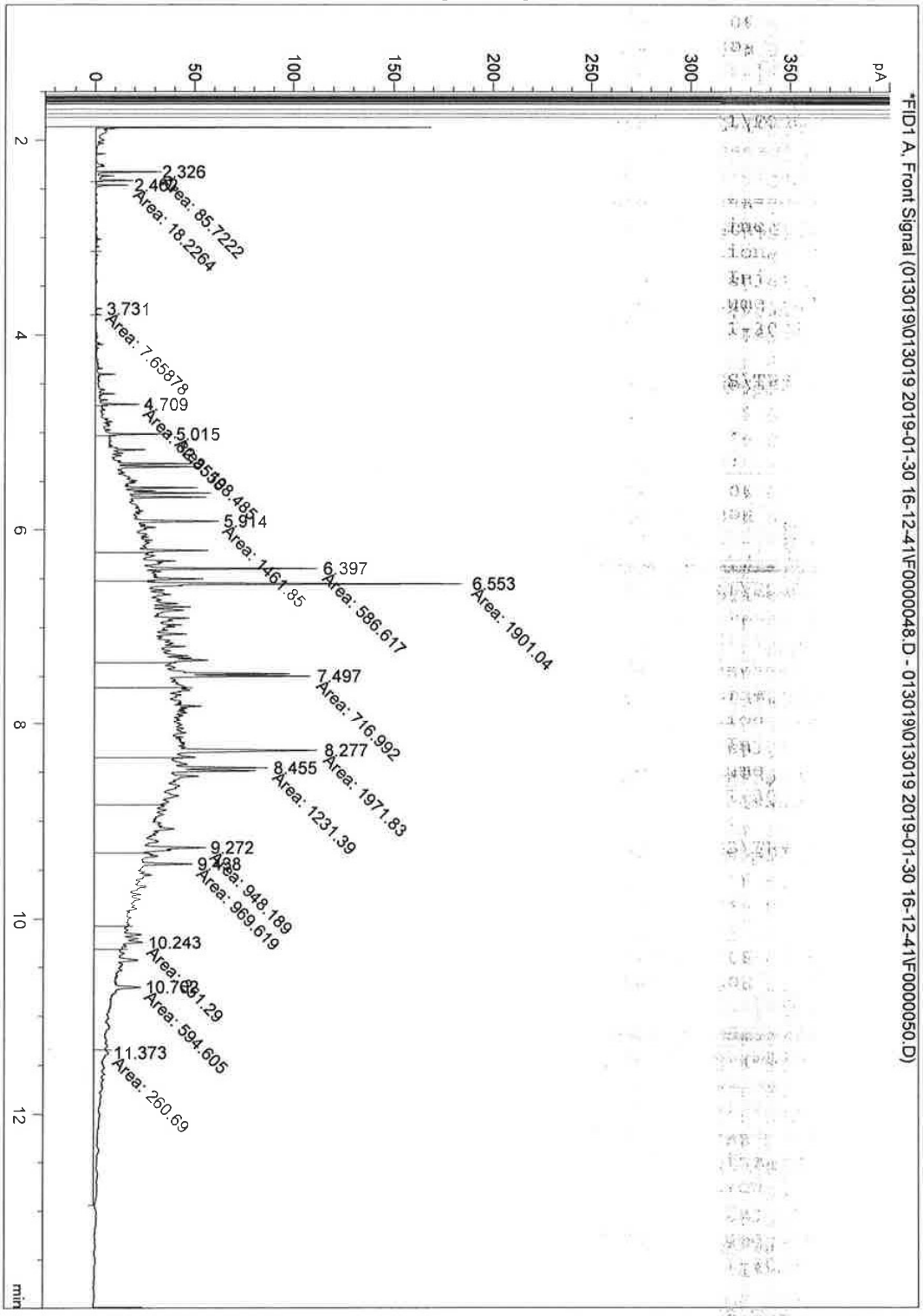
If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Data File C:\CHEM32\1\DATA\013019\013019 2019-01-30 16-12-41\F0000048.D
Sample Name: 00718-2 TPHS

==========

Acq. Operator : MIM Seq. Line : 48
Acq. Instrument : Instrument 1 Location : Vial 46
Injection Date : 31/01/2019 07:41:02 Inj : 1
Inj Volume : 2 µl

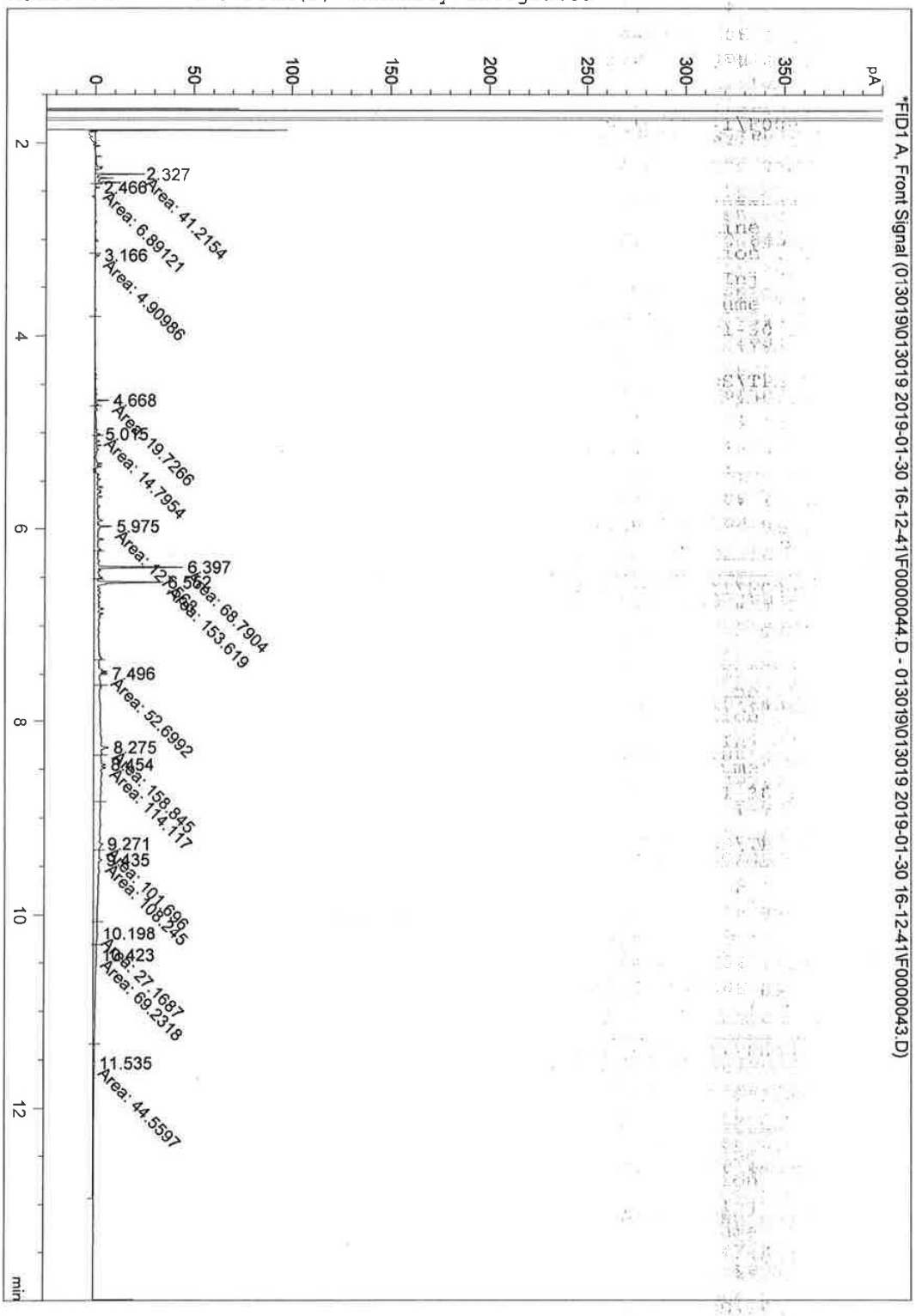
Acq. Method : C:\CHEM32\1\DATA\013019\013019 2019-01-30 16-12-41\TPH.M
Last changed : 02/03/2018 08:21:05 by NH
Analysis Method : C:\CHEM32\1\METHODS\AQUISITION METHODS\TPH_012919.M
Last changed : 31/01/2019 12:46:28 by MIM
(modified after loading)
Additional Info : Peak(s) manually integrated



Data File C:\CHEM32\1\DATA\013019\013019 2019-01-30 16-12-41\F0000044.D
Sample Name: 00718-3 TPHS

==========

Acq. Operator : MIM
Seq. Line : 44
Acq. Instrument : Instrument 1
Location : Vial 42
Injection Date : 31/01/2019 06:22:26
Inj : 1
Inj Volume : 2 µl
Acq. Method : C:\CHEM32\1\DATA\013019\013019 2019-01-30 16-12-41\TPH.M
Last changed : 02/03/2018 08:21:05 by NH
Analysis Method : C:\CHEM32\1\METHODS\AQUISITION METHODS\TPH_012919.M
Last changed : 31/01/2019 12:42:07 by MIM
(modified after loading)
Additional Info : Peak(s) manually integrated

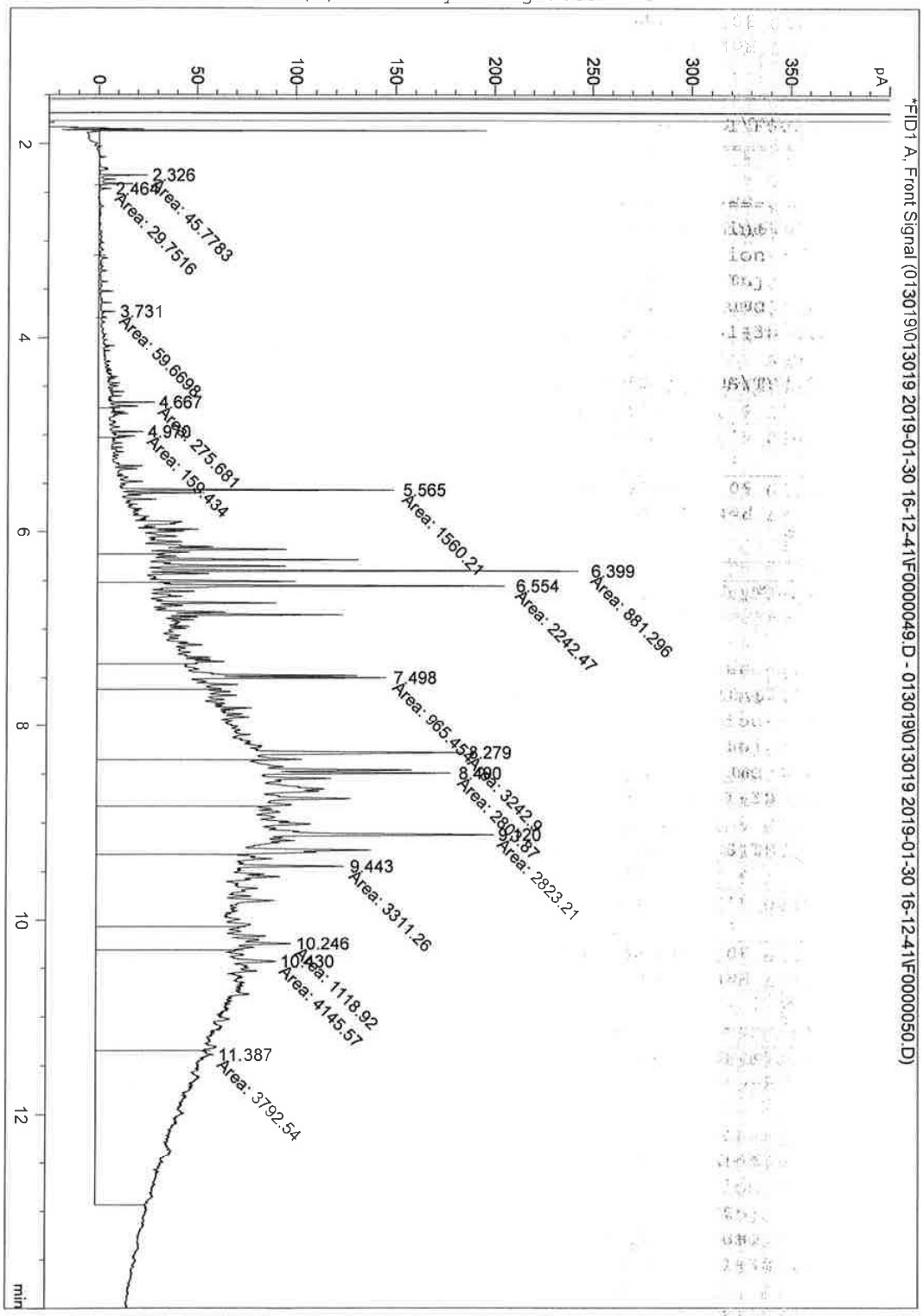


Data File C:\CHEM32\1\DATA\013019\013019 2019-01-30 16-12-41\F0000049.D
Sample Name: 00718-7 TPHS

==========

Acq. Operator : MIM Seq. Line : 49
Acq. Instrument : Instrument 1 Location : Vial 47
Injection Date : 31/01/2019 08:00:41 Inj : 1
Inj Volume : 2 µl

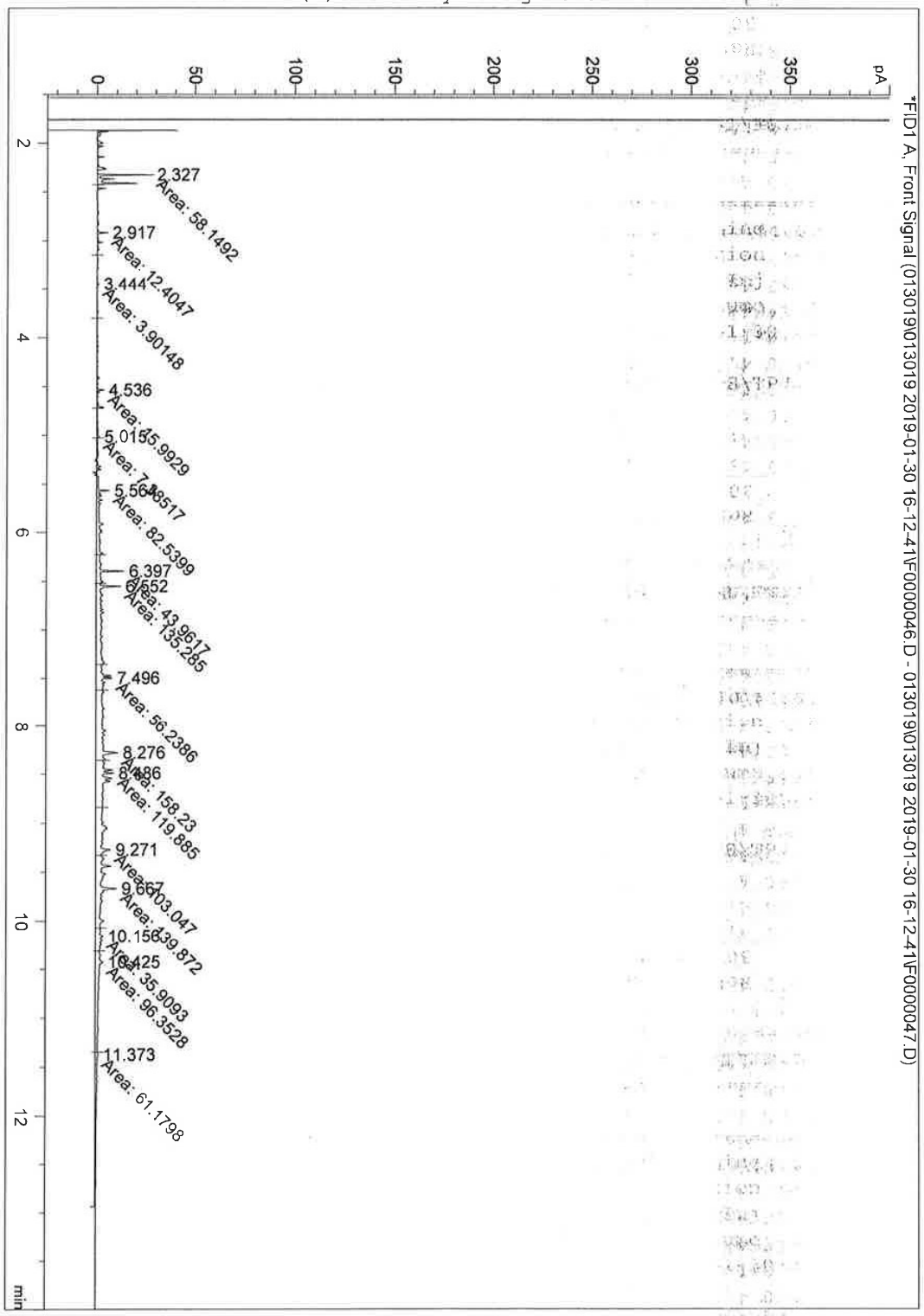
Acq. Method : C:\CHEM32\1\DATA\013019\013019 2019-01-30 16-12-41\TPH.M
Last changed : 02/03/2018 08:21:05 by NH
Analysis Method : C:\CHEM32\1\METHODS\AQUISITION METHODS\TPH_012919.M
Last changed : 31/01/2019 12:47:51 by MIM
(modified after loading)
Additional Info : Peak(s) manually integrated



Data File C:\CHEM32\1\DATA\013019\013019 2019-01-30 16-12-41\F0000046.D
Sample Name: 00718-10 TPHS

==========

Acq. Operator : MIM Seq. Line : 46
Acq. Instrument : Instrument 1 Location : Vial 44
Injection Date : 31/01/2019 07:01:44 Inj : 1
Inj Volume : 2 µl
Acq. Method : C:\CHEM32\1\DATA\013019\013019 2019-01-30 16-12-41\TPH.M
Last changed : 02/03/2018 08:21:05 by NH
Analysis Method : C:\CHEM32\1\METHODS\AQUISITION METHODS\TPH_012919.M
Last changed : 31/01/2019 12:44:47 by MIM
(modified after loading)
Additional Info : Peak(s) manually integrated

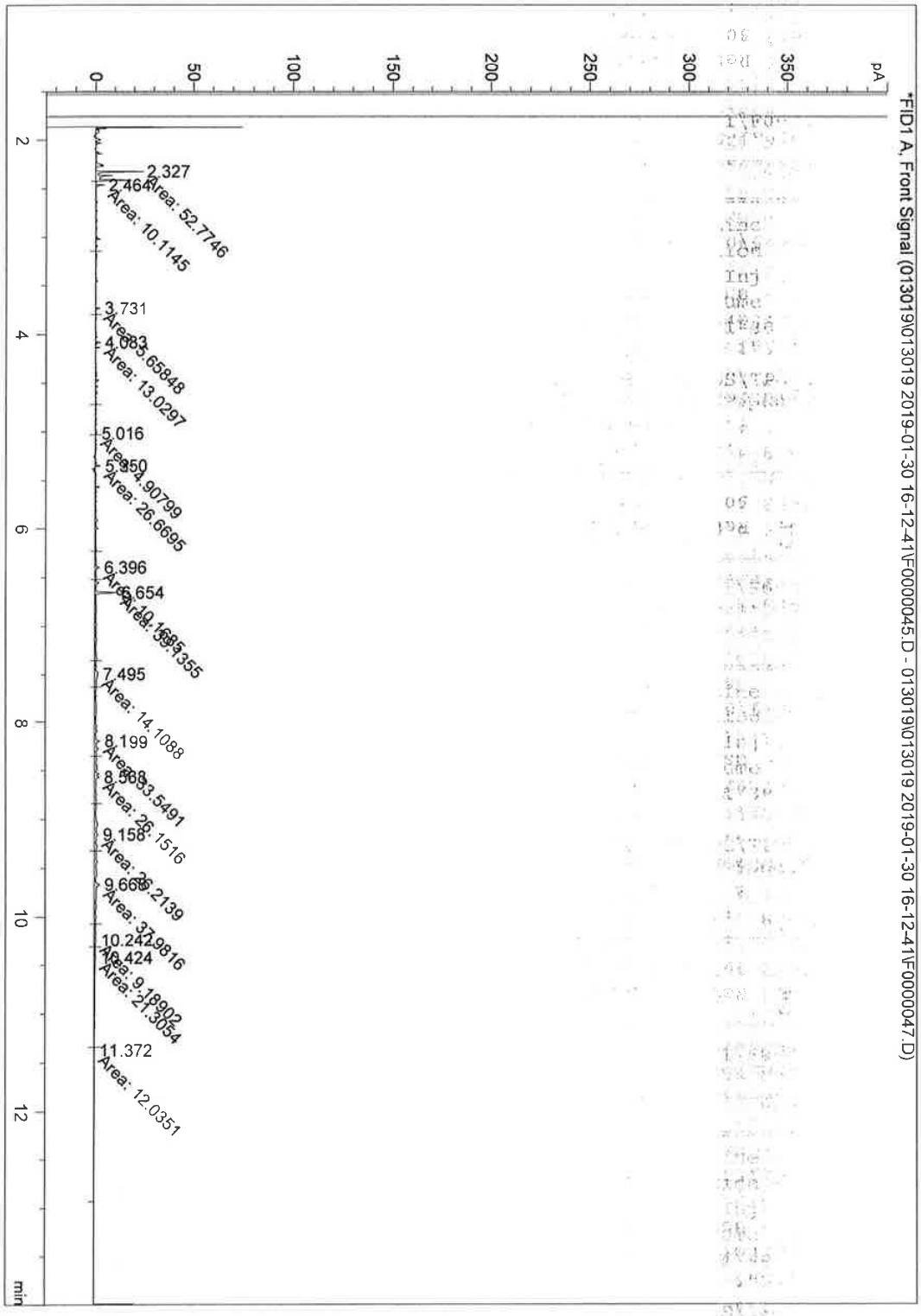


Data File C:\CHEM32\1\DATA\013019\013019 2019-01-30 16-12-41\F0000045.D
Sample Name: 00718-4 TPHS

==========

Acq. Operator : MIM
Seq. Line : 45
Acq. Instrument : Instrument 1
Location : Vial 43
Injection Date : 31/01/2019 06:42:10
Inj : 1
Inj Volume : 2 µl

Acq. Method : C:\CHEM32\1\DATA\013019\013019 2019-01-30 16-12-41\TPH.M
Last changed : 02/03/2018 08:21:05 by NH
Analysis Method : C:\CHEM32\1\METHODS\AQUISITION METHODS\TPH_012919.M
Last changed : 31/01/2019 12:43:31 by MIM
(modified after loading)
Additional Info : Peak(s) manually integrated



envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

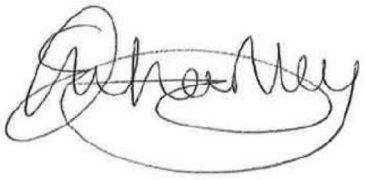
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 19/00718
Issue Number: 1 **Date:** 07 February, 2019

Client: RSK Environment Ltd Hemel
18 Frogmore Road
Hemel Hempstead
Hertfordshire
UK
HP3 9RT

Project Manager: Claire Siberry/Nigel Austin
Project Name: Ugly Brown Building
Project Ref: 371654
Order No: N/A
Date Samples Received: 25/01/19
Date Instructions Received: 25/01/19
Date Analysis Completed: 07/02/19

Prepared by:



Elisha Hartley
Admin Assistant

Approved by:

Georgia King
Admin & Client Services Supervisor

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME
UKAS TESTING 1247

Envirolab Job Number: 19/00718

Client Project Name: Ugly Brown Building

Client Project Ref: 371654

Lab Sample ID	19/00718/2	19/00718/3	19/00718/7	19/00718/10	19/00718/14				Units	Method ref
Client Sample No										
Client Sample ID	BH06	BH06	BH07	BH11	BH12A					
Depth to Top	0.70	2.60	3.00	0.70	2.50					
Depth To Bottom										
Date Sampled	16-Jan-19	16-Jan-19	23-Jan-19	22-Jan-19	21-Jan-19					
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES					
Sample Matrix Code	4AB	5	5A	4ABE	4AB					
% Moisture at <40C$_A$	9.6	27.9	21.0	12.3	10.1				% w/w	A-T-044
% Stones >10mm$_A$	41.3	<0.1	35.6	13.2	43.1				% w/w	A-T-044
pH$_D$$^{M\#}$	9.01	8.47	9.21	9.18	9.38				pH	A-T-031s
Total Organic Carbon$_D$$^{M\#}$	-	0.23	-	-	0.53				% w/w	A-T-032s
Arsenic$_D$$^{M\#}$	4	2	8	3	3				mg/kg	A-T-024s
Cadmium$_D$$^{M\#}$	<0.5	<0.5	<0.5	<0.5	<0.5				mg/kg	A-T-024s
Copper$_D$$^{M\#}$	348	90	59	26	18				mg/kg	A-T-024s
Chromium$_D$$^{M\#}$	12	36	24	23	14				mg/kg	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1	<1				mg/kg	A-T-040s
Lead$_D$$^{M\#}$	99	68	207	45	50				mg/kg	A-T-024s
Mercury$_D$	0.43	0.24	0.54	0.87	0.20				mg/kg	A-T-024s
Nickel$_D$$^{M\#}$	11	34	21	10	13				mg/kg	A-T-024s
Selenium$_D$$^{\#}$	<1	1	2	<1	<1				mg/kg	A-T-024s
Zinc$_D$$^{M\#}$	89	102	180	76	33				mg/kg	A-T-024s
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_A$$^{\#}$	NAD	NAD	NAD	NAD	NAD					A-T-045
Asbestos ACM - Suitable for Water Absorption Test?	N/A	N/A	N/A	N/A	N/A					

Envirolab Job Number: 19/00718

Client Project Name: Ugly Brown Building

Client Project Ref: 371654

Lab Sample ID	19/00718/2	19/00718/3	19/00718/7	19/00718/10	19/00718/14				Units	Method ref
Client Sample No										
Client Sample ID	BH06	BH06	BH07	BH11	BH12A					
Depth to Top	0.70	2.60	3.00	0.70	2.50					
Depth To Bottom										
Date Sampled	16-Jan-19	16-Jan-19	23-Jan-19	22-Jan-19	21-Jan-19					
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES					
Sample Matrix Code	4AB	5	5A	4ABE	4AB					
PAH-16MS plus Coronene										
Acenaphthene$_{A}^{M\#}$	0.04	0.08	0.24	<0.01	<0.01				mg/kg	A-T-019s
Acenaphthylene$_{A}^{M\#}$	0.02	<0.01	0.02	<0.01	<0.01				mg/kg	A-T-019s
Anthracene$_{A}^{M\#}$	0.27	<0.02	0.69	0.03	<0.02				mg/kg	A-T-019s
Benzo(a)anthracene$_{A}^{M\#}$	0.99	<0.04	2.16	0.15	<0.04				mg/kg	A-T-019s
Benzo(a)pyrene$_{A}^{M\#}$	0.66	<0.04	1.86	0.15	<0.04				mg/kg	A-T-019s
Benzo(b)fluoranthene$_{A}^{M\#}$	1.18	<0.05	2.13	0.19	<0.05				mg/kg	A-T-019s
Benzo(ghi)perylene$_{A}^{M\#}$	0.38	<0.05	0.83	0.11	<0.05				mg/kg	A-T-019s
Benzo(k)fluoranthene$_{A}^{M\#}$	0.38	<0.07	0.70	<0.07	<0.07				mg/kg	A-T-019s
Chrysene$_{A}^{M\#}$	1.08	<0.06	2.02	0.16	<0.06				mg/kg	A-T-019s
Coronene$_{A}$	0.10	<0.01	0.21	0.05	<0.01				mg/kg	A-T-019s
Dibenzo(ah)anthracene$_{A}^{M\#}$	0.10	<0.04	0.21	<0.04	<0.04				mg/kg	A-T-019s
Fluoranthene$_{A}^{M\#}$	1.26	0.46	4.96	0.25	<0.08				mg/kg	A-T-019s
Fluorene$_{A}^{M\#}$	0.03	<0.01	0.20	<0.01	<0.01				mg/kg	A-T-019s
Indeno(123-cd)pyrene$_{A}^{M\#}$	0.49	<0.03	1.10	0.14	<0.03				mg/kg	A-T-019s
Naphthalene$_{A}^{M\#}$	<0.03	<0.03	0.04	<0.03	<0.03				mg/kg	A-T-019s
Phenanthrene$_{A}^{M\#}$	0.37	<0.03	2.77	0.12	<0.03				mg/kg	A-T-019s
Pyrene$_{A}^{M\#}$	2.21	0.32	4.11	0.20	<0.07				mg/kg	A-T-019s
Total PAH-16MS plus Coronene$_{A}$	9.56	0.86	24.2	1.55	<0.08				mg/kg	A-T-019s
TPH Total with ID + GC Trace										
TPH total (>C6-C40)$_{A}^{M\#}$	289	53	791	38	<10				mg/kg	A-T-007s
TPH FID Chromatogram$_{A}$	Appended	Appended	Appended	Appended	Appended					A-T-007s
TPH ID (for FID characterisations)$_{A}$	Possible PAHs + other unknown heavier hydrocarbons	Possible PAHs + other unknown heavier hydrocarbons	Possible PAHs + other unknown heavier hydrocarbons	Unknown profile	NDP					A-T-007s

REPORT NOTES

General:
This report shall not be reproduced, except in full, without written approval from Envirolab.
All samples contained within this report, and any received with the same delivery, will be disposed of one month after the date of this report.
Analytical results reflect the quality of the sample at the time of analysis only.
Opinions and interpretations expressed are outside the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Soil chemical analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any “A” subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:
Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis.
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:
1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.
Secondary Matrix Codes:
A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:
IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

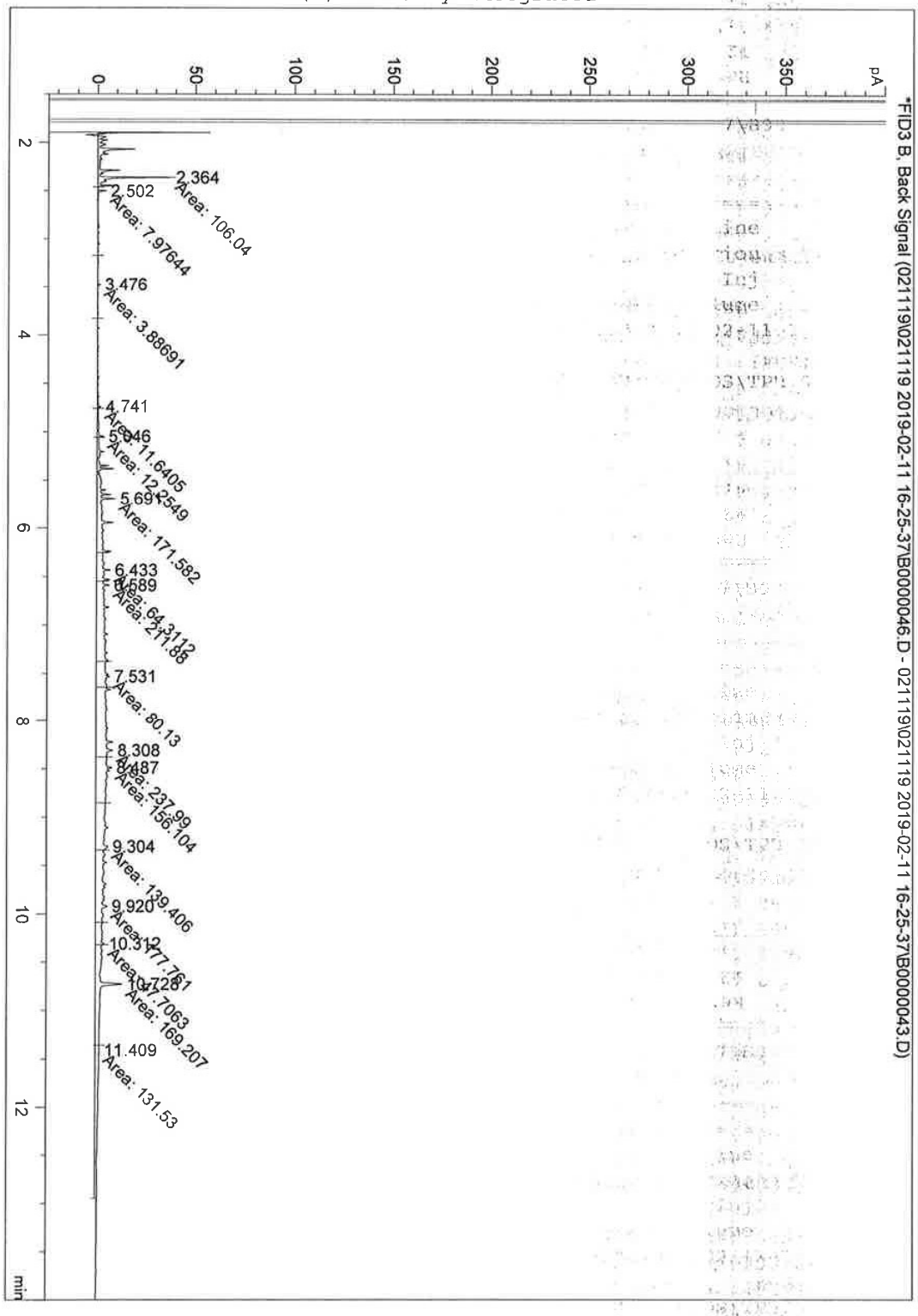
Please contact us if you need any further information.

Data File C:\CHEM32\1\DATA\021119\021119 2019-02-11 16-25-37\B0000046.D
Sample Name: 1010-1 TPHS

==========

Acq. Operator : MIM
Seq. Line : 46
Acq. Instrument : Instrument 1
Location : Vial 119
Injection Date : 12/02/2019 07:09:56
Inj : 1
Inj Volume : 2 µl

Acq. Method : C:\CHEM32\1\DATA\021119\021119 2019-02-11 16-25-37\TPH.M
Last changed : 02/03/2018 08:21:05 by NH
Analysis Method : C:\CHEM32\1\METHODS\AQUISITION METHODS\TPH_021119.M
Last changed : 12/02/2019 12:17:59 by MIM
(modified after loading)
Additional Info : Peak(s) manually integrated



Data File C:\CHEM32\1\DATA\021119\021119 2019-02-11 16-25-37\B0000047.D
Sample Name: 1010-6 TPHS

```
==========================================================================
Acq. Operator    : MIM                          Seq. Line :  47
Acq. Instrument  : Instrument 1                 Location  : Vial 120
Injection Date   : 12/02/2019 07:29:27             Inj    :  1
                                                Inj Volume : 2 µl
Acq. Method      : C:\CHEM32\1\DATA\021119\021119 2019-02-11 16-25-37\TPH.M
Last changed     : 02/03/2018 08:21:05 by NH
Analysis Method  : C:\CHEM32\1\METHODS\AQUISITION METHODS\TPH_021119.M
Last changed     : 12/02/2019 12:21:51 by MIM
                   (modified after loading)
Additional Info  : Peak(s) manually integrated
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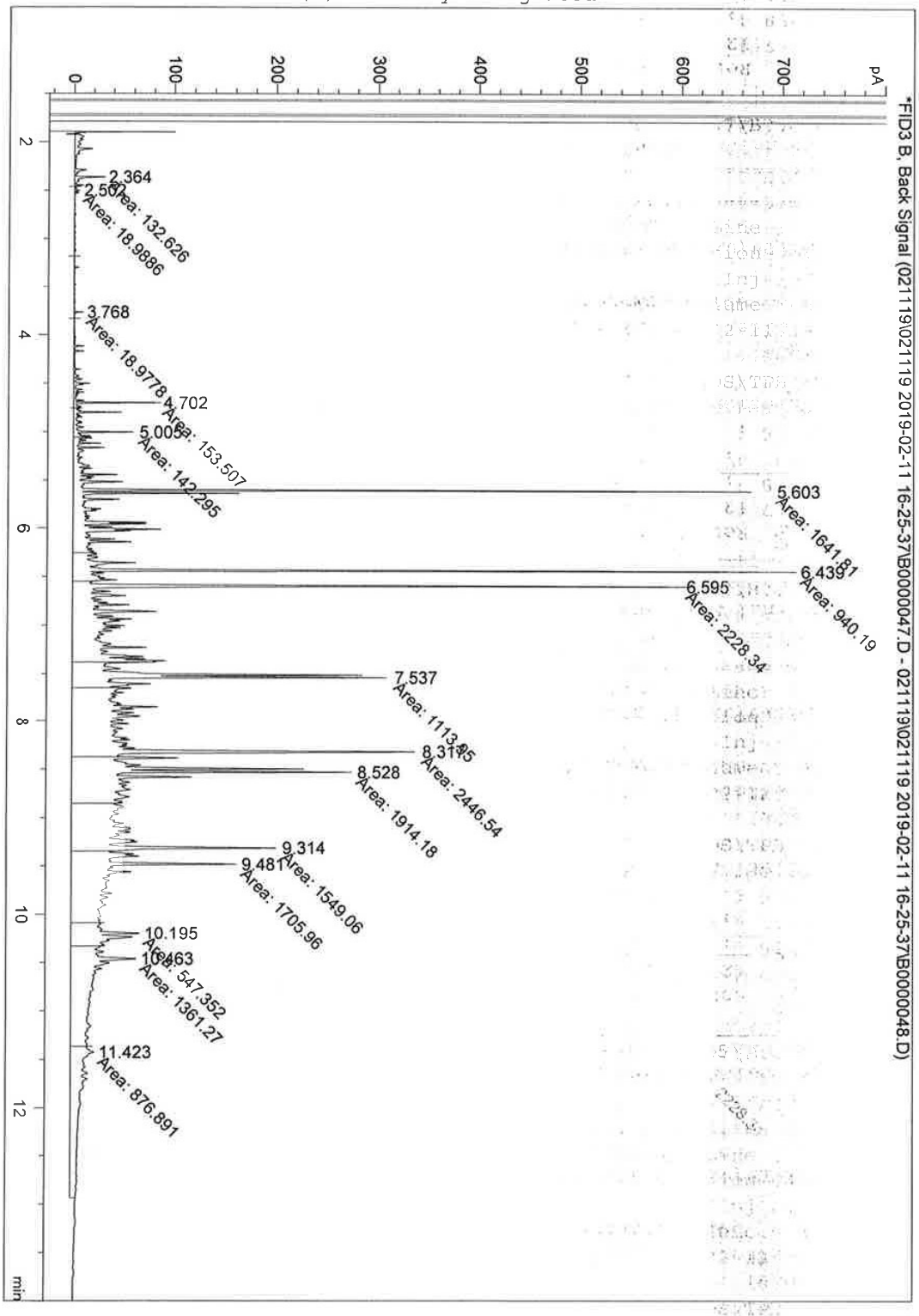
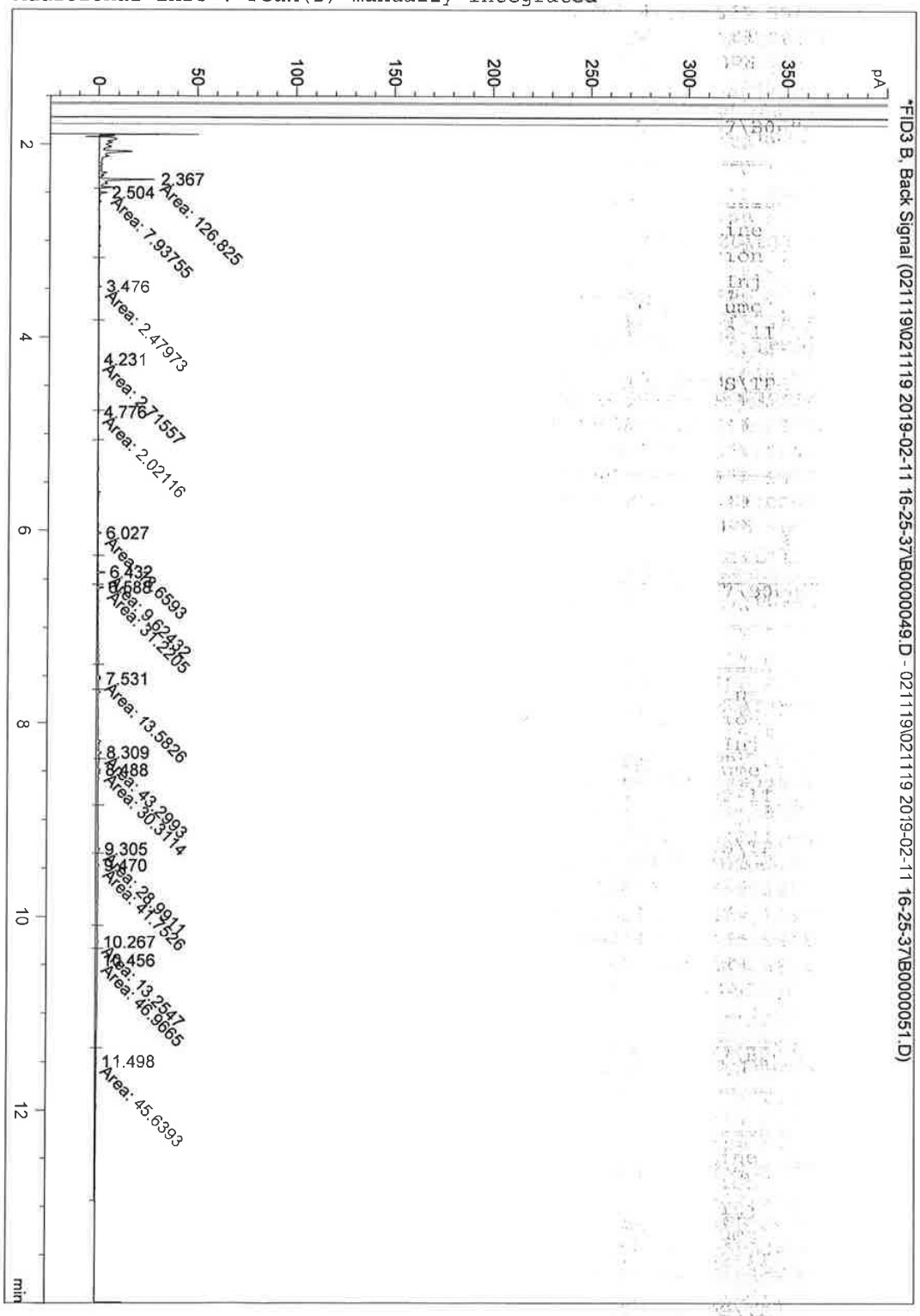


Data File C:\CHEM32\1\DATA\021119\021119 2019-02-11 16-25-37\B0000049.D
Sample Name: 1010-10 TPHS

Acq. Operator	: MIM	Seq. Line	: 49
Acq. Instrument	: Instrument 1	Location	: Vial 122
Injection Date	: 12/02/2019 08:08:35	Inj	: 1
		Inj Volume	: 2 µl
Acq. Method	: C:\CHEM32\1\DATA\021119\021119 2019-02-11 16-25-37\TPH.M		
Last changed	: 02/03/2018 08:21:05 by NH		
Analysis Method	: C:\CHEM32\1\METHODS\AQUISITION METHODS\TPH_021119.M		
Last changed	: 12/02/2019 12:22:47 by MIM (modified after loading)		
Additional Info	: Peak(s) manually integrated		



Data File C:\CHEM32\1\DATA\021119\021119 2019-02-11 16-25-37\B0000050.D
Sample Name: 1010-12 TPHS

```
==========================================================================
Acq. Operator    : MIM                          Seq. Line : 50
Acq. Instrument  : Instrument 1                  Location : Vial 123
Injection Date   : 12/02/2019 08:28:17               Inj :  1
                                                Inj Volume : 2 µl
Acq. Method      : C:\CHEM32\1\DATA\021119\021119 2019-02-11 16-25-37\TPH.M
Last changed     : 02/03/2018 08:21:05 by NH
Analysis Method  : C:\CHEM32\1\METHODS\AQUISITION METHODS\TPH_021119.M
Last changed     : 12/02/2019 12:23:56 by MIM
                   (modified after loading)
Additional Info  : Peak(s) manually integrated
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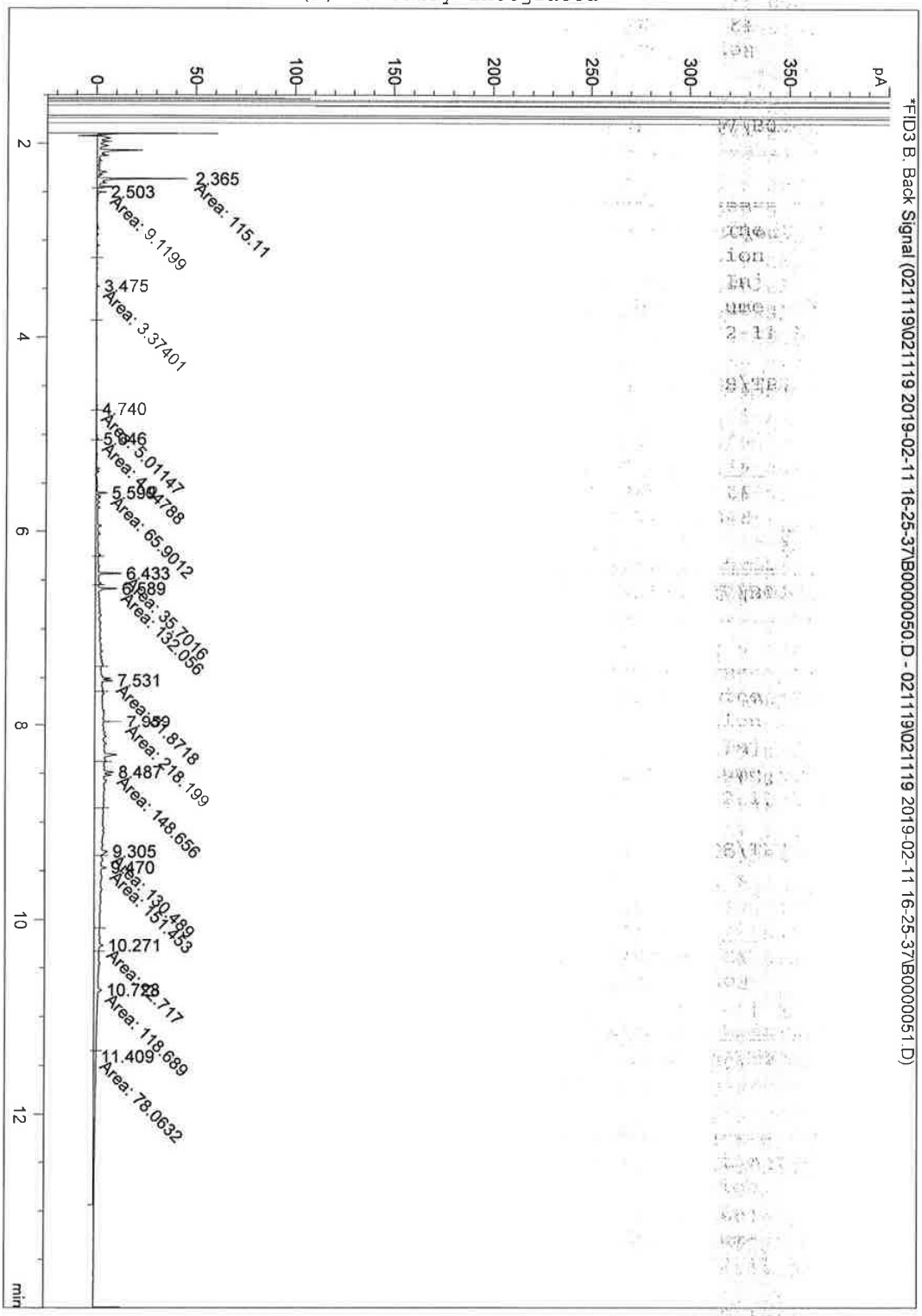

Data File C:\CHEM32\1\DATA\021119\021119 2019-02-11 16-25-37\B0000052.D
Sample Name: 1010-13 TPHS

Acq. Operator	: MIM	Seq. Line	: 52
Acq. Instrument	: Instrument 1	Location	: Vial 125
Injection Date	: 12/02/2019 09:07:39	Inj	: 1
		Inj Volume	: 2 µl
Acq. Method	: C:\CHEM32\1\DATA\021119\021119 2019-02-11 16-25-37\TPH.M		
Last changed	: 02/03/2018 08:21:05 by NH		
Analysis Method	: C:\CHEM32\1\METHODS\AQUISITION METHODS\TPH_021119.M		
Last changed	: 12/02/2019 12:25:09 by MIM (modified after loading)		
Additional Info	: Peak(s) manually integrated