



PHOTOGRAPHIC LOG

Client Name: Shell UK Oil Products	Site Location: Shell Hitchin	Project No. 46370079

Photo No. 5	Date: April 2013
Description: EXA: Black staining beneath the base of the tank farm at 4.5m bgl.	



Photo No. 6	Date: April 2013
Description: EXA: Uncovering the uncharted tank (Tank 8)	

A yellow Komatsu excavator is shown working in a deep excavation pit. The pit is filled with brown soil and debris. A blue tarp is visible on the left side of the pit. The excavator's arm and bucket are visible, and the word "KOMATSU" is printed on the side of the arm. The background shows a construction site with a fence and some equipment.



PHOTOGRAPHIC LOG

Client Name: Shell UK Oil Products	Site Location: Shell Hitchin	Project No. 46370079

Photo No. 7	Date: April 2013
Description: Excavating the site interceptor	

A yellow excavator with "Fox Construction" and "Tel: 01236 7" on its arm is shown in the process of excavating a site. The excavator is positioned on the right side of the frame, with its arm extended towards the center. The ground is muddy and rocky, with a large pile of excavated material in the foreground. In the background, there are trees and a white container with "SHELL" and "FOX" logos. A person in a high-visibility vest is visible inside the excavator's cab. The scene is set outdoors, likely at a construction or industrial site.

Photo No. 8	Date: May 2013	
Description: Trial Pit 2		



PHOTOGRAPHIC LOG

Client Name: Shell UK Oil Products	Site Location: Shell Hitchin	Project No. 46370079

Photo No. 9	Date: April 2013	
Description: EXA during excavation.		

Photo No. 10	Date: April 2013
Description: Fenced off asbestos impacted area under pump islands 5 & 6	





PHOTOGRAPHIC LOG

Client Name: Shell UK Oil Products	Site Location: Shell Hitchin	Project No. 46370079

Photo No. 11	Date: August 2013	
Description: Re-drilling of BH102		

Photo No. 12	Date: August 2013	
Description: BH102 sample cores		

Appendix C - Laboratory Results



URS Corporation Limited
St. George's House
2nd Floor
5 St. George's Road
Wimbledon
Greater London
SW19 4DR

Attention: Jocelyn Willis

CERTIFICATE OF ANALYSIS

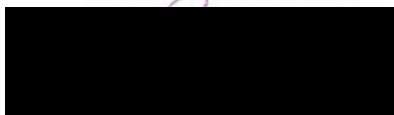
Date: 18 April 2013
Customer: H_URS_WIM
Sample Delivery Group (SDG): 130411-64
Your Reference: 46370079
Location: Hitchin
Report No: 220987

We received 14 samples on Thursday April 11, 2013 and 14 of these samples were scheduled for analysis which was completed on Thursday April 18, 2013. 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.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Sonia McWhan
Operations Manager





SDG:	130411-64	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	220987
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
7219157	VA101		4.50	09/04/2013
7219158	VA102		3.00	09/04/2013
7219159	VA103		3.00	09/04/2013
7219160	VA104		6.50	09/04/2013
7219162	VA105		6.50	09/04/2013
7219163	VA106		6.30	09/04/2013
7219165	VA107		6.80	09/04/2013
7219167	VA108		6.70	09/04/2013
7219168	VA109		6.80	09/04/2013
7219170	VA110		3.00	09/04/2013
7219171	VA111		7.00	10/04/2013
7219172	VA112		7.00	10/04/2013
7219173	VA113		6.70	10/04/2013
7219177	VA114		3.00	10/04/2013

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



CERTIFICATE OF ANALYSIS

SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

SOLID

Results Legend



Test

No Determination
Possible

Lab Sample No(s)

Customer
Sample Reference

AGS Reference

Depth (m)

Container

			7219157		VA101				3.00	60g VOC (ALE215)
			7219158		VA102				6.70	250g Amber Jar (AL)
			7219159		VA103				7.00	60g VOC (ALE215)
			7219160		VA104				7.00	250g Amber Jar (AL)
			7219162		VA105				7.00	60g VOC (ALE215)
			7219163		VA106				6.80	250g Amber Jar (AL)
			7219165		VA107				6.80	60g VOC (ALE215)
			7219167		VA108				6.70	250g Amber Jar (AL)
			7219168		VA109				6.80	60g VOC (ALE215)
			7219170		VA110				3.00	250g Amber Jar (AL)
			7219171		VA111				7.00	60g VOC (ALE215)
			7219172		VA112				7.00	250g Amber Jar (AL)
			7219173		VA113				6.70	60g VOC (ALE215)
			7219177		VA114				3.00	250g Amber Jar (AL)
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 14	X	X	X	X	X	X	X	X
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 14	X	X	X	X	X	X	X	X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 14		X	X	X	X	X	X	X
Oxygenates (S)	All	NDPs: 0 Tests: 14		X	X	X	X	X	X	X
PAH by GCMS	All	NDPs: 0 Tests: 14	X	X	X	X	X	X	X	X
Sample description	All	NDPs: 0 Tests: 14	X	X	X	X	X	X	X	X
Total Organic Carbon	All	NDPs: 0 Tests: 7	X		X		X		X	
VOC MS (S)	All	NDPs: 0 Tests: 14	X	X	X	X	X	X	X	X



SDG:	130411-64	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	220987
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions	Inclusions 2
7219157	VA101	4.50	Light Brown	Sand	0.1 - 2 mm	Stones	None
7219158	VA102	3.00	Light Brown	Sand	0.1 - 2 mm	None	None
7219159	VA103	3.00	Red	Silt Loam	0.063 - 0.1 mm	None	None
7219160	VA104	6.50	Light Brown	Sand	0.1 - 2 mm	None	None
7219162	VA105	6.50	Light Brown	Loamy Sand	0.063 - 0.1 mm	Stones	Oil/Petroleum
7219163	VA106	6.30	Light Brown	Sand	0.1 - 2 mm	None	None
7219165	VA107	6.80	Light Brown	Silt Loam	0.063 - 0.1 mm	Oil/Petroleum	None
7219167	VA108	6.70	Light Brown	Sand	0.1 - 2 mm	None	None
7219168	VA109	6.80	Light Brown	Sand	0.1 - 2 mm	None	None
7219170	VA110	3.00	Light Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
7219171	VA111	7.00	Light Brown	Sand	0.1 - 2 mm	None	None
7219172	VA112	7.00	Light Brown	Loamy Sand	0.063 - 0.1 mm	Stones	Oil/Petroleum
7219173	VA113	6.70	Light Brown	Sand	0.1 - 2 mm	Stones	None
7219177	VA114	3.00	Light Brown	Sand	0.1 - 2 mm	None	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.

Order Number:
Report Number: 220987
Superseded Report:

Page 5 of 71

Order Number:
Report Number: 220987
Superseded Report:

Page 6 of 71

Order Number:
Report Number: 220987
Superseded Report:

Page 7 of 71

Order Number:
Report Number: 220987
Superseded Report:

Page 8 of 71

Order Number:
Report Number: 220987
Superseded Report:

Page 9 of 71

Order Number:
Report Number: 220987
Superseded Report:

Page 10 of 71

Order Number:
Report Number: 220987
Superseded Report:

Page 11 of 71

Order Number:
Report Number: 220987
Superseded Report:

Page 12 of 71

Order Number:
Report Number: 220987
Superseded Report:

Page 13 of 71

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Order Number:
Report Number: 220987
Superseded Report:

[illegible]

Order Number:
Report Number: 220987
Superseded Report:

Page 15 of 71

Order Number:
Report Number: 220987
Superseded Report:

Page 16 of 71

Order Number:
Report Number: 220987
Superseded Report:

Page 17 of 71

Order Number:
Report Number: 220987
Superseded Report:

Page 18 of 71

Order Number:
Report Number: 220987
Superseded Report:

Page 19 of 71

Order Number:
Report Number: 220987
Superseded Report:

Page 20 of 71

Order Number:
Report Number: 220987
Superseded Report:

Page 21 of 71

Order Number:
Report Number: 220987
Superseded Report:

Page 22 of 71



SDG:	130411-64	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	220987
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample ¹	Surrogate Corrected
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds 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		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		
TM288		Determination of Oxygenates in Soils by Headspace/GC-MS		

¹ Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.



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Location: Hitchin
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Order Number:
Report Number: 220987
Superseded Report:

Test Completion Dates

Lab Sample No(s)	7219157	7219158	7219159	7219160	7219162	7219163	7219165	7219167	7219168	7219170
Customer Sample Ref.	VA101	VA102	VA103	VA104	VA105	VA106	VA107	VA108	VA109	VA110
AGS Ref.										
Depth	4.50	3.00	3.00	6.50	6.50	6.30	6.80	6.70	6.80	3.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
EPH CWG (Aliphatic) GC (S)	15-Apr-2013	16-Apr-2013	15-Apr-2013	16-Apr-2013	16-Apr-2013	16-Apr-2013	15-Apr-2013	16-Apr-2013	16-Apr-2013	16-Apr-2013
EPH CWG (Aromatic) GC (S)	15-Apr-2013	16-Apr-2013	15-Apr-2013	16-Apr-2013	16-Apr-2013	16-Apr-2013	15-Apr-2013	16-Apr-2013	16-Apr-2013	16-Apr-2013
GRO by GC-FID (S)	13-Apr-2013	16-Apr-2013	12-Apr-2013	16-Apr-2013	14-Apr-2013	16-Apr-2013	15-Apr-2013	13-Apr-2013	13-Apr-2013	13-Apr-2013
Oxygenates (S)	17-Apr-2013	17-Apr-2013	17-Apr-2013	17-Apr-2013	18-Apr-2013	17-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	17-Apr-2013
PAH by GCMS	17-Apr-2013	16-Apr-2013	17-Apr-2013	17-Apr-2013	17-Apr-2013	16-Apr-2013	17-Apr-2013	17-Apr-2013	16-Apr-2013	17-Apr-2013
Sample description	11-Apr-2013	12-Apr-2013	11-Apr-2013	12-Apr-2013	12-Apr-2013	12-Apr-2013	11-Apr-2013	12-Apr-2013	12-Apr-2013	12-Apr-2013
Total Organic Carbon	12-Apr-2013		12-Apr-2013		15-Apr-2013		12-Apr-2013		15-Apr-2013	
VOC MS (S)	17-Apr-2013	16-Apr-2013	15-Apr-2013	16-Apr-2013	17-Apr-2013	16-Apr-2013	17-Apr-2013	17-Apr-2013	17-Apr-2013	17-Apr-2013

Lab Sample No(s)	7219171	7219172	7219173	7219177
Customer Sample Ref.	VA111	VA112	VA113	VA114
AGS Ref.				
Depth	7.00	7.00	6.70	3.00
Type	SOLID	SOLID	SOLID	SOLID
EPH CWG (Aliphatic) GC (S)	16-Apr-2013	16-Apr-2013	16-Apr-2013	16-Apr-2013
EPH CWG (Aromatic) GC (S)	16-Apr-2013	16-Apr-2013	16-Apr-2013	16-Apr-2013
GRO by GC-FID (S)	13-Apr-2013	13-Apr-2013	13-Apr-2013	13-Apr-2013
Oxygenates (S)	17-Apr-2013	17-Apr-2013	18-Apr-2013	17-Apr-2013
PAH by GCMS	17-Apr-2013	17-Apr-2013	17-Apr-2013	17-Apr-2013
Sample description	12-Apr-2013	12-Apr-2013	12-Apr-2013	12-Apr-2013
Total Organic Carbon	15-Apr-2013		15-Apr-2013	
VOC MS (S)	17-Apr-2013	15-Apr-2013	17-Apr-2013	15-Apr-2013



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Job: H_URS_WIM-162
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Order Number:
Report Number: 220987
Superseded Report:

ASSOCIATED AQC DATA

EPH CWG (Aliphatic) GC (S)

Component	Method Code	QC 70	QC 74	QC 77
Total Aliphatics >C12-C35	TM173		97.71	85.63
		70.55 : 108.45	70.55 : 108.45	73.54 : 110.66

EPH CWG (Aromatic) GC (S)

Component	Method Code	QC 70	QC 74	QC 77
Total Aromatics >EC12-EC35	TM173		94.0	82.67
		80.36 : 115.81	80.36 : 115.81	78.23 : 114.94

GRO by GC-FID (S)

Component	Method Code	QC 72	QC 77	QC 75	QC 75
Benzene by GC (Moisture Corrected)	TM089	101.5	96.5	98.0	104.0
		80.15 : 118.91	80.02 : 117.27	80.15 : 118.91	80.02 : 117.27
Ethylbenzene by GC (Moisture Corrected)	TM089	102.0	99.0	98.0	107.0
		79.83 : 118.16	84.04 : 116.69	79.83 : 118.16	84.04 : 116.69
m & p Xylene by GC (Moisture Corrected)	TM089	102.75	99.0	98.0	107.25
		78.35 : 120.05	84.58 : 114.27	78.35 : 120.05	84.58 : 114.27
MTBE GC-FID (Moisture Corrected)	TM089	103.0	96.0	101.5	102.5
		80.54 : 120.94	79.00 : 121.00	80.54 : 120.94	79.00 : 121.00
o Xylene by GC (Moisture Corrected)	TM089	102.0	98.0	98.0	105.5
		80.90 : 117.77	84.97 : 115.07	80.90 : 117.77	84.97 : 115.07
QC	TM089	116.28	97.49	101.62	109.96
		85.99 : 125.08	83.21 : 120.45	85.99 : 125.08	83.21 : 120.45
Toluene by GC (Moisture Corrected)	TM089	103.0	98.0	98.5	106.5
		81.82 : 117.25	84.65 : 117.24	81.82 : 117.25	84.65 : 117.24

Oxygenates (S)

Component	Method Code	QC 76	QC 75	QC 76
Benzene raw	TM288	103.0	98.0	93.25
		77.94 : 128.84	77.94 : 128.84	77.94 : 128.84
Diisopropyl ether raw	TM288	102.5	99.75	97.5
		78.68 : 128.65	78.68 : 128.65	78.68 : 128.65
Ethanol raw	TM288	118.0	57.1	115.0
		56.39 : 148.67	56.39 : 148.67	56.39 : 148.67
Ethylbenzene raw	TM288	104.0	100.5	107.5
		78.18 : 122.27	78.18 : 122.27	78.18 : 122.27
o-Xylene raw	TM288	98.0	94.5	90.25
		78.38 : 109.16	78.38 : 109.16	78.38 : 109.16
p/m-Xylene raw	TM288	107.13	101.75	108.0
		80.22 : 110.48	80.22 : 110.48	80.22 : 110.48
tert Butanol raw	TM288	127.0	84.5	105.5
		62.51 : 145.03	62.51 : 145.03	62.51 : 145.03
tert-amyl methyl ether raw	TM288	103.75	98.5	91.0
		71.22 : 127.95	71.22 : 127.95	71.22 : 127.95



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Report Number: 220987
Superseded Report:

Oxygenates (S)

		QC 76	QC 75	QC 76
tert-butyl ethyl ether raw	TM288	102.25 64.00 : 136.00	99.0 64.00 : 136.00	96.0 64.00 : 136.00
tert-butyl methyl ether raw	TM288	103.25 83.50 : 129.91	97.75 83.50 : 129.91	99.75 83.50 : 129.91
Toluene raw	TM288	94.5 75.97 : 110.53	92.25 75.97 : 110.53	82.5 75.97 : 110.53

PAH by GCMS

Component	Method Code	QC 79	QC 75	QC 73
Acenaphthene	TM218	89.0 83.80 : 121.00	87.0 79.96 : 117.68	93.5 80.50 : 119.50
Acenaphthylene	TM218	81.5 72.38 : 111.60	82.0 71.19 : 110.66	87.5 76.68 : 112.28
Anthracene	TM218	87.5 79.70 : 113.00	82.5 75.14 : 109.30	90.0 75.54 : 110.88
Benz(a)anthracene	TM218	92.0 82.86 : 122.05	95.0 79.62 : 124.12	101.5 83.07 : 126.36
Benzo(a)pyrene	TM218	92.0 82.40 : 123.80	95.0 81.56 : 121.22	102.0 79.21 : 128.01
Benzo(b)fluoranthene	TM218	90.5 77.82 : 128.87	94.5 81.11 : 119.79	105.0 86.21 : 131.42
Benzo(ghi)perylene	TM218	89.0 81.67 : 122.61	93.0 81.23 : 116.67	96.5 83.37 : 119.89
Benzo(k)fluoranthene	TM218	89.0 81.20 : 118.10	92.5 79.07 : 114.76	96.0 78.77 : 120.72
Chrysene	TM218	90.0 80.60 : 117.80	90.5 77.94 : 118.46	96.5 78.77 : 118.99
Dibenzo(ah)anthracene	TM218	92.0 77.93 : 124.42	94.0 79.74 : 118.79	97.5 78.63 : 120.55
Fluoranthene	TM218	89.0 82.25 : 115.25	85.0 77.89 : 110.15	93.5 77.25 : 117.75
Fluorene	TM218	87.5 80.60 : 118.10	85.0 73.20 : 120.90	92.0 79.28 : 117.35
Indeno(123cd)pyrene	TM218	91.5 83.07 : 119.48	95.0 79.80 : 118.43	97.5 78.87 : 122.50
Naphthalene	TM218	87.0 85.84 : 110.01	88.5 73.48 : 119.86	94.0 74.75 : 118.25
Phenanthrene	TM218	88.5 81.45 : 121.95	84.0 75.81 : 115.66	91.5 83.20 : 113.96
Pyrene	TM218	89.0 75.20 : 108.20	85.0 78.21 : 109.14	94.0 82.10 : 113.43

Total Organic Carbon

Component	Method Code	QC 71	QC 72
Total Organic Carbon	TM132	105.96 86.66 : 109.87	105.05 86.66 : 109.87

VOC MS (S)



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Order Number:
Report Number: 220987
Superseded Report:

VOC MS (S)

Component	Method Code	QC 76	QC 79	QC 74	QC 74
1,1,1,2-tetrachloroethane	TM116	102.6 77.50 : 124.09	102.6 77.50 : 124.09	102.4 77.50 : 124.09	105.4 77.50 : 124.09
1,1,1-Trichloroethane	TM116	106.6 86.36 : 114.14	99.0 86.36 : 114.14	102.4 86.36 : 114.14	111.6 86.36 : 114.14
1,1,2-Trichloroethane	TM116	119.2 93.86 : 131.61	111.6 93.86 : 131.61	115.6 93.86 : 131.61	118.2 93.86 : 131.61
1,1-Dichloroethane	TM116	113.0 83.96 : 125.03	101.4 83.96 : 125.03	104.0 83.96 : 125.03	115.8 83.96 : 125.03
1,2-Dichloroethane	TM116	108.8 88.93 : 122.77	112.8 88.93 : 122.77	102.6 88.93 : 122.77	111.0 88.93 : 122.77
1,4-Dichlorobenzene	TM116	109.6 89.32 : 117.26	104.8 89.32 : 117.26	103.8 89.32 : 117.26	108.6 89.32 : 117.26
2-Chlorotoluene	TM116	130.4 93.47 : 156.27	133.2 93.47 : 156.27	133.4 93.47 : 156.27	142.2 93.47 : 156.27
4-Chlorotoluene	TM116	130.4 92.38 : 149.49	123.4 92.38 : 149.49	126.8 92.38 : 149.49	137.0 92.38 : 149.49
Benzene	TM116	103.0 86.95 : 110.62	95.8 86.95 : 110.62	100.6 86.95 : 110.62	105.2 86.95 : 110.62
Carbon Disulphide	TM116	101.8 76.98 : 118.83	85.4 76.98 : 118.83	97.2 76.98 : 118.83	97.0 76.98 : 118.83
Carbontetrachloride	TM116	104.6 71.94 : 132.65	99.8 71.94 : 132.65	108.2 71.94 : 132.65	110.4 71.94 : 132.65
Chlorobenzene	TM116	106.2 78.33 : 118.74	103.2 78.33 : 118.74	106.0 78.33 : 118.74	104.6 78.33 : 118.74
Chloroform	TM116	109.6 69.66 : 148.03	105.0 69.66 : 148.03	103.6 69.66 : 148.03	112.2 69.66 : 148.03
Chloromethane	TM116	108.2 49.71 : 146.30	89.4 49.71 : 146.30	110.6 49.71 : 146.30	149.4 49.71 : 146.30
Cis-1,2-Dichloroethene	TM116	98.8 87.09 : 113.71	94.2 87.09 : 113.71	93.4 87.09 : 113.71	99.6 87.09 : 113.71
Dibromomethane	TM116	103.0 65.13 : 138.40	107.4 65.13 : 138.40	98.6 65.13 : 138.40	100.4 65.13 : 138.40
Dichloromethane	TM116	114.8 70.67 : 150.15	104.6 70.67 : 150.15	104.6 70.67 : 150.15	111.2 70.67 : 150.15
Ethylbenzene	TM116	102.4 84.09 : 110.87	97.4 84.09 : 110.87	102.2 84.09 : 110.87	102.2 84.09 : 110.87
Hexachlorobutadiene	TM116	134.8 62.74 : 176.60	135.0 62.74 : 176.60	144.8 62.74 : 176.60	165.6 62.74 : 176.60
Isopropylbenzene	TM116	95.0 75.72 : 100.29	87.8 75.72 : 100.29	91.2 75.72 : 100.29	92.4 75.72 : 100.29
Naphthalene	TM116	112.2 80.72 : 132.86	108.0 80.72 : 132.86	105.6 80.72 : 132.86	117.2 80.72 : 132.86
o-Xylene	TM116	100.2 76.04 : 111.23	98.4 76.04 : 111.23	99.6 76.04 : 111.23	97.0 76.04 : 111.23
p/m-Xylene	TM116	101.0 79.03 : 115.32	99.6 79.03 : 115.32	102.0 79.03 : 115.32	102.0 79.03 : 115.32
Sec-Butylbenzene	TM116	104.6 73.42 : 125.99	94.8 73.42 : 125.99	93.6 73.42 : 125.99	108.8 73.42 : 125.99
Tetrachloroethene	TM116	110.8 87.31 : 123.54	106.6 87.31 : 123.54	114.8 87.31 : 123.54	109.4 87.31 : 123.54
Toluene	TM116	97.6 83.48 : 106.73	97.2 83.48 : 106.73	95.0 83.48 : 106.73	98.0 83.48 : 106.73



CERTIFICATE OF ANALYSIS

Validated

SDG:	130411-64	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	220987
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

VOC MS (S)

		QC 76	QC 79	QC 74	QC 74
Trichloroethene	TM116	101.2 86.48 : 110.46	97.4 86.48 : 110.46	101.6 86.48 : 110.46	102.2 86.48 : 110.46
Trichlorofluoromethane	TM116	108.6 82.57 : 120.95	92.8 82.57 : 120.95	105.0 82.57 : 120.95	111.4 82.57 : 120.95
Vinyl Chloride	TM116	125.0 62.58 : 154.52	96.8 62.58 : 154.52	112.6 62.58 : 154.52	125.6 62.58 : 154.52

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

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

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



SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

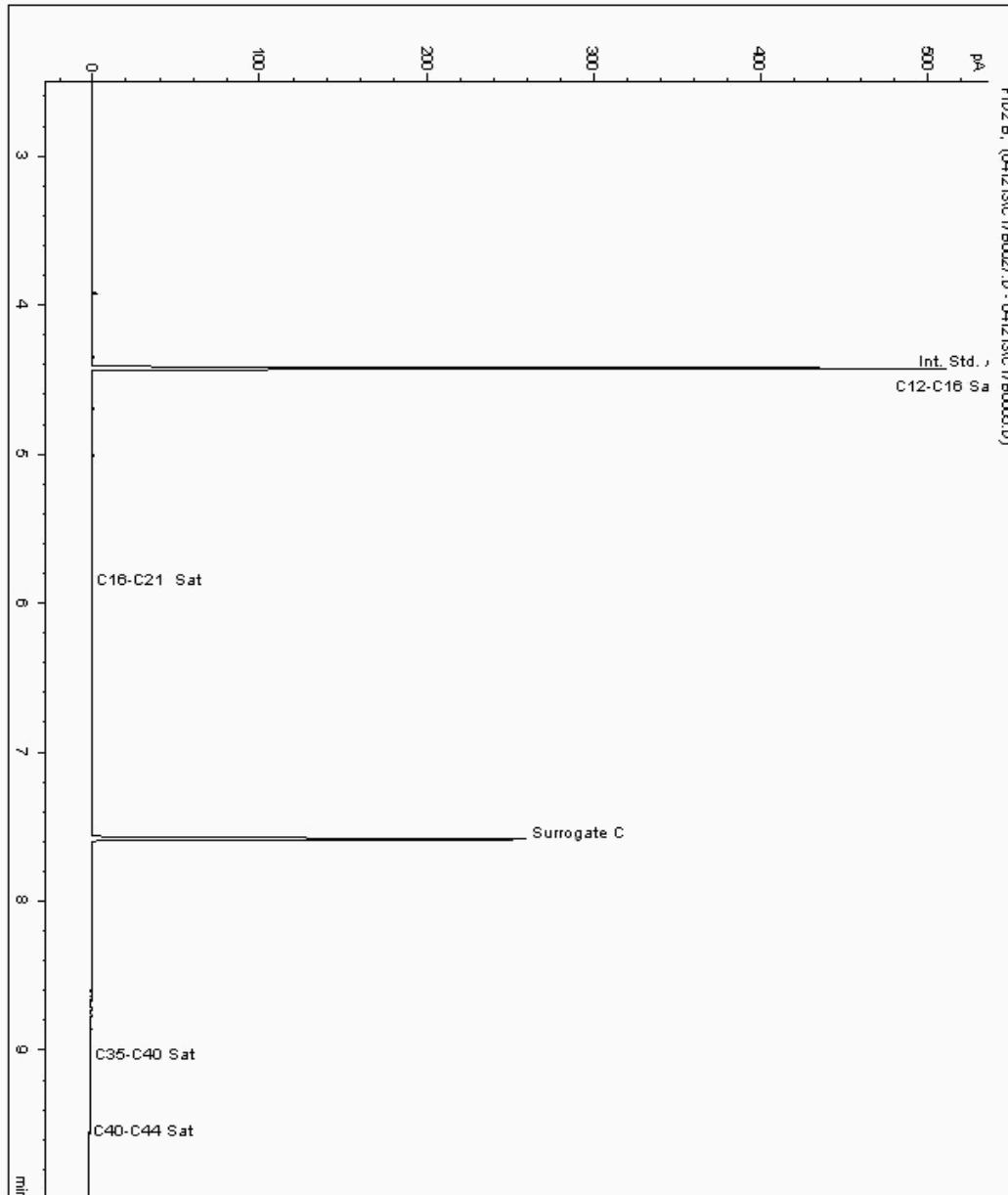
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7223790
Sample ID : VA101

Depth : 4.50

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6940130-7223790
Date Acquired : 12/04/2013 20:28:05 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.965





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

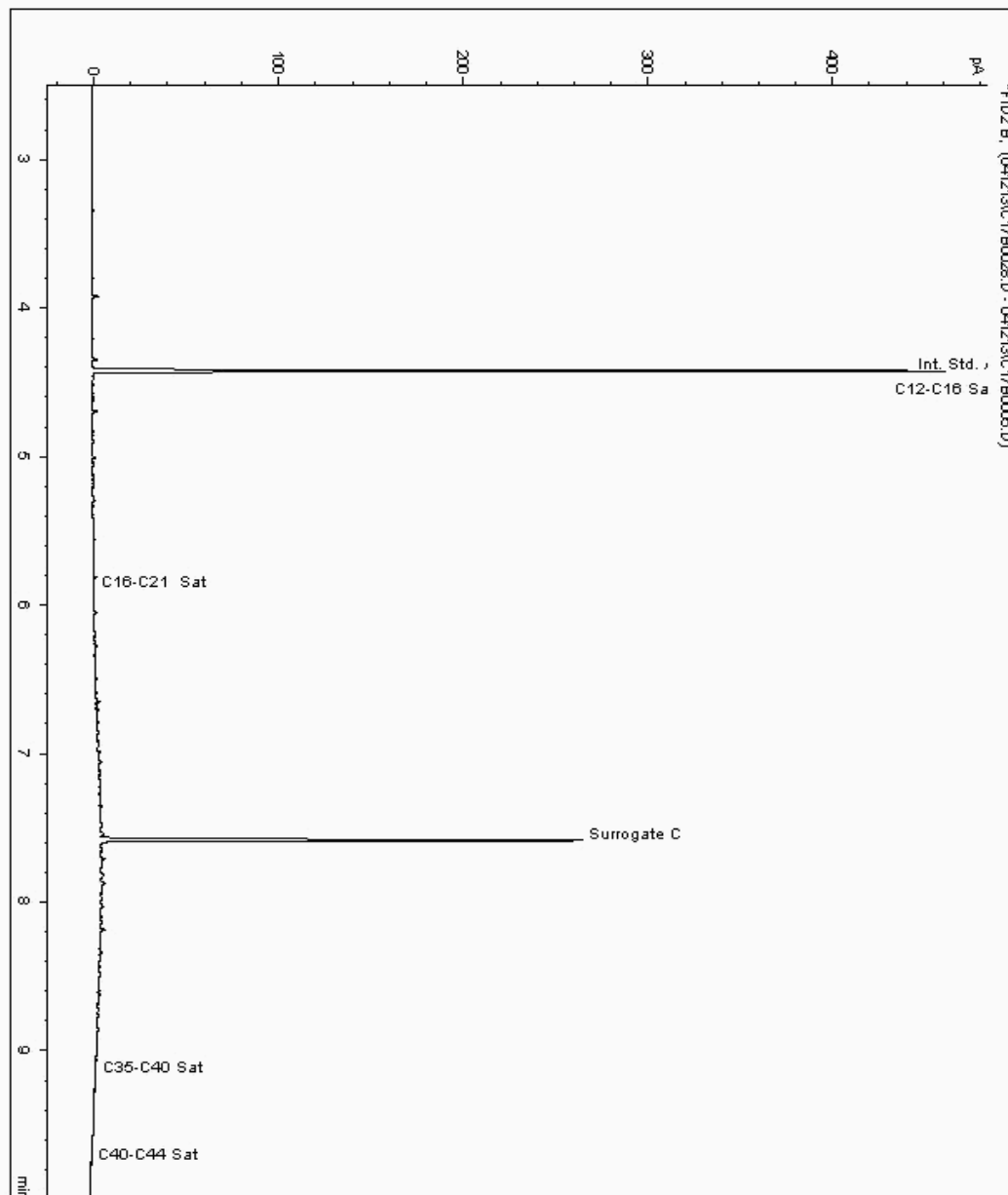
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7223802
Sample ID : VA107

Depth : 6.80

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6940195-7223802
Date Acquired : 12/04/2013 20:48:40 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.004





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

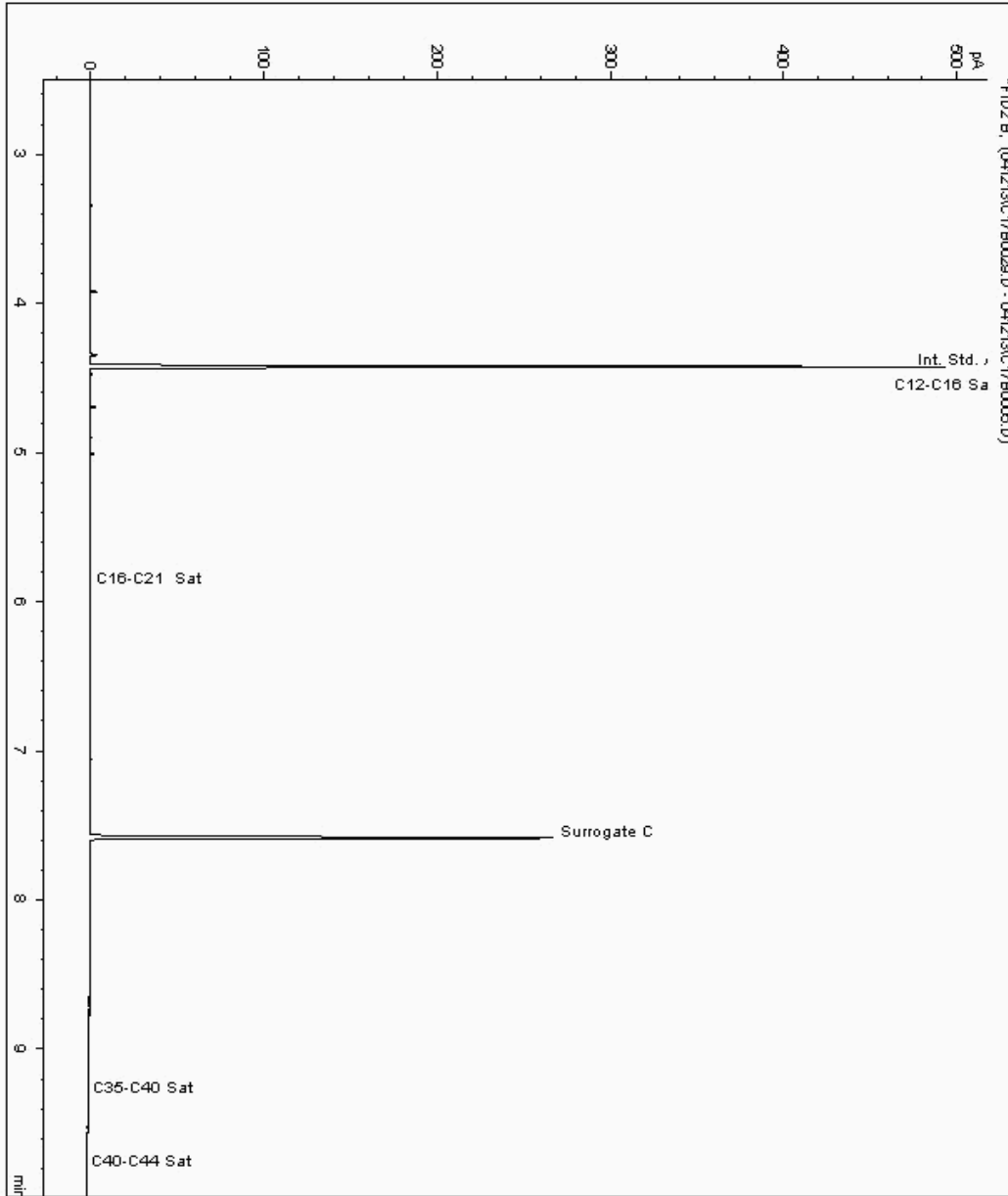
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7223815
Sample ID : VA103

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6940149-7223815
Date Acquired : 12/04/2013 21:09:11 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.973





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

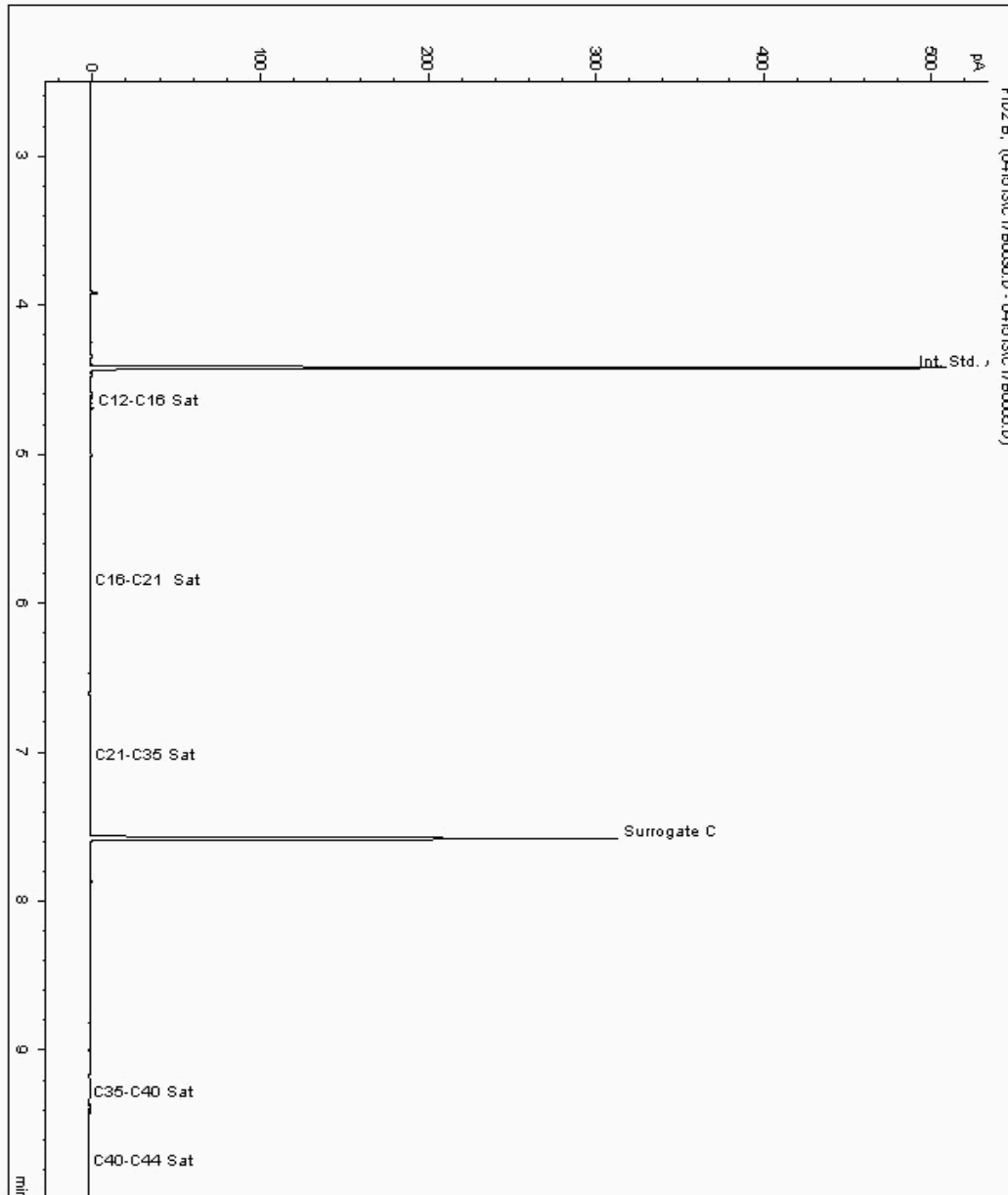
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7234470
Sample ID : VA102

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6940140-7234470
Date Acquired : 15/04/2013 23:55:58 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.995





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

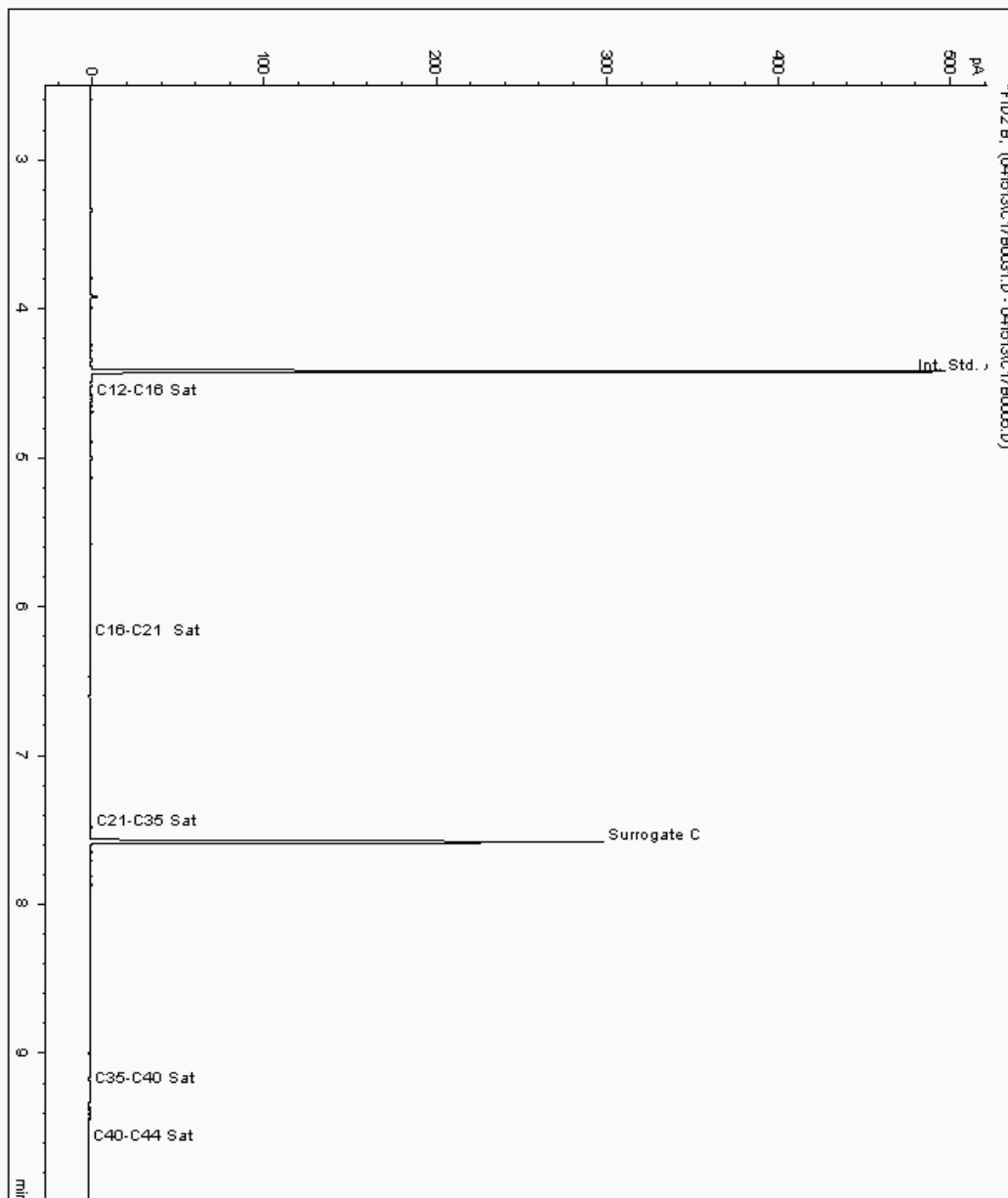
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7234475
Sample ID : VA113

Depth : 6.70

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6940266-7234475
Date Acquired : 16/04/2013 00:16:32 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.021





CERTIFICATE OF ANALYSIS

SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

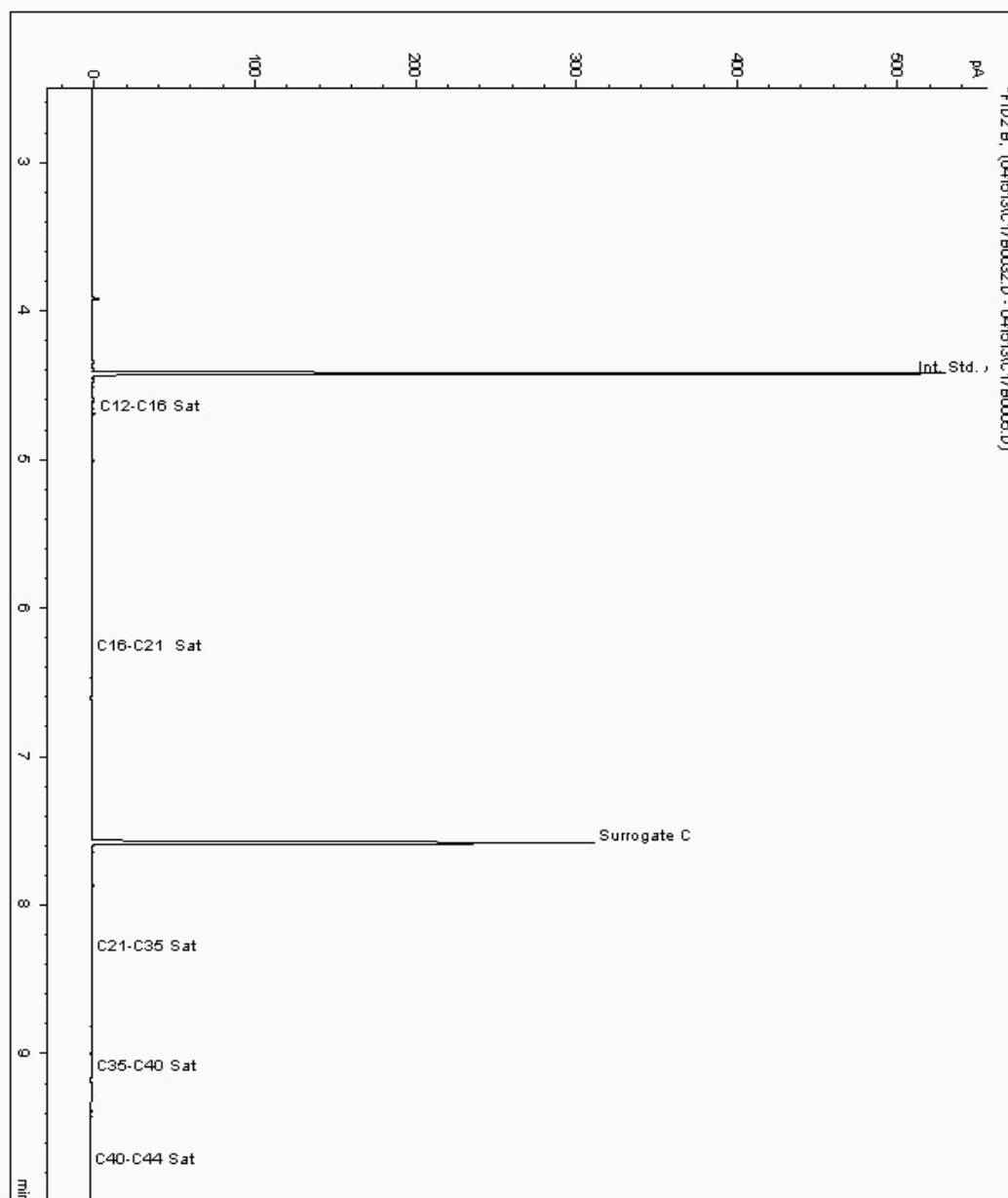
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7234484
Sample ID : VA114

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6940276-7234484
Date Acquired : 16/04/2013 00:37:10 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.006





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

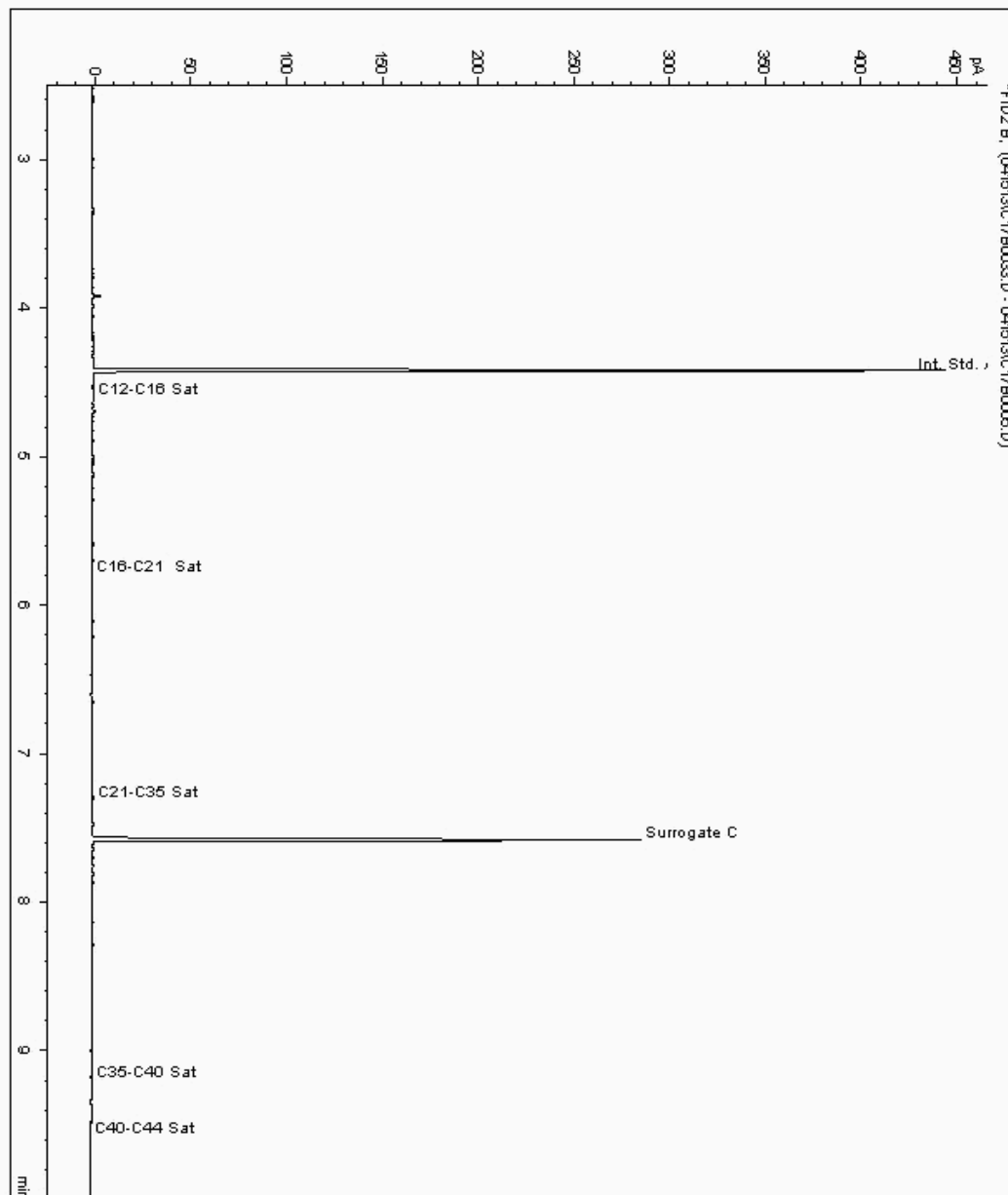
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7234487
Sample ID : VA110

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6940232-7234487
Date Acquired : 16/04/2013 00:57:57 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.012





CERTIFICATE OF ANALYSIS

SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

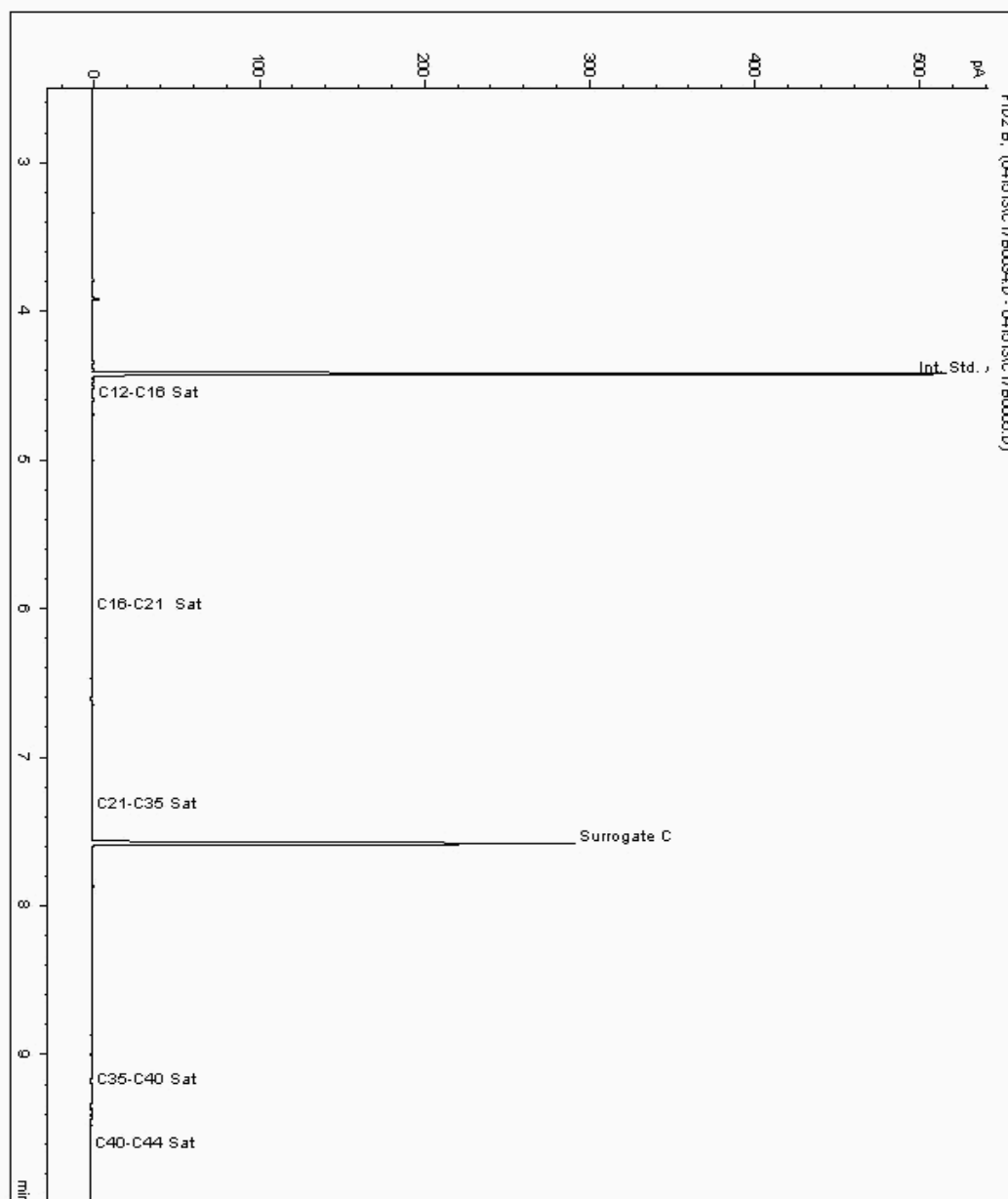
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7234488
Sample ID : VA104

Depth : 6.50

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6940165-7234488
Date Acquired : 16/04/2013 01:18:34 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.974





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

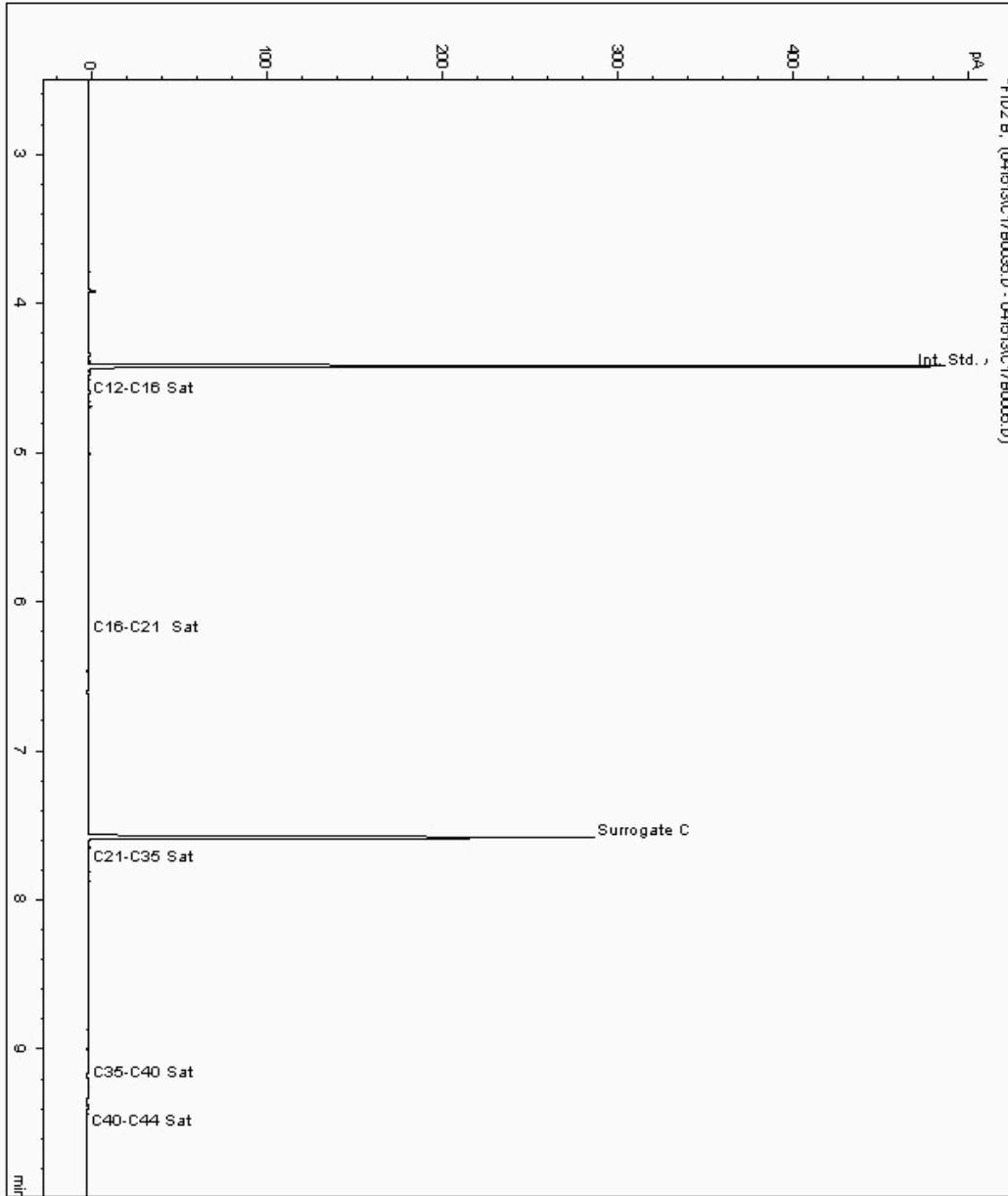
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7234489
Sample ID : VA109

Depth : 6.80

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6940222-7234489
Date Acquired : 16/04/2013 01:39:09 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.027





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

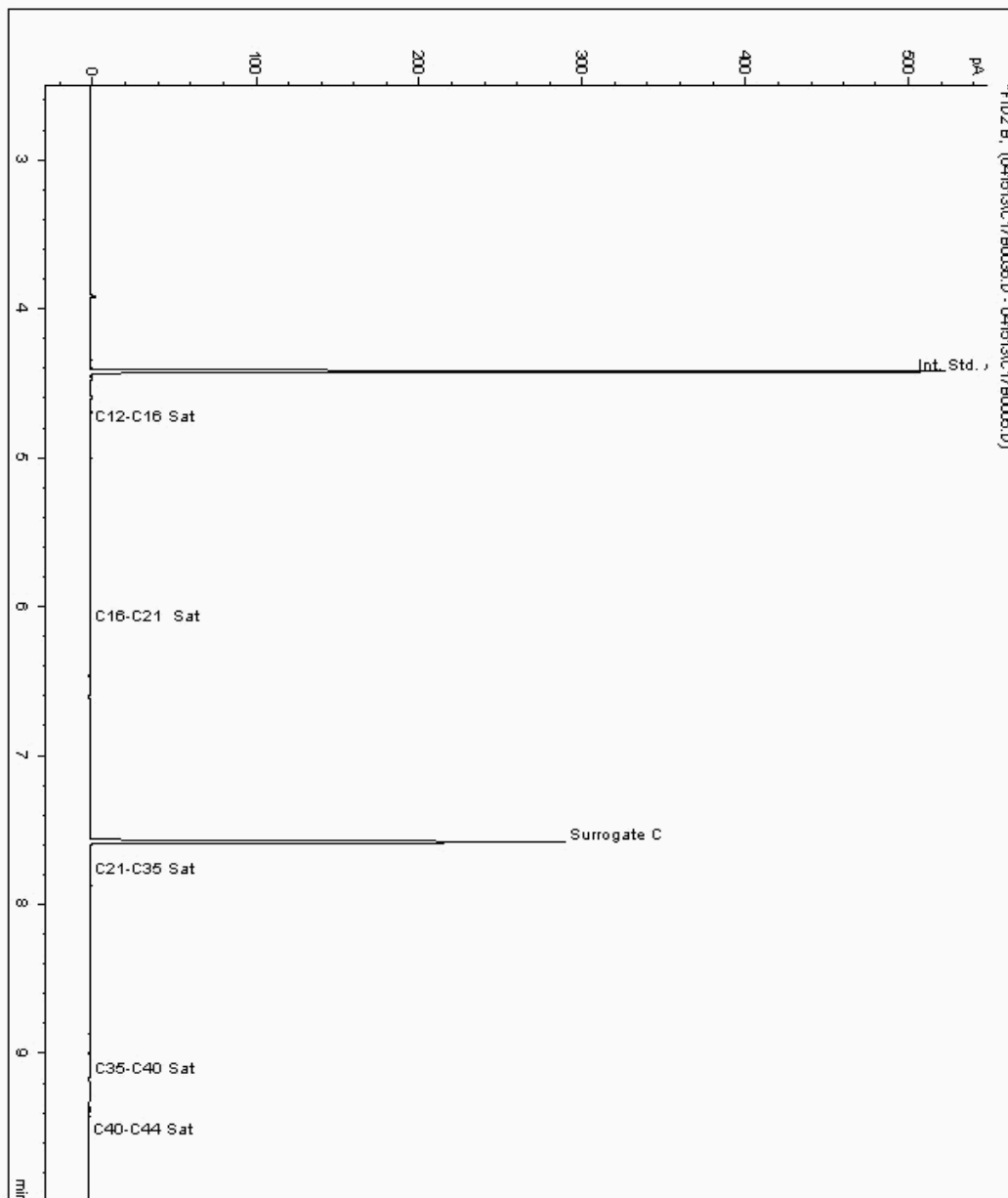
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7234506
Sample ID : VA108

Depth : 6.70

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6940207-7234506
Date Acquired : 16/04/2013 01:59:56 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.009





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

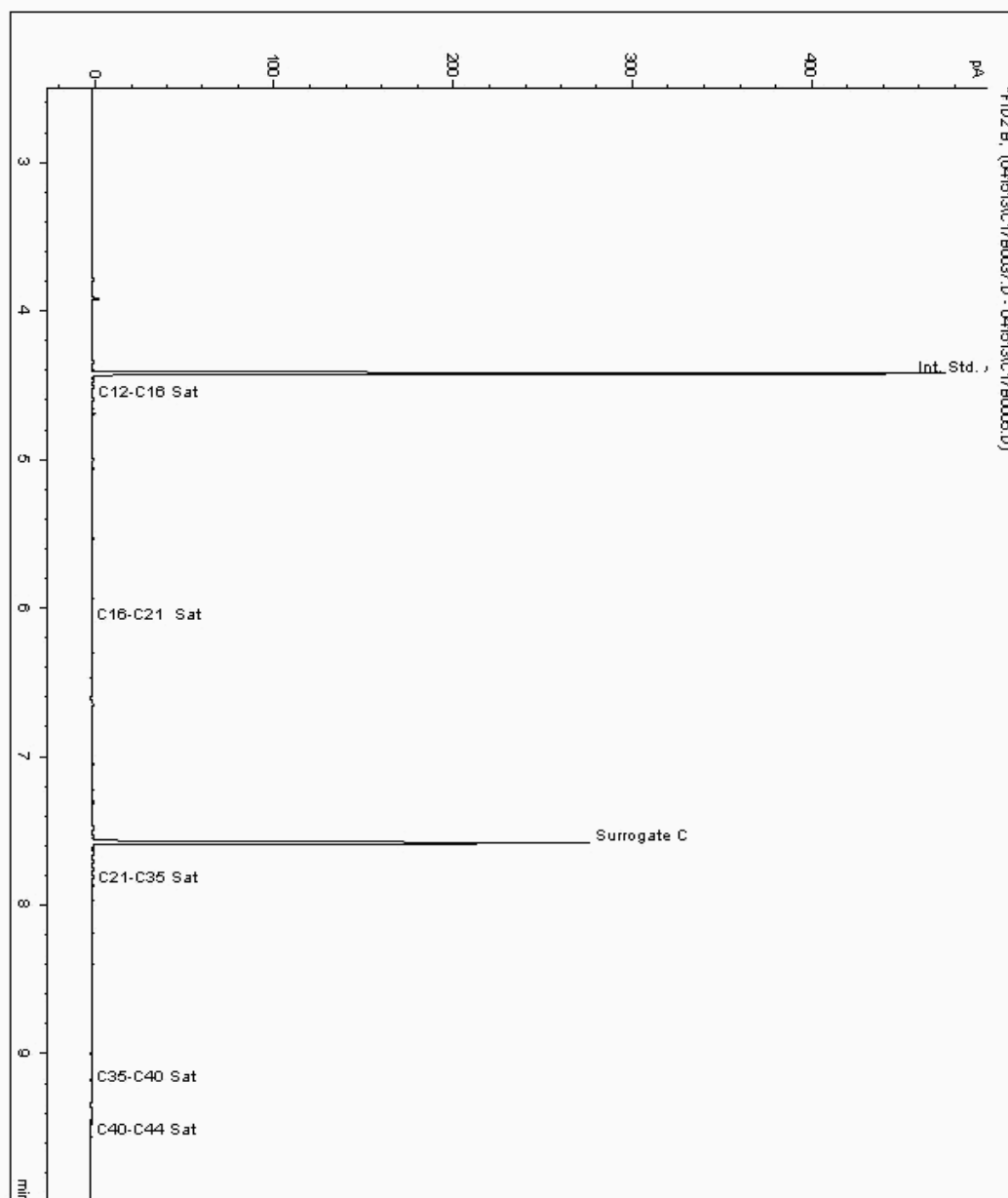
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7234507
Sample ID : VA106

Depth : 6.30

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6940184-7234507
Date Acquired : 16/04/2013 02:20:27 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.015





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

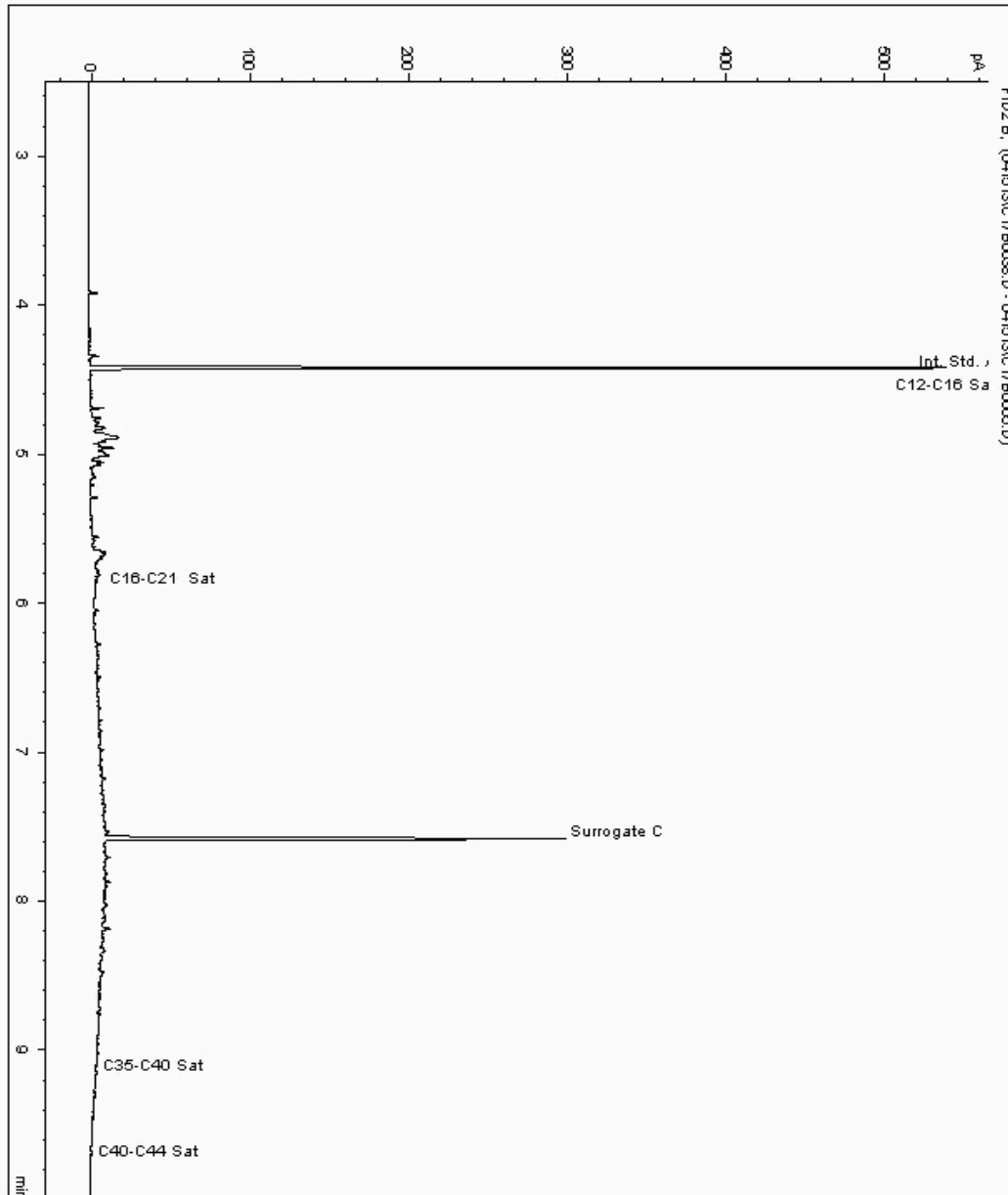
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7234518
Sample ID : VA105

Depth : 6.50

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6940174-7234518
Date Acquired : 16/04/2013 02:41:01 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.015





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

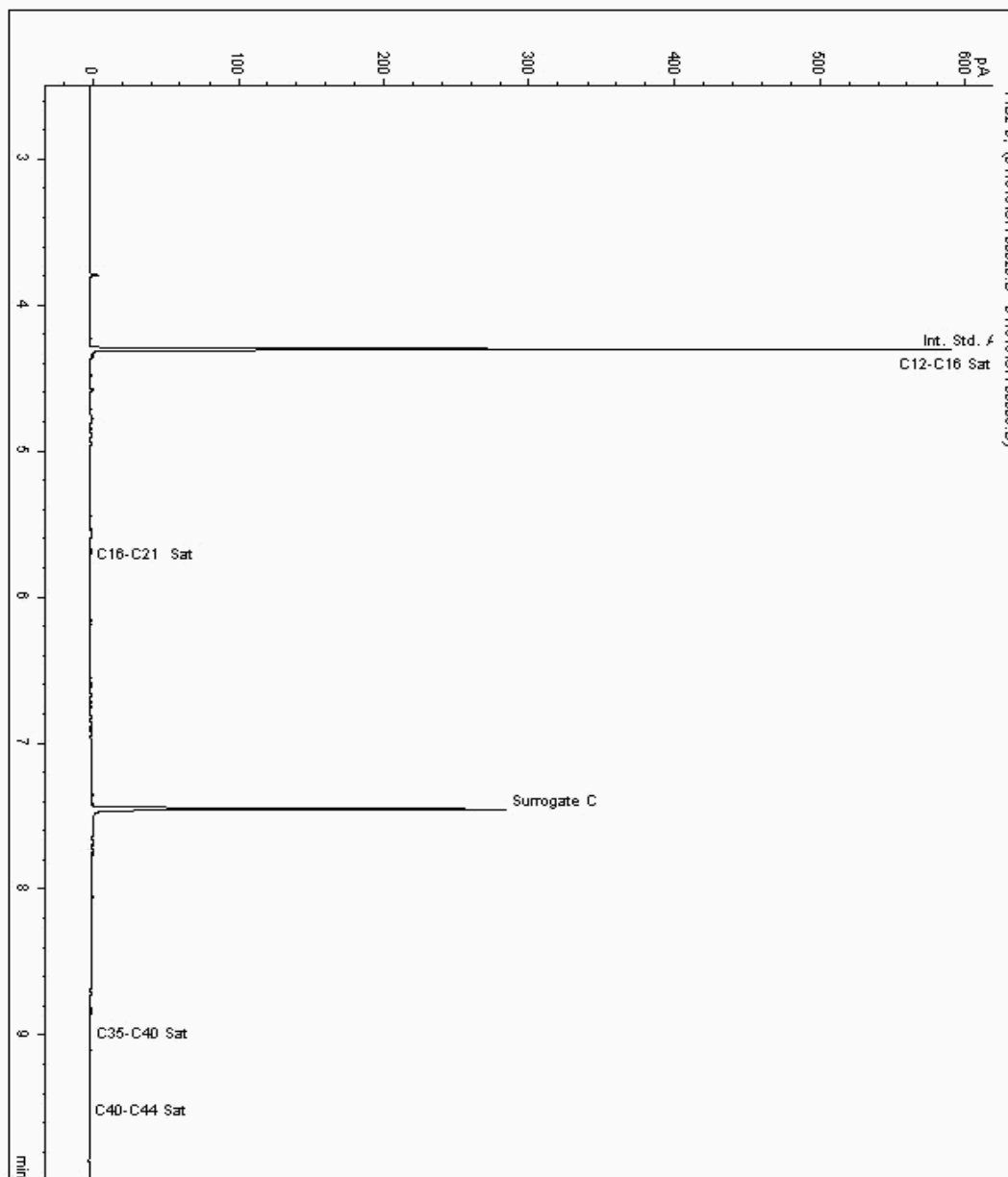
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7234534
Sample ID : VA112

Depth : 7.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6940251-7234534
Date Acquired : 15/04/2013 21:16:44 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.996





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

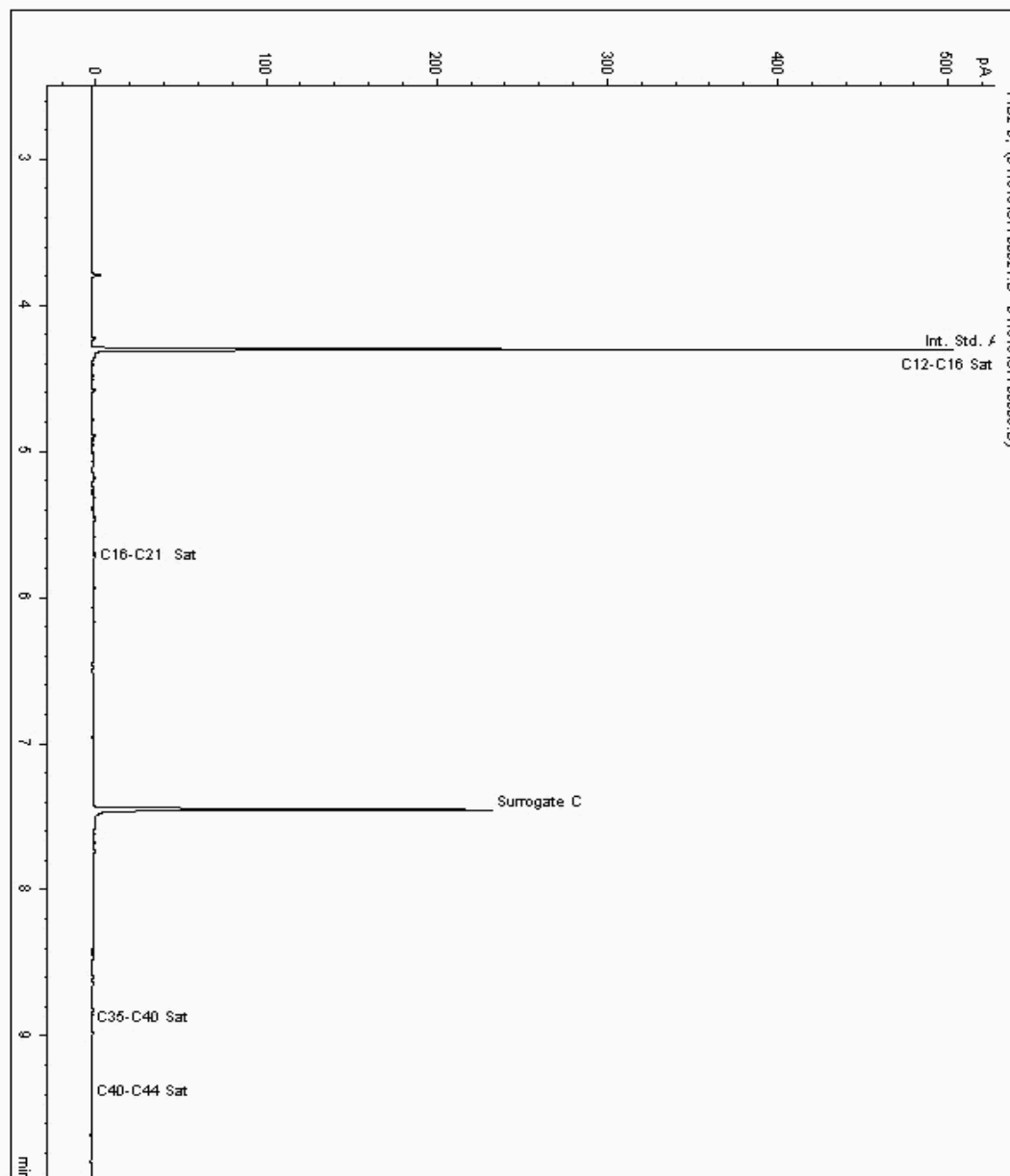
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7234542
Sample ID : VA111

Depth : 7.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6940241-7234542
Date Acquired : 15/04/2013 21:37:43 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.038





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

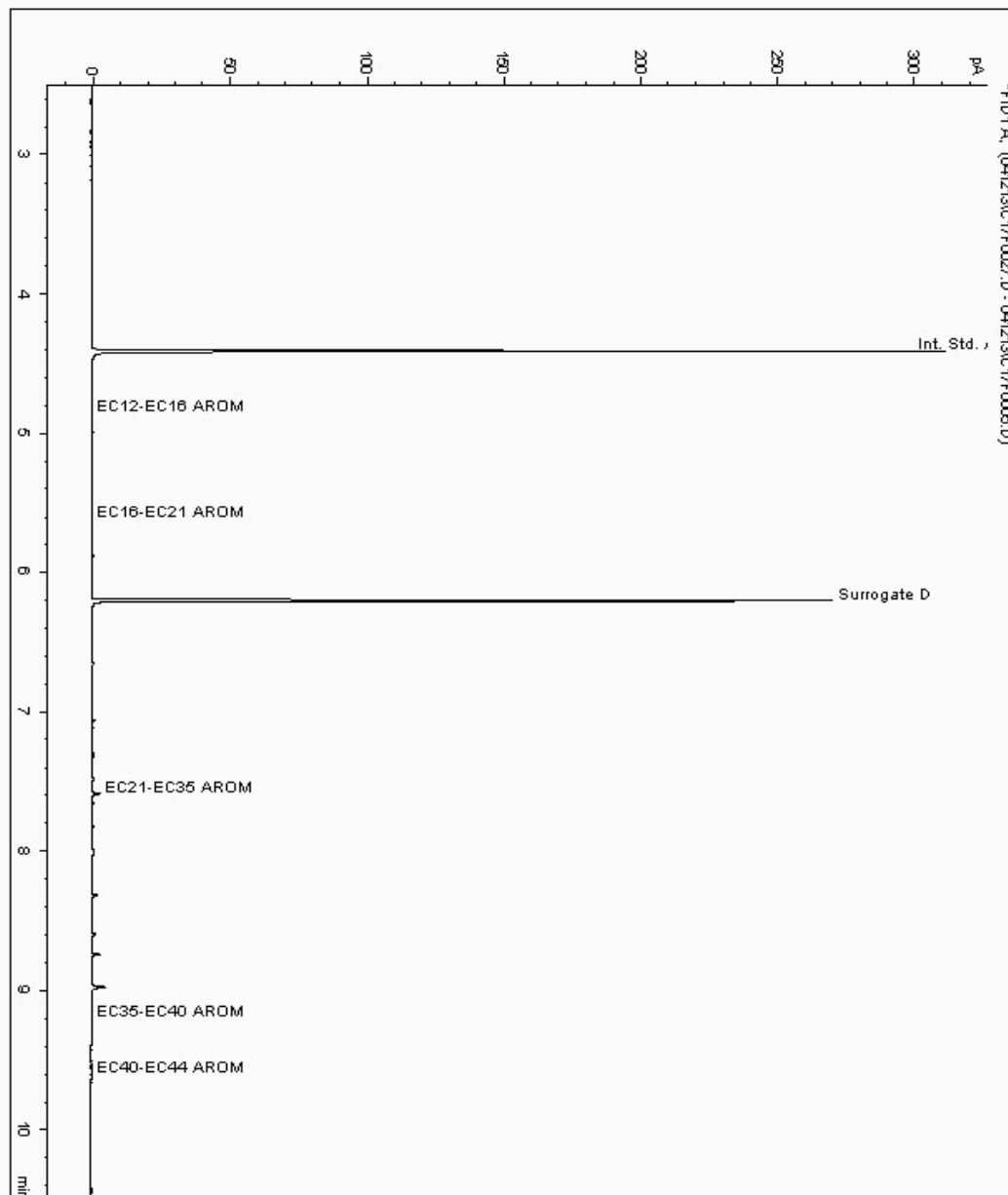
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7223790
Sample ID : VA101

Depth : 4.50

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6940131-7223790
Date Acquired : 12/04/2013 20:28:04 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.965





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

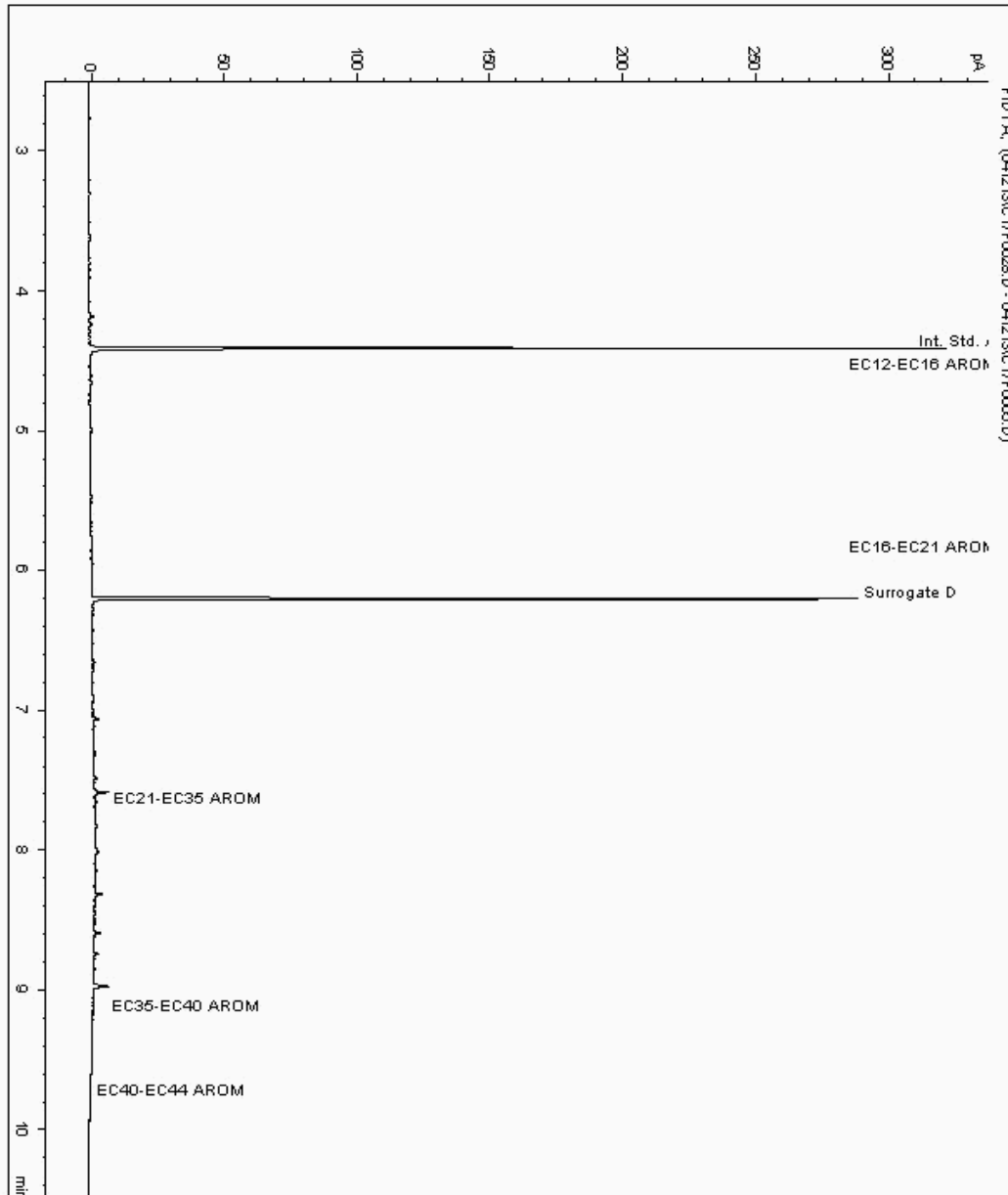
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7223802
Sample ID : VA107

Depth : 6.80

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6940196-7223802
Date Acquired : 12/04/2013 20:48:40 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.004





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

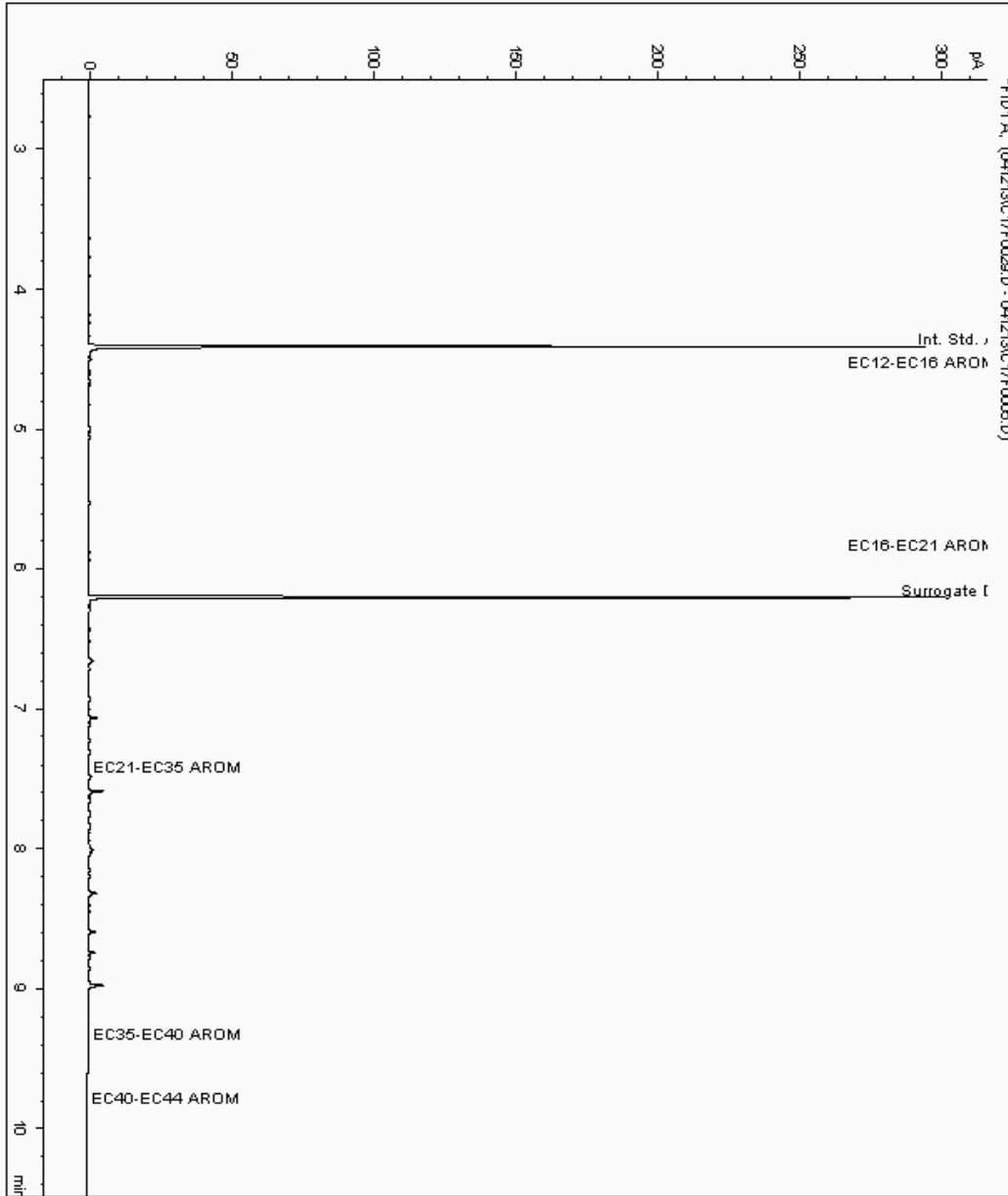
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7223815
Sample ID : VA103

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6940150-7223815
Date Acquired : 12/04/2013 21:09:10 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.973





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

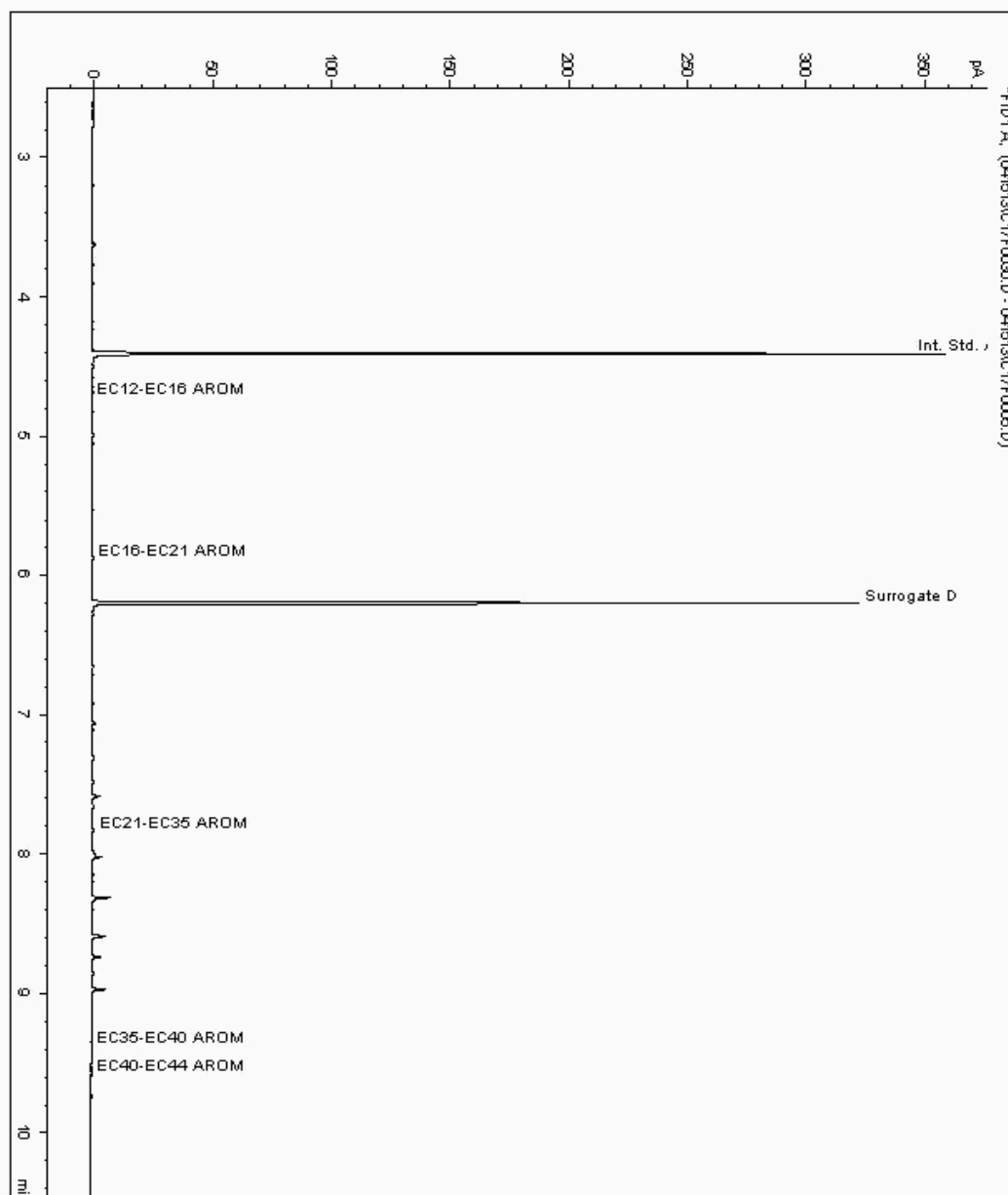
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7234470
Sample ID : VA102

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6940141-7234470
Date Acquired : 15/04/2013 23:55:58 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.995





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

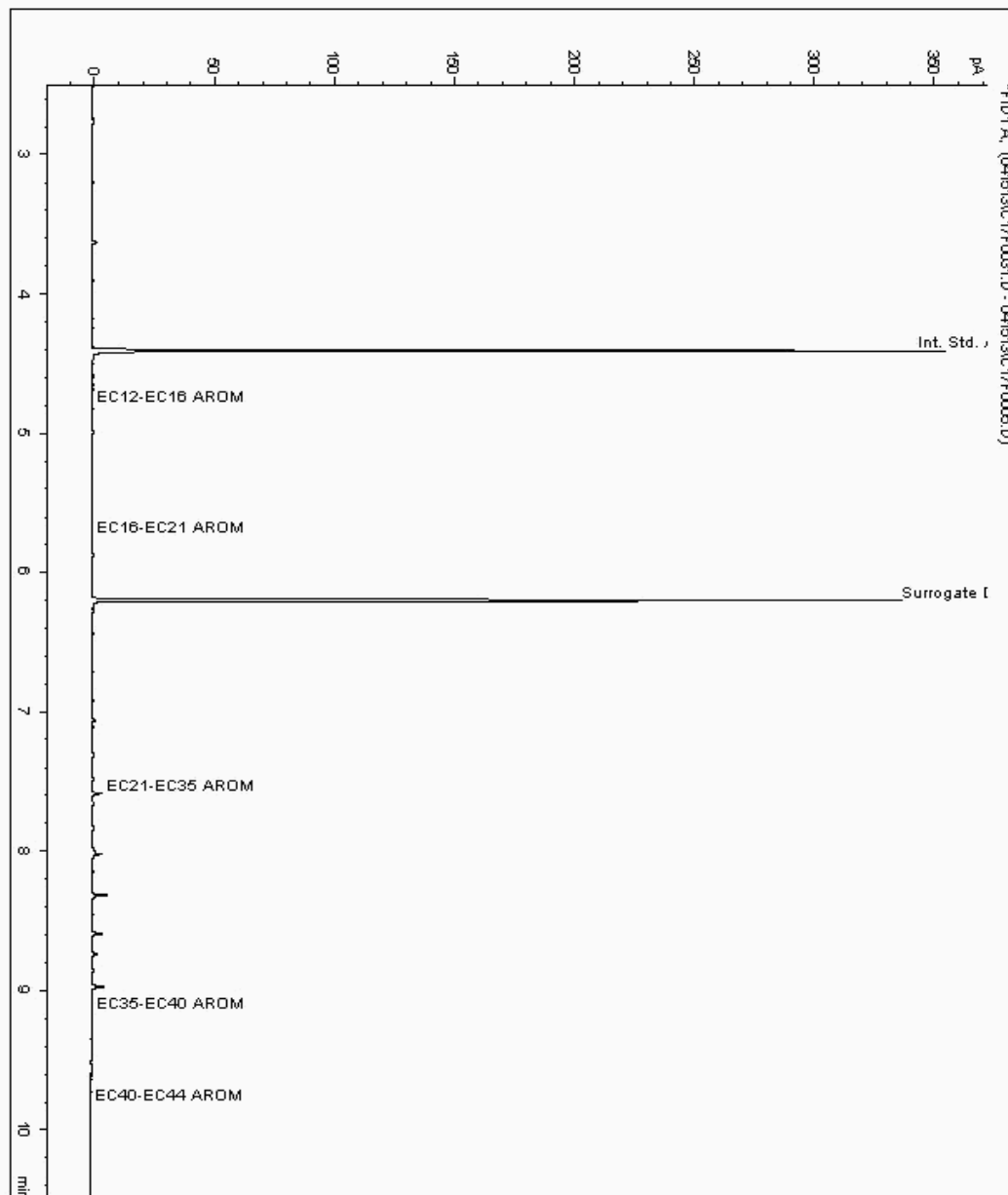
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7234475
Sample ID : VA113

Depth : 6.70

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6940267-7234475
Date Acquired : 16/04/2013 00:16:32 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.021





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

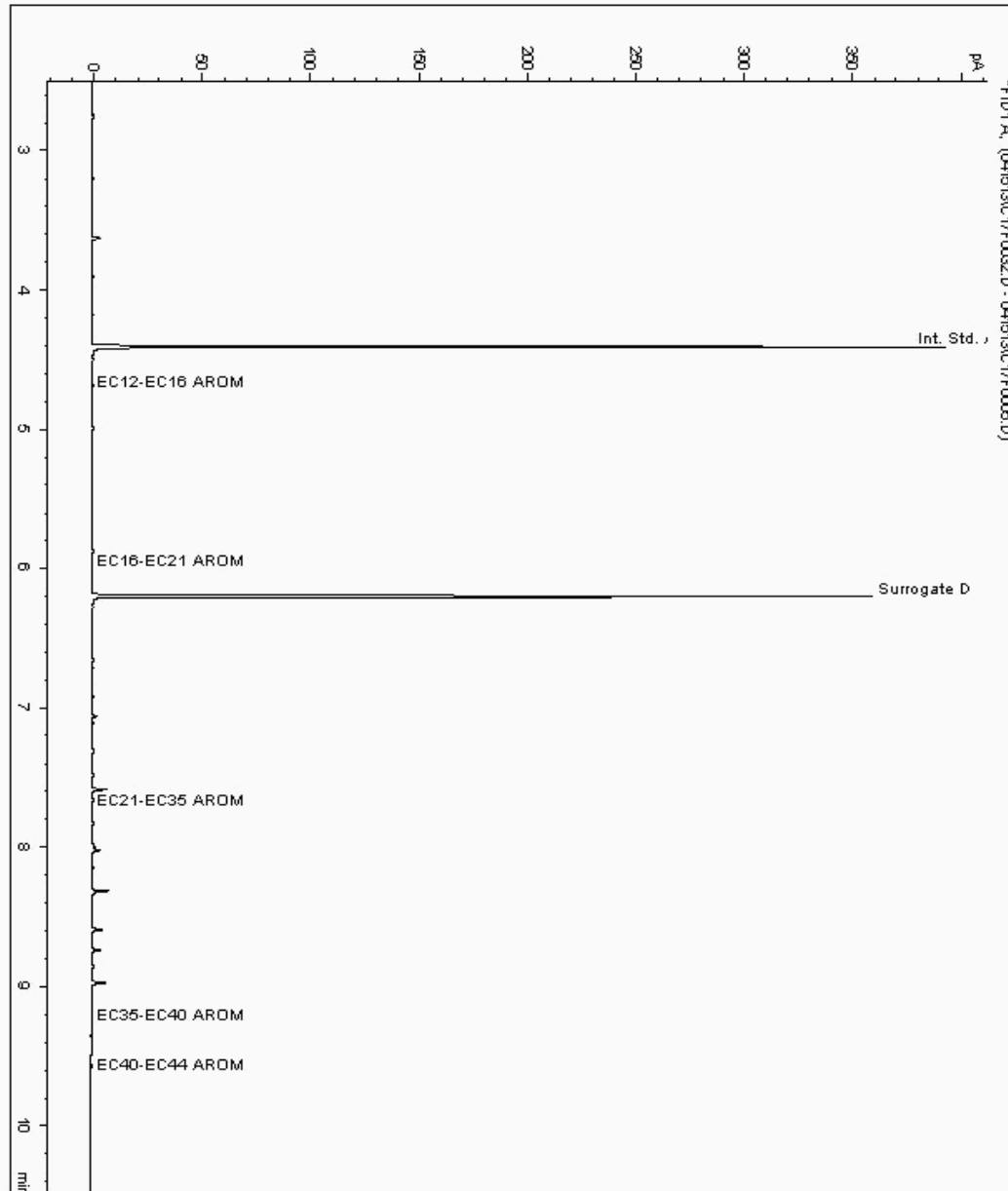
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7234484
Sample ID : VA114

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6940277-7234484
Date Acquired : 16/04/2013 00:37:10 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.006





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

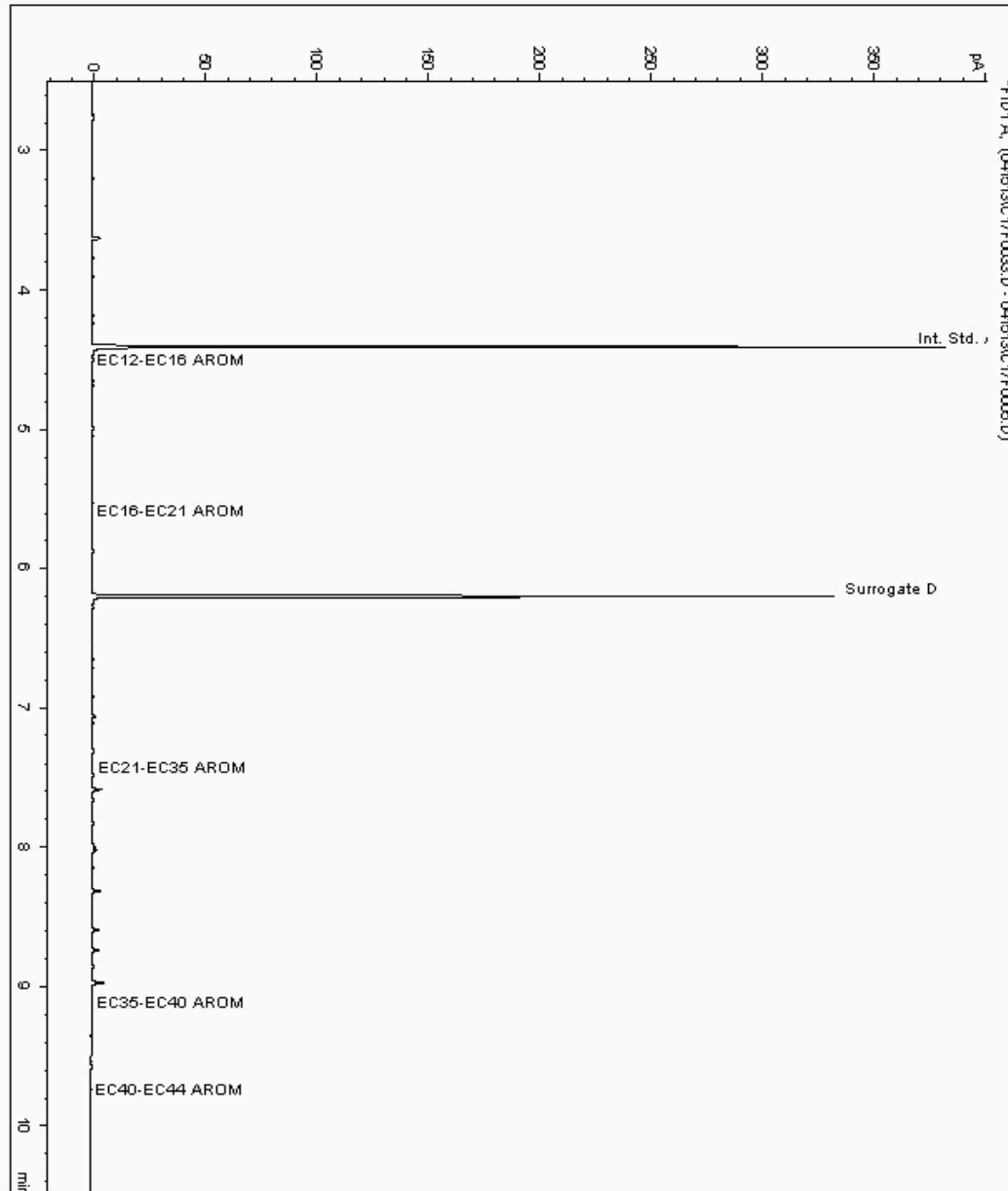
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7234487
Sample ID : VA110

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6940233-7234487
Date Acquired : 16/04/2013 00:57:57 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.012

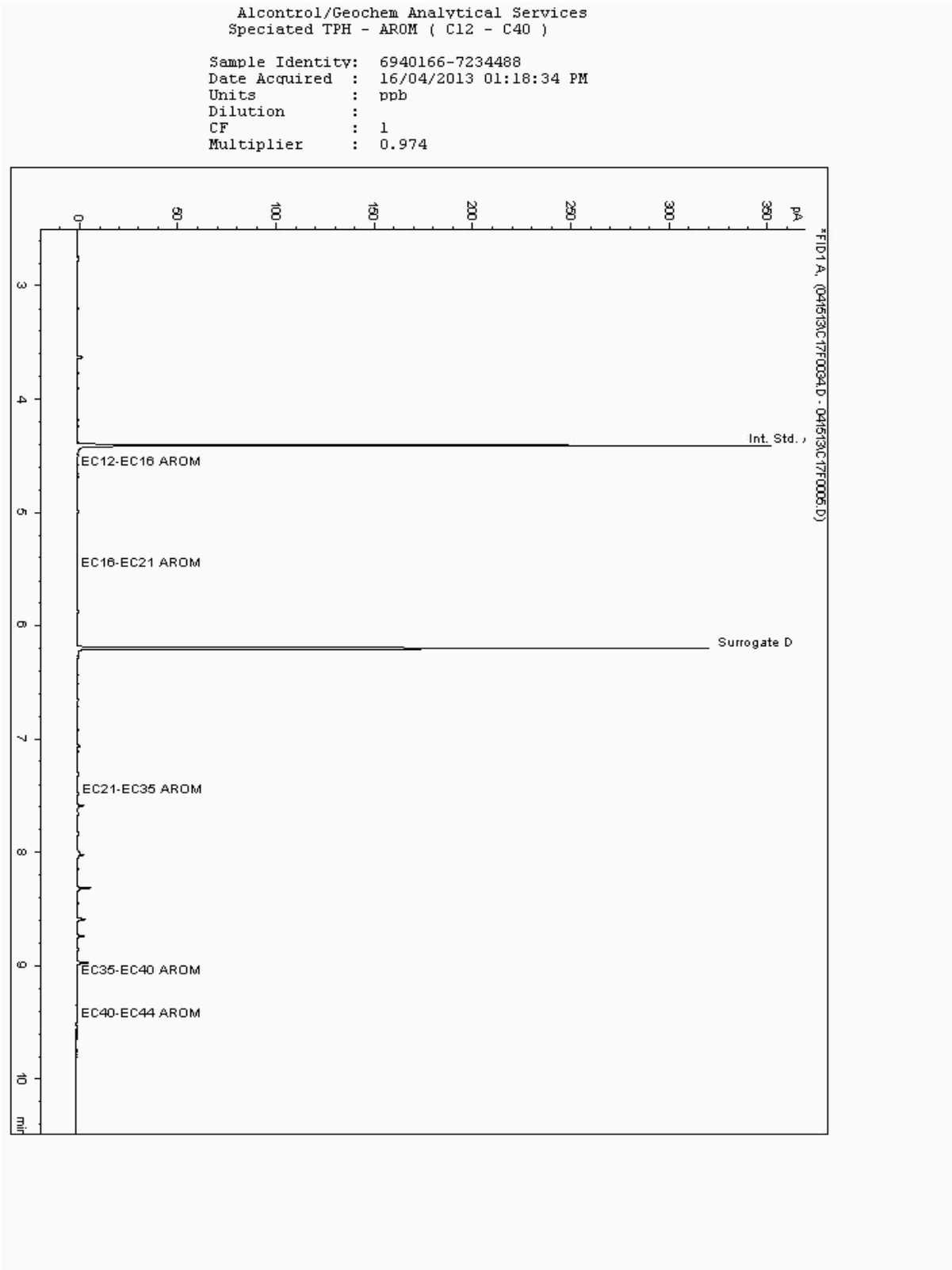




SDG:	130411-64	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	220987
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Chromatogram

Analysis:	EPH CWG (Aromatic) GC (S)	Sample No :	7234488	Depth :	6.50
		Sample ID :	VA104		





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

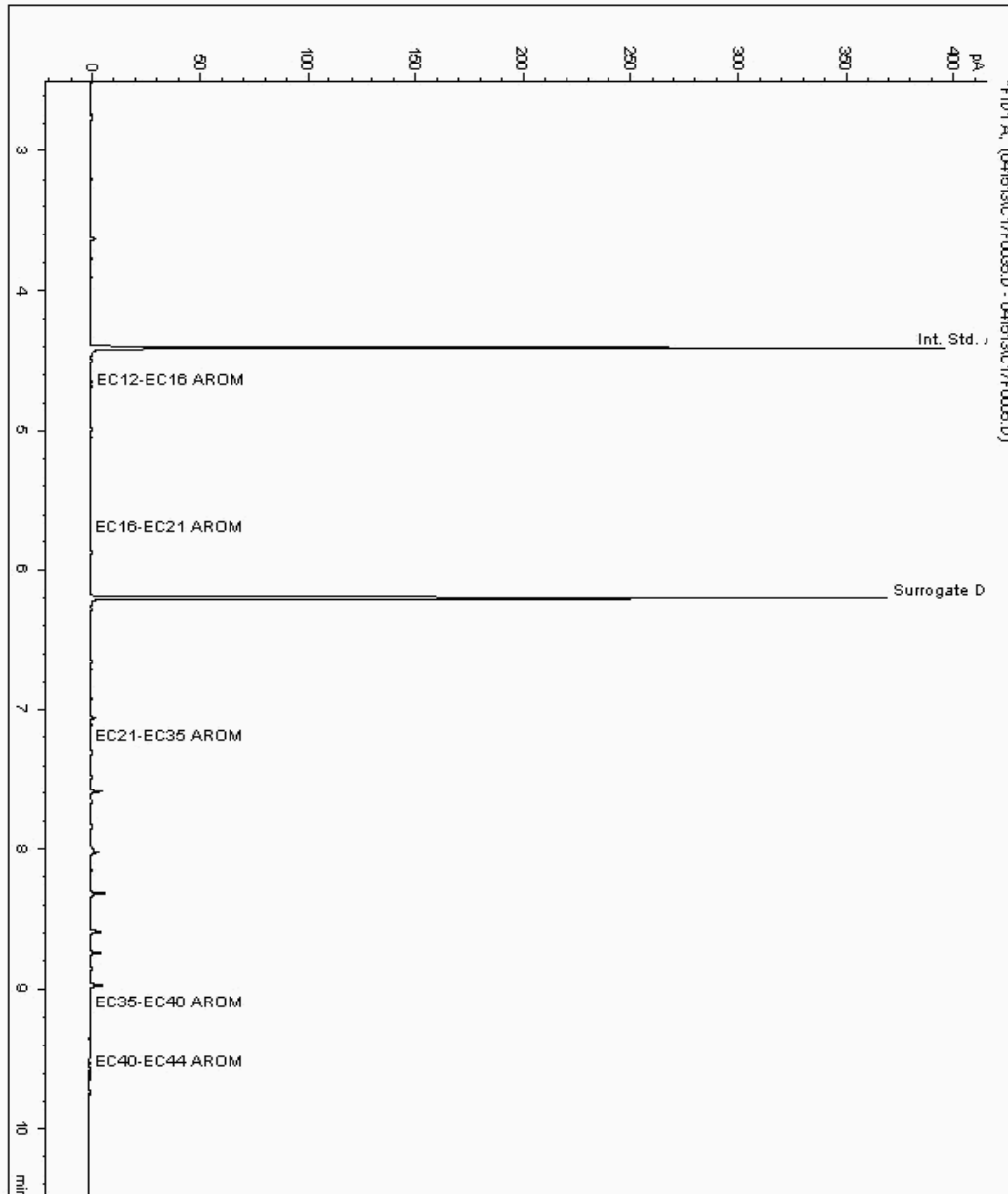
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7234489
Sample ID : VA109

Depth : 6.80

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6940223-7234489
Date Acquired : 16/04/2013 01:39:09 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.027





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

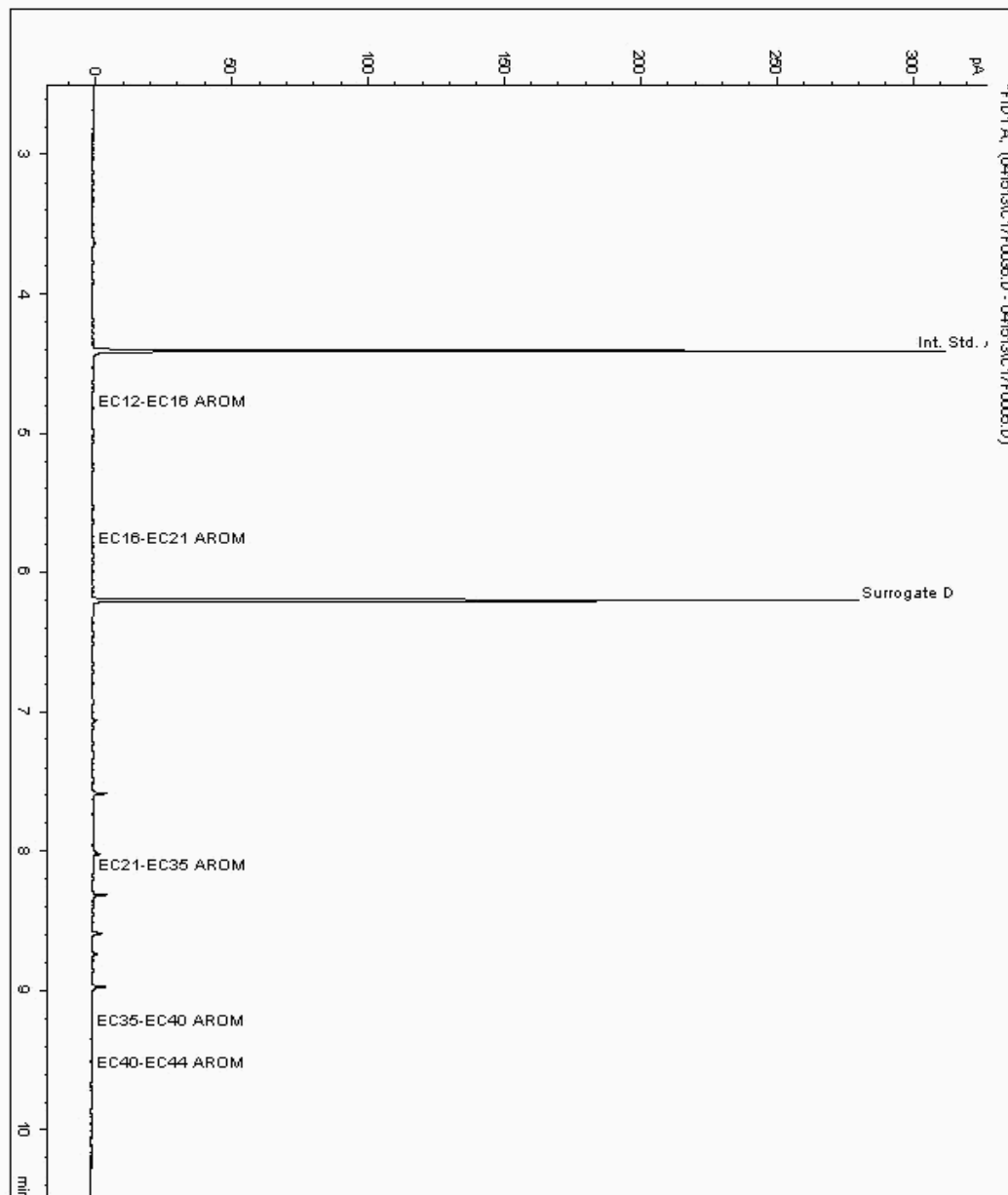
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7234506
Sample ID : VA108

Depth : 6.70

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6940208-7234506
Date Acquired : 16/04/2013 01:59:56 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.009





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

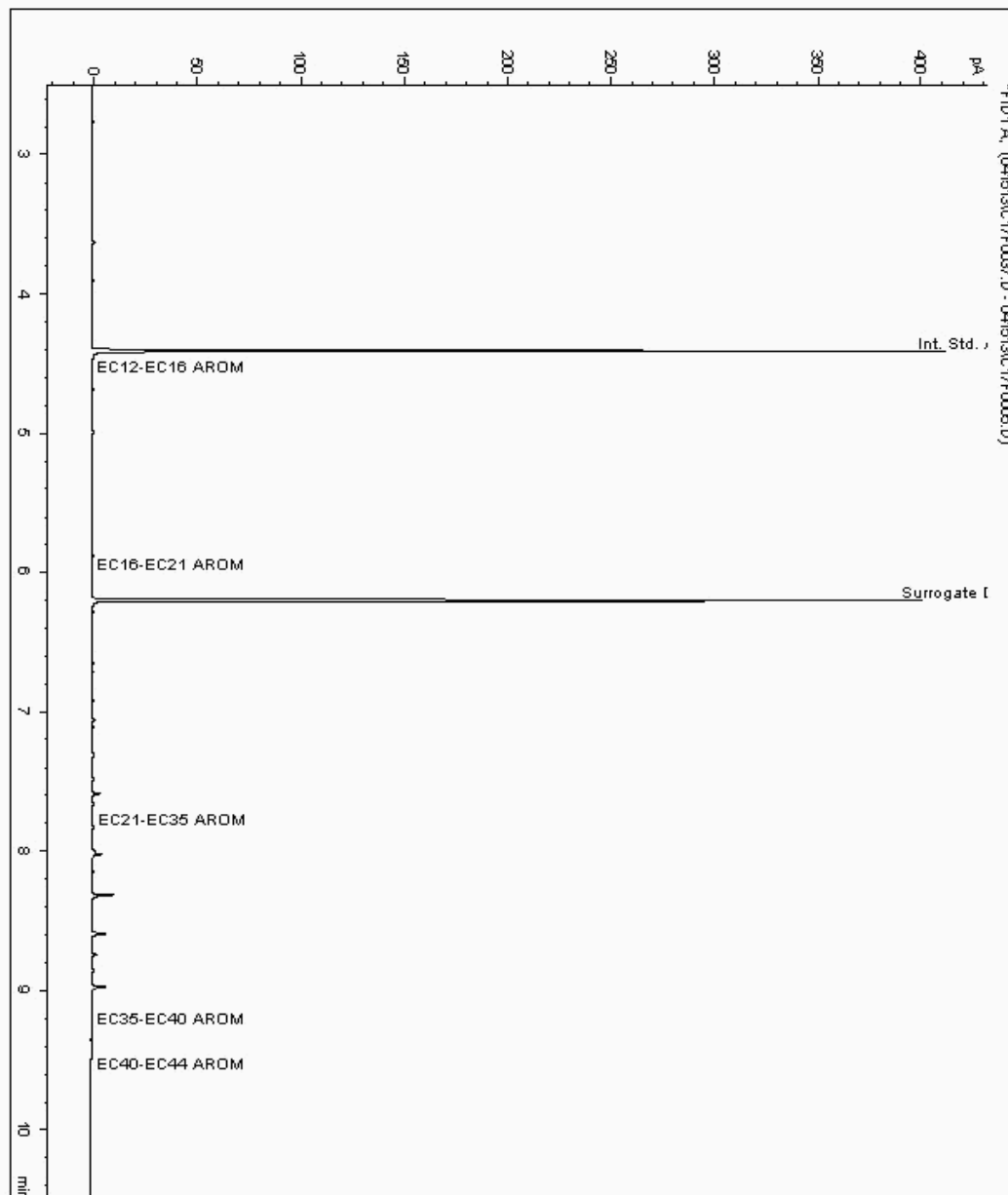
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7234507
Sample ID : VA106

Depth : 6.30

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6940185-7234507
Date Acquired : 16/04/2013 02:20:27 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.015





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

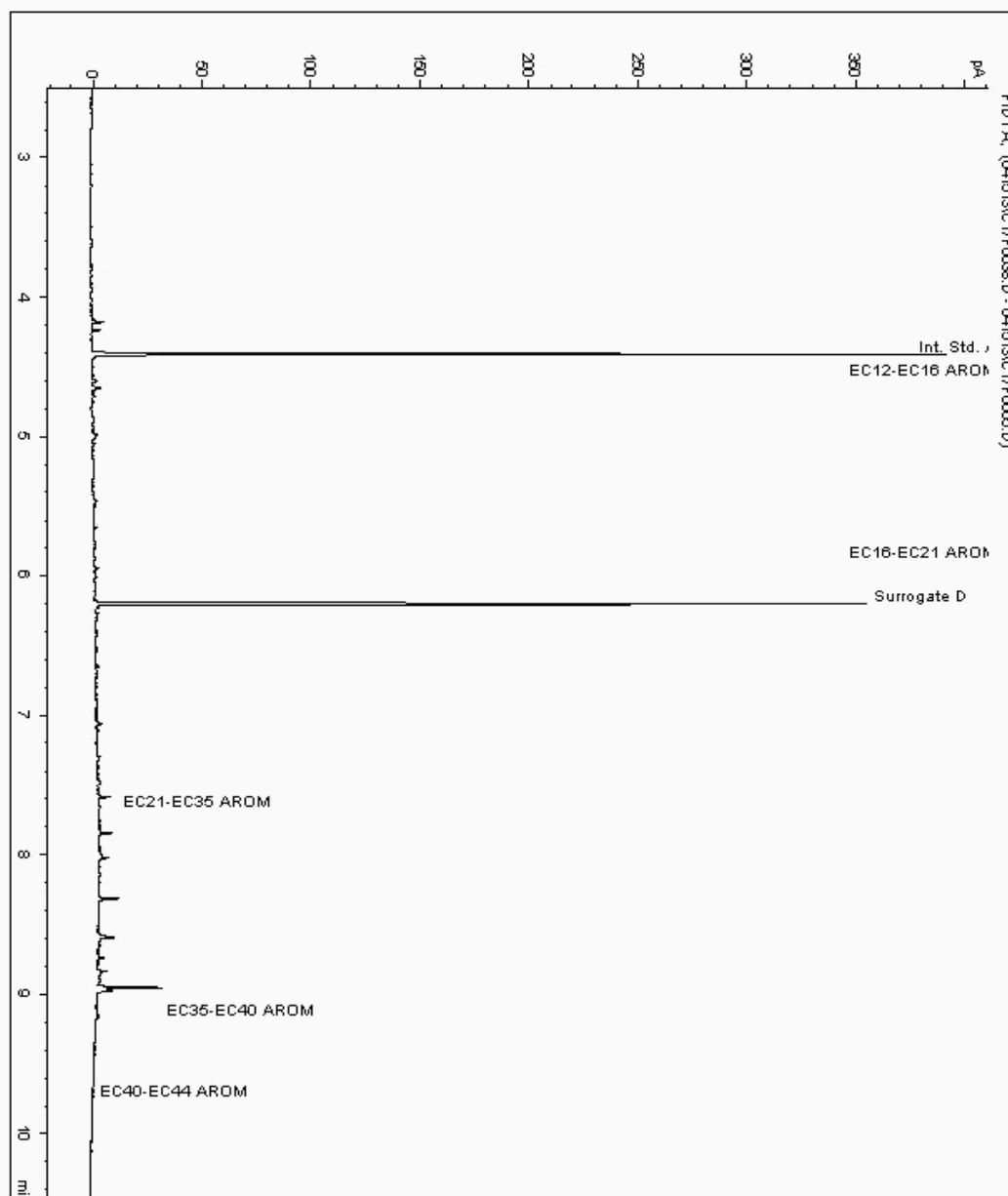
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7234518
Sample ID : VA105

Depth : 6.50

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6940175-7234518
Date Acquired : 16/04/2013 02:41:01 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.015





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

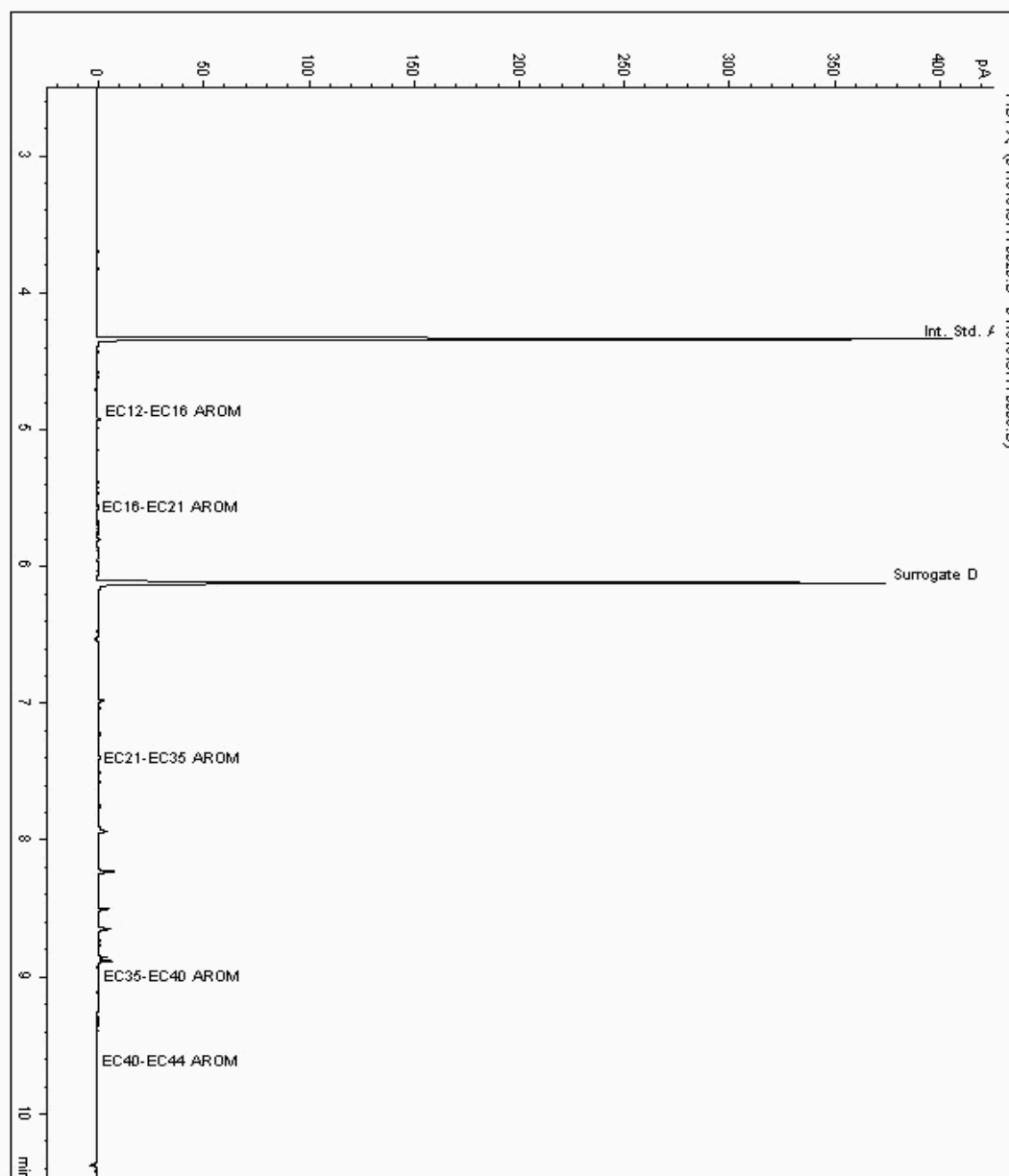
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7234534
Sample ID : VA112

Depth : 7.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6940252-7234534
Date Acquired : 15/04/2013 21:16:44 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.996





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

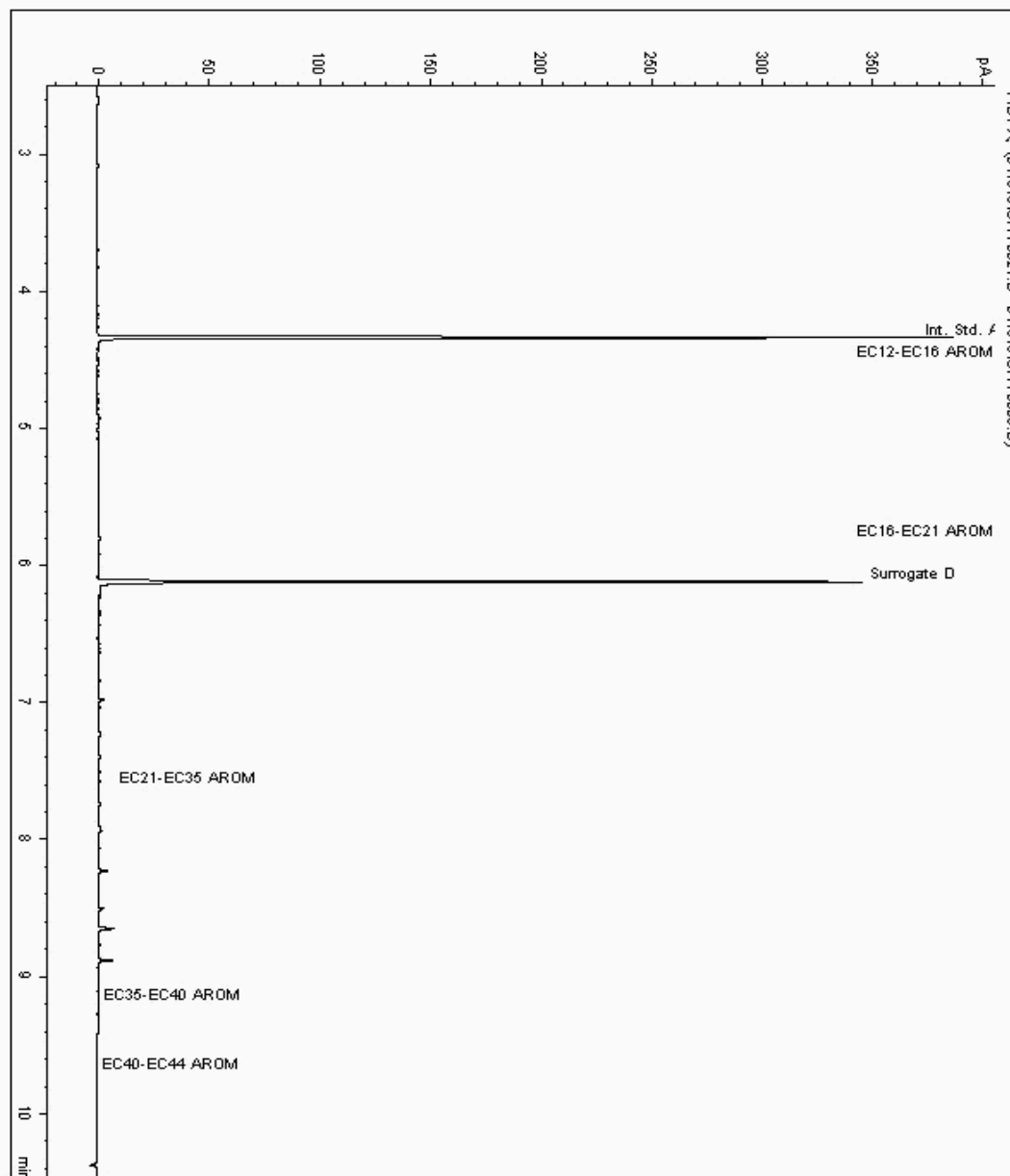
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7234542
Sample ID : VA111

Depth : 7.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6940242-7234542
Date Acquired : 15/04/2013 21:37:43 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.038





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

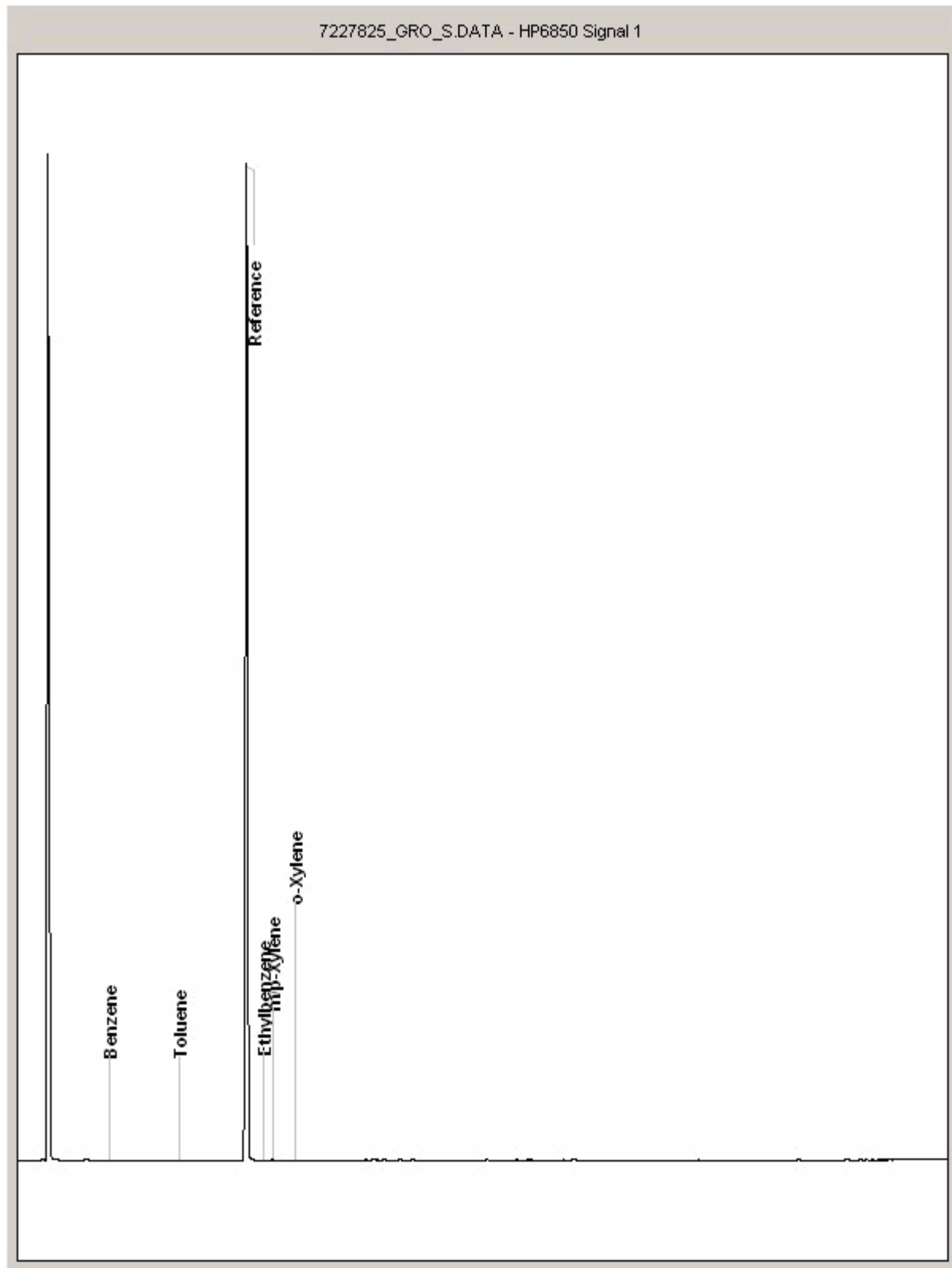
Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7227825
Sample ID : VA104

Depth : 6.50





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

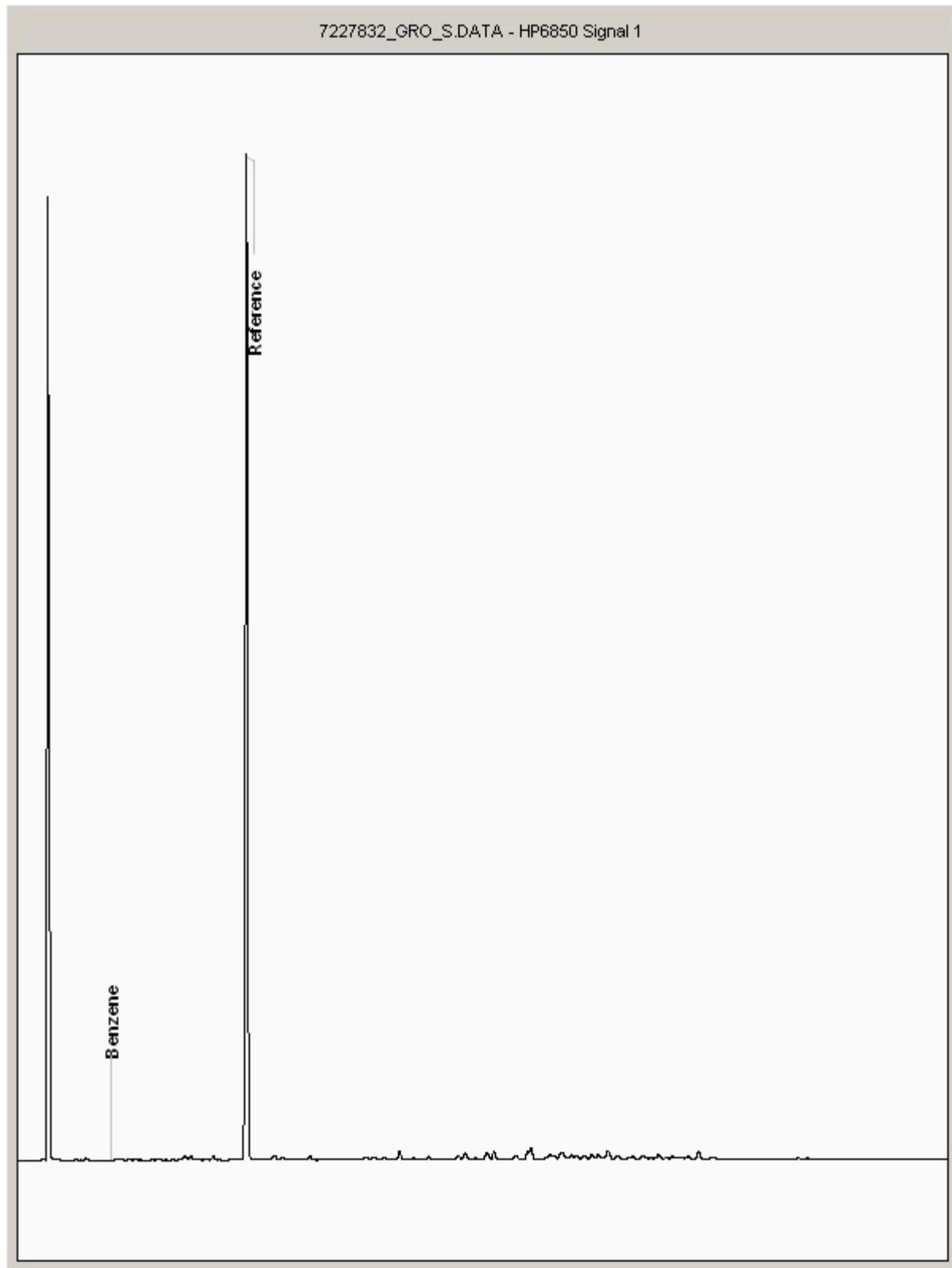
Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7227832
Sample ID : VA106

Depth : 6.30





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

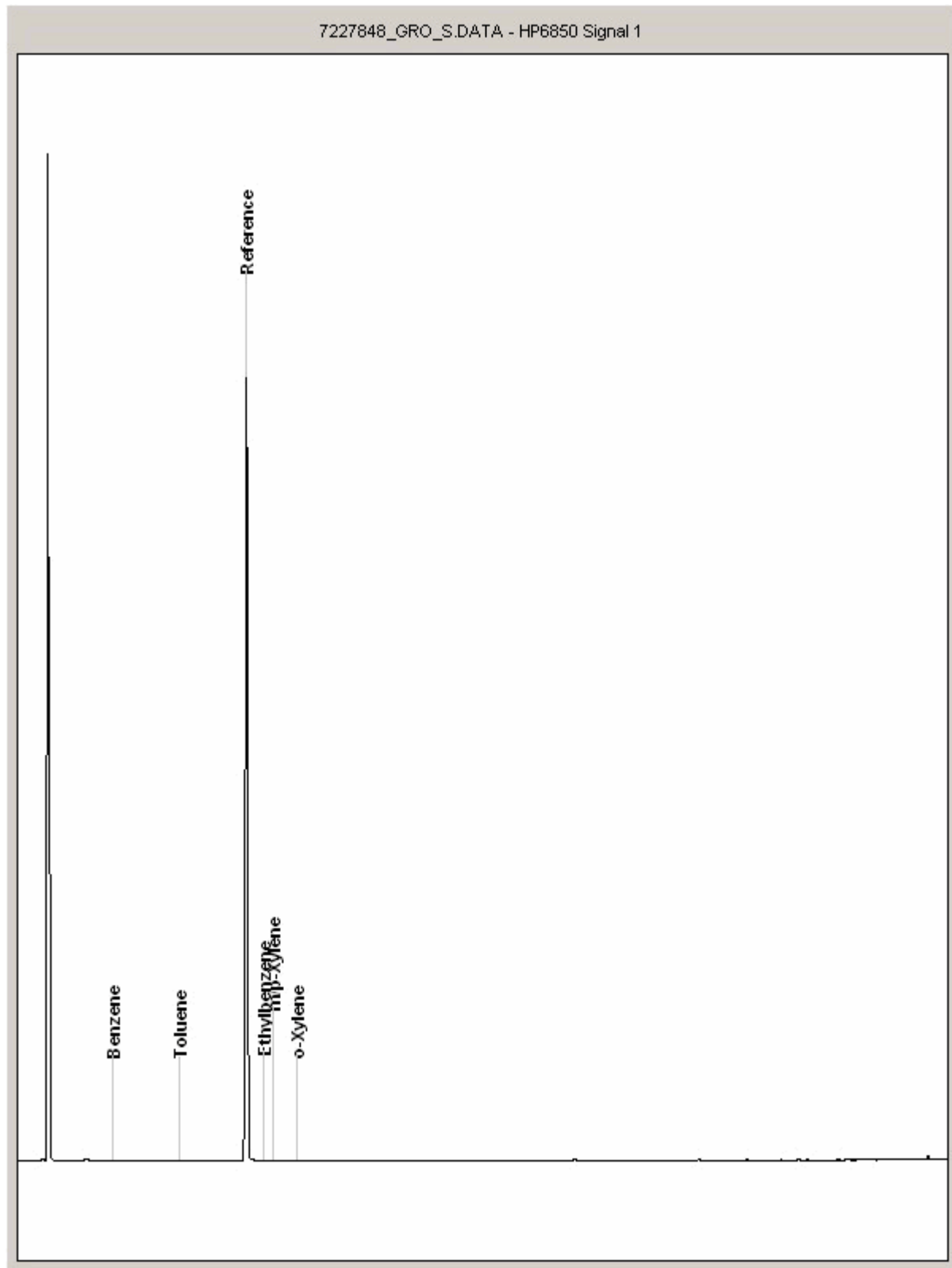
Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7227848
Sample ID : VA102

Depth : 3.00





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

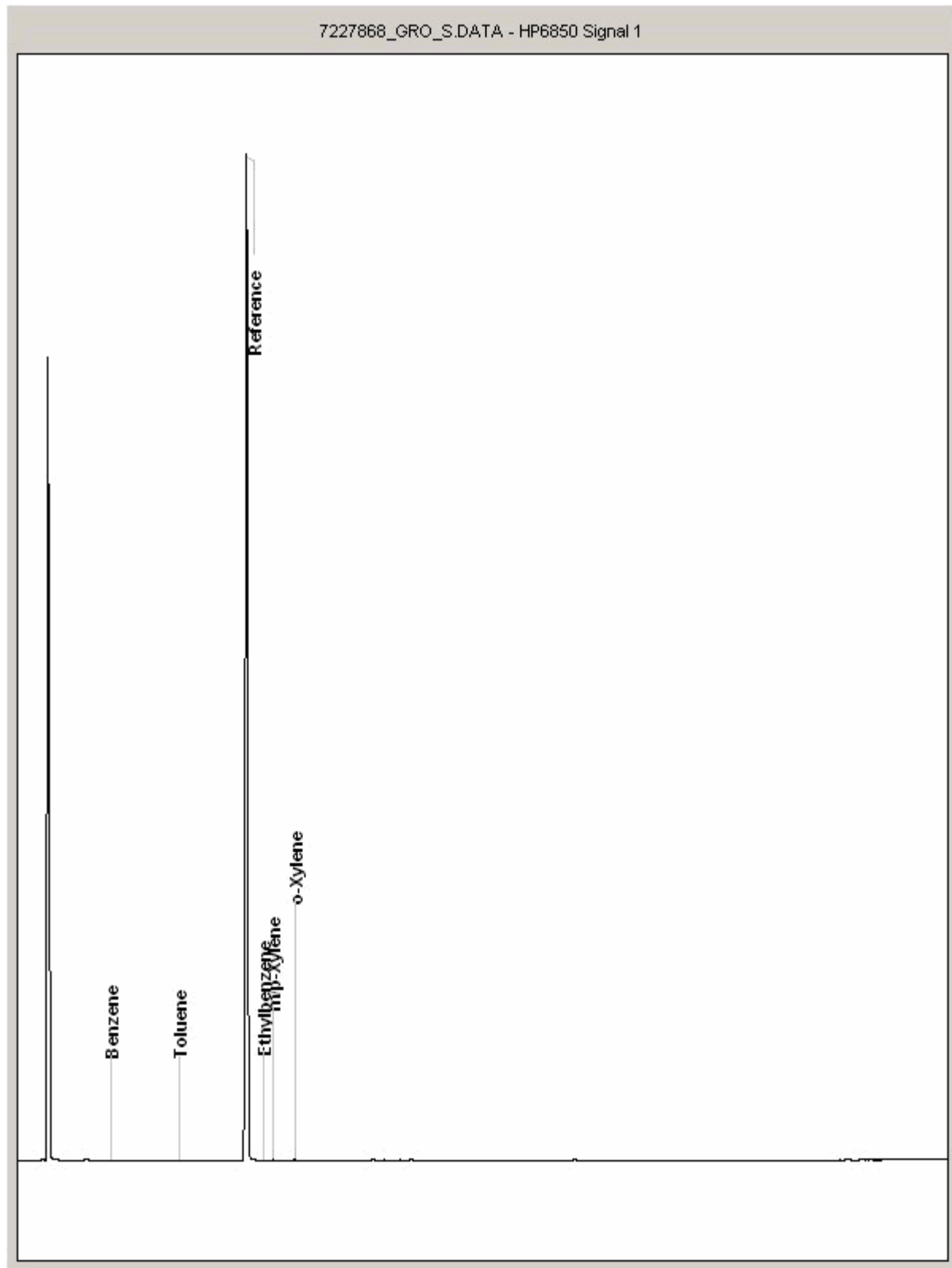
Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7227868
Sample ID : VA103

Depth : 3.00





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

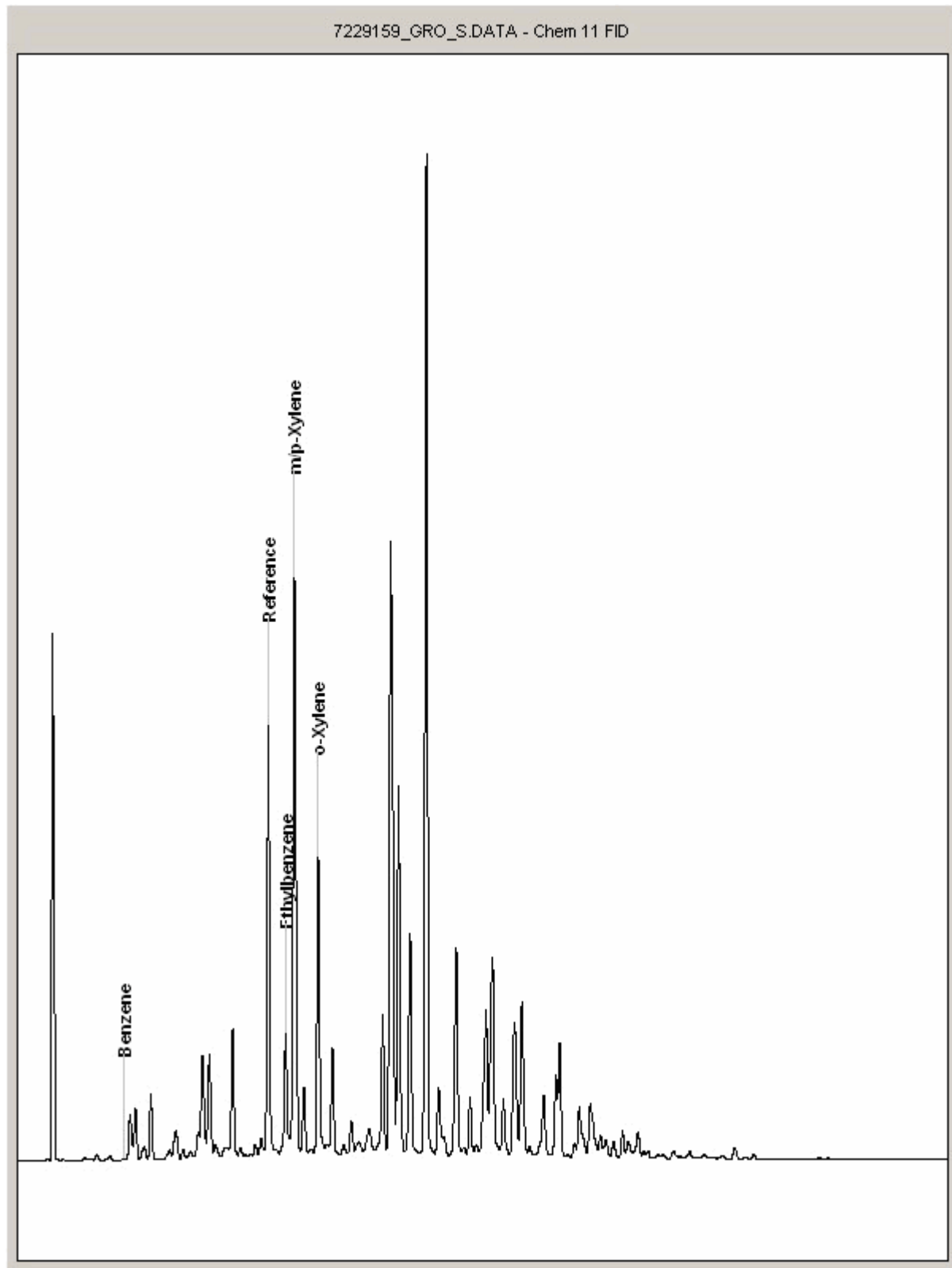
Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7229159
Sample ID : VA112

Depth : 7.00





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

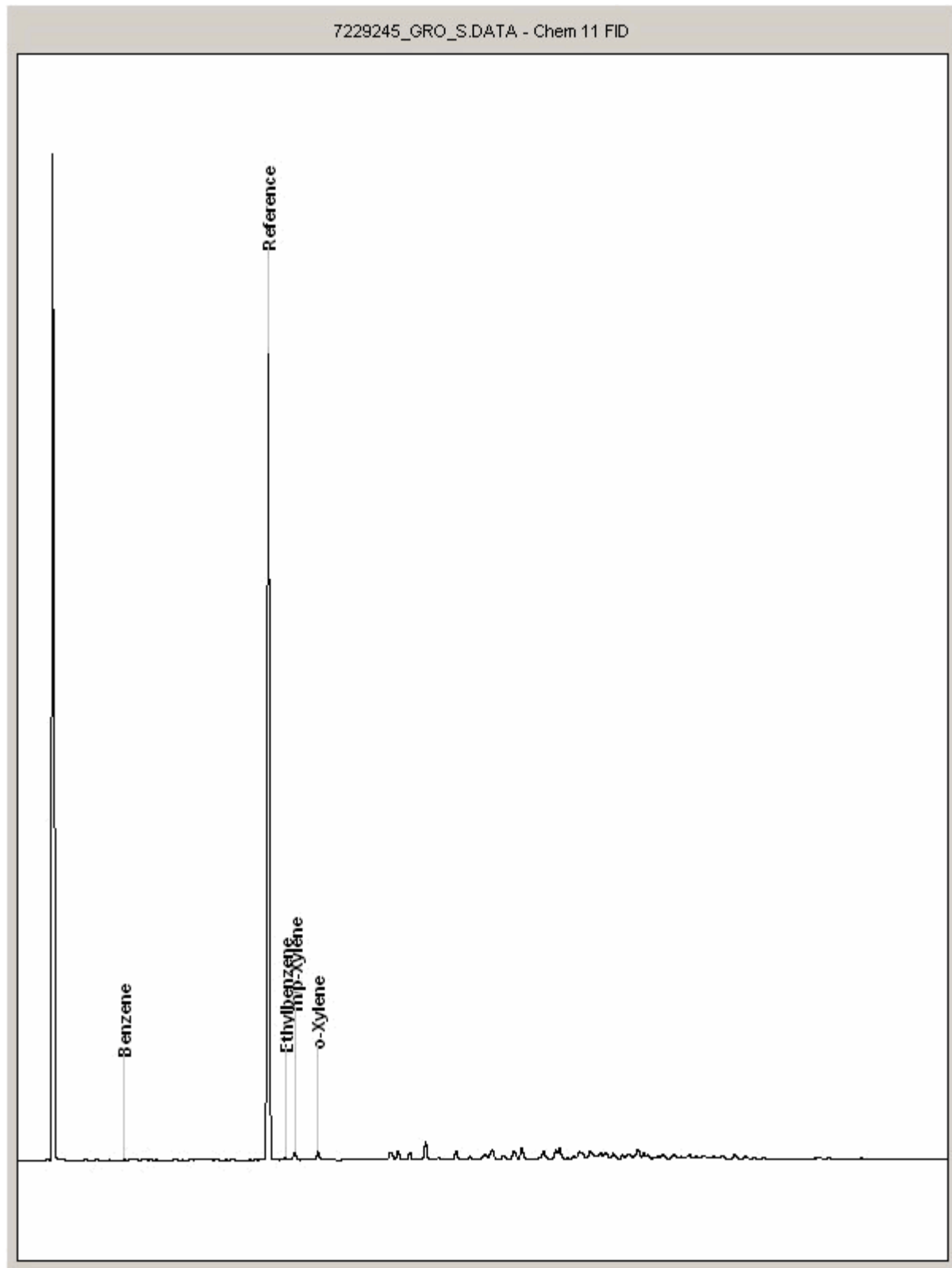
Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7229245
Sample ID : VA111

Depth : 7.00





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

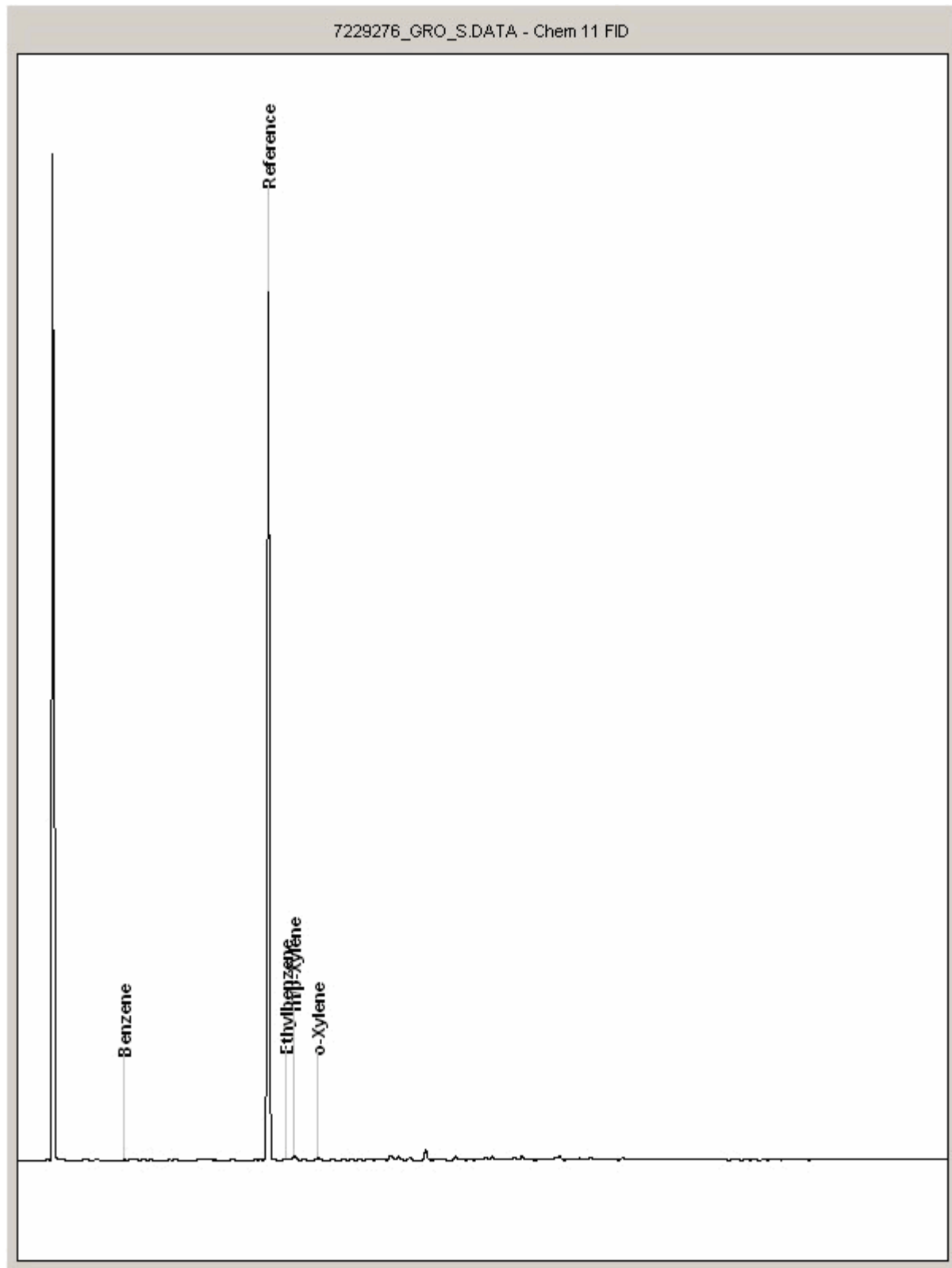
Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7229276
Sample ID : VA113

Depth : 6.70





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

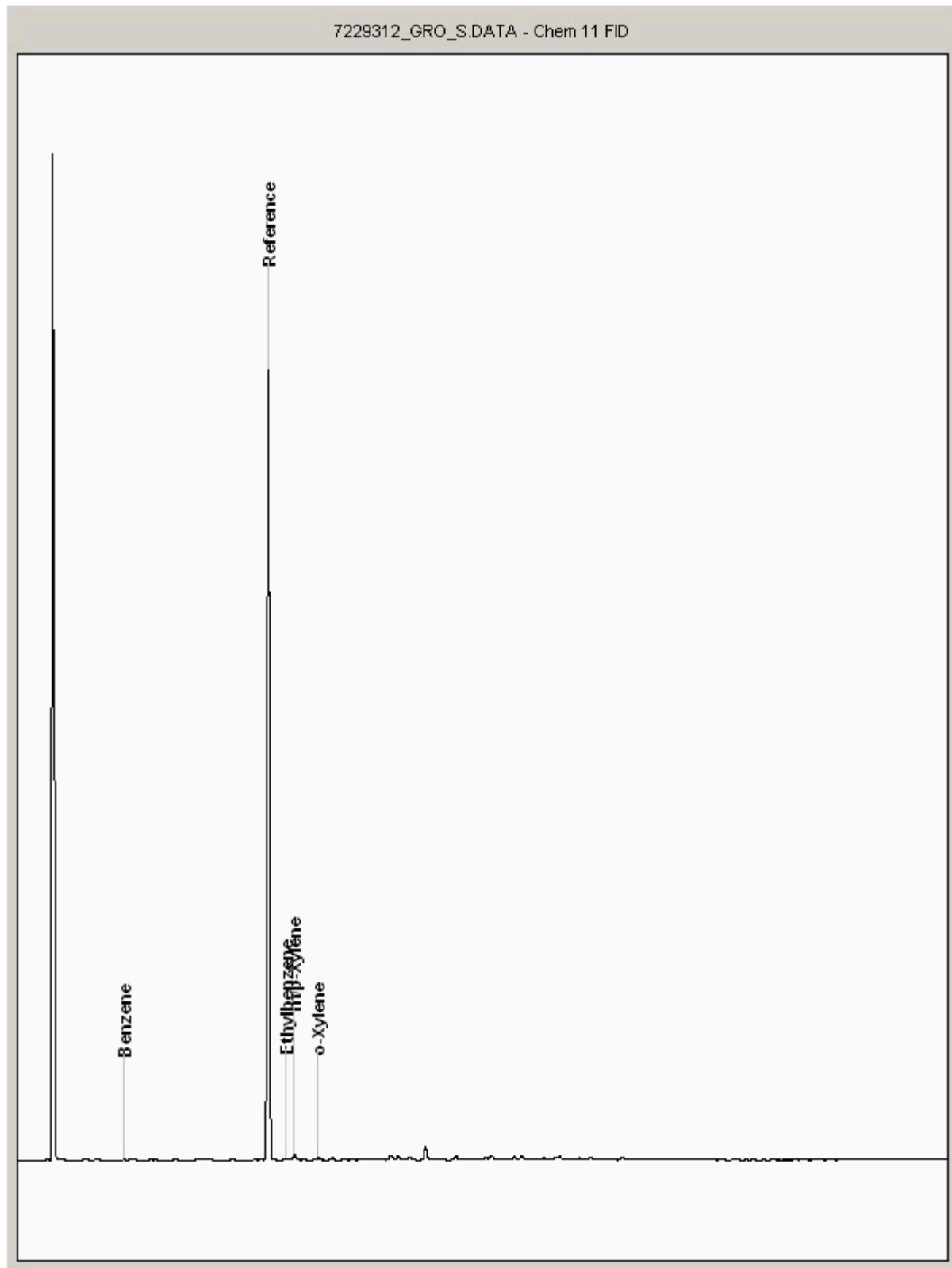
Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7229312
Sample ID : VA109

Depth : 6.80





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

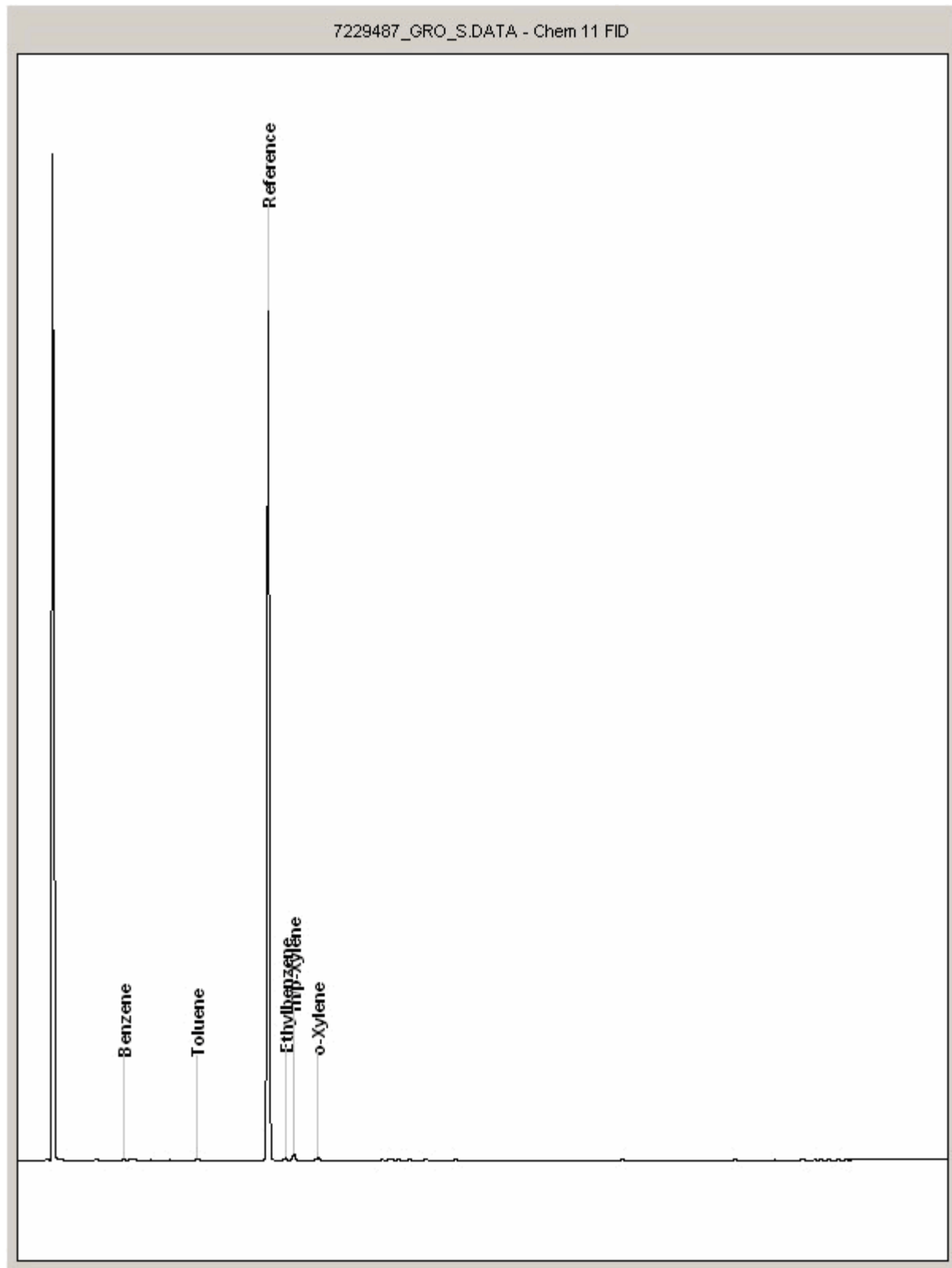
Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7229487
Sample ID : VA110

Depth : 3.00





CERTIFICATE OF ANALYSIS

SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

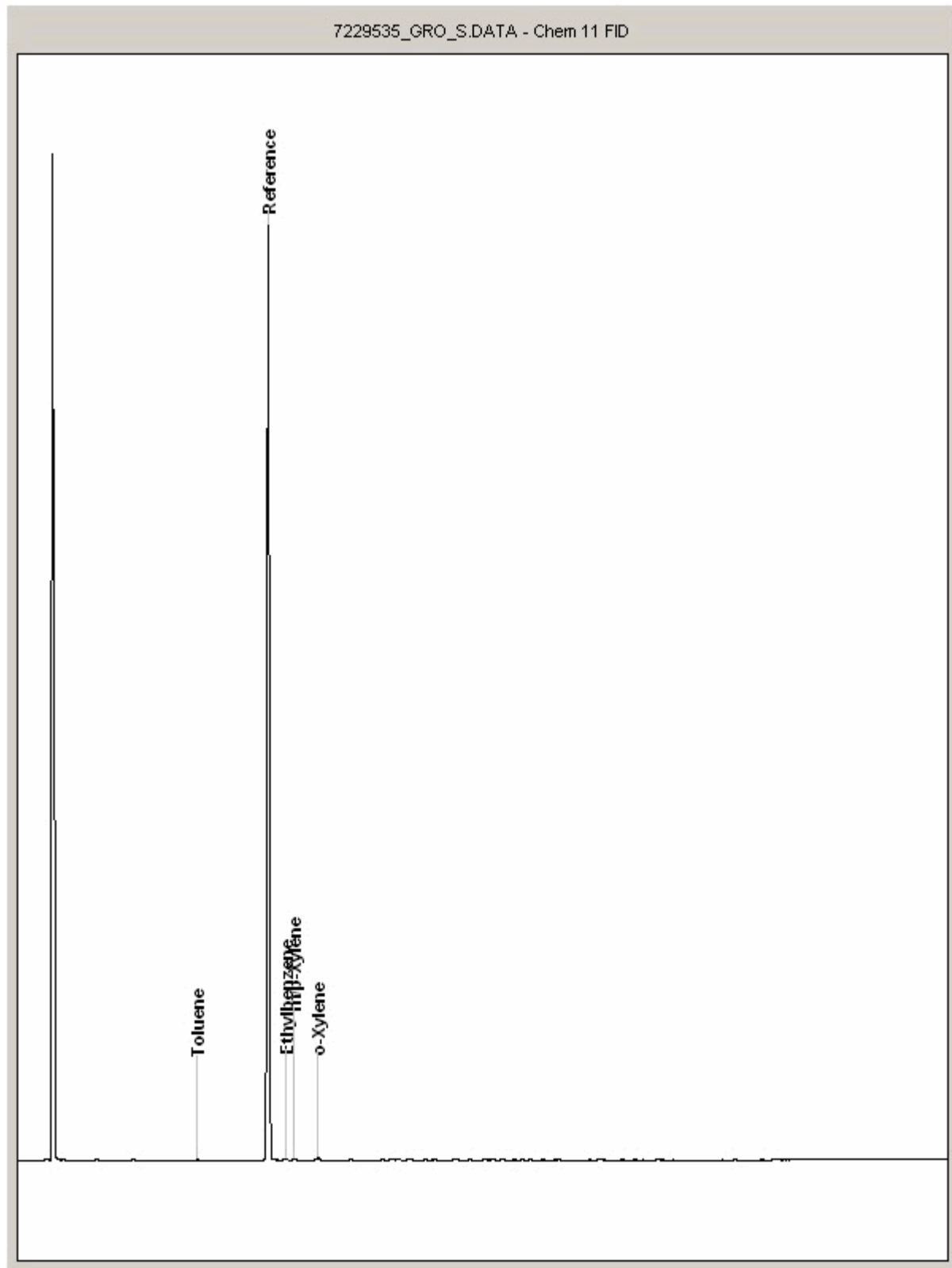
Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7229535
Sample ID : VA114

Depth : 3.00





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

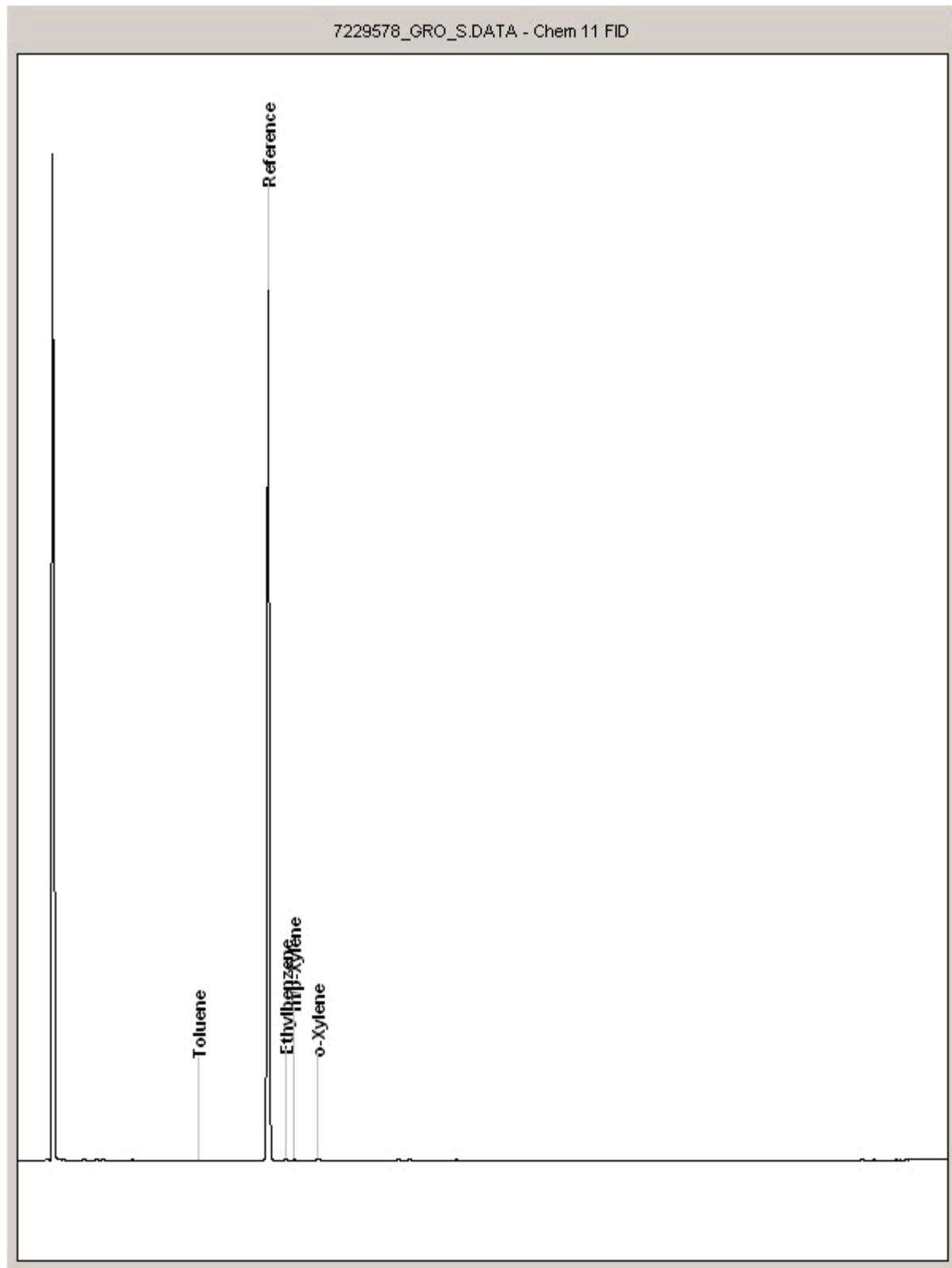
Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7229578
Sample ID : VA101

Depth : 4.50





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

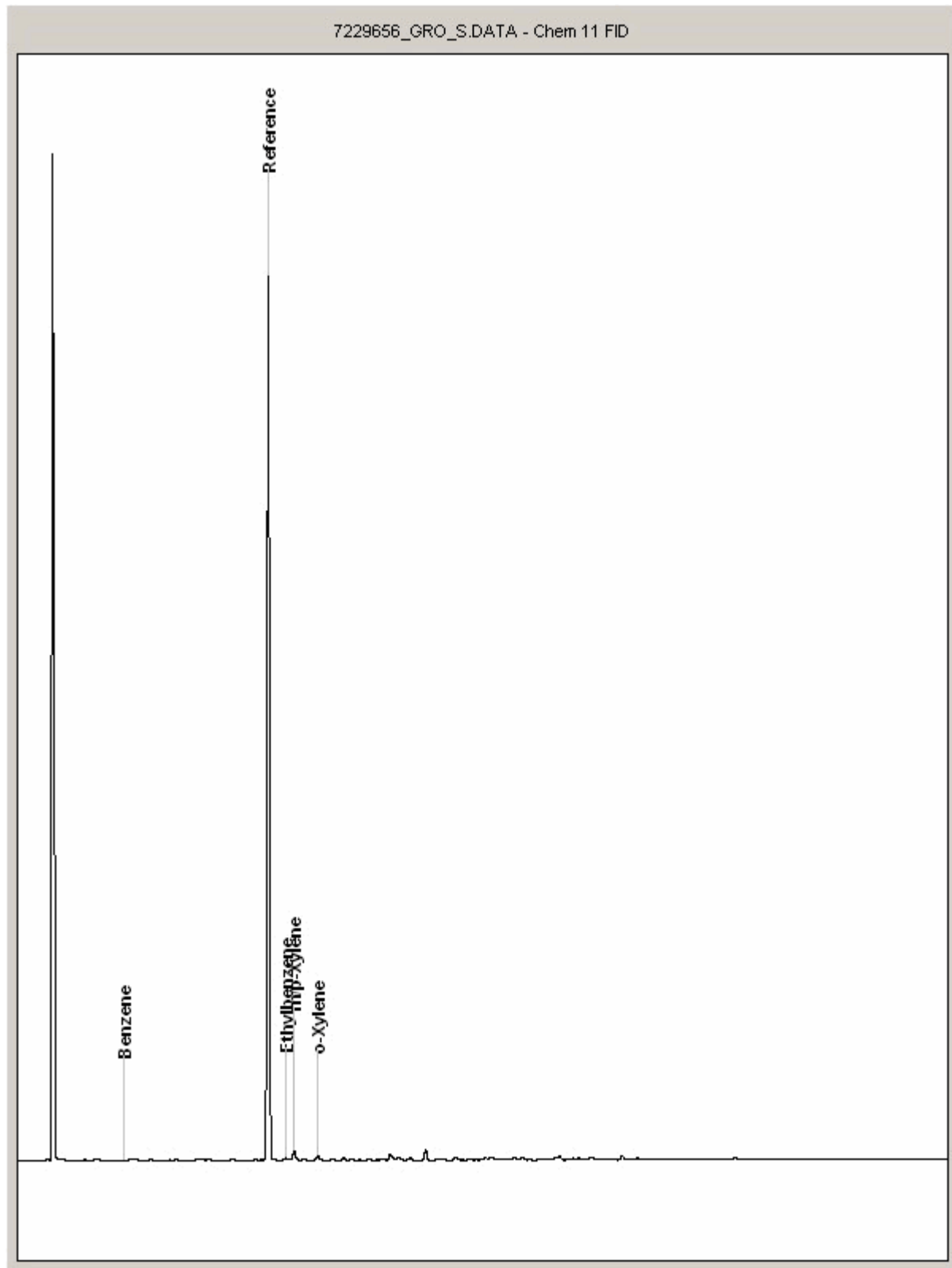
Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7229656
Sample ID : VA108

Depth : 6.70





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

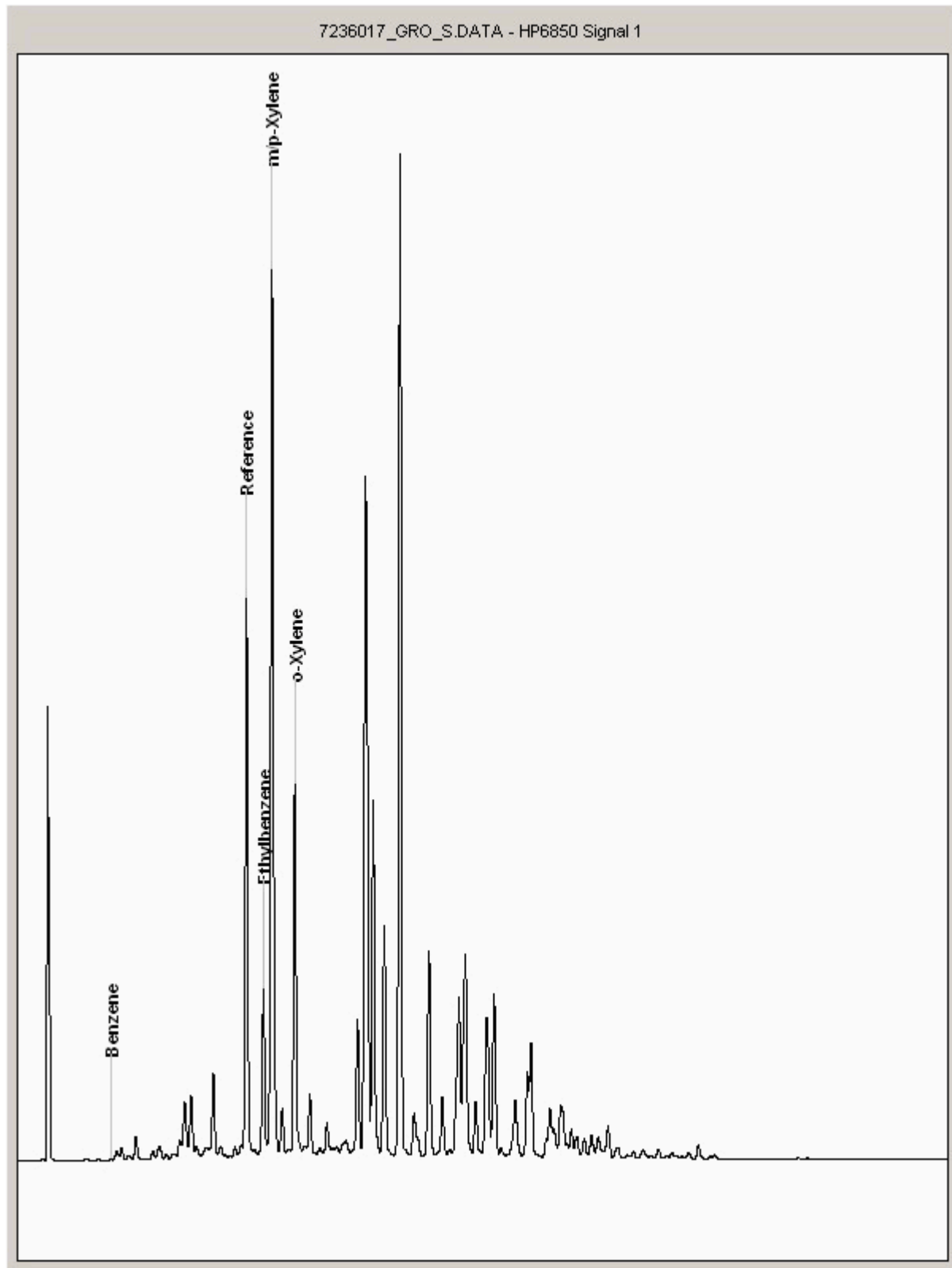
Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7236017
Sample ID : VA105

Depth : 6.50





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

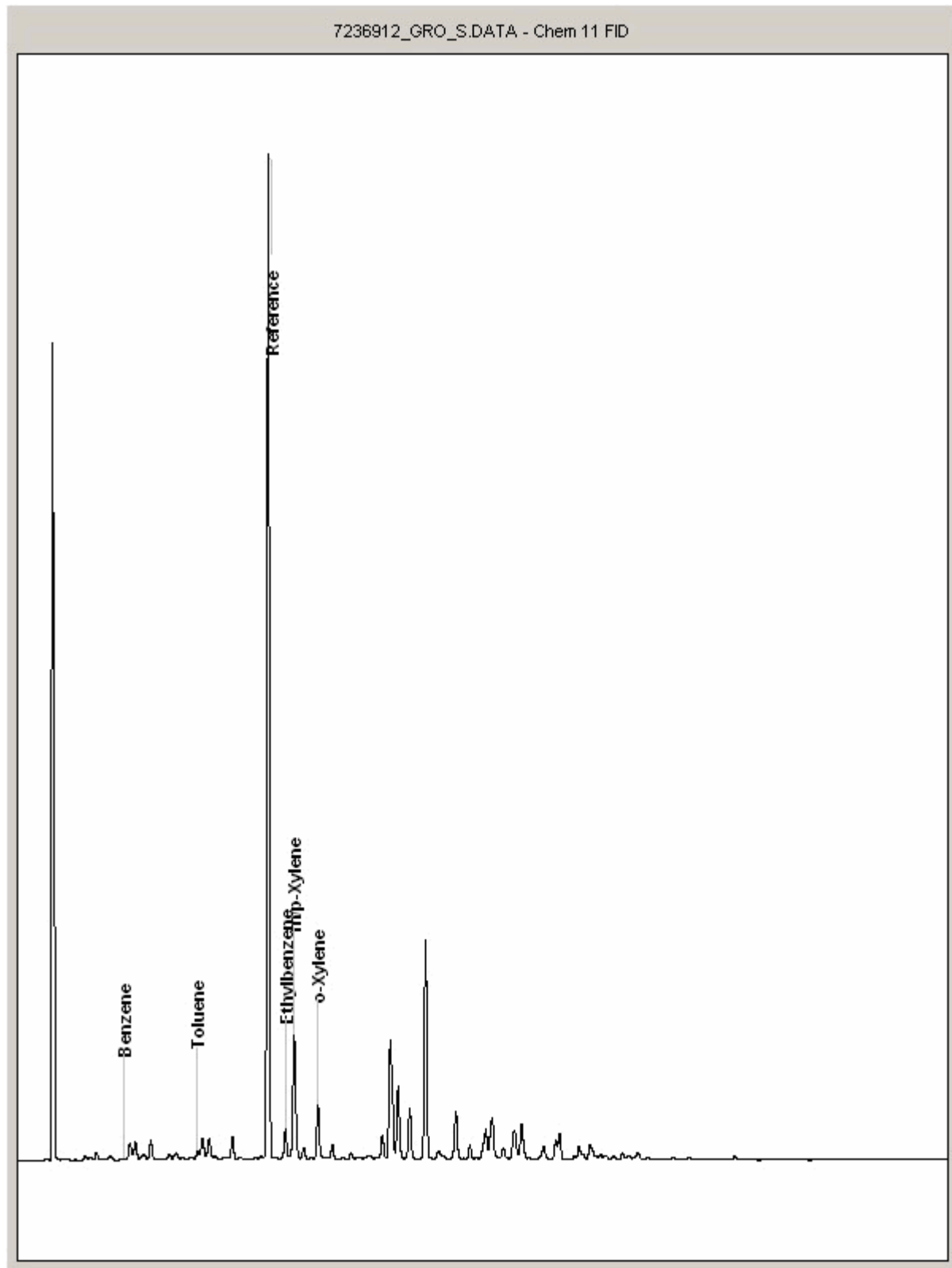
Order Number:
Report Number: 220987
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7236912
Sample ID : VA107

Depth : 6.80





SDG: 130411-64
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 220987
Superseded Report:

Appendix General

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

2. 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 2 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. ALcontrol Laboratories 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. 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 for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

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 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.

21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.

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.

Sample Deviations

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Holding time exceeded before sample received
§	Sampled on date not provided
+	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to sampled on date
&	Sample Holding Time exceeded - Late arrival of instructions.

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.



URS Corporation Limited
St. George's House
2nd Floor
5 St. George's Road
Wimbledon
Greater London
SW19 4DR

Attention: Jocelyn Willis

CERTIFICATE OF ANALYSIS

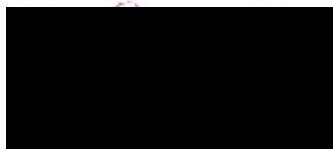
Date: 19 April 2013
Customer: H_URS_WIM
Sample Delivery Group (SDG): 130412-65
Your Reference: 46370079
Location: Hitchin
Report No: 221133

We received 9 samples on Friday April 12, 2013 and 9 of these samples were scheduled for analysis which was completed on Friday April 19, 2013. 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.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Sonia McWhan

Operations Manager





SDG:	130412-65	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	221133
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
7226591	VA115		6.50	10/04/2013
7226594	VA116		6.50	10/04/2013
7226600	VA117		6.50	10/04/2013
7226601	VA118		3.00	10/04/2013
7226602	VA119		6.50	11/04/2013
7226604	VA120		6.50	11/04/2013
7226605	VA121		3.50	11/04/2013
7226606	VA122		3.00	11/04/2013
7226607	VA123		2.50	11/04/2013

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

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Results Legend

X Test

N No Determination Possible

Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container											
					All	NDPs: 0 Tests: 9									
					All	NDPs: 0 Tests: 9									
					All	NDPs: 0 Tests: 9									
					All	NDPs: 0 Tests: 9									
					All	NDPs: 0 Tests: 8									
					All	NDPs: 0 Tests: 9									
					All	NDPs: 0 Tests: 5									
All	NDPs: 0 Tests: 9														



SDG:	130412-65	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	221133
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions	Inclusions 2
7226591	VA115	6.50	Light Brown	Sand	0.1 - 2 mm	Oil/Petroleum	None
7226594	VA116	6.50	Light Brown	Silt Loam	0.063 - 0.1 mm	Oil/Petroleum	None
7226600	VA117	6.50	Light Brown	Silt Loam	0.063 - 0.1 mm	Stones	None
7226601	VA118	3.00	Light Brown	Silt Loam	0.063 - 0.1 mm	None	None
7226602	VA119	6.50	Light Brown	Sand	0.1 - 2 mm	Stones	None
7226604	VA120	6.50	Light Brown	Silty Clay	0.063 - 0.1 mm	None	None
7226605	VA121	3.50	Light Brown	Silt Loam	0.063 - 0.1 mm	None	None
7226606	VA122	3.00	Red	Sand	0.1 - 2 mm	None	None
7226607	VA123	2.50	Red	Silt Loam	0.063 - 0.1 mm	None	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.

Order Number:
Report Number: 221133
Superseded Report:

14:26:25 19/04/2013

Order Number:
Report Number: 221133
Superseded Report:

14:26:25 19/04/2013

Order Number:
Report Number: 221133
Superseded Report:

Page 7 of 50

Order Number:
Report Number: 221133
Superseded Report:

Page 8 of 50

Order Number:
Report Number: 221133
Superseded Report:

Page 9 of 50

Order Number:
Report Number: 221133
Superseded Report:

Page 10 of 50

Order Number:
Report Number: 221133
Superseded Report:

Page 11 of 50



CERTIFICATE OF ANALYSIS

SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

GRO by GC-FID (S)

Results Legend		Customer Sample R	VA121	VA122	VA123				
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sampled Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	3.50 Soil/Solid 11/04/2013 12/04/2013 130412-65 7226605	3.00 Soil/Solid 11/04/2013 12/04/2013 130412-65 7226606	2.50 Soil/Solid 11/04/2013 12/04/2013 130412-65 7226607			
M	mCERTS accredited.								
aq	Aqueous / settled sample.								
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted test.								
**	% 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								
1-4&\$#@	Sample deviation (see appendix)								
Component	LOD/Units	Method							
GRO Surrogate % recovery**	%	TM089	144	141	134				
Aliphatics >C5-C6	<10 µg/kg	TM089	572	<10	<10				
Aliphatics >C6-C8	<10 µg/kg	TM089	2080	10.4	<10				
Aliphatics >C8-C10	<10 µg/kg	TM089	753	32.5	<10				
Aliphatics >C10-C12	<10 µg/kg	TM089	770	96.3	<10				
Aromatics >EC5-EC7	<10 µg/kg	TM089	31.5	<10	<10				
Aromatics >EC7-EC8	<10 µg/kg	TM089	169	<10	<10				
Aromatics >EC8-EC10	<10 µg/kg	TM089	721	24.4	<10				
Aromatics >EC10-EC12	<10 µg/kg	TM089	513	65	<10				

Order Number:
Report Number: 221133
Superseded Report:

Page 13 of 50

Order Number:
Report Number: 221133
Superseded Report:

Page 14 of 50

Order Number:
Report Number: 221133
Superseded Report:

Page 15 of 50



CERTIFICATE OF ANALYSIS

SDG:	130412-65	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	221133
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

VOC MS (S)

Results Legend		Customer Sample R	VA121	VA122	VA123			
#	ISO17025 accredited.							
M	mCERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% 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							
1-4&*\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
Toluene-d8**	%	TM116	104	108	106			
Methyl Tertiary Butyl Ether	<11 µg/kg	TM116	<11 M	<11 M	<11 M			
Benzene	<9 µg/kg	TM116	51.4 M	<9 M	<9 M			
Toluene	<5 µg/kg	TM116	66.4 M	7.16 M	9.93 M			
Ethylbenzene	<4 µg/kg	TM116	85.7 M	9.28 M	10.7 M			
p/m-Xylene	<14 µg/kg	TM116	78.6 #	<14 #	<14 #			
o-Xylene	<10 µg/kg	TM116	31.5 M	<10 M	<10 M			
Tert-amyl methyl ether	<15 µg/kg	TM116	<15	<15	<15			
					</			



SDG:	130412-65	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	221133
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample ¹	Surrogate Corrected
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds 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		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		
TM288		Determination of Oxygenates in Soils by Headspace/GC-MS		

¹ Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.



SDG:	130412-65	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	221133
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Test Completion Dates

Lab Sample No(s)	7226591	7226594	7226600	7226601	7226602	7226604	7226605	7226606	7226607
Customer Sample Ref.	VA115	VA116	VA117	VA118	VA119	VA120	VA121	VA122	VA123
AGS Ref.									
Depth	6.50	6.50	6.50	3.00	6.50	6.50	3.50	3.00	2.50
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
EPH CWG (Aliphatic) GC (S)	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	17-Apr-2013	17-Apr-2013	17-Apr-2013
EPH CWG (Aromatic) GC (S)	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	17-Apr-2013	17-Apr-2013	17-Apr-2013
GRO by GC-FID (S)	16-Apr-2013	16-Apr-2013	16-Apr-2013	16-Apr-2013	16-Apr-2013	16-Apr-2013	16-Apr-2013	16-Apr-2013	16-Apr-2013
Oxygenates (S)	19-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013
PAH by GCMS	16-Apr-2013	17-Apr-2013	16-Apr-2013	17-Apr-2013	15-Apr-2013		18-Apr-2013	17-Apr-2013	18-Apr-2013
Sample description	13-Apr-2013	13-Apr-2013	13-Apr-2013	13-Apr-2013	13-Apr-2013	13-Apr-2013	13-Apr-2013	13-Apr-2013	13-Apr-2013
Total Organic Carbon	17-Apr-2013		17-Apr-2013		17-Apr-2013		17-Apr-2013		17-Apr-2013
VOC MS (S)	17-Apr-2013	17-Apr-2013	16-Apr-2013	16-Apr-2013	16-Apr-2013	17-Apr-2013	16-Apr-2013	16-Apr-2013	16-Apr-2013



SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

ASSOCIATED AQC DATA

EPH CWG (Aliphatic) GC (S)

Component	Method Code	QC 76	QC 77
Total Aliphatics >C12-C35	TM173	100.83 73.54 : 110.66	90.42 72.36 : 109.88

EPH CWG (Aromatic) GC (S)

Component	Method Code	QC 76	QC 77
Total Aromatics >EC12-EC35	TM173	104.0 78.23 : 114.94	94.67 79.85 : 121.16

GRO by GC-FID (S)

Component	Method Code	QC 77	QC 72
Benzene by GC (Moisture Corrected)	TM089	100.5 80.02 : 117.27	95.5 80.15 : 118.91
Ethylbenzene by GC (Moisture Corrected)	TM089	101.5 84.04 : 116.69	96.5 79.83 : 118.16
m & p Xylene by GC (Moisture Corrected)	TM089	101.75 84.58 : 114.27	97.0 78.35 : 120.05
MTBE GC-FID (Moisture Corrected)	TM089	100.0 79.00 : 121.00	97.0 80.54 : 120.94
o Xylene by GC (Moisture Corrected)	TM089	99.5 84.97 : 115.07	96.0 80.90 : 117.77
QC	TM089	105.48 83.21 : 120.45	104.47 85.99 : 125.08
Toluene by GC (Moisture Corrected)	TM089	101.5 84.65 : 117.24	96.5 81.82 : 117.25

Oxygenates (S)

Component	Method Code	QC 75	QC 78	QC 76
Benzene raw	TM288	102.5 77.94 : 128.84	92.0 77.94 : 128.84	93.25 77.94 : 128.84
Diisopropyl ether raw	TM288	96.0 78.68 : 128.65	92.75 78.68 : 128.65	97.5 78.68 : 128.65
Ethanol raw	TM288	126.0 56.39 : 148.67	61.5 56.39 : 148.67	115.0 56.39 : 148.67
Ethylbenzene raw	TM288	92.5 78.18 : 122.27	89.75 78.18 : 122.27	107.5 78.18 : 122.27
o-Xylene raw	TM288	94.75 78.38 : 109.16	85.0 78.38 : 109.16	90.25 78.38 : 109.16
p/m-Xylene raw	TM288	97.63 80.22 : 110.48	90.88 80.22 : 110.48	108.0 80.22 : 110.48
tert Butanol raw	TM288	125.5 62.51 : 145.03	67.5 62.51 : 145.03	105.5 62.51 : 145.03
tert-amyl methyl ether raw	TM288	100.25 71.22 : 127.95	91.25 71.22 : 127.95	91.0 71.22 : 127.95



CERTIFICATE OF ANALYSIS

SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

Oxygenates (S)

		QC 75	QC 78	QC 76
tert-butyl ethyl ether raw	TM288	96.5 64.00 : 136.00	92.5 64.00 : 136.00	96.0 64.00 : 136.00
tert-butyl methyl ether raw	TM288	100.25 83.50 : 129.91	91.75 83.50 : 129.91	99.75 83.50 : 129.91
Toluene raw	TM288	96.25 75.97 : 110.53	85.5 75.97 : 110.53	82.5 75.97 : 110.53

PAH by GCMS

Component	Method Code	QC 73	QC 78	QC 77
Acenaphthene	TM218	98.5 83.80 : 121.00	91.0 85.41 : 112.62	91.0 78.75 : 116.25
Acenaphthylene	TM218	89.0 72.38 : 111.60	83.0 75.00 : 105.00	83.0 76.52 : 106.41
Anthracene	TM218	91.5 79.70 : 113.00	84.0 77.86 : 109.85	84.0 83.05 : 105.46
Benz(a)anthracene	TM218	92.5 82.86 : 122.05	94.0 78.00 : 115.50	94.0 82.29 : 116.68
Benzo(a)pyrene	TM218	92.0 82.40 : 123.80	95.5 78.00 : 114.00	95.5 79.35 : 121.65
Benzo(b)fluoranthene	TM218	96.0 77.82 : 128.87	94.0 79.35 : 115.65	94.0 83.08 : 116.21
Benzo(ghi)perylene	TM218	92.5 81.67 : 122.61	88.5 73.75 : 111.25	88.5 77.55 : 116.77
Benzo(k)fluoranthene	TM218	92.5 81.20 : 118.10	91.5 77.00 : 113.00	91.5 82.18 : 115.45
Chrysene	TM218	94.5 80.60 : 117.80	89.0 83.80 : 113.87	89.0 81.22 : 115.83
Dibenzo(ah)anthracene	TM218	93.0 77.93 : 124.42	88.5 81.47 : 118.85	88.5 78.23 : 120.68
Fluoranthene	TM218	95.0 82.25 : 115.25	88.5 85.51 : 112.48	88.5 80.71 : 115.30
Fluorene	TM218	95.0 80.60 : 118.10	88.5 82.83 : 113.52	88.5 79.10 : 112.21
Indeno(123cd)pyrene	TM218	93.0 83.07 : 119.48	90.0 80.25 : 114.75	90.0 78.53 : 122.18
Naphthalene	TM218	97.5 85.84 : 110.01	90.5 79.59 : 115.14	90.5 76.02 : 116.24
Phenanthrene	TM218	96.0 81.45 : 121.95	89.0 83.98 : 112.67	89.0 80.81 : 114.47
Pyrene	TM218	94.5 75.20 : 108.20	87.0 84.64 : 111.39	87.0 81.24 : 114.02

Total Organic Carbon

Component	Method Code	QC 77	QC 77
Total Organic Carbon	TM132	99.54 86.66 : 109.87	99.54 86.66 : 109.87

VOC MS (S)



CERTIFICATE OF ANALYSIS

SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

VOC MS (S)

Component	Method Code	QC 70	QC 72	QC 77
1,1,1,2-tetrachloroethane	TM116	100.8 77.50 : 124.09	100.4 77.50 : 124.09	93.6 86.16 : 121.72
1,1,1-Trichloroethane	TM116	104.2 86.36 : 114.14	106.4 86.36 : 114.14	94.6 85.09 : 125.10
1,1,2-Trichloroethane	TM116	111.6 93.86 : 131.61	110.2 93.86 : 131.61	106.0 98.00 : 135.46
1,1-Dichloroethane	TM116	106.0 83.96 : 125.03	109.0 83.96 : 125.03	100.6 85.89 : 132.78
1,2-Dichloroethane	TM116	104.0 88.93 : 122.77	102.8 88.93 : 122.77	104.4 82.61 : 140.85
1,4-Dichlorobenzene	TM116	106.2 89.32 : 117.26	101.4 89.32 : 117.26	95.0 86.85 : 121.85
2-Chlorotoluene	TM116	135.2 93.47 : 156.27	132.6 93.47 : 156.27	118.6 89.30 : 154.24
4-Chlorotoluene	TM116	130.4 92.38 : 149.49	129.8 92.38 : 149.49	113.4 89.25 : 148.67
Benzene	TM116	99.6 86.95 : 110.62	99.6 86.95 : 110.62	96.6 90.00 : 123.49
Carbon Disulphide	TM116	98.2 76.98 : 118.83	93.6 76.98 : 118.83	92.4 70.58 : 125.46
Carbontetrachloride	TM116	107.4 71.94 : 132.65	104.6 71.94 : 132.65	101.0 85.17 : 120.25
Chlorobenzene	TM116	103.0 78.33 : 118.74	101.8 78.33 : 118.74	98.4 89.06 : 121.18
Chloroform	TM116	104.4 69.66 : 148.03	103.8 69.66 : 148.03	99.6 87.09 : 129.96
Chloromethane	TM116	120.8 49.71 : 146.30	154.2 49.71 : 146.30	82.8 45.90 : 176.07
Cis-1,2-Dichloroethene	TM116	94.0 87.09 : 113.71	96.8 87.09 : 113.71	93.6 83.06 : 120.53
Dibromomethane	TM116	93.4 65.13 : 138.40	92.4 65.13 : 138.40	97.0 79.31 : 116.60
Dichloromethane	TM116	105.8 70.67 : 150.15	104.2 70.67 : 150.15	102.6 85.23 : 135.44
Ethylbenzene	TM116	98.4 84.09 : 110.87	97.4 84.09 : 110.87	95.0 86.48 : 124.49
Hexachlorobutadiene	TM116	152.6 62.74 : 176.60	120.8 62.74 : 176.60	143.6 49.32 : 166.67
Isopropylbenzene	TM116	89.8 75.72 : 100.29	81.0 75.72 : 100.29	85.0 78.55 : 110.79
Naphthalene	TM116	108.4 80.72 : 132.86	106.6 80.72 : 132.86	96.2 83.77 : 127.25
o-Xylene	TM116	95.0 76.04 : 111.23	93.6 76.04 : 111.23	90.8 81.14 : 117.94
p/m-Xylene	TM116	99.9 79.03 : 115.32	96.4 79.03 : 115.32	92.7 87.70 : 116.30
Sec-Butylbenzene	TM116	100.4 73.42 : 125.99	82.6 73.42 : 125.99	90.8 65.03 : 126.69
Tetrachloroethene	TM116	111.6 87.31 : 123.54	109.4 87.31 : 123.54	106.4 78.08 : 139.93
Toluene	TM116	94.8 83.48 : 106.73	94.8 83.48 : 106.73	90.0 81.89 : 118.84



SDG:	130412-65	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	221133
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

VOC MS (S)

		QC 70	QC 72	QC 77
Trichloroethene	TM116	100.2 86.48 : 110.46	99.4 86.48 : 110.46	95.8 88.19 : 119.96
Trichlorofluoromethane	TM116	107.2 82.57 : 120.95	107.8 82.57 : 120.95	106.4 86.00 : 127.38
Vinyl Chloride	TM116	119.4 62.58 : 154.52	119.4 62.58 : 154.52	129.8 92.90 : 132.77

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

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

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



SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

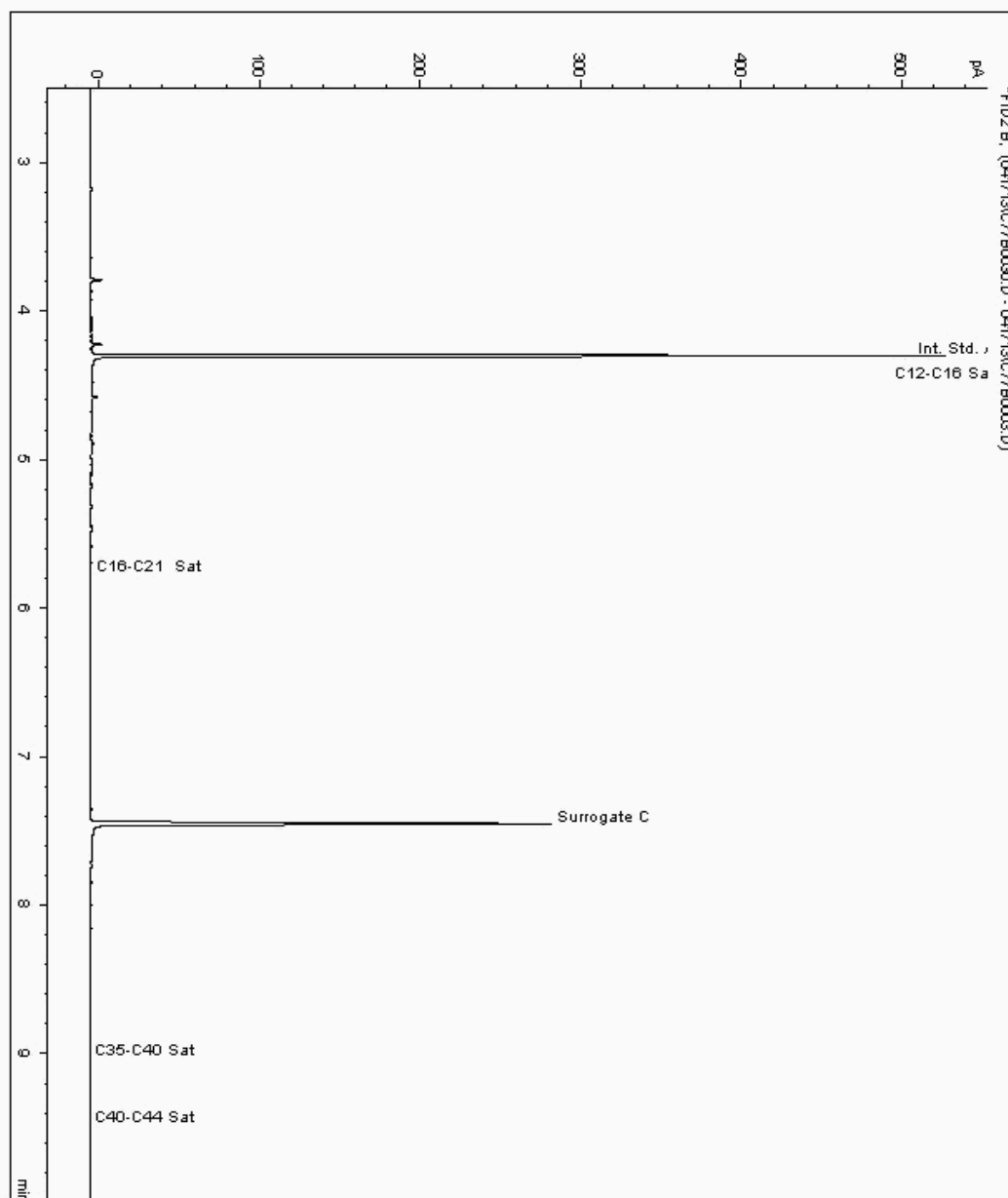
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7239927
Sample ID : VA118

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6947424-7239927
Date Acquired : 17/04/2013 18:04:03 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.004





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

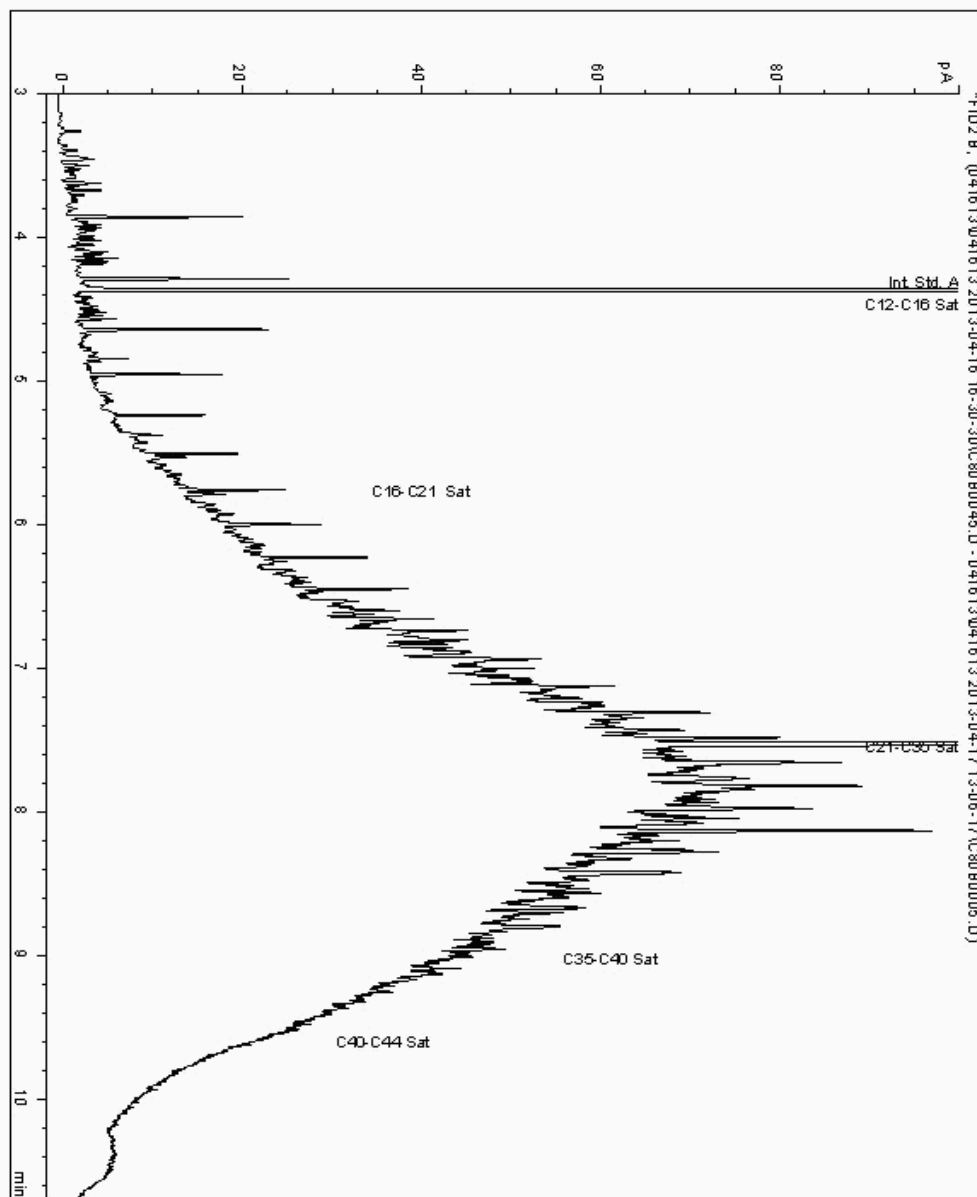
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7239933
Sample ID : VA115

Depth : 6.50

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6947299-7239933
Date Acquired : 17/04/13 05:55:28
Units : ppb
Dilution :
CF : 1
Multiplier : 0.967





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

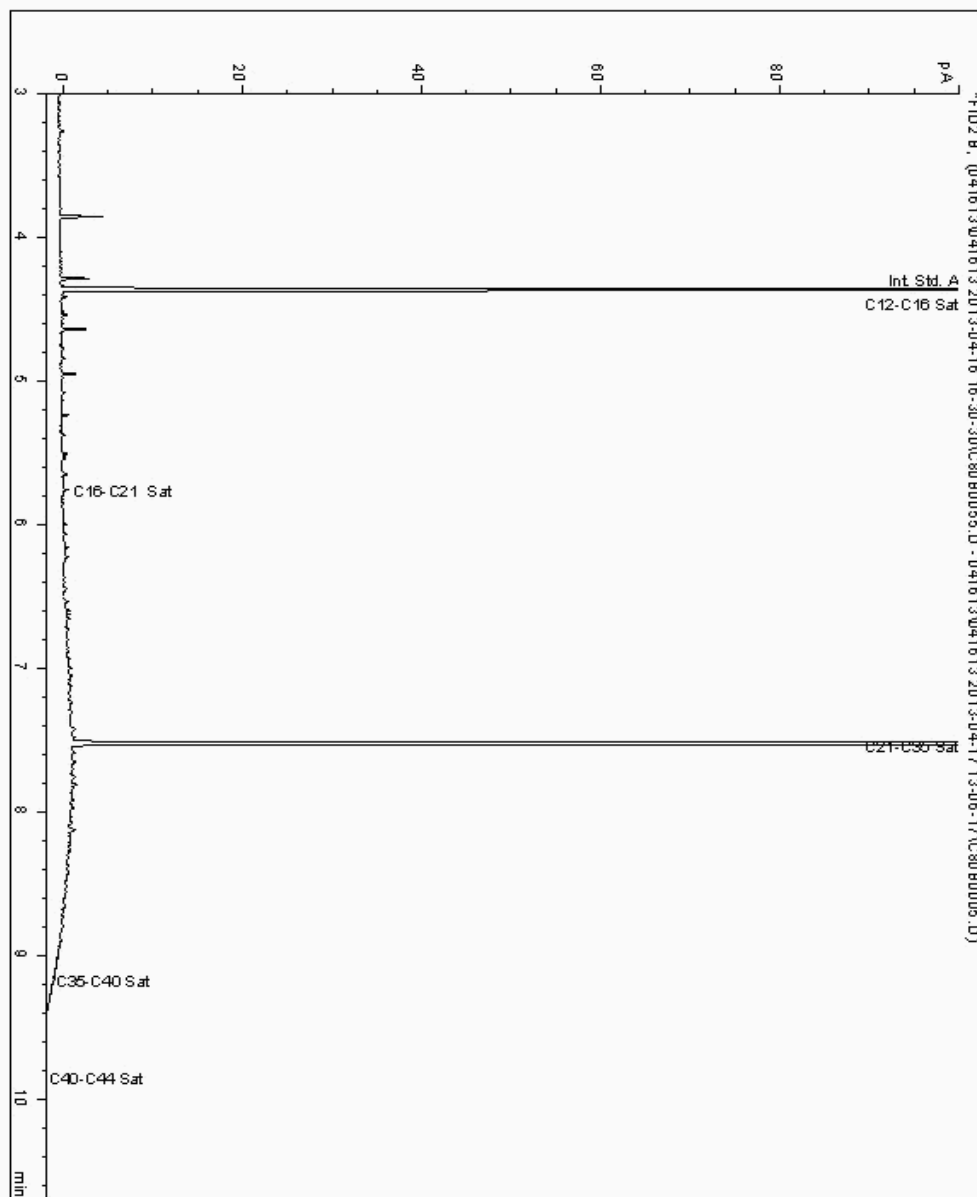
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7239958
Sample ID : VA116

Depth : 6.50

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6947360-7239958
Date Acquired : 17/04/13 09:19:52
Units : ppb
Dilution :
CF : 1
Multiplier : 1.028





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

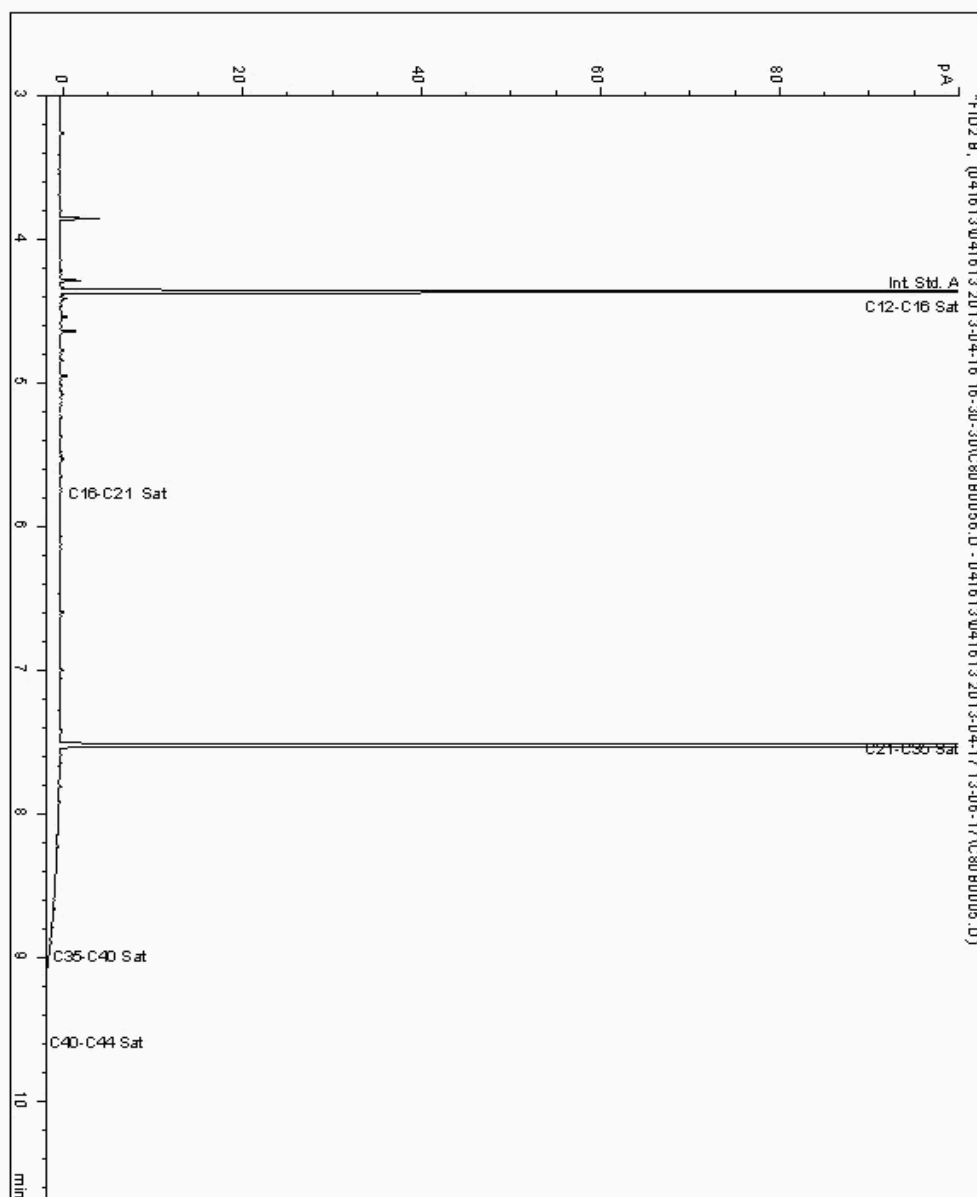
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7239964
Sample ID : VA117

Depth : 6.50

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6947395-7239964
Date Acquired : 17/04/13 09:40:15
Units : ppb
Dilution :
CF : 1
Multiplier : 0.993





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

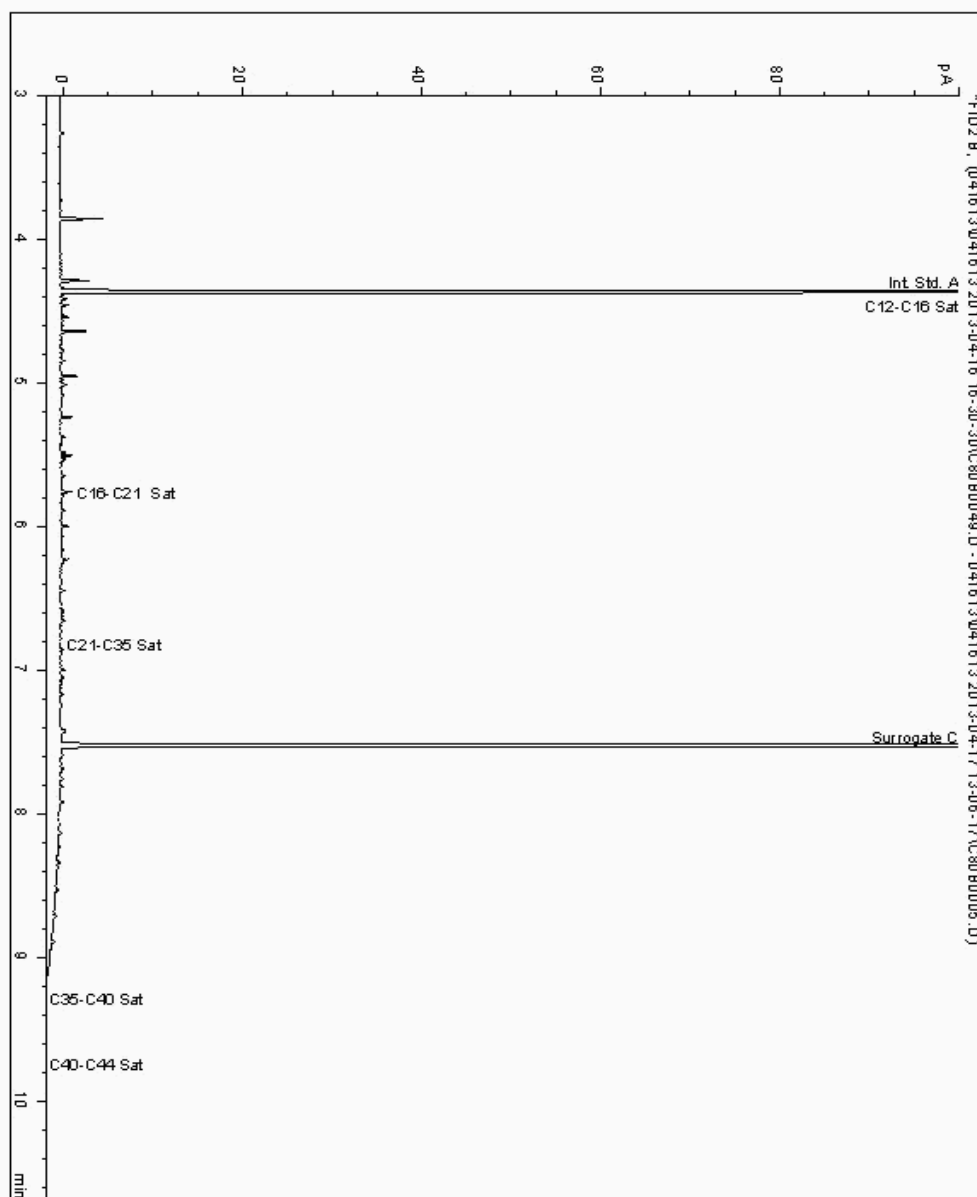
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7239983
Sample ID : VA119

Depth : 6.50

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6947434-7239983
Date Acquired : 17/04/13 07:17:10
Units : ppb
Dilution :
CF : 1
Multiplier : 0.995





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

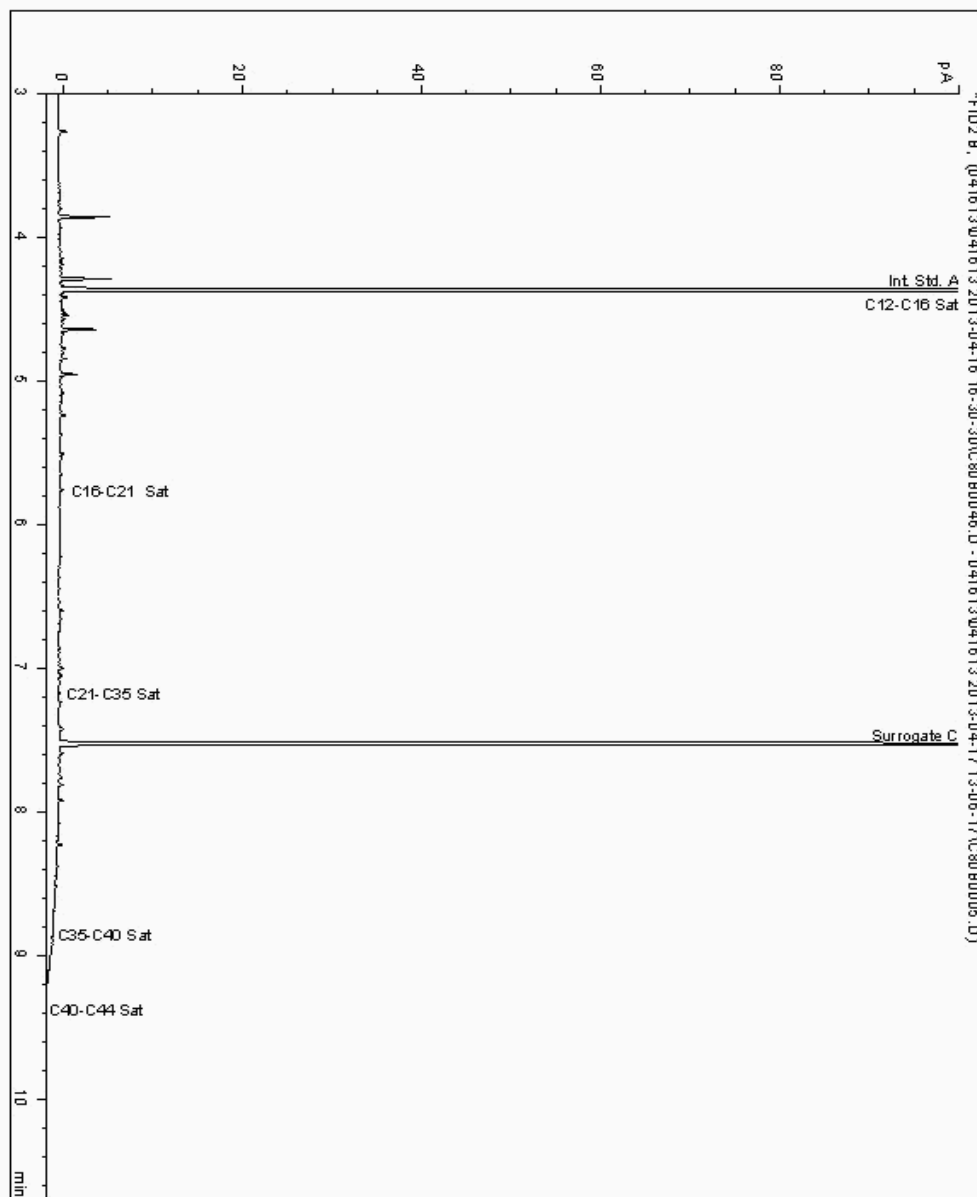
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7240003
Sample ID : VA120

Depth : 6.50

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6947466-7240003
Date Acquired : 17/04/13 06:16:02
Units : ppb
Dilution :
CF : 1
Multiplier : 1.044





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

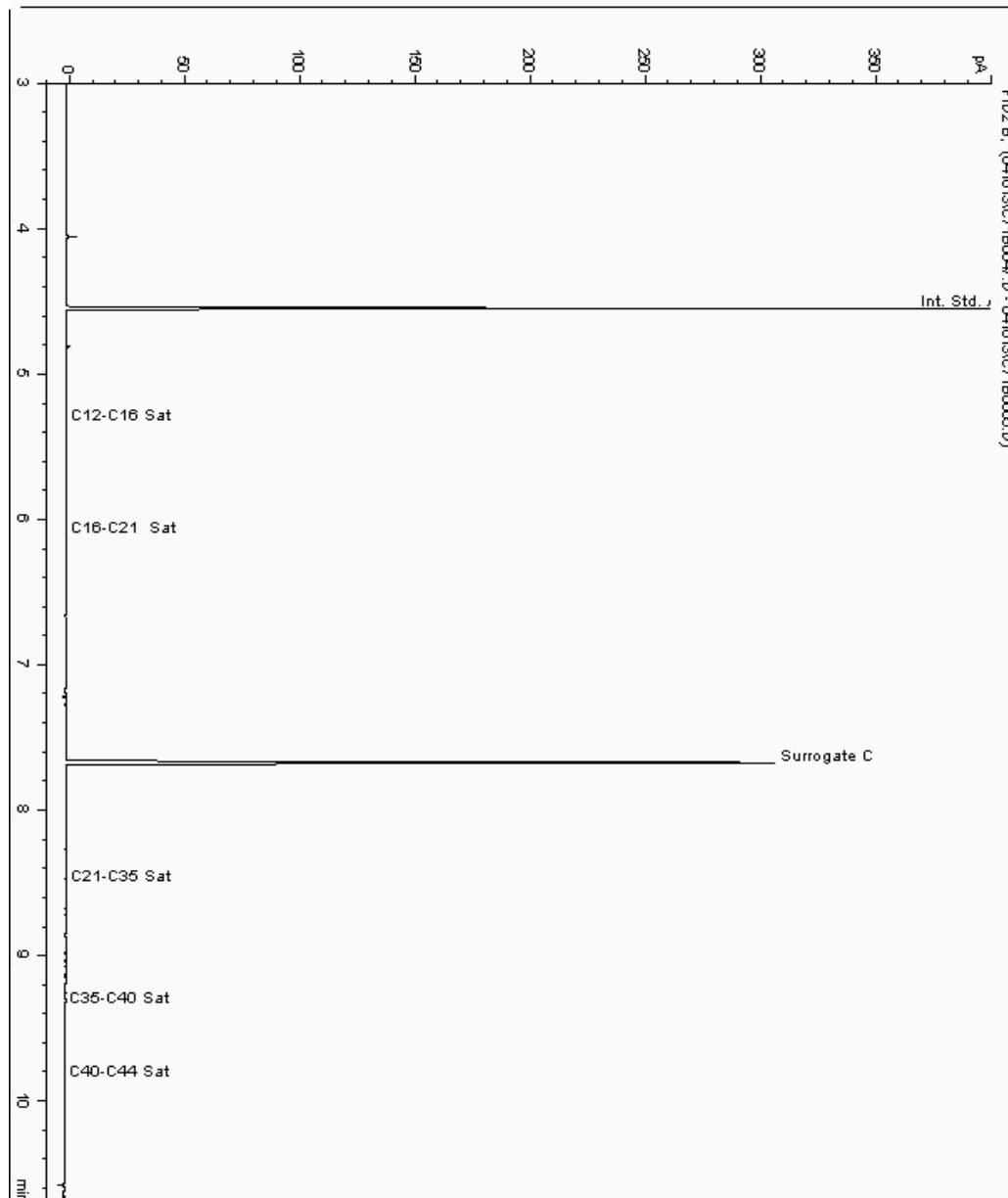
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7243925
Sample ID : VA122

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6947573-7243925
Date Acquired : 17/04/2013 03:07:51 PM
Units : ppb
Dilution:





CERTIFICATE OF ANALYSIS

SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

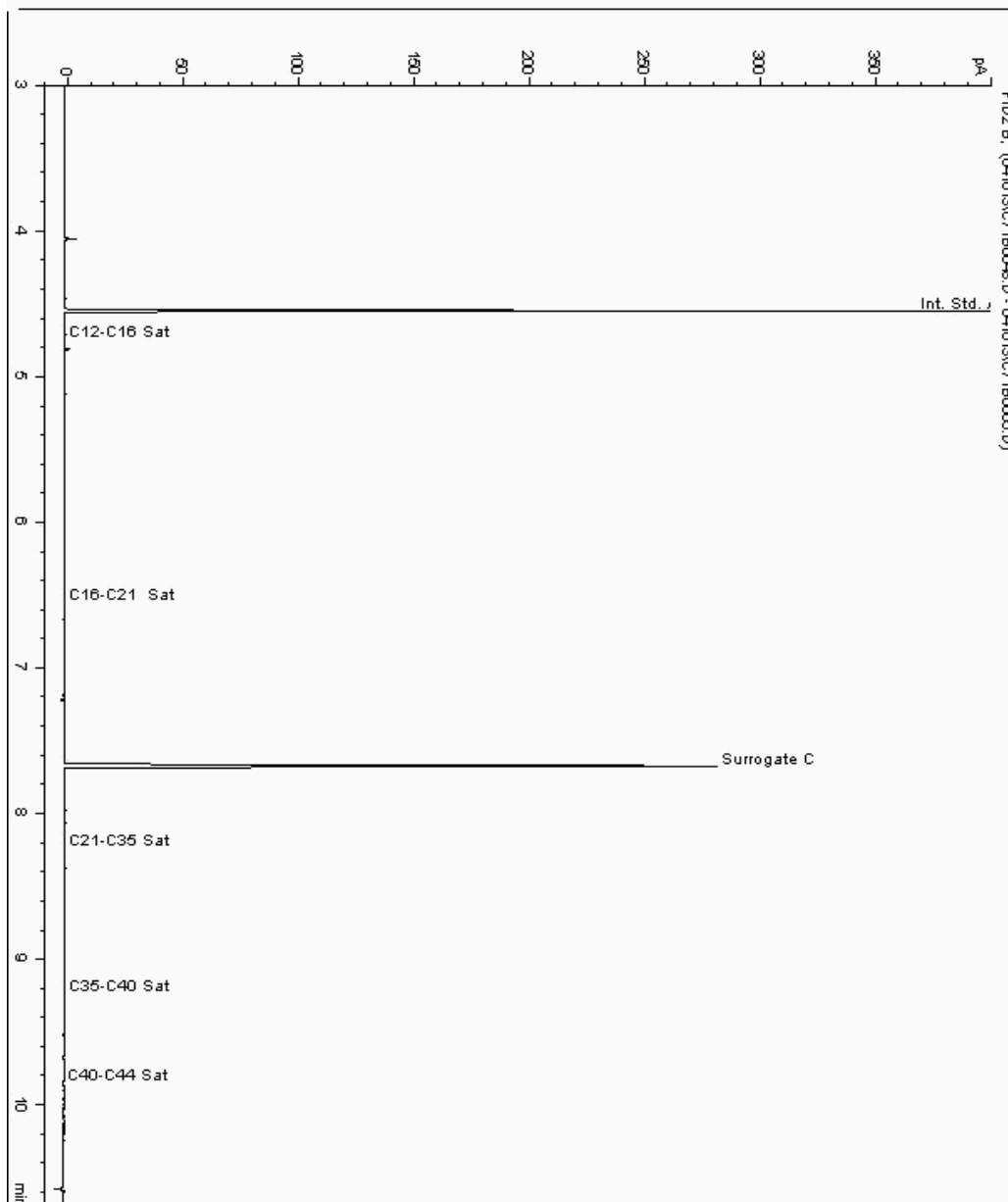
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7243939
Sample ID : VA121

Depth : 3.50

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6947510-7243939
Date Acquired : 17/04/2013 03:28:43 PM
Units : ppb
Dilution:





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

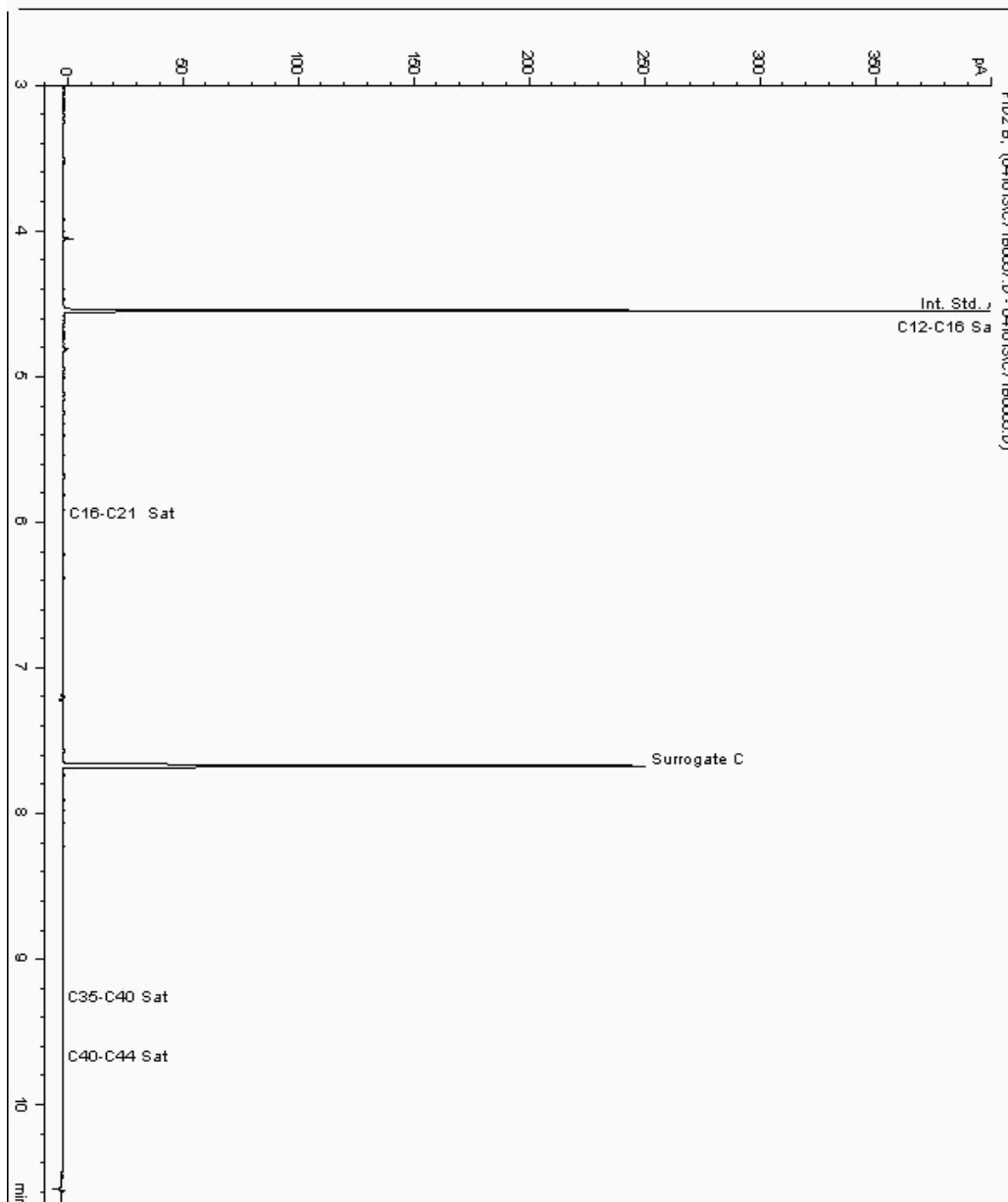
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7244127
Sample ID : VA123

Depth : 2.50

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6947611-7244127
Date Acquired : 17/04/2013 06:34:06 PM
Units : ppb
Dilution:





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

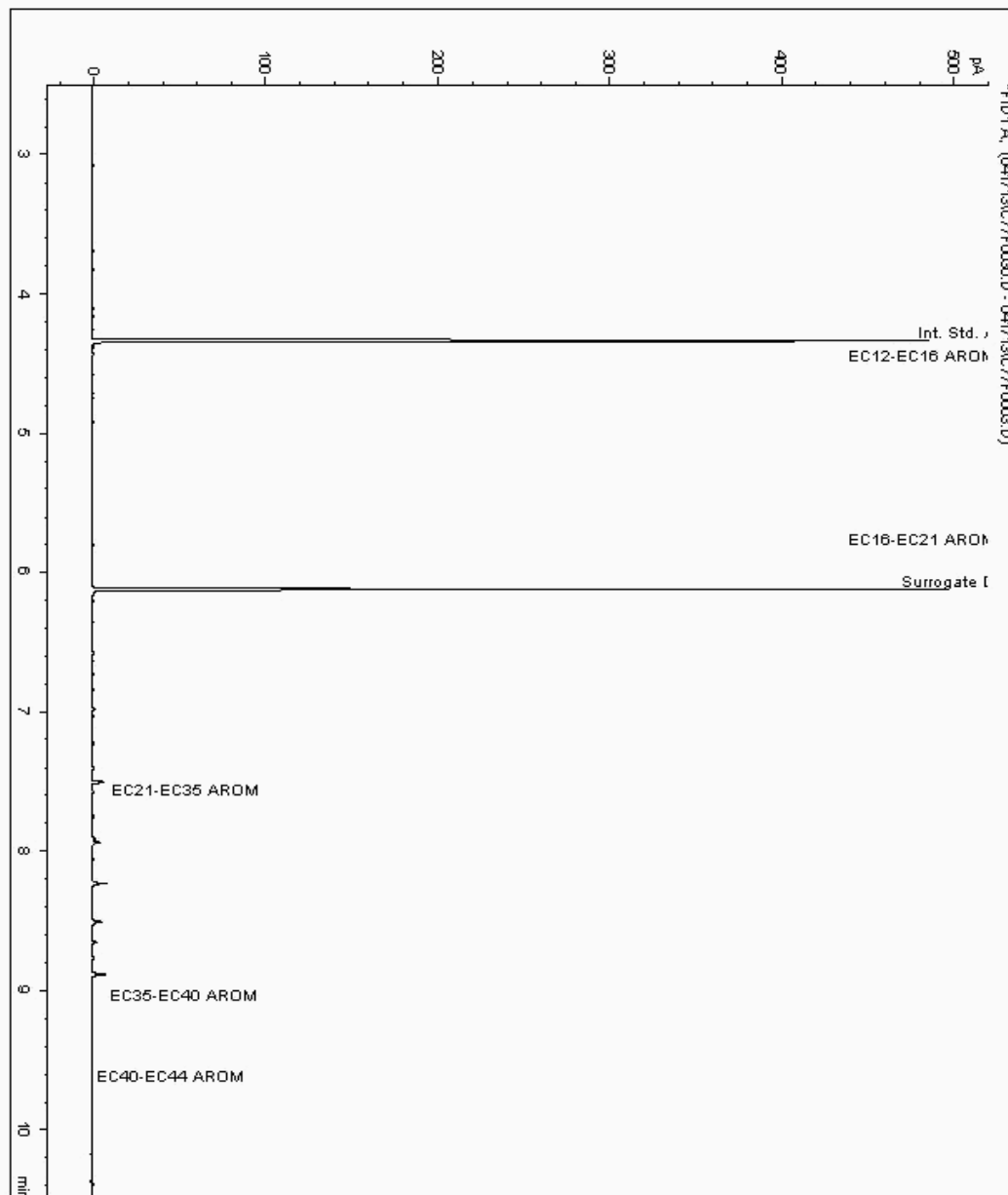
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7239927
Sample ID : VA118

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6947425-7239927
Date Acquired : 17/04/2013 18:04:03 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.004





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

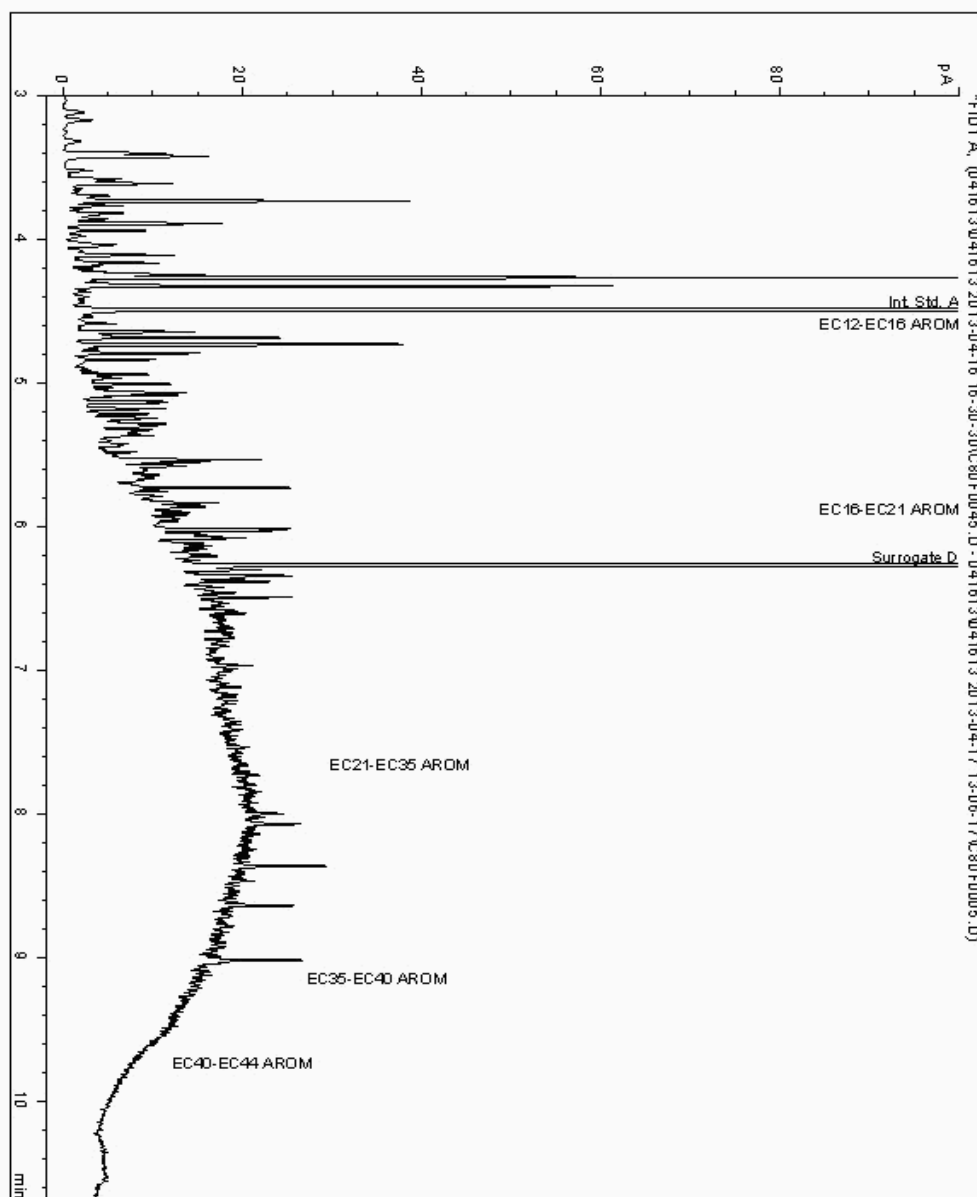
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7239933
Sample ID : VA115

Depth : 6.50

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6947300-7239933
Date Acquired : 17/04/13 05:55:28
Units : ppb
Dilution :
CF : 1
Multiplier : 0.967





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

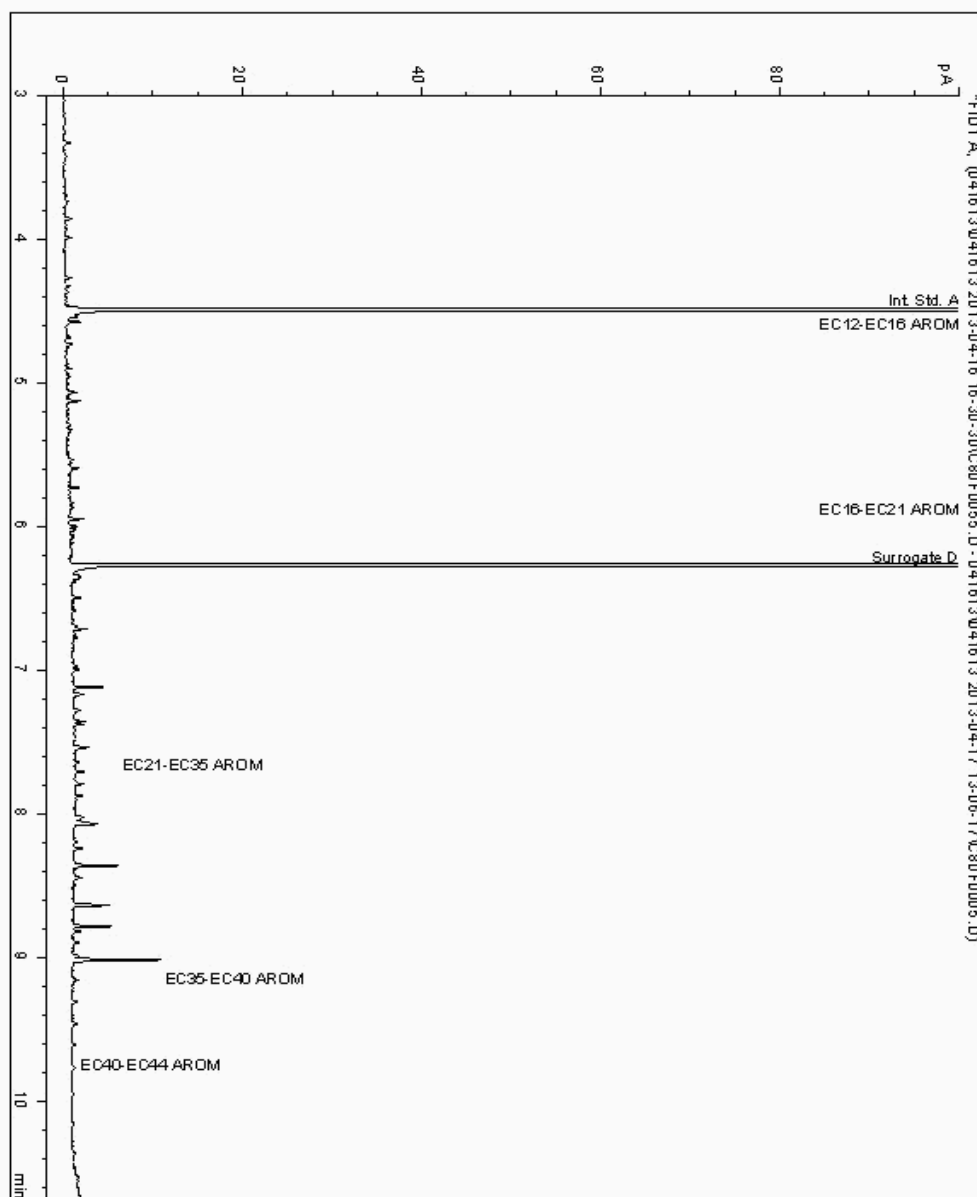
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7239958
Sample ID : VA116

Depth : 6.50

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6947361-7239958
Date Acquired : 17/04/13 09:19:52
Units : ppb
Dilution :
CF : 1
Multiplier : 1.028





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

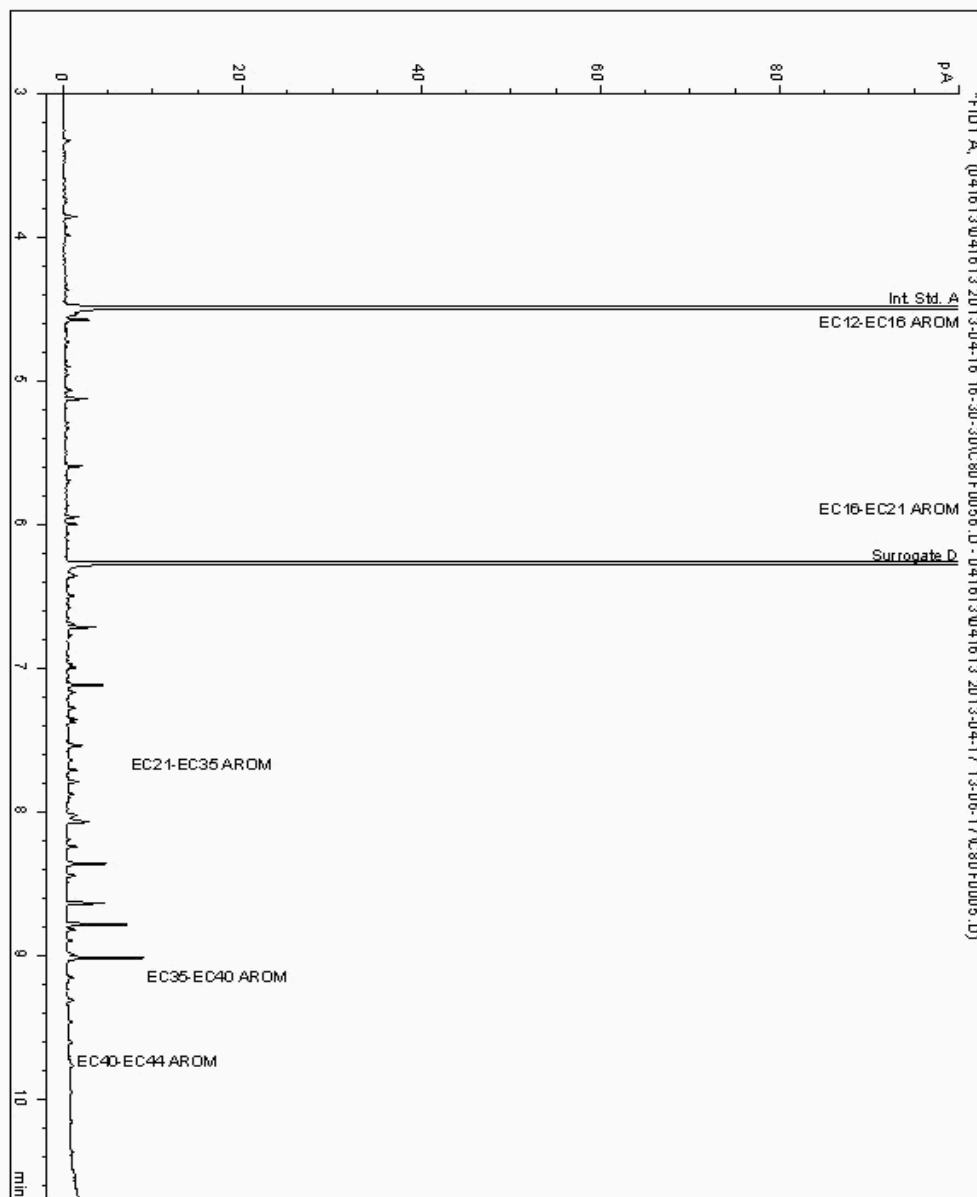
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7239964
Sample ID : VA117

Depth : 6.50

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6947396-7239964
Date Acquired : 17/04/13 09:40:15
Units : ppb
Dilution :
CF : 1
Multiplier : 0.993





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

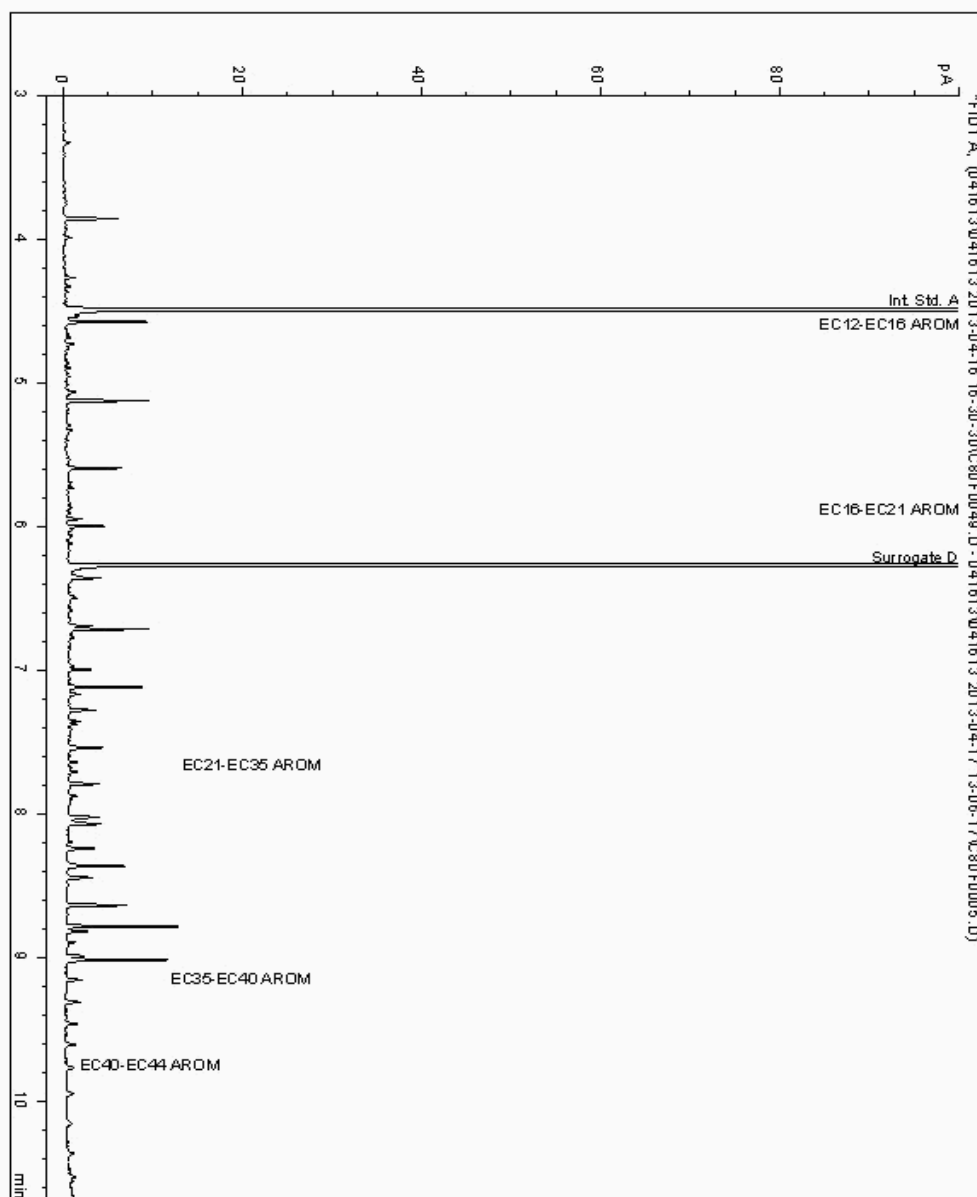
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7239983
Sample ID : VA119

Depth : 6.50

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6947435-7239983
Date Acquired : 17/04/13 07:17:10
Units : ppb
Dilution :
CF : 1
Multiplier : 0.995





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

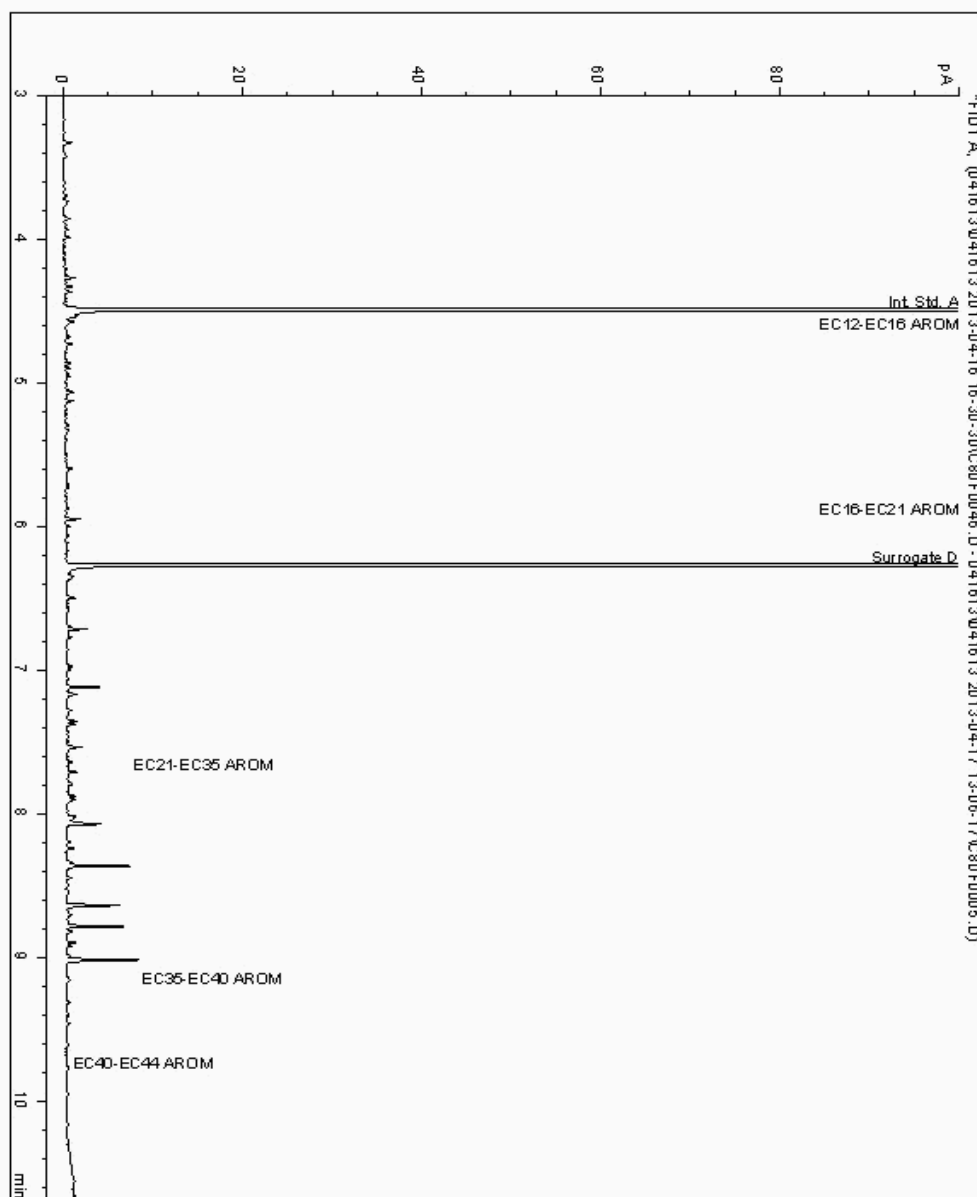
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7240003
Sample ID : VA120

Depth : 6.50

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6947467-7240003
Date Acquired : 17/04/13 06:16:02
Units : ppb
Dilution :
CF : 1
Multiplier : 1.044





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

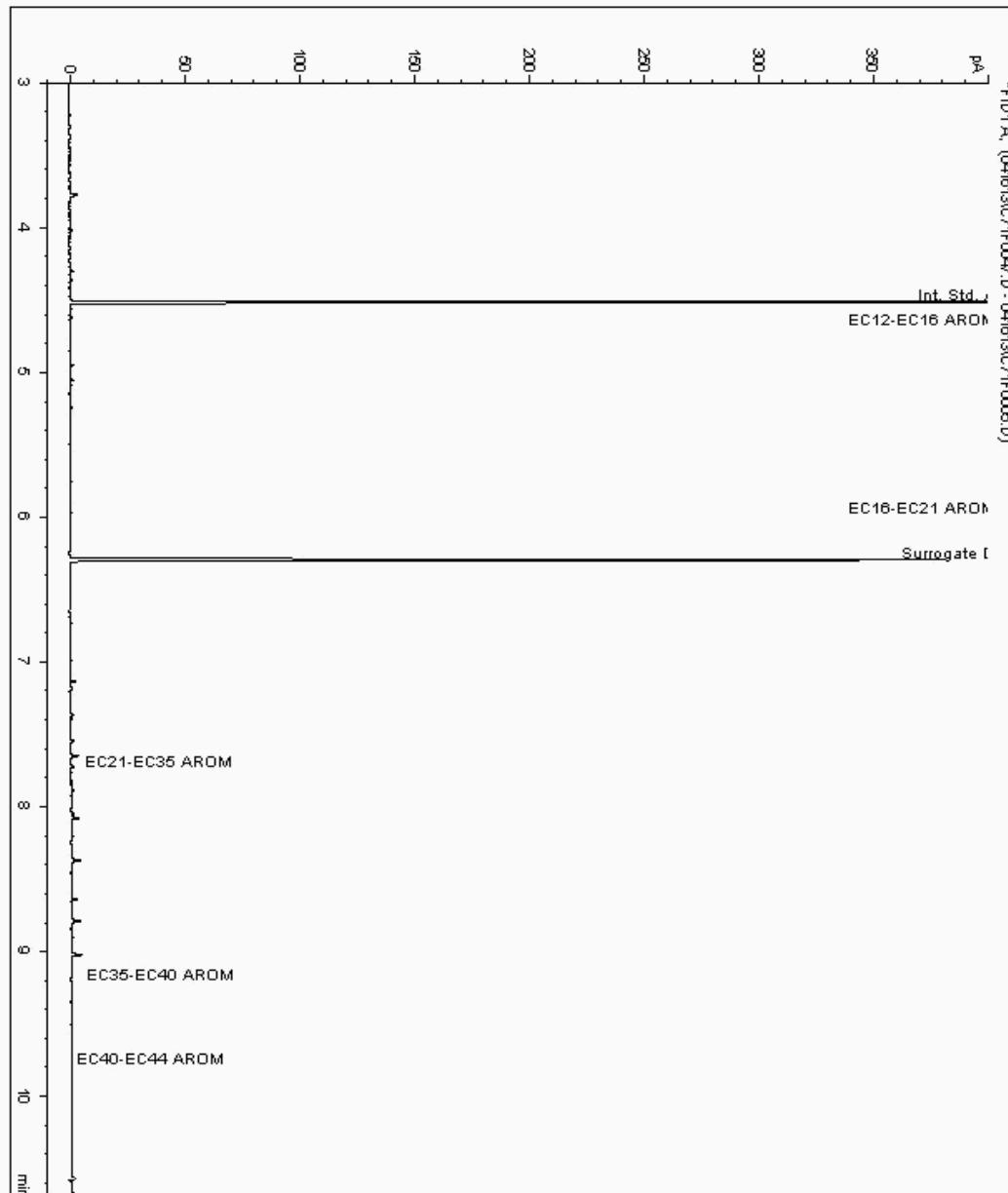
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7243925
Sample ID : VA122

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6947574-7243925
Date Acquired : 17/04/2013 03:07:51 PM
Units : ppb
Dilution:





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

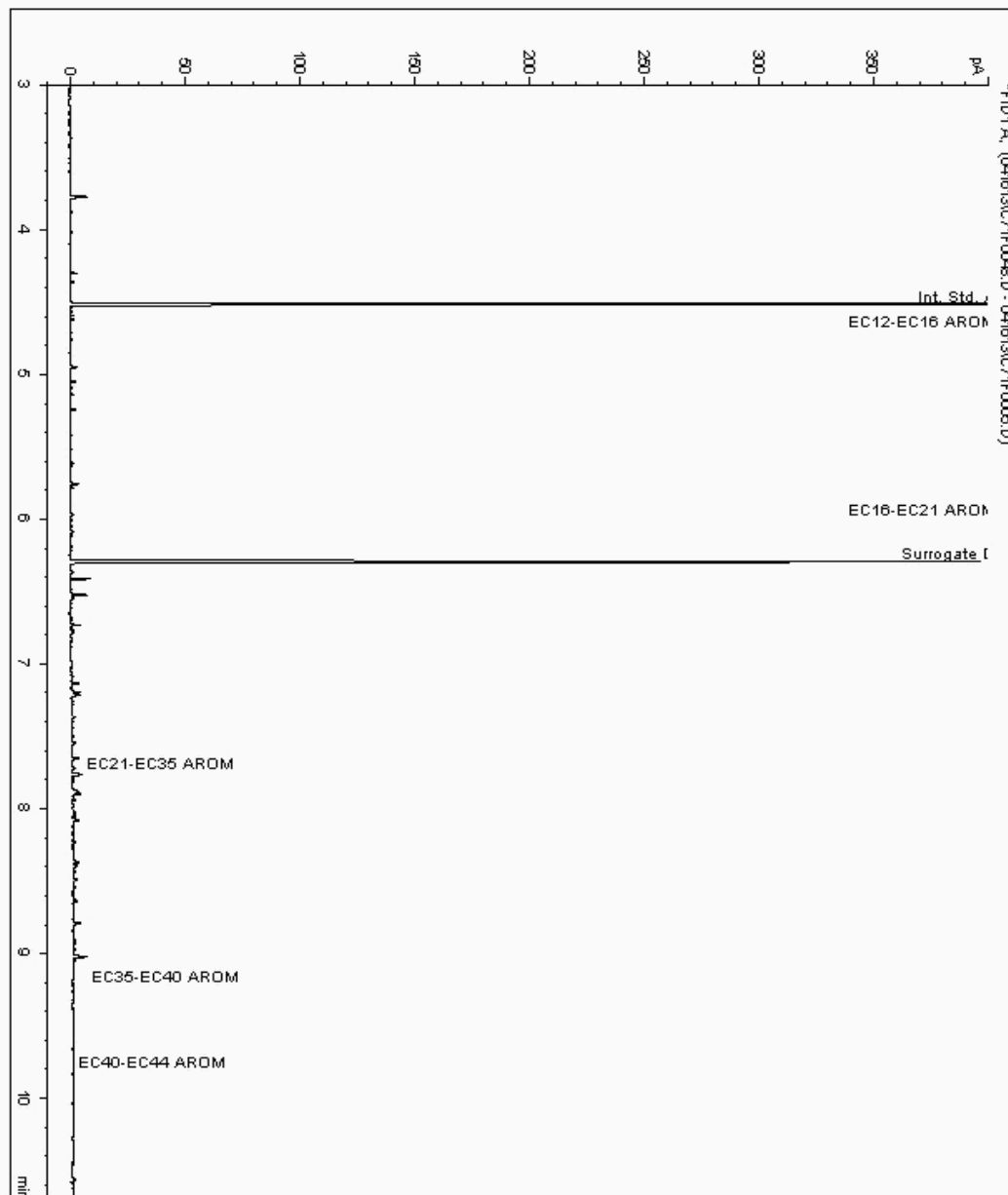
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7243939
Sample ID : VA121

Depth : 3.50

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6947511-7243939
Date Acquired : 17/04/2013 03:28:43 PM
Units : ppb
Dilution:





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

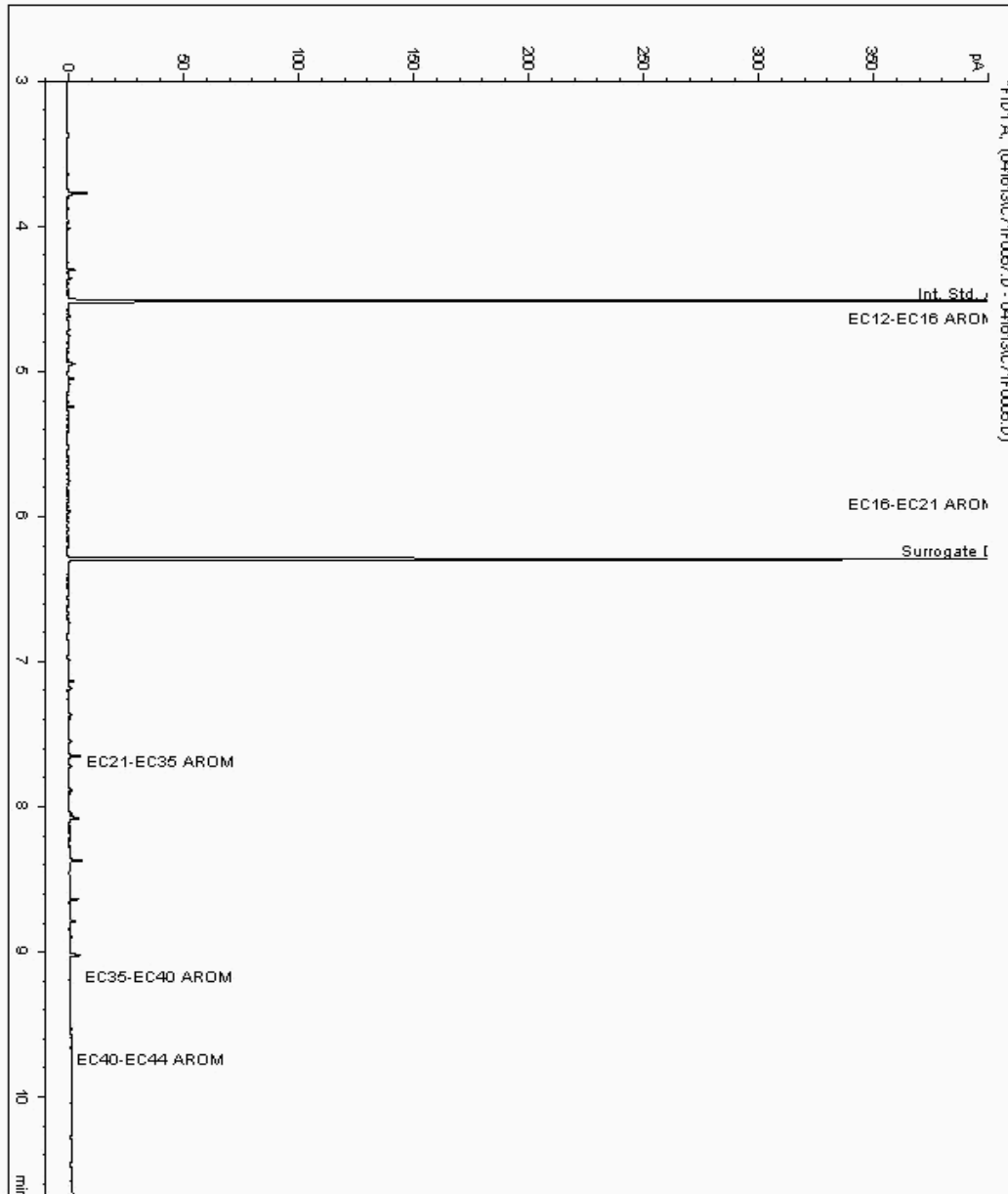
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7244127
Sample ID : VA123

Depth : 2.50

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6947612-7244127
Date Acquired : 17/04/2013 06:34:07 PM
Units : ppb
Dilution:





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

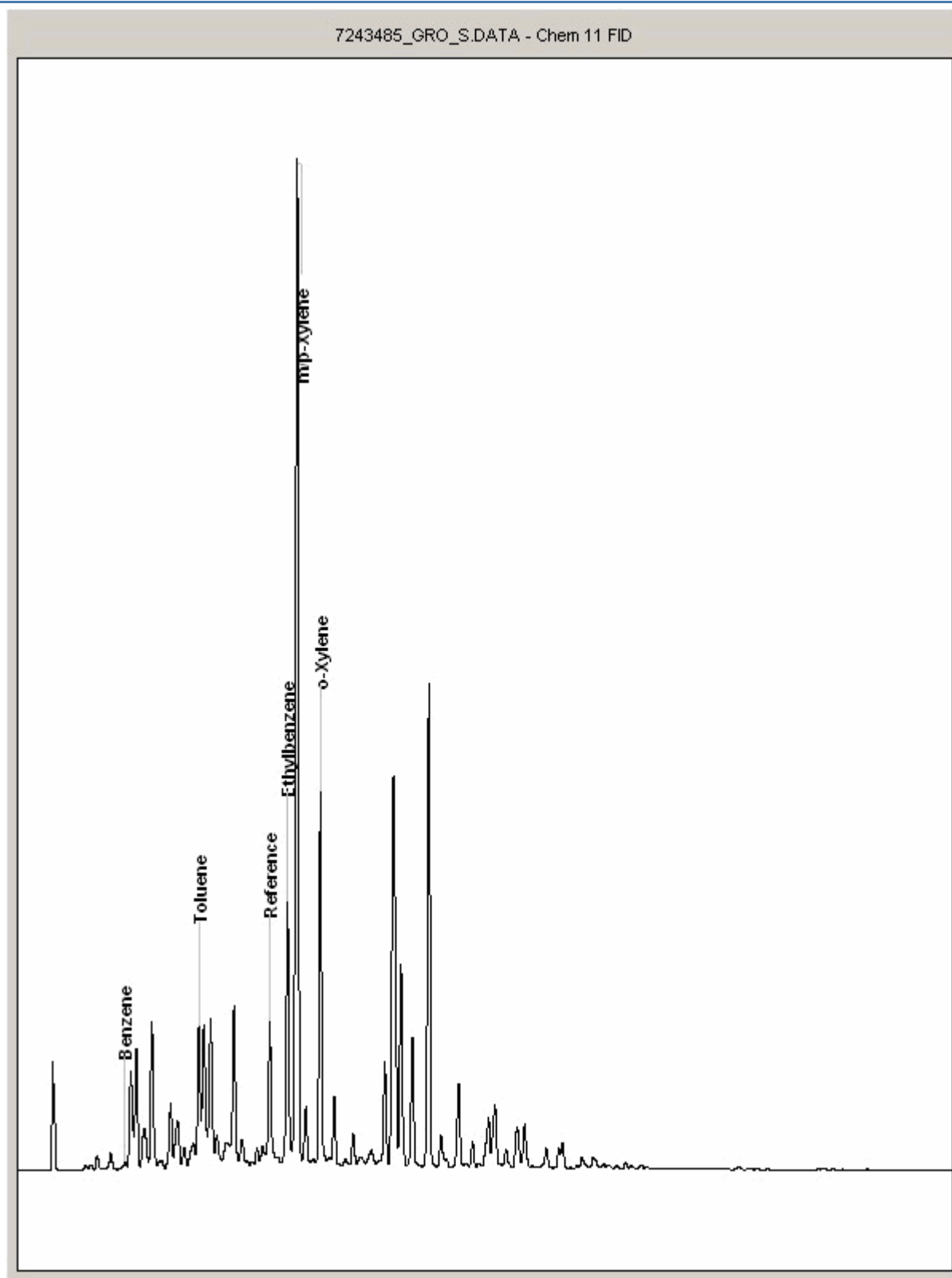
Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7243485
Sample ID : VA115

Depth : 6.50





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

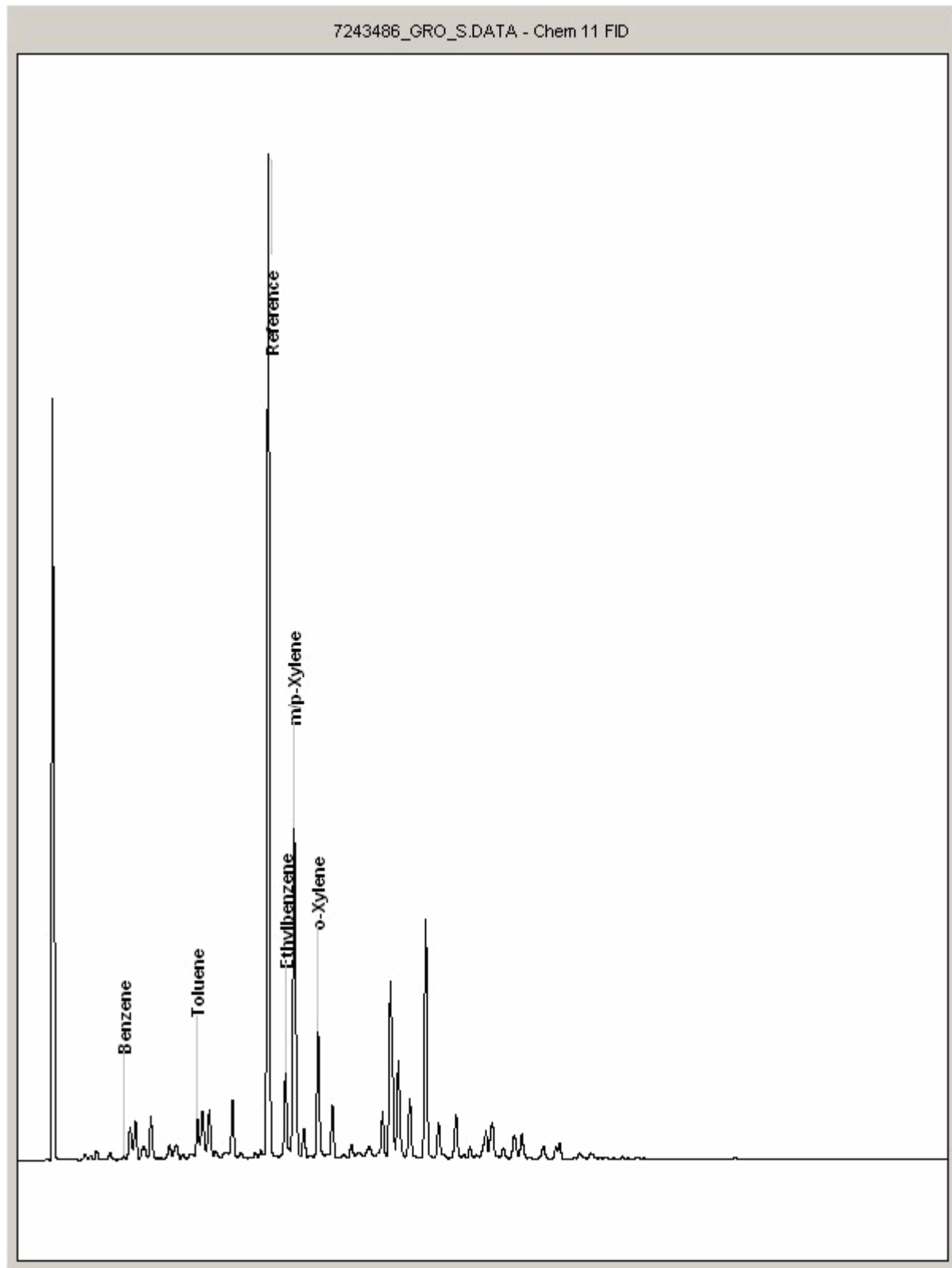
Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7243486
Sample ID : VA116

Depth : 6.50





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

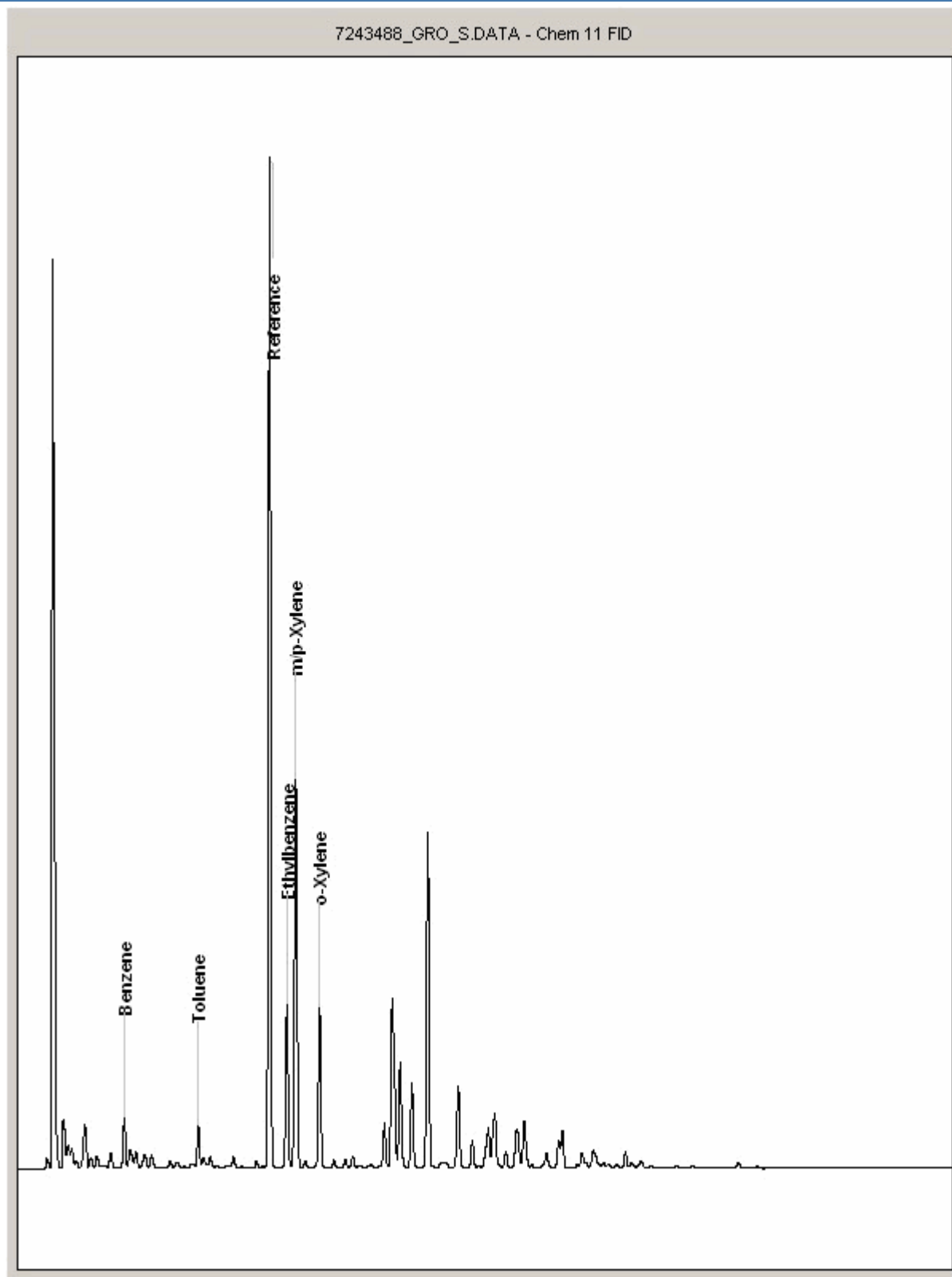
Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7243488
Sample ID : VA117

Depth : 6.50





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

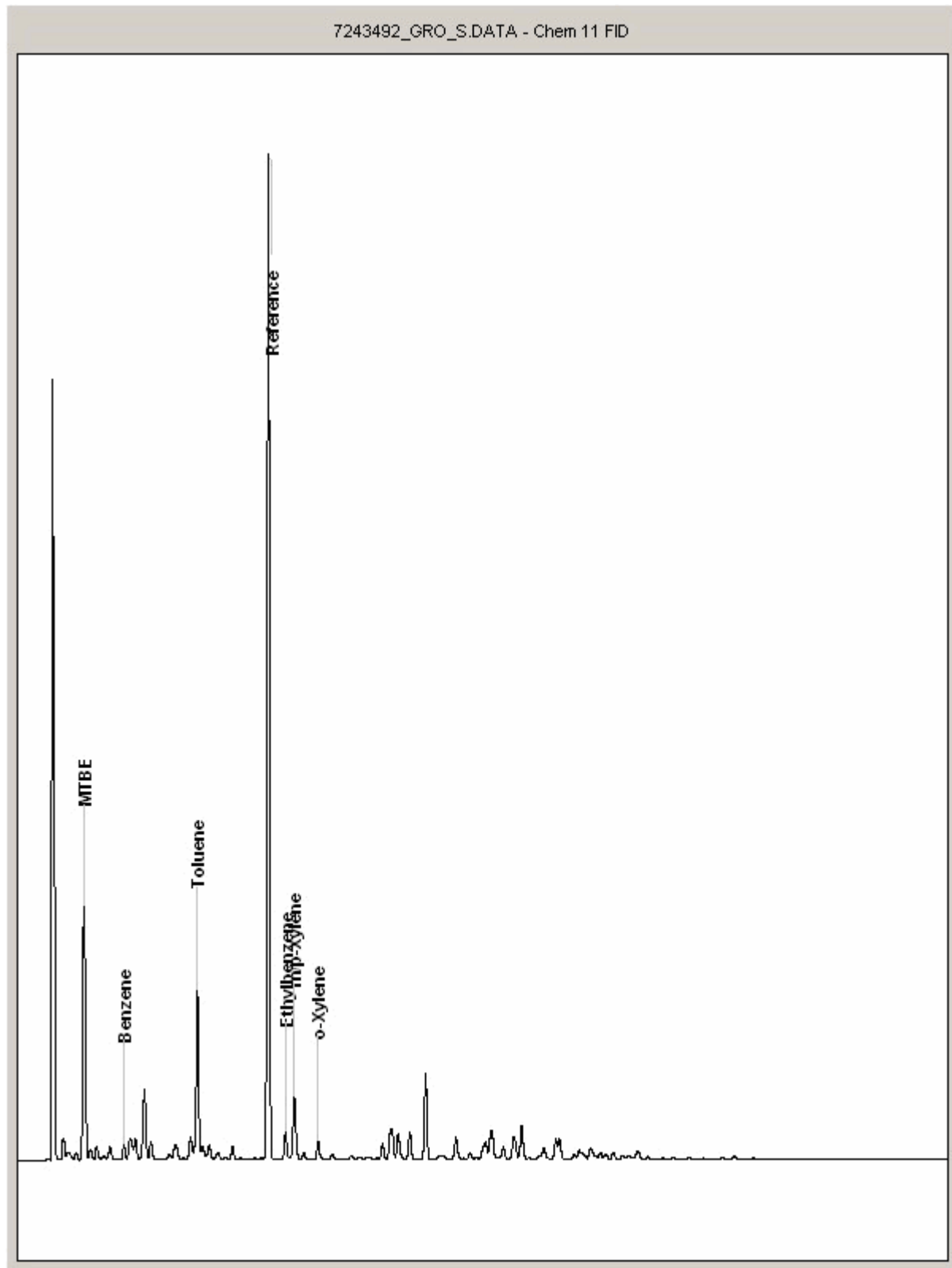
Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7243492
Sample ID : VA120

Depth : 6.50





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

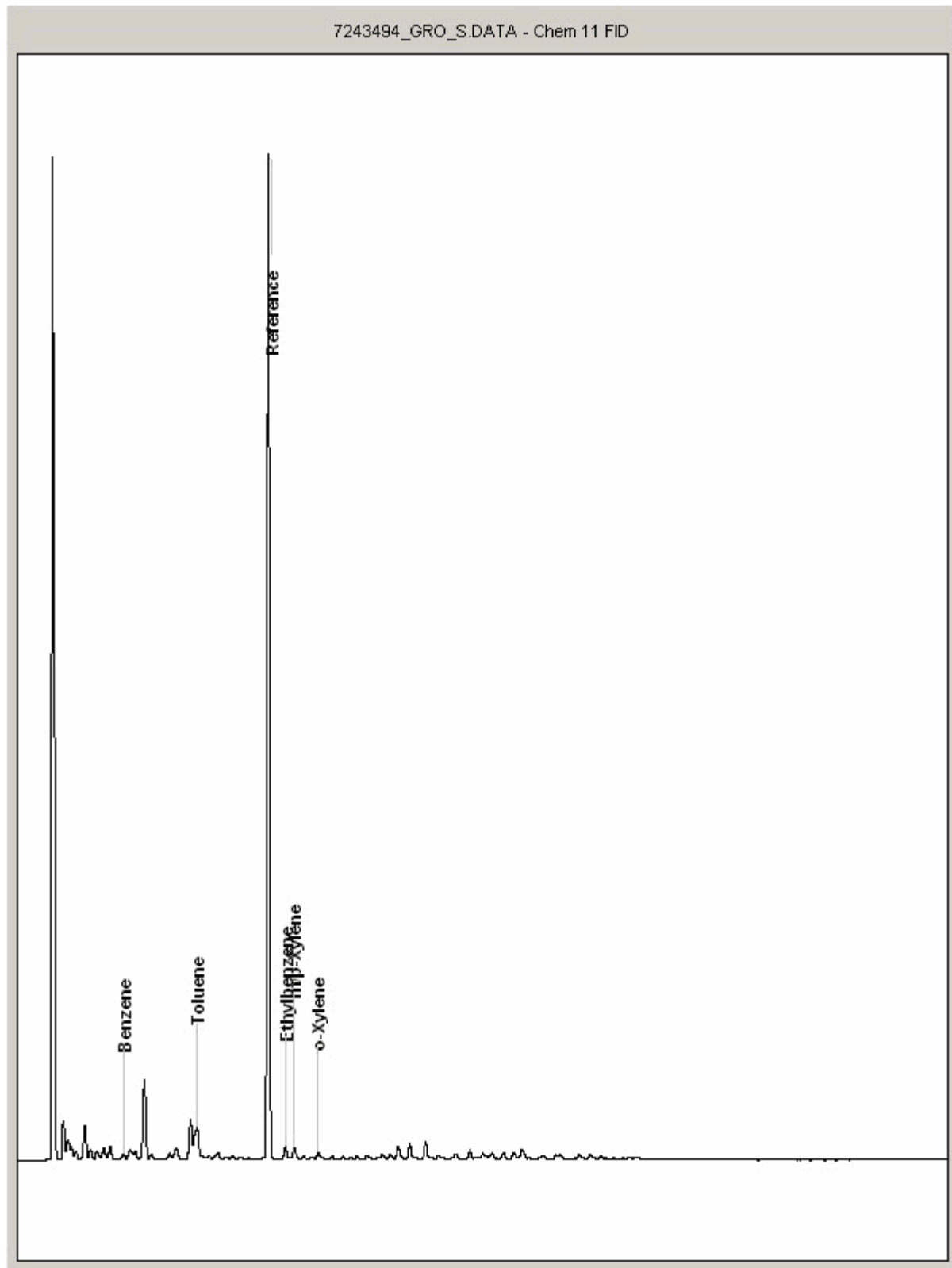
Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7243494
Sample ID : VA121

Depth : 3.50





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

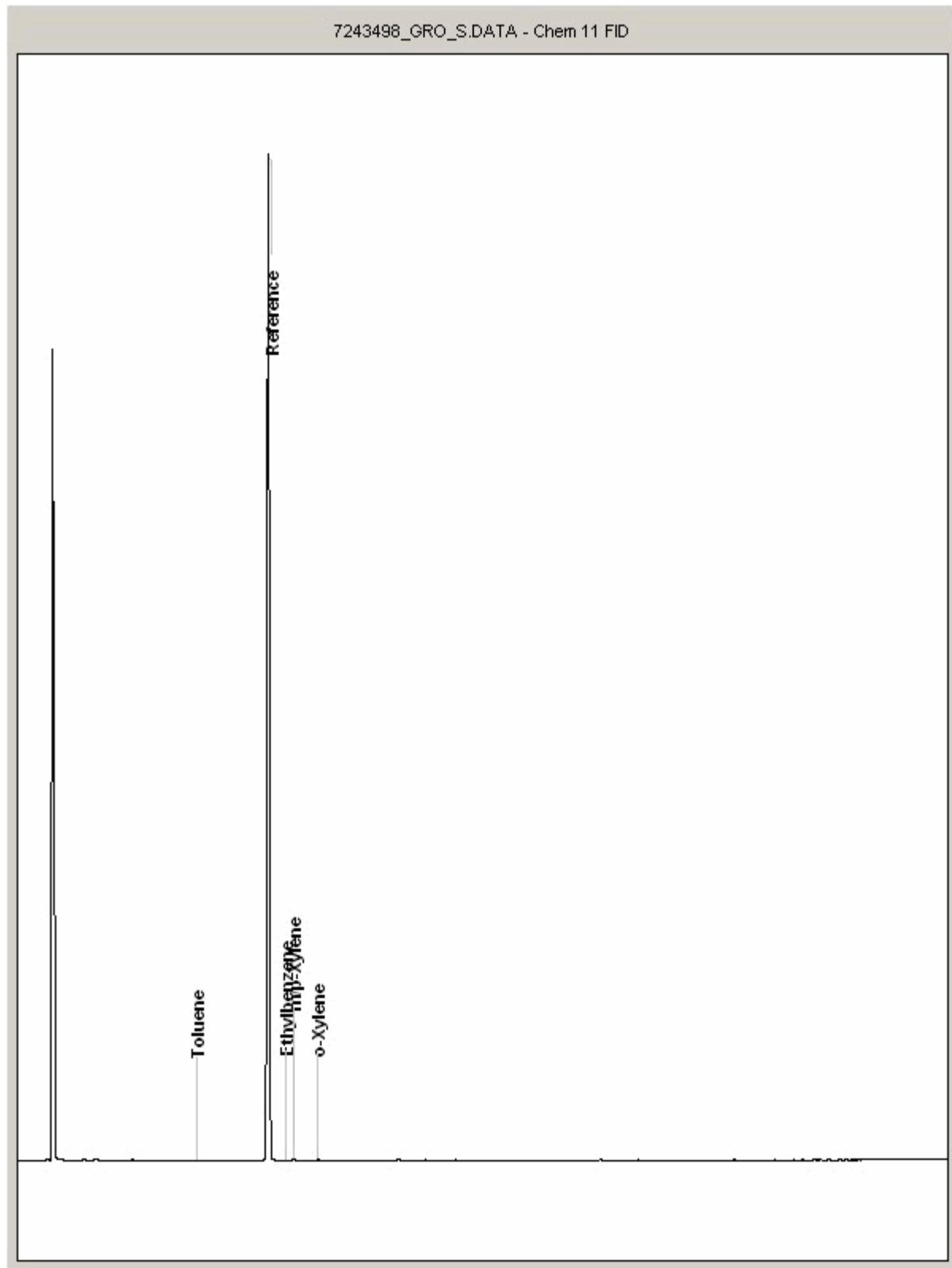
Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7243498
Sample ID : VA123

Depth : 2.50





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

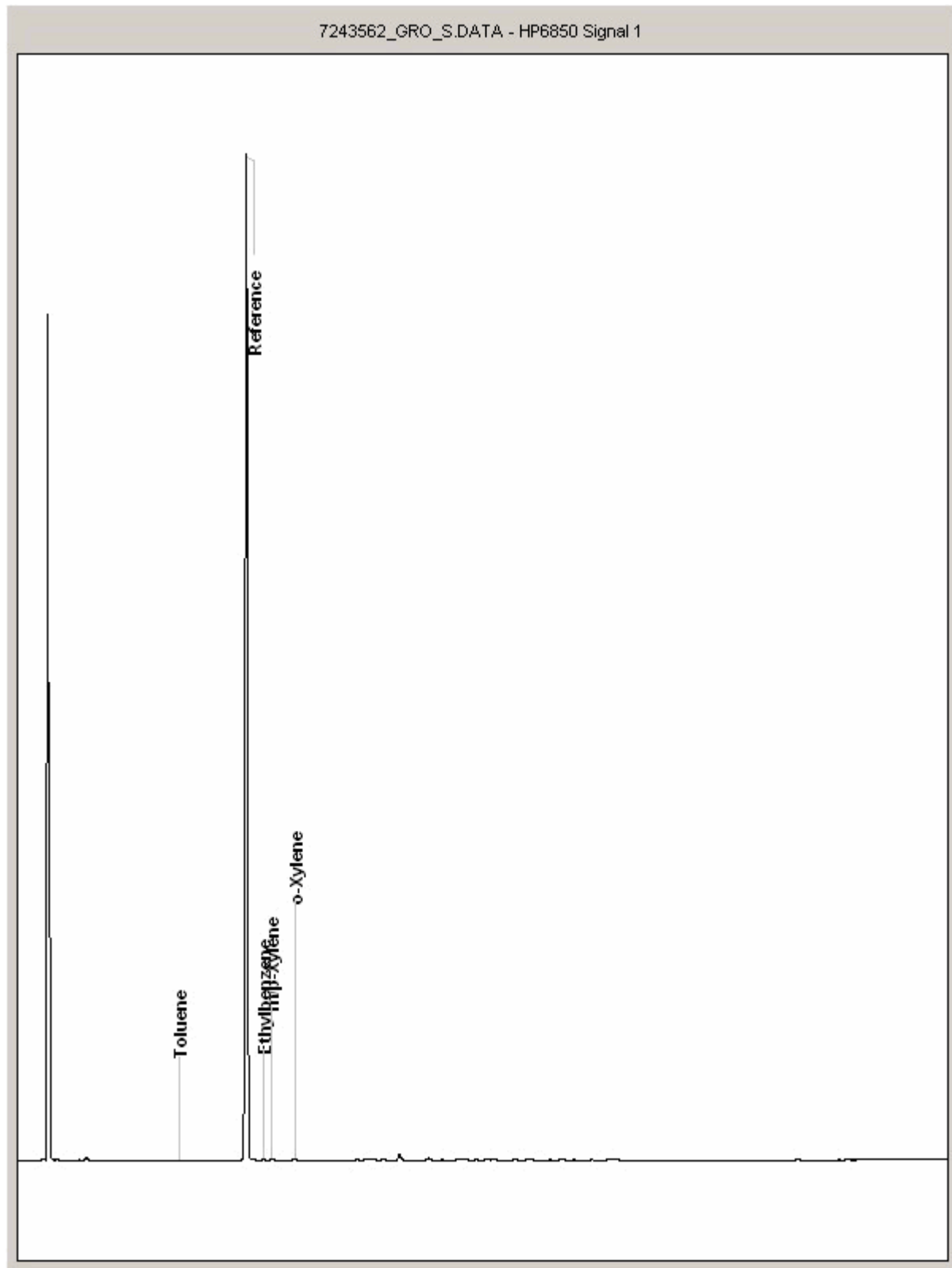
Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7243562
Sample ID : VA118

Depth : 3.00





CERTIFICATE OF ANALYSIS

SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

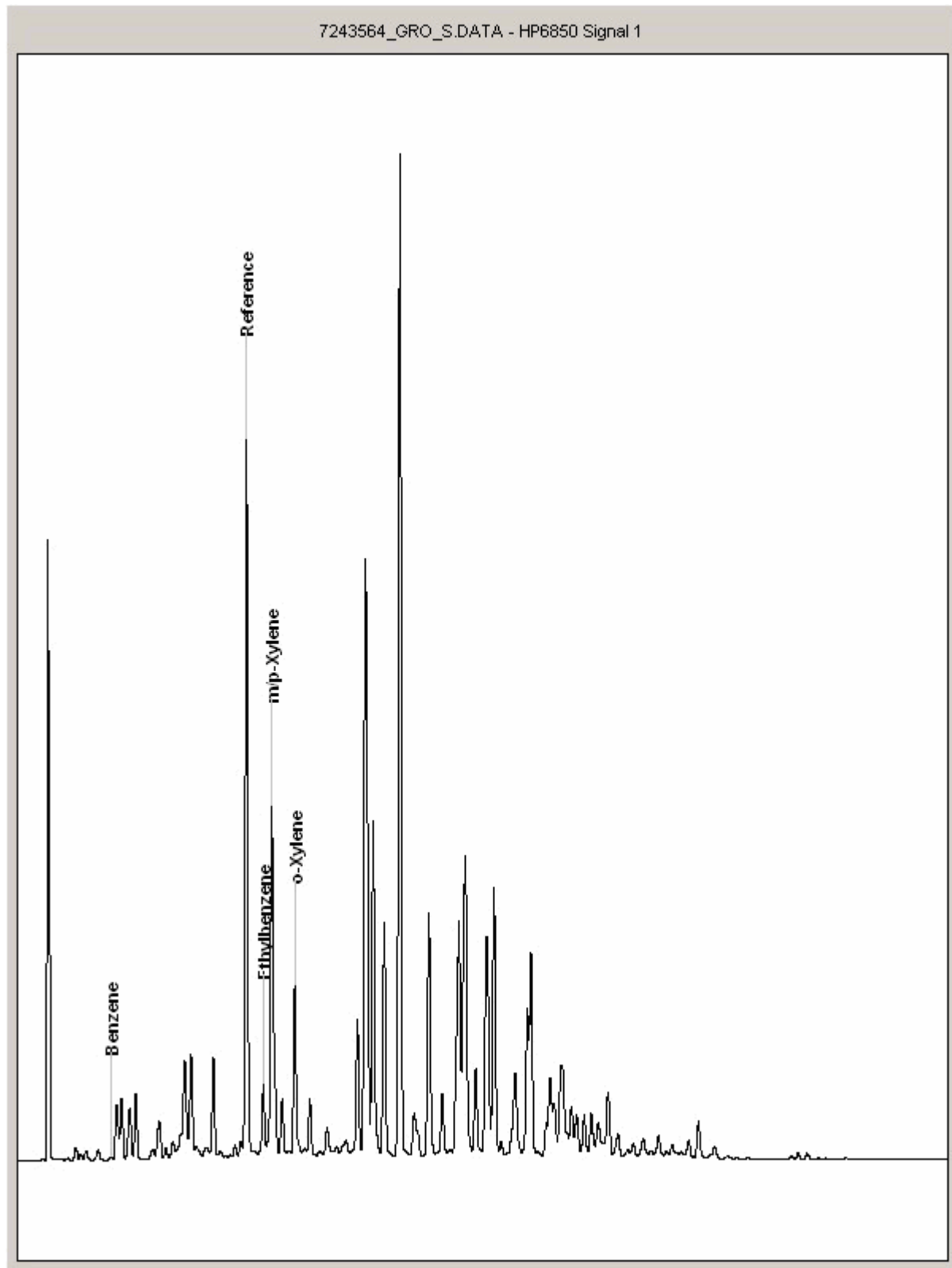
Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7243564
Sample ID : VA119

Depth : 6.50





SDG: 130412-65
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

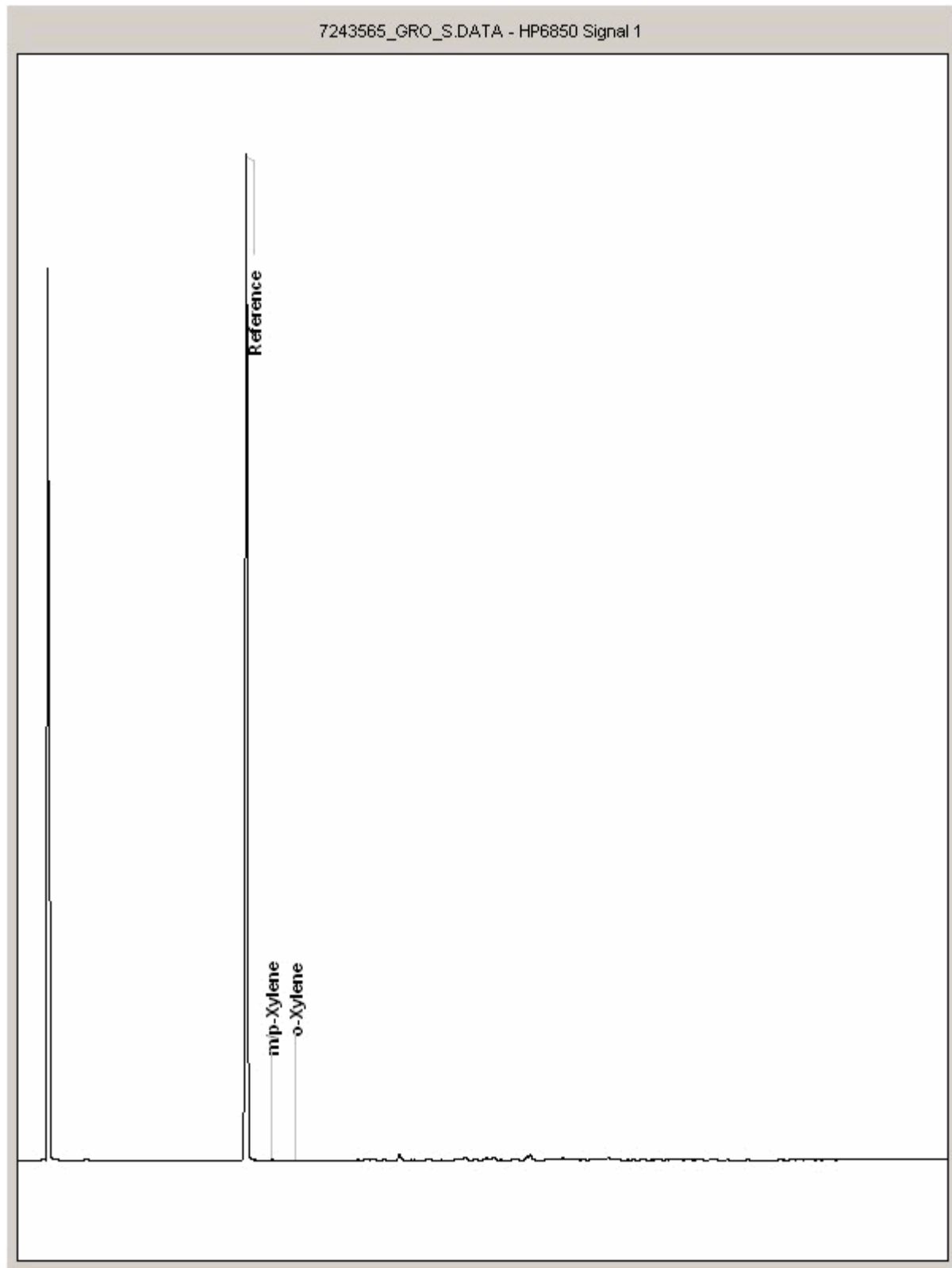
Order Number:
Report Number: 221133
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7243565
Sample ID : VA122

Depth : 3.00





SDG:	130412-65	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	221133
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Appendix General

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICS and SVOC TICS.
2. 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 2 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. ALcontrol Laboratories 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. 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 for wet tests reported on a dry weight basis are not corrected for moisture content.
13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.
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 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.
21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.
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.

Sample Deviations

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Holding time exceeded before sample received
§	Sampled on date not provided
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to sampled on date
&	Sample Holding Time exceeded - Late arrival of instructions.

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.



URS Corporation Limited
St. George's House
2nd Floor
5 St. George's Road
Wimbledon
Greater London
SW19 4DR

Attention: Jocelyn Willis

CERTIFICATE OF ANALYSIS

Date: 23 April 2013
Customer: H_URS_WIM
Sample Delivery Group (SDG): 130413-40
Your Reference: 46370079
Location: Shell Hitchin
Report No: 221579

We received 11 samples on Saturday April 13, 2013 and 11 of these samples were scheduled for analysis which was completed on Tuesday April 23, 2013. 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.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Sonia McWhan

Operations Manager





SDG:	130413-40	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	221579
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
7233114	BACKFILL01			12/04/2013
7233116	BACKFILL02			12/04/2013
7233117	BACKFILL03			12/04/2013
7233085	VA124		6.70	11/04/2013
7233094	VA125		3.00	11/04/2013
7233099	VA126		3.00	11/04/2013
7233100	VA127		0.80	12/04/2013
7233101	VA128		1.50	12/04/2013
7233104	VA129		2.00	12/04/2013
7233102	VA128A		0.60	12/04/2013
7233105	VA129A		0.25	12/04/2013

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



CERTIFICATE OF ANALYSIS

SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

SOLID Results Legend X Test N No Determination Possible	Lab Sample No(s)		Customer Sample Reference		AGS Reference		Depth (m)		Container	
	7233105	VA129A					0.25		1kg TUB	
	7233102	VA128A					0.60		60g VOC (ALE215)	
	7233104	VA129					2.00		250g Amber Jar (AL)	
	7233101	VA128					1.50		60g VOC (ALE215)	
Asbestos ID in Solid Samples	7233100	VA127					0.80		250g Amber Jar (AL)	
									400g Tub (ALE214)	
									250g VOC (ALE215)	
									250g Amber Jar (AL)	
									60g VOC (ALE215)	
EPH CWG (Aliphatic) GC (S)	7233099	VA126					3.00		250g Amber Jar (AL)	
	7233094	VA125					3.00		60g VOC (ALE215)	
	7233085	VA124					6.70		250g Amber Jar (AL)	
									60g VOC (ALE215)	
									250g Amber Jar (AL)	
EPH CWG (Aromatic) GC (S)	7233117	BACKFILL03							250g Amber Jar (AL)	
	7233116	BACKFILL02							60g VOC (ALE215)	
	7233114	BACKFILL01							250g Amber Jar (AL)	
									60g VOC (ALE215)	
									250g Amber Jar (AL)	
GRO by GC-FID (S)									60g VOC (ALE215)	
									250g Amber Jar (AL)	
									60g VOC (ALE215)	
									250g Amber Jar (AL)	
									60g VOC (ALE215)	
Oxygenates (S)									250g Amber Jar (AL)	
									60g VOC (ALE215)	
									250g Amber Jar (AL)	
									60g VOC (ALE215)	
									250g Amber Jar (AL)	
PAH by GCMS									60g VOC (ALE215)	
									250g Amber Jar (AL)	
									60g VOC (ALE215)	
									250g Amber Jar (AL)	
									60g VOC (ALE215)	
Sample description									250g Amber Jar (AL)	
									60g VOC (ALE215)	
									250g Amber Jar (AL)	
									60g VOC (ALE215)	
									250g Amber Jar (AL)	
Total Organic Carbon									60g VOC (ALE215)	
									250g Amber Jar (AL)	
									60g VOC (ALE215)	
									250g Amber Jar (AL)	
									60g VOC (ALE215)	
VOC MS (S)									250g Amber Jar (AL)	
									60g VOC (ALE215)	
									250g Amber Jar (AL)	
									60g VOC (ALE215)	
									250g Amber Jar (AL)	



SDG:	130413-40	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	221579
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions	Inclusions 2
7233114	BACKFILL01		Dark Brown	Sand	0.1 - 2 mm	Stones	Vegetation
7233116	BACKFILL02		Dark Brown	Sand	0.1 - 2 mm	Stones	None
7233117	BACKFILL03		Dark Brown	Sand	0.1 - 2 mm	Stones	Vegetation
7233085	VA124	6.70	Dark Brown	Loamy Sand	0.1 - 2 mm	Oil/Petroleum	Stones
7233094	VA125	3.00	Light Brown	Sand	0.1 - 2 mm	None	None
7233099	VA126	3.00	Dark Brown	Sand	0.1 - 2 mm	None	None
7233100	VA127	0.80	Cream	Chalk	0.1 - 2 mm	Crushed Brick	Stones
7233101	VA128	1.50	Dark Brown	Sand	0.1 - 2 mm	N/A	Stones
7233104	VA129	2.00	Light Brown	Loamy Sand	0.1 - 2 mm	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.

Order Number:
Report Number: 221579
Superseded Report:

Page 5 of 51

Order Number:
Report Number: 221579
Superseded Report:

15:34:14 23/04/2013

Order Number:
Report Number: 221579
Superseded Report:

Page 7 of 51

Order Number:
Report Number: 221579
Superseded Report:

Page 8 of 51

Order Number:
Report Number: 221579
Superseded Report:

Page 9 of 51

Order Number:
Report Number: 221579
Superseded Report:

Page 10 of 51

Order Number:
Report Number: 221579
Superseded Report:

Page 11 of 51



SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

GRO by GC-FID (S)

Results Legend			Customer Sample R	VA127	VA128	VA129			
#	ISO17025 accredited.			0.80	1.50	2.00			
M	mCERTS accredited.			Soil/Solid	Soil/Solid	Soil/Solid			
aq	Aqueous / settled sample.			12/04/2013	12/04/2013	12/04/2013			
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted test.								
**	% 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								
1-4&*\$@	Sample deviation (see appendix)								
Component		LOD/Units	Method						
GRO Surrogate % recovery**		%	TM089	121	127	125			
Aliphatics >C5-C6		<10 µg/kg	TM089	<10	<10	13.2			
Aliphatics >C6-C8		<10 µg/kg	TM089	<10	50.6	33.6			
Aliphatics >C8-C10		<10 µg/kg	TM089	<10	185	22.8			
Aliphatics >C10-C12		<10 µg/kg	TM089	<10	224	44.4			
Aromatics >EC5-EC7		<10 µg/kg	TM089	<10	<10	<10			
Aromatics >EC7-EC8		<10 µg/kg	TM089	<10	<10	<10			
Aromatics >EC8-EC10		<10 µg/kg	TM089	<10	125	21.6			
Aromatics >EC10-EC12		<10 µg/kg	TM089	<10	149	30			
		</							

Order Number:
Report Number: 221579
Superseded Report:

Page 13 of 51

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

[illegible]

Order Number:
Report Number: 221579
Superseded Report:

Page 15 of 51

Order Number:
Report Number: 221579
Superseded Report:

Page 16 of 51



SDG:	130413-40	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	221579
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Asbestos Identification - Soil

		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	VA127 0.80 SOLID 12/04/2013 00:00:00 130413-40 7233100 TM048	22/04/13	Kevin Bowron	-	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	VA128A 0.60 SOLID 12/04/2013 00:00:00 130413-40 7233102 TM048	22/04/13	Kevin Bowron	Soil containing loose fibres and debris typical of AIB	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	VA129A 0.25 SOLID 12/04/2013 00:00:00 130413-40 7233105 TM048	22/04/13	Kevin Bowron	Soil containing loose fibres and debris typical of AIB	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected



SDG:	130413-40	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	221579
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample ¹	Surrogate Corrected
ASB_PREP				
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		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds 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		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		
TM288		Determination of Oxygenates in Soils by Headspace/GC-MS		
TM321		Organic matter Content of Soil By Titration		

¹ Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.



CERTIFICATE OF ANALYSIS

Validated

SDG:	130413-40	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	221579
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Test Completion Dates

Lab Sample No(s)	7233114	7233116	7233117	7233085	7233094	7233099	7233100	7233101	7233104	7233102
Customer Sample Ref.	BACKFILL01	BACKFILL02	BACKFILL03	VA124	VA125	VA126	VA127	VA128	VA129	VA128A
AGS Ref.										
Depth				6.70	3.00	3.00	0.80	1.50	2.00	0.60
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID

Asbestos ID in Solid Samples							23-Apr-2013			23-Apr-2013
EPH CWG (Aliphatic) GC (S)	19-Apr-2013	19-Apr-2013	19-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	
EPH CWG (Aromatic) GC (S)	19-Apr-2013	19-Apr-2013	19-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	
GRO by GC-FID (S)	18-Apr-2013	18-Apr-2013	18-Apr-2013	17-Apr-2013	16-Apr-2013	17-Apr-2013	16-Apr-2013	17-Apr-2013	16-Apr-2013	
Oxygenates (S)	19-Apr-2013	19-Apr-2013	19-Apr-2013	19-Apr-2013	19-Apr-2013	19-Apr-2013	22-Apr-2013	22-Apr-2013	22-Apr-2013	
PAH by GCMS	17-Apr-2013	17-Apr-2013	17-Apr-2013	18-Apr-2013	17-Apr-2013	17-Apr-2013	17-Apr-2013	18-Apr-2013	18-Apr-2013	
Sample description	14-Apr-2013	14-Apr-2013	14-Apr-2013	13-Apr-2013	13-Apr-2013	13-Apr-2013	13-Apr-2013	13-Apr-2013	13-Apr-2013	
Total Organic Carbon	19-Apr-2013	19-Apr-2013	19-Apr-2013		19-Apr-2013		23-Apr-2013		19-Apr-2013	
VOC MS (S)	17-Apr-2013	17-Apr-2013	17-Apr-2013	17-Apr-2013	17-Apr-2013	17-Apr-2013	17-Apr-2013	17-Apr-2013	17-Apr-2013	

Lab Sample No(s)	7233105
Customer Sample Ref.	VA129A
AGS Ref.	
Depth	0.25
Type	SOLID

Asbestos ID in Solid Samples	23-Apr-2013



SDG:	130413-40	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	221579
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

ASSOCIATED AQC DATA

EPH CWG (Aliphatic) GC (S)

Component	Method Code	QC 75	QC 79	QC 73
Total Aliphatics >C12-C35	TM173			95.83
		73.54 : 110.66	70.55 : 108.45	73.54 : 110.66

EPH CWG (Aromatic) GC (S)

Component	Method Code	QC 75	QC 79	QC 73
Total Aromatics >EC12-EC35	TM173			
		78.23 : 114.94	80.36 : 115.81	78.23 : 114.94

GRO by GC-FID (S)

Component	Method Code	QC 75	QC 76
Benzene by GC (Moisture Corrected)	TM089	88.0 79.00 : 121.00	95.5 80.15 : 118.91
Ethylbenzene by GC (Moisture Corrected)	TM089	94.0 79.00 : 121.00	98.5 79.83 : 118.16
m & p Xylene by GC (Moisture Corrected)	TM089	95.5 79.00 : 121.00	99.5 78.35 : 120.05
MTBE GC-FID (Moisture Corrected)	TM089	96.0 74.48 : 125.29	101.0 80.54 : 120.94
o Xylene by GC (Moisture Corrected)	TM089	96.5 79.00 : 121.00	99.0 80.90 : 117.77
QC	TM089	117.45 88.60 : 124.06	113.71 85.99 : 125.08
Toluene by GC (Moisture Corrected)	TM089	90.0 79.00 : 121.00	97.5 81.82 : 117.25

Oxygenates (S)

Component	Method Code	QC 77
Benzene raw	TM288	102.75 77.94 : 128.84
Diisopropyl ether raw	TM288	98.75 78.68 : 128.65
Ethanol raw	TM288	168.0 56.39 : 148.67
Ethylbenzene raw	TM288	96.25 78.18 : 122.27
o-Xylene raw	TM288	99.25 78.38 : 109.16
p/m-Xylene raw	TM288	102.25 80.22 : 110.48
tert Butanol raw	TM288	169.0 62.51 : 145.03
tert-amyl methyl ether raw	TM288	104.0 71.22 : 127.95



CERTIFICATE OF ANALYSIS

SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

Oxygenates (S)

		QC 77
tert-butyl ethyl ether raw	TM288	99.5 64.00 : 136.00
tert-butyl methyl ether raw	TM288	102.5 83.50 : 129.91
Toluene raw	TM288	99.5 75.97 : 110.53

PAH by GCMS

Component	Method Code	QC 76	QC 73
Acenaphthene	TM218	92.0 80.50 : 119.50	91.5 83.80 : 121.00
Acenaphthylene	TM218	84.0 76.68 : 112.28	81.5 72.38 : 111.60
Anthracene	TM218	89.0 75.54 : 110.88	87.5 79.70 : 113.00
Benz(a)anthracene	TM218	96.0 83.07 : 126.36	92.5 82.86 : 122.05
Benzo(a)pyrene	TM218	97.5 79.21 : 128.01	92.5 82.40 : 123.80
Benzo(b)fluoranthene	TM218	97.0 86.21 : 131.42	92.5 77.82 : 128.87
Benzo(ghi)perylene	TM218	94.5 83.37 : 119.89	91.0 81.67 : 122.61
Benzo(k)fluoranthene	TM218	94.5 78.77 : 120.72	91.5 81.20 : 118.10
Chrysene	TM218	93.5 78.77 : 118.99	91.0 80.60 : 117.80
Dibenzo(ah)anthracene	TM218	94.5 78.63 : 120.55	92.5 77.93 : 124.42
Fluoranthene	TM218	90.5 77.25 : 117.75	89.5 82.25 : 115.25
Fluorene	TM218	91.0 79.28 : 117.35	89.5 80.60 : 118.10
Indeno(123cd)pyrene	TM218	95.0 78.87 : 122.50	91.5 83.07 : 119.48
Naphthalene	TM218	92.5 74.75 : 118.25	88.0 83.14 : 111.37
Phenanthrene	TM218	91.5 83.20 : 113.96	91.0 81.45 : 121.95
Pyrene	TM218	91.5 82.10 : 113.43	89.5 75.20 : 108.20

Total Organic Carbon

Component	Method Code	QC 79	QC 75	QC 73
Total Organic Carbon	TM132	96.33 86.66 : 109.87	106.88 86.66 : 109.87	100.0 86.66 : 109.87

VOC MS (S)



CERTIFICATE OF ANALYSIS

SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

VOC MS (S)

Component	Method Code	QC 73
1,1,1,2-tetrachloroethane	TM116	108.0 77.50 : 124.09
1,1,1-Trichloroethane	TM116	110.4 86.36 : 114.14
1,1,2-Trichloroethane	TM116	118.4 93.86 : 131.61
1,1-Dichloroethane	TM116	113.6 83.96 : 125.03
1,2-Dichloroethane	TM116	109.6 88.93 : 122.77
1,4-Dichlorobenzene	TM116	113.2 89.32 : 117.26
2-Chlorotoluene	TM116	140.2 93.47 : 156.27
4-Chlorotoluene	TM116	133.0 92.38 : 149.49
Benzene	TM116	102.8 86.95 : 110.62
Carbon Disulphide	TM116	98.8 76.98 : 118.83
Carbontetrachloride	TM116	110.0 71.94 : 132.65
Chlorobenzene	TM116	106.2 78.33 : 118.74
Chloroform	TM116	112.6 69.66 : 148.03
Chloromethane	TM116	147.8 49.71 : 146.30
Cis-1,2-Dichloroethene	TM116	98.8 87.09 : 113.71
Dibromomethane	TM116	102.2 65.13 : 138.40
Dichloromethane	TM116	111.8 70.67 : 150.15
Ethylbenzene	TM116	99.6 84.09 : 110.87
Hexachlorobutadiene	TM116	163.8 62.74 : 176.60
Isopropylbenzene	TM116	88.8 75.72 : 100.29
Naphthalene	TM116	113.2 80.72 : 132.86
o-Xylene	TM116	96.0 76.04 : 111.23
p/m-Xylene	TM116	101.0 79.03 : 115.32
Sec-Butylbenzene	TM116	103.8 73.42 : 125.99
Tetrachloroethene	TM116	112.2 87.31 : 123.54
Toluene	TM116	98.2 83.48 : 106.73



SDG:	130413-40	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	221579
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

VOC MS (S)

		QC 73
Trichloroethene	TM116	101.2 86.48 : 110.46
Trichlorofluoromethane	TM116	111.8 82.57 : 120.95
Vinyl Chloride	TM116	119.6 62.58 : 154.52

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

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

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



SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

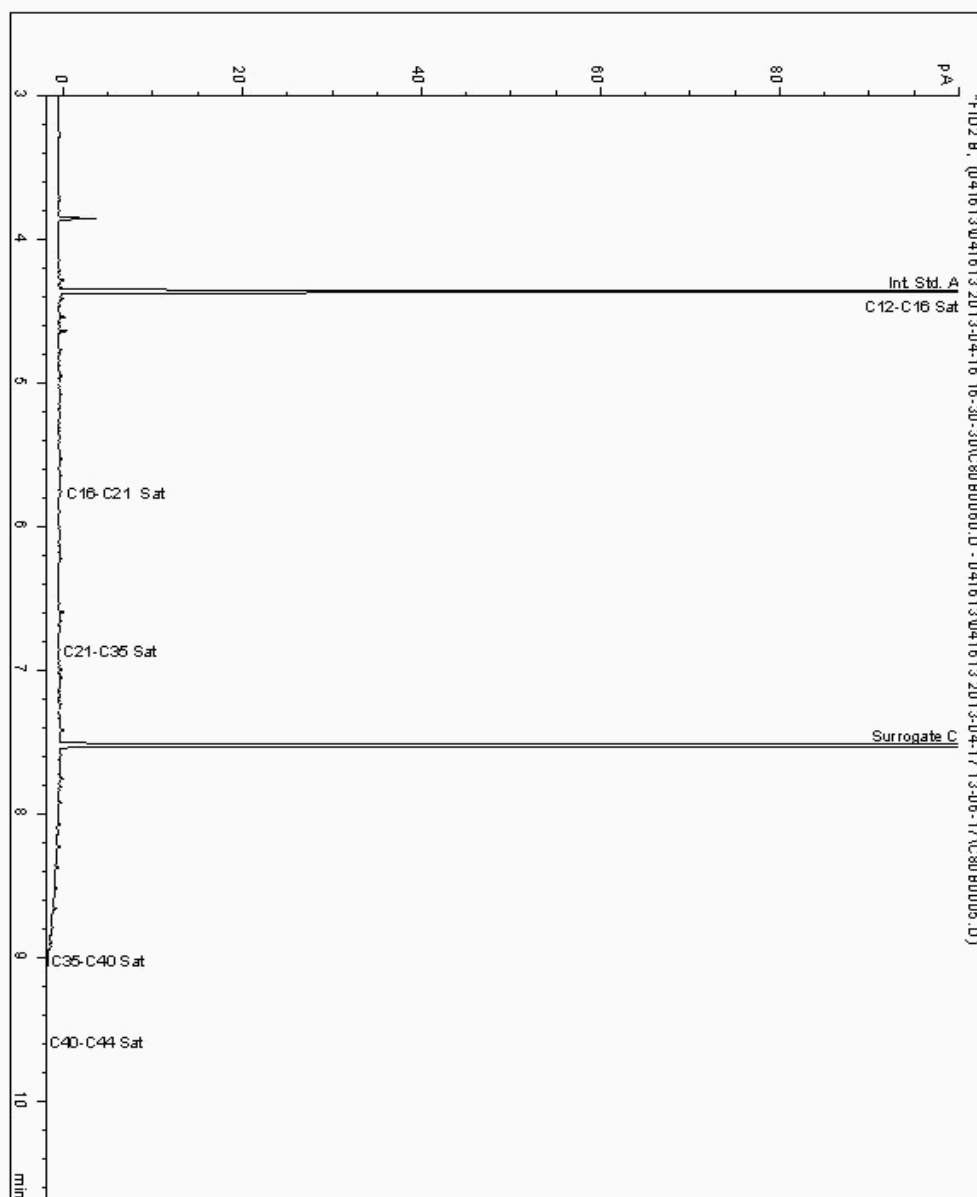
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7240396
Sample ID : VA126

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6952856-7240396
Date Acquired : 17/04/13 11:02:18
Units : ppb
Dilution :
CF : 1
Multiplier : 1.046





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

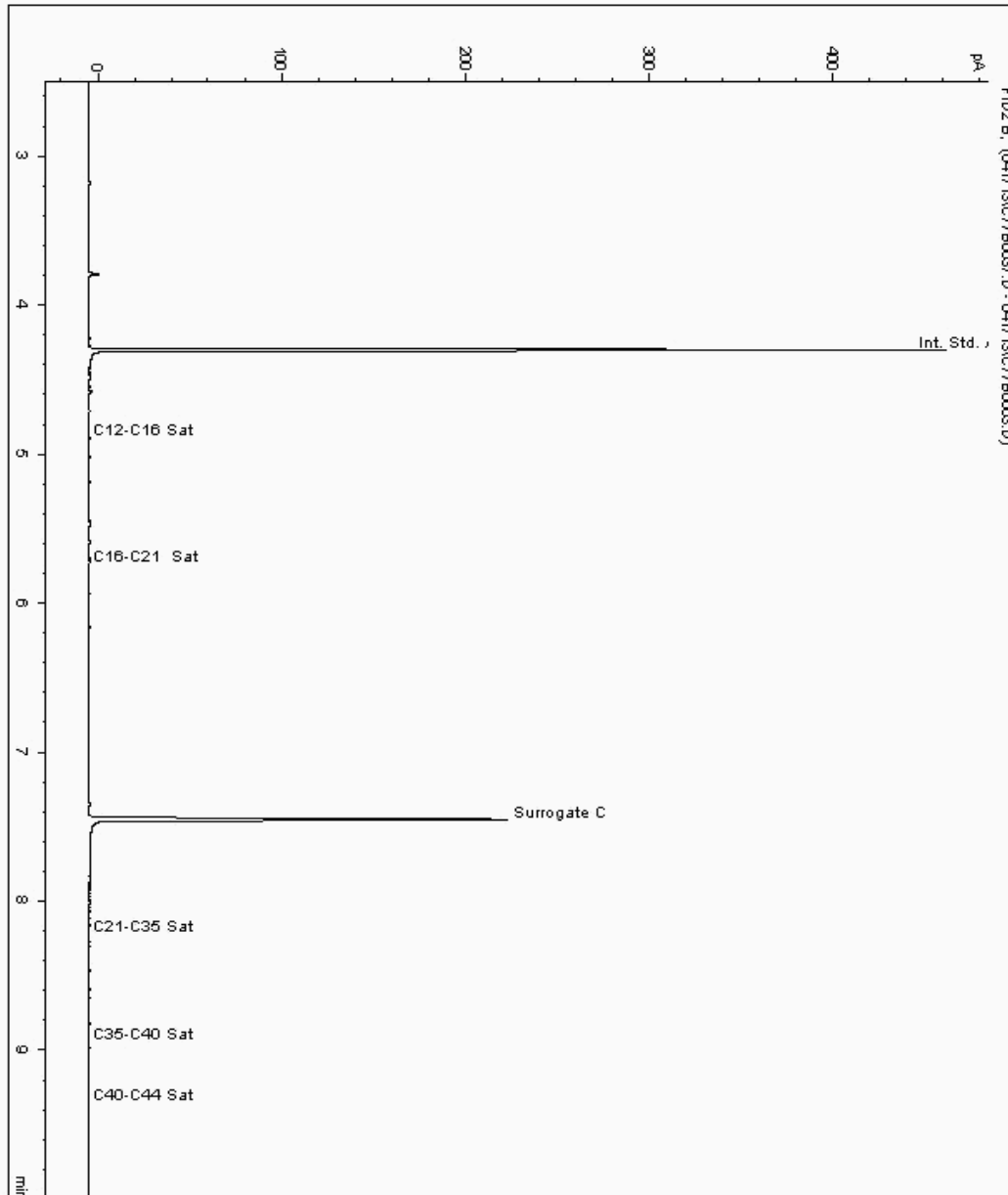
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7247619
Sample ID : VA128

Depth : 1.50

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6952875-7247619
Date Acquired : 17/04/2013 20:01:29 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.983





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

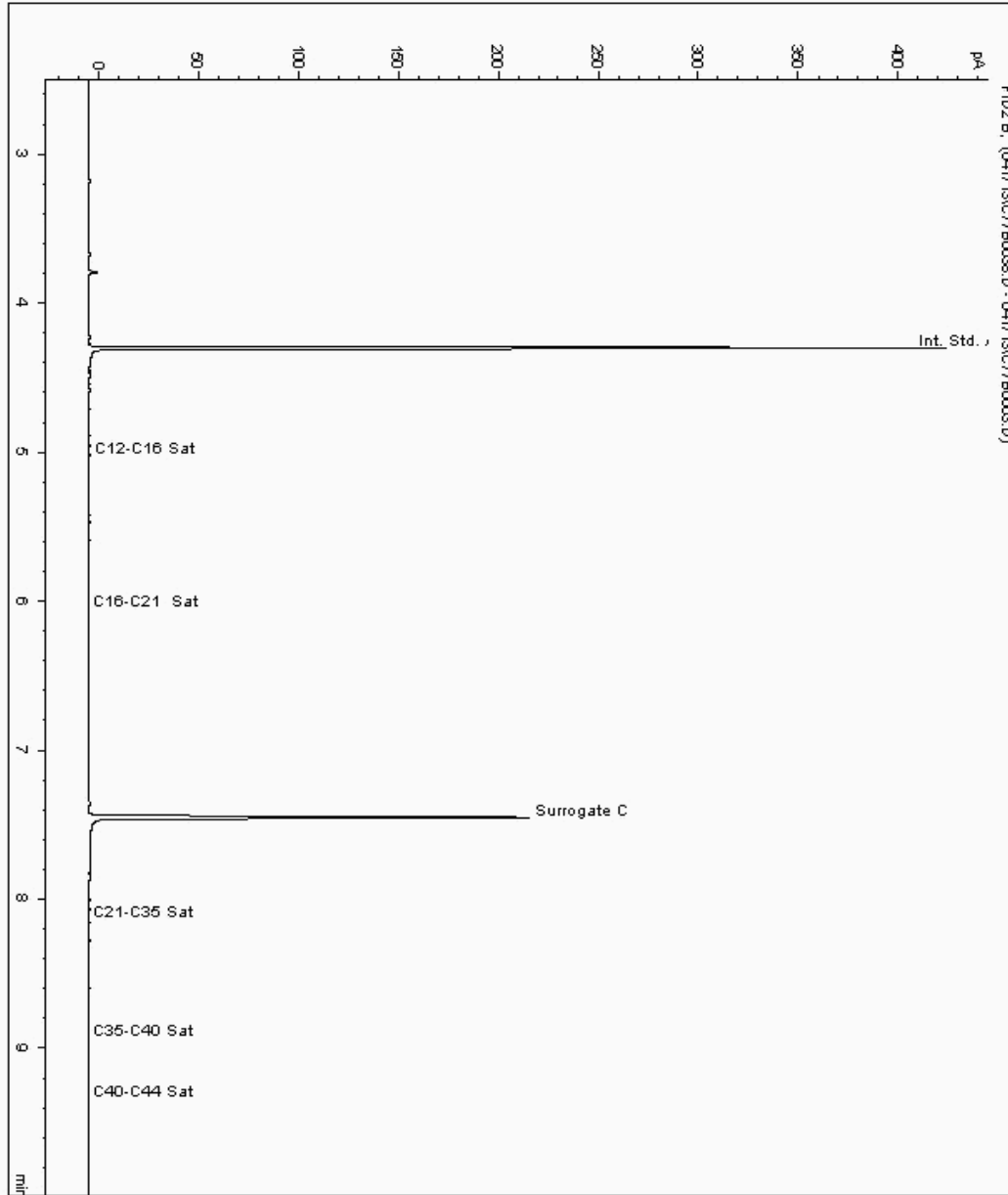
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7247628
Sample ID : VA129

Depth : 2.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6952884-7247628
Date Acquired : 17/04/2013 20:22:37 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.999





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

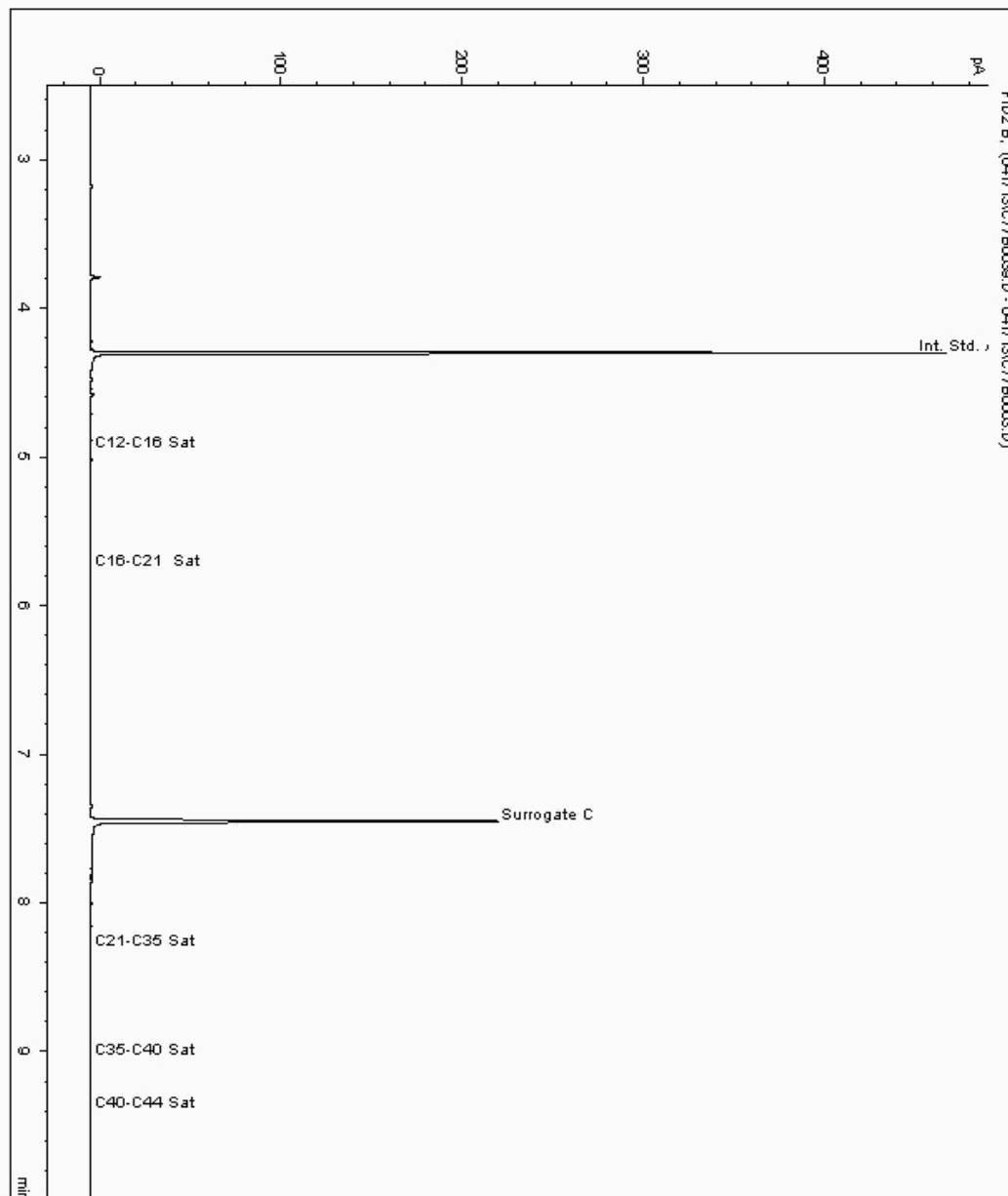
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7247640
Sample ID : VA125

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6952843-7247640
Date Acquired : 17/04/2013 20:43:44 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.022





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

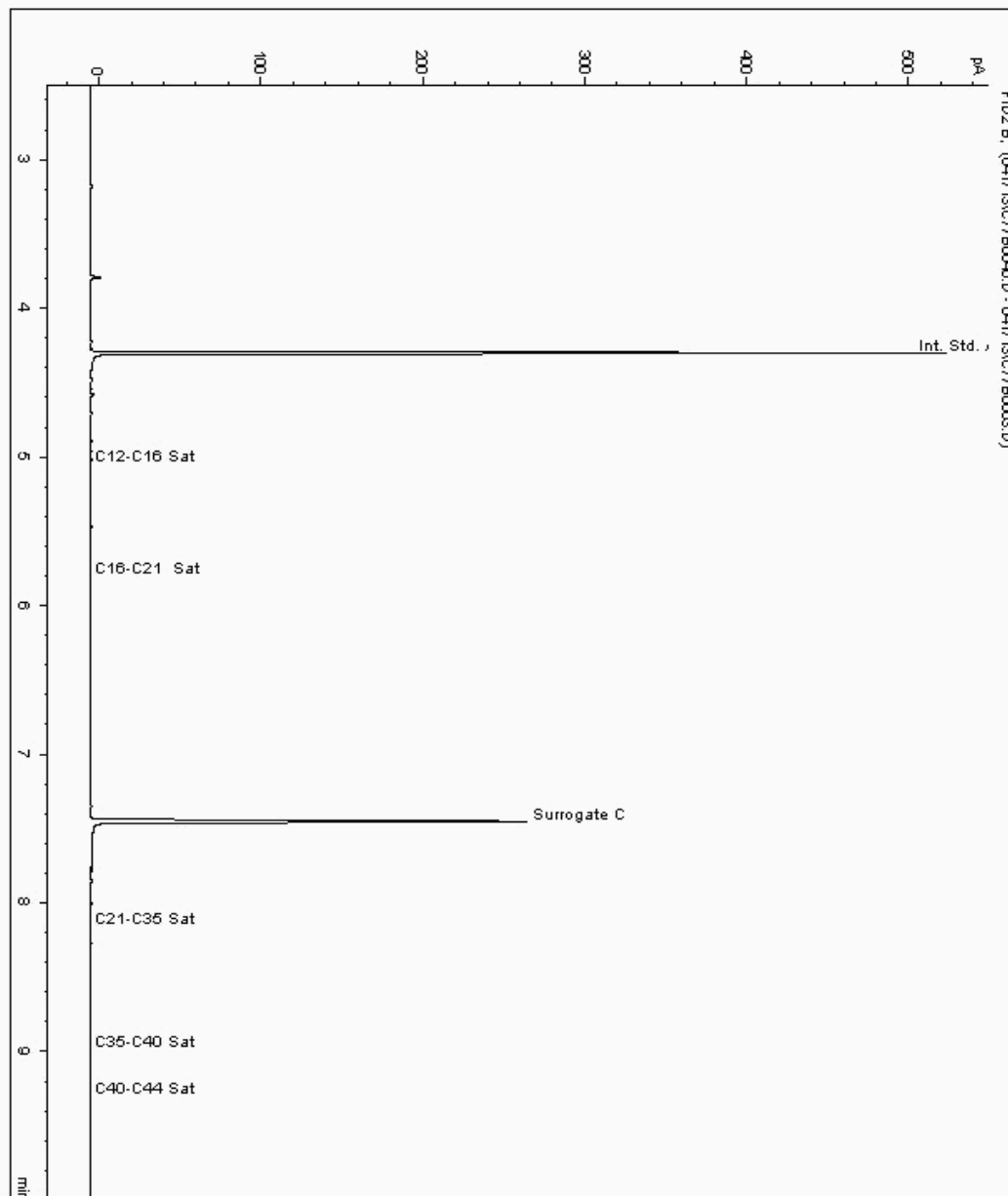
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7247659
Sample ID : VA124

Depth : 6.70

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6952834-7247659
Date Acquired : 17/04/2013 21:04:53 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.026





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

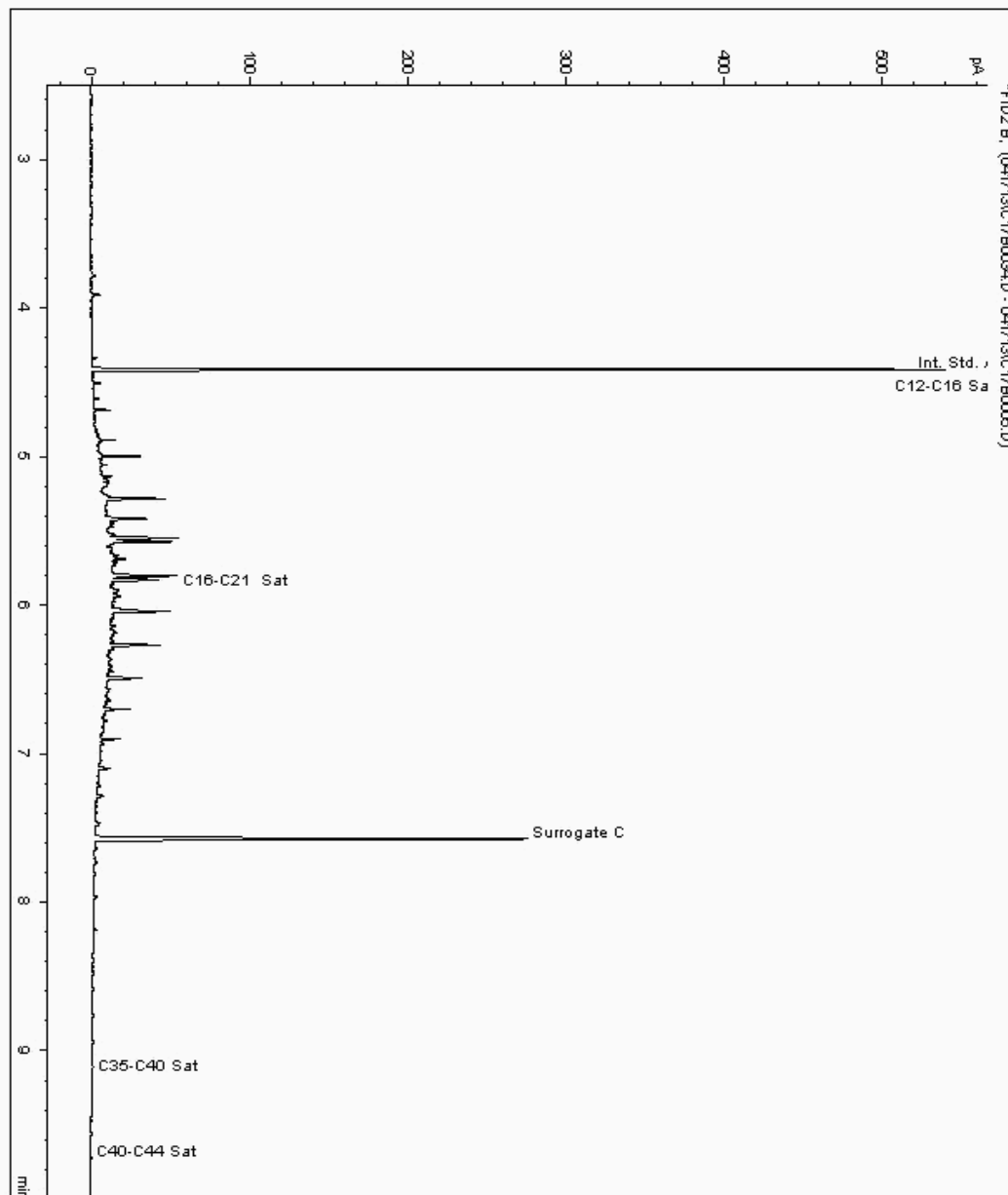
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7251271
Sample ID : VA127

Depth : 0.80

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6952865-7251271
Date Acquired : 18/04/2013 09:15:19 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.022





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

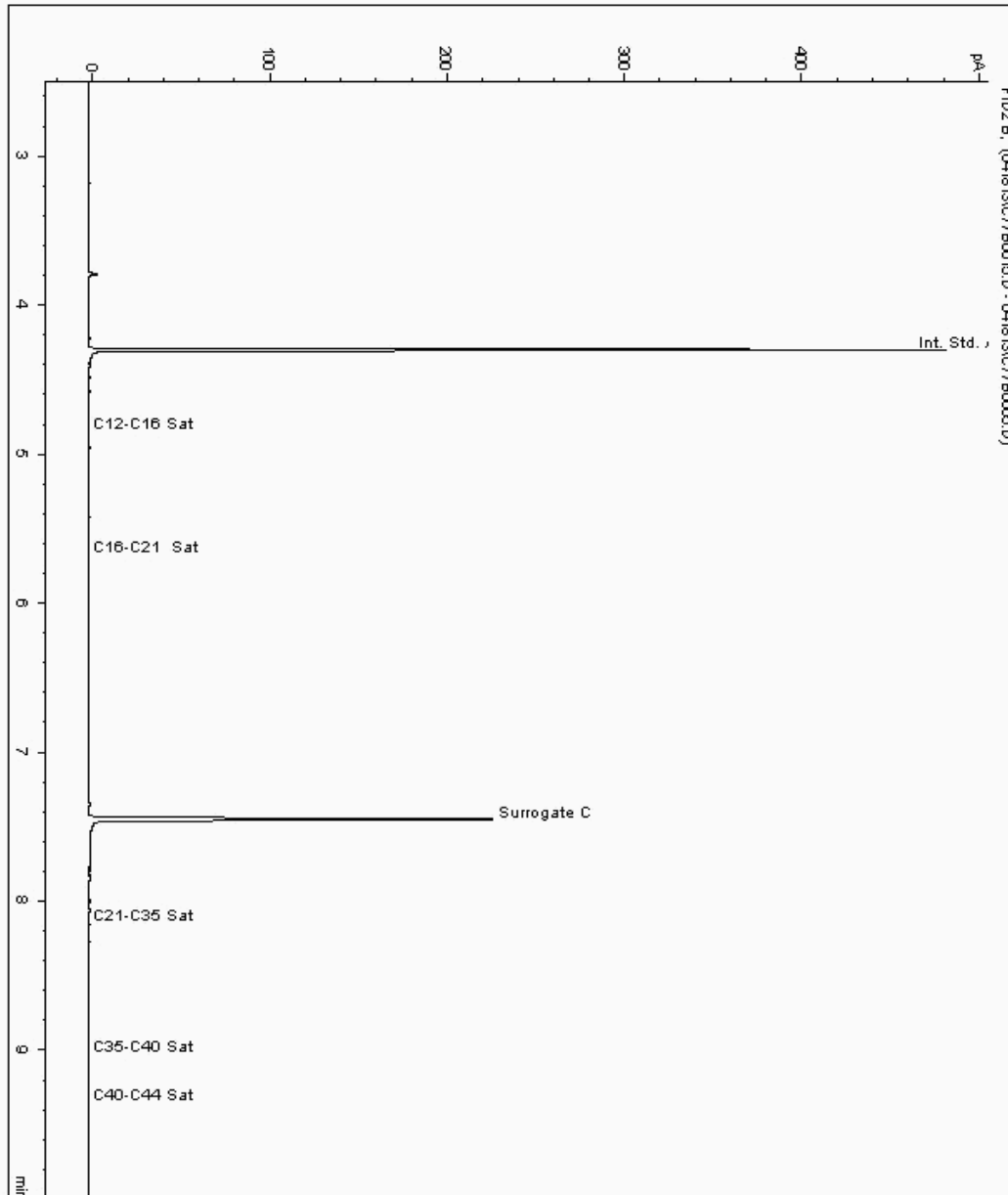
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7254163
Sample ID : BACKFILL03

Depth :

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6952914-7254163
Date Acquired : 18/04/2013 17:31:11 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.971





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

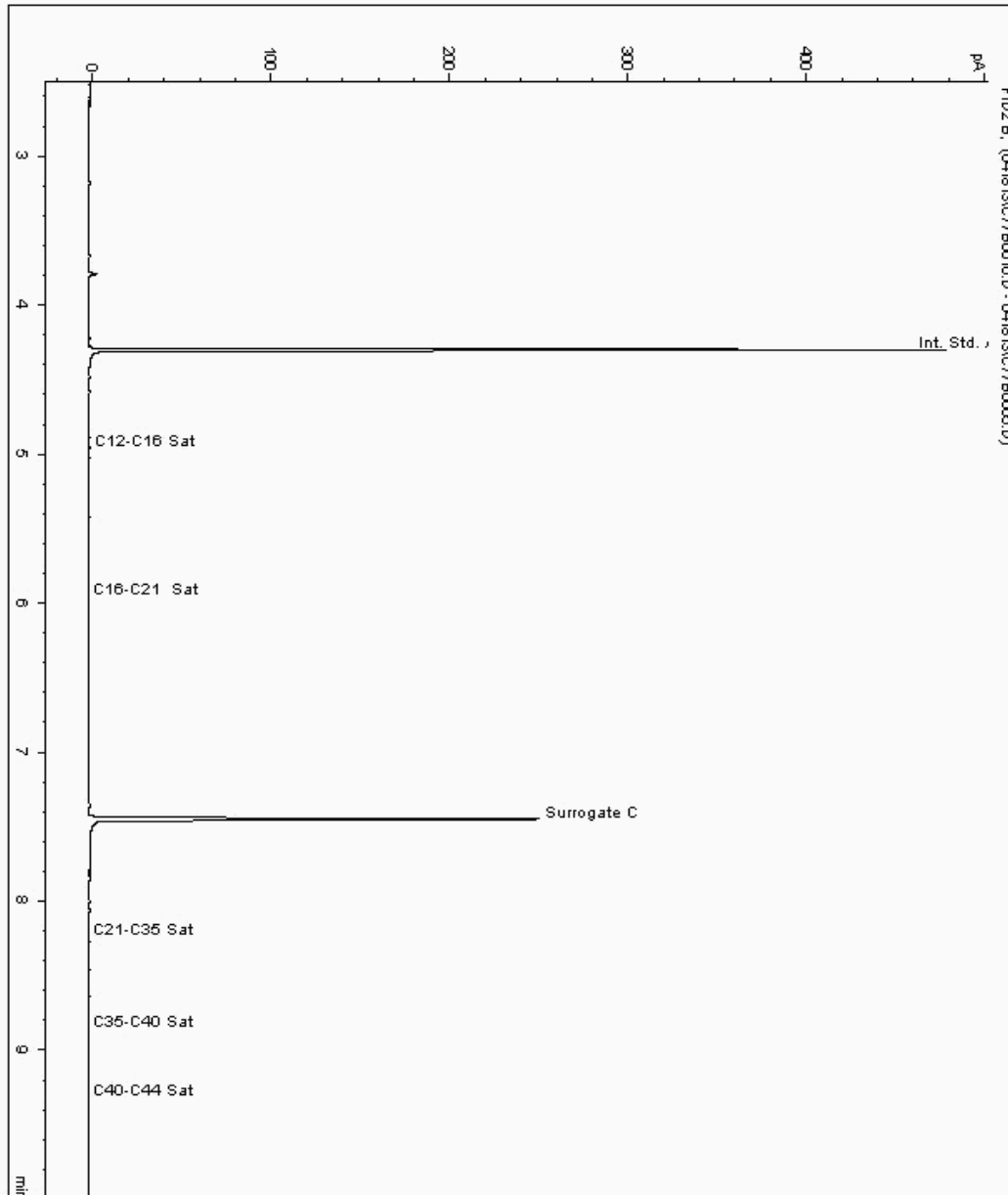
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7254176
Sample ID : BACKFILL02

Depth :

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6952904-7254176
Date Acquired : 18/04/2013 17:51:44 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.025





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

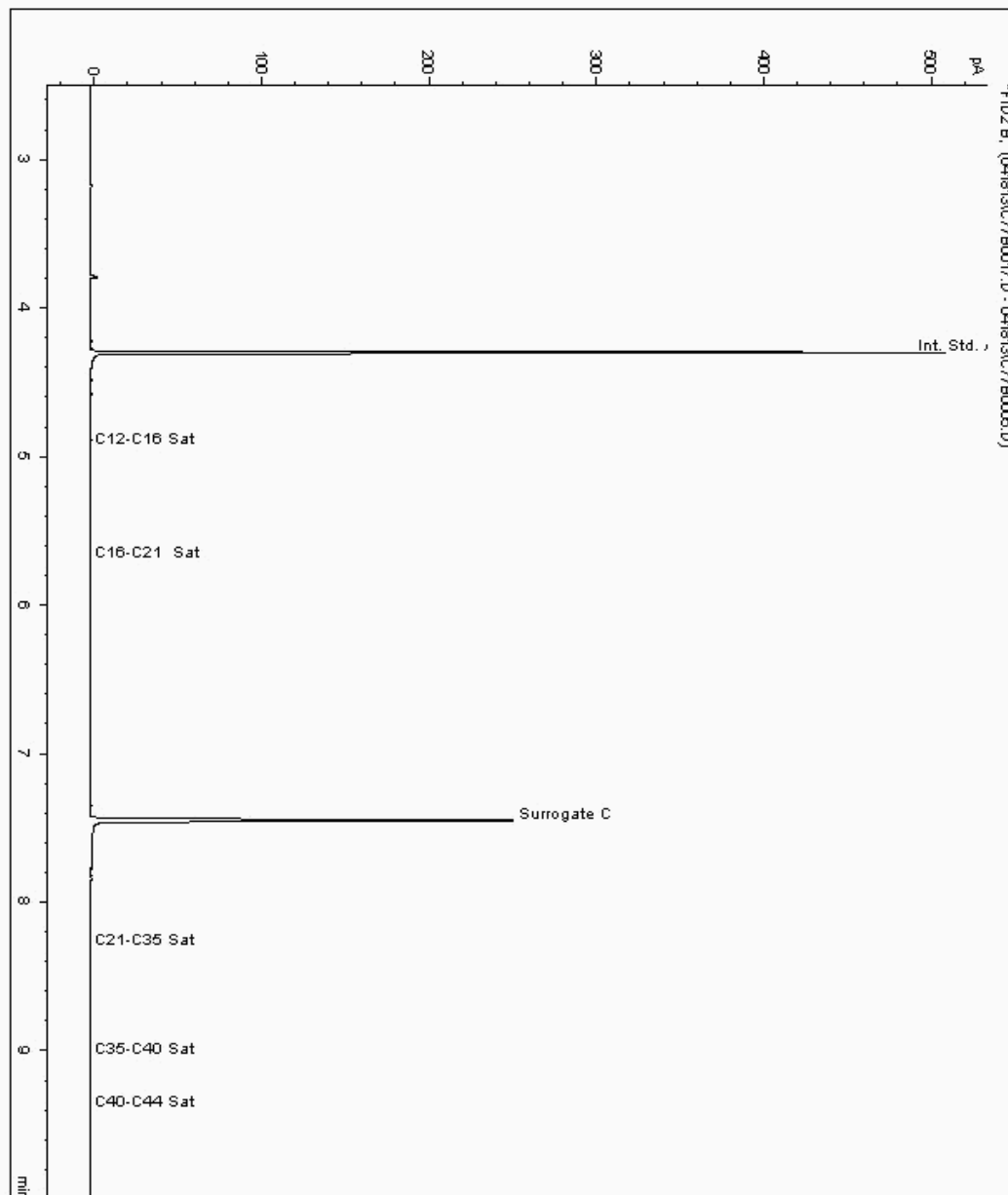
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7254296
Sample ID : BACKFILL01

Depth :

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6952894-7254296
Date Acquired : 18/04/2013 18:12:16 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.007





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

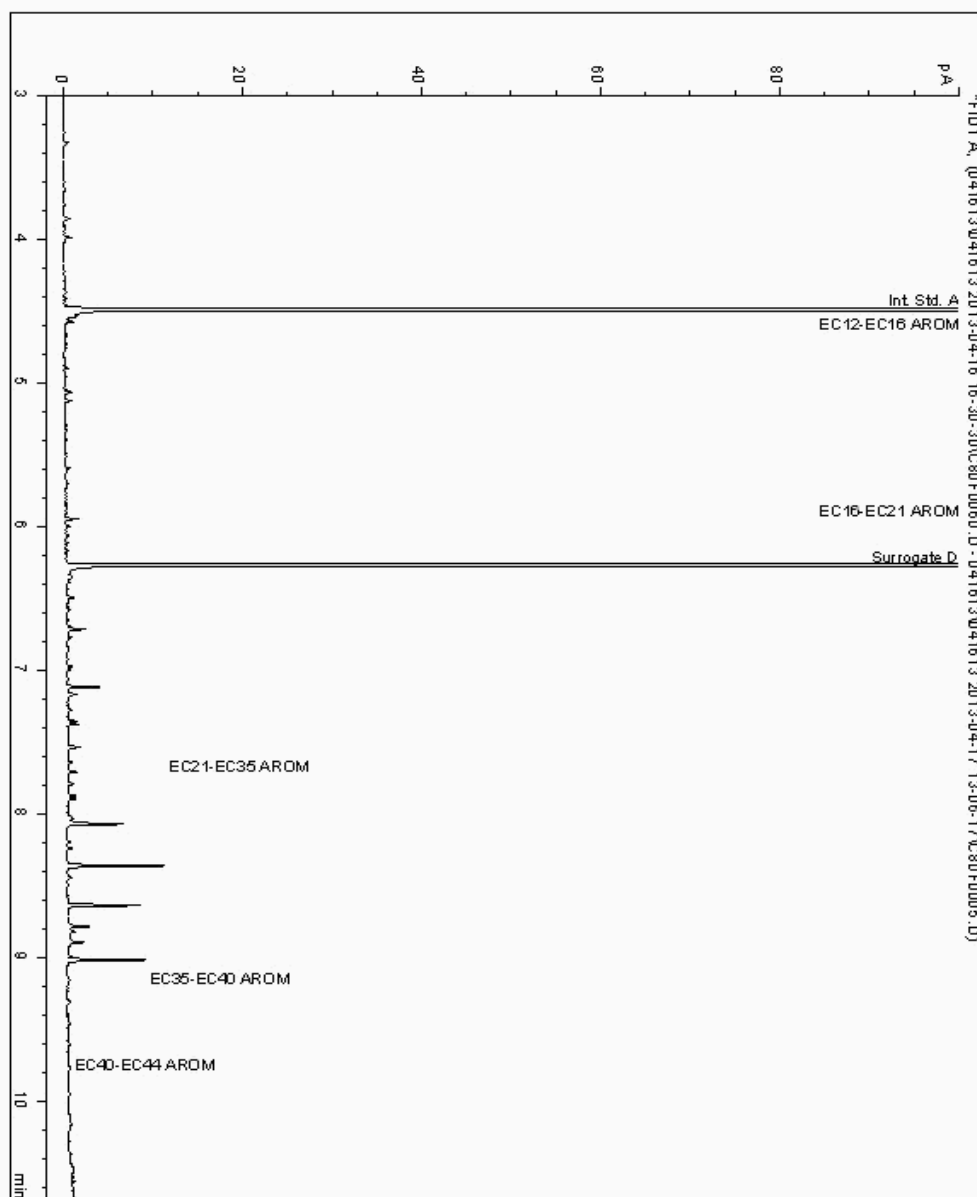
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7240396
Sample ID : VA126

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6952857-7240396
Date Acquired : 17/04/13 11:02:18
Units : ppb
Dilution :
CF : 1
Multiplier : 1.046





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

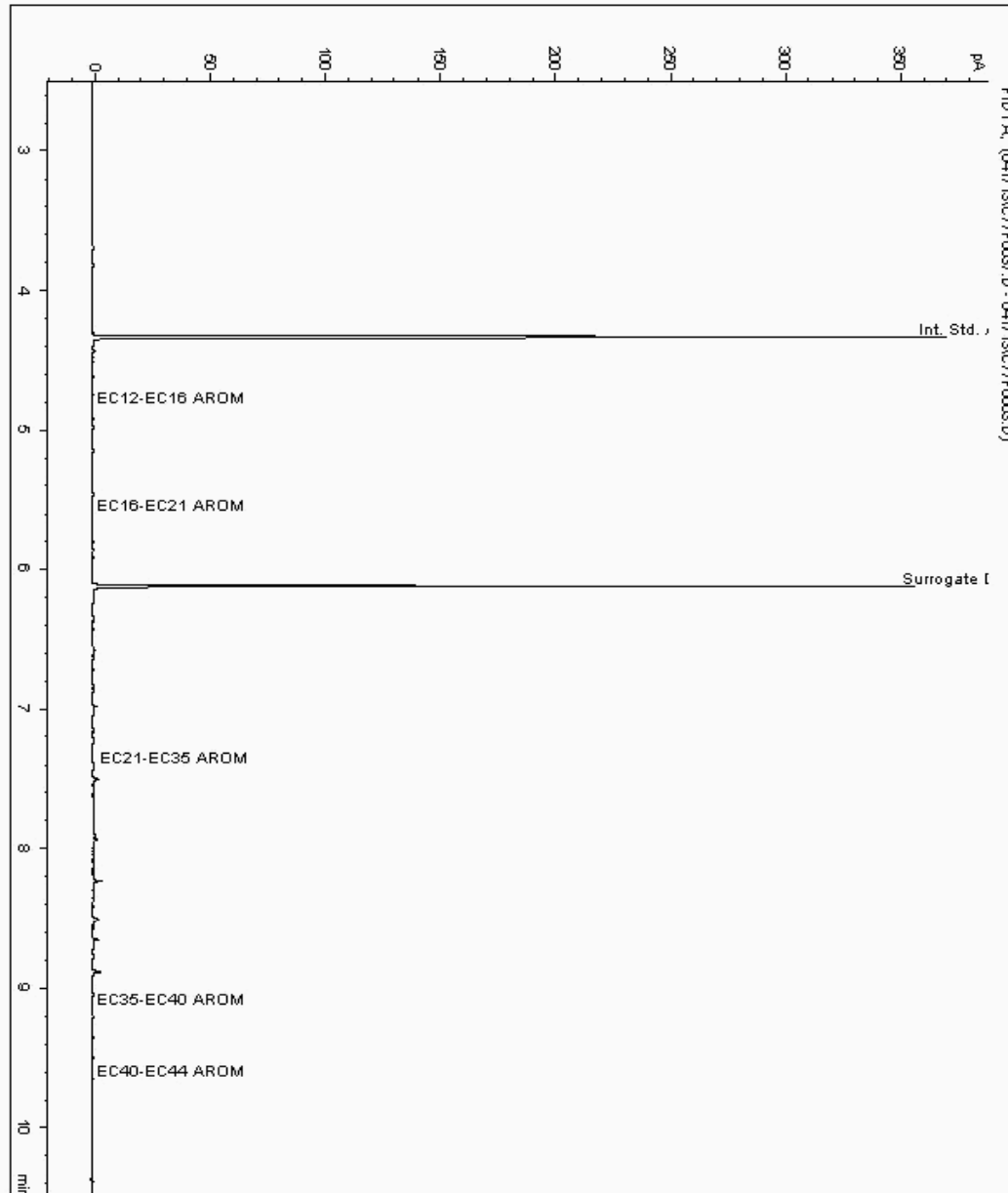
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7247619
Sample ID : VA128

Depth : 1.50

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6952876-7247619
Date Acquired : 17/04/2013 20:01:30 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.983





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

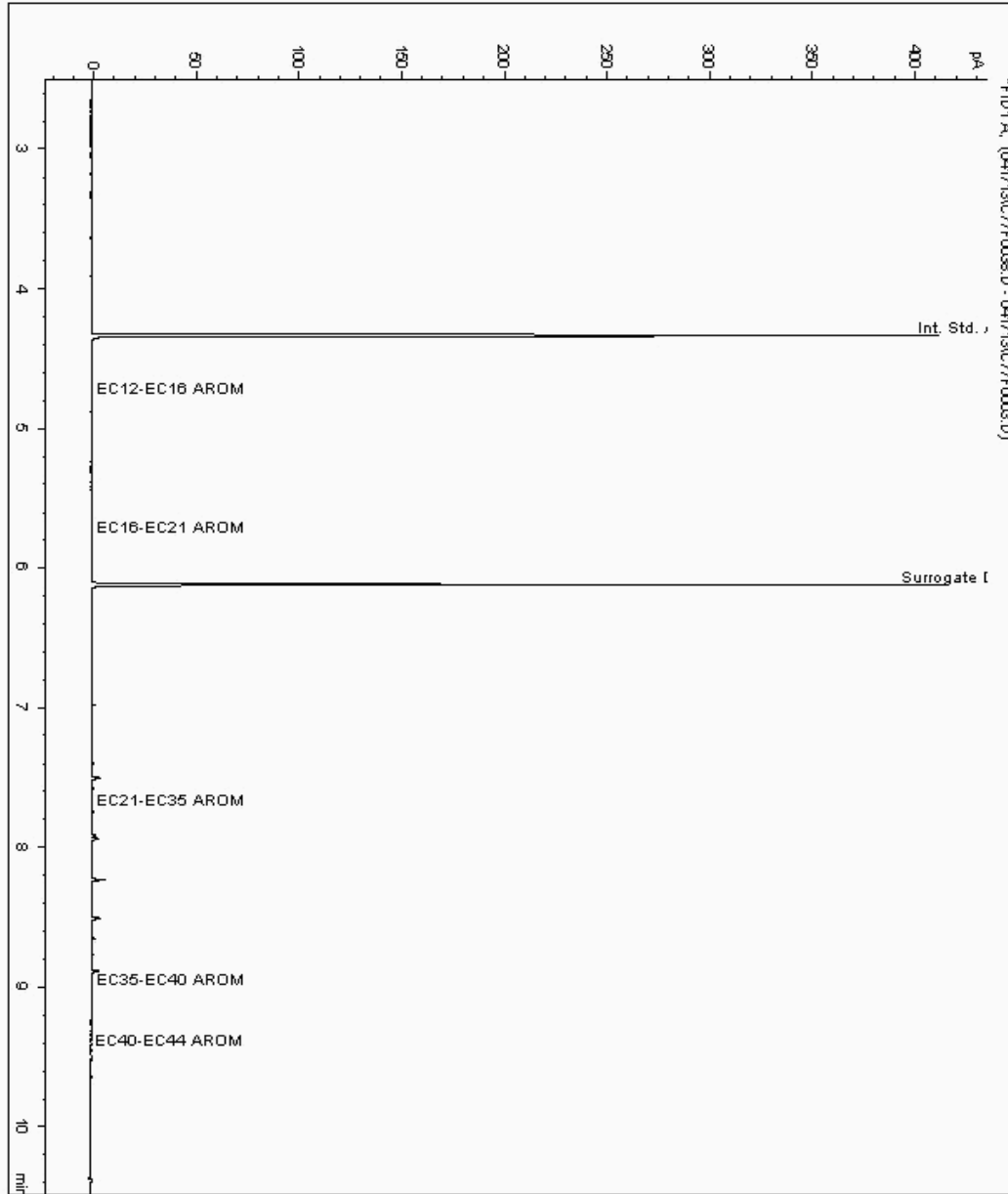
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7247628
Sample ID : VA129

Depth : 2.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6952885-7247628
Date Acquired : 17/04/2013 20:22:38 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.999





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

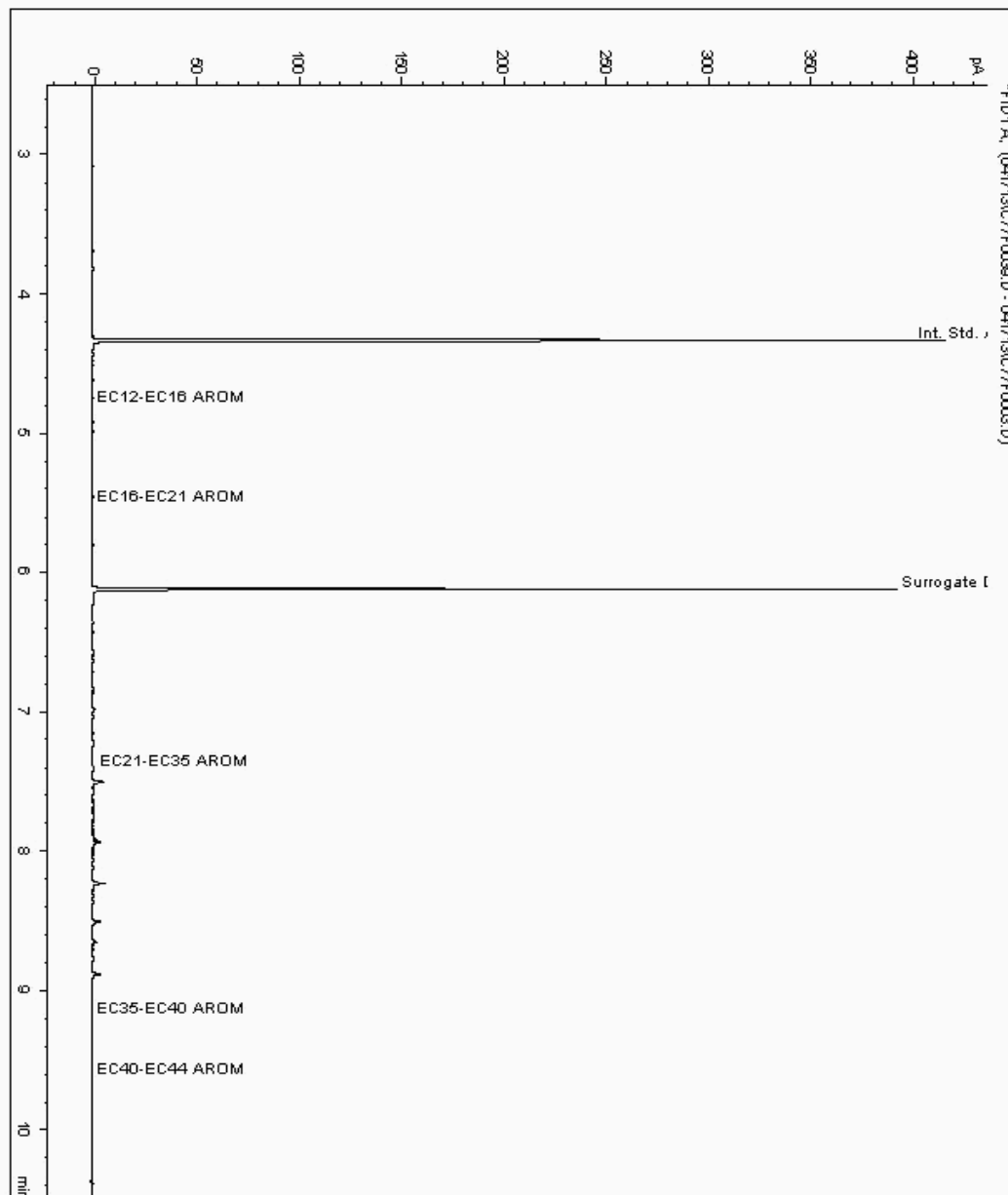
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7247640
Sample ID : VA125

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6952844-7247640
Date Acquired : 17/04/2013 20:43:45 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.022





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

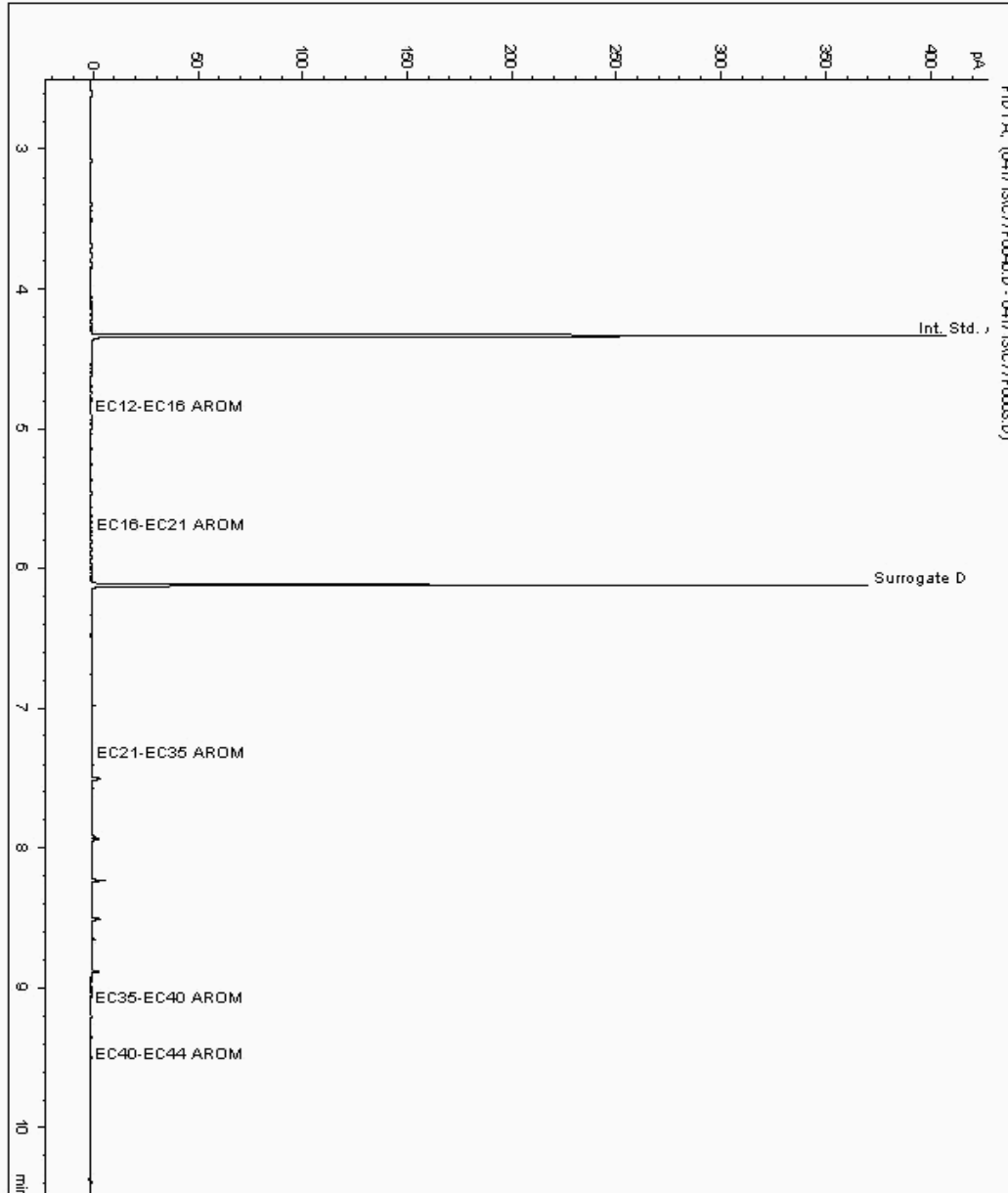
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7247659
Sample ID : VA124

Depth : 6.70

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6952835-7247659
Date Acquired : 17/04/2013 21:04:52 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.026





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

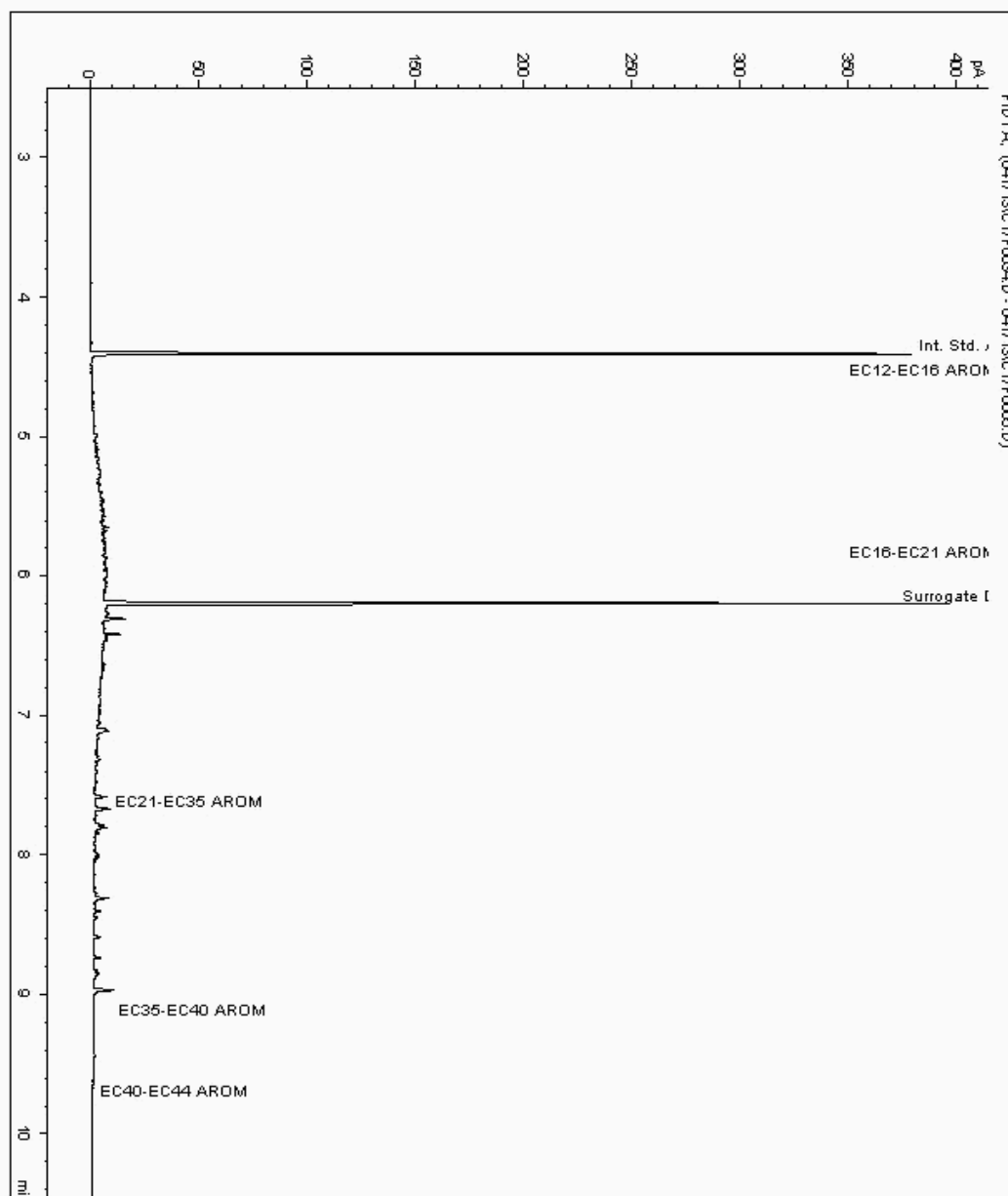
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7251271
Sample ID : VA127

Depth : 0.80

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6952866-7251271
Date Acquired : 18/04/2013 09:15:19 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.022





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

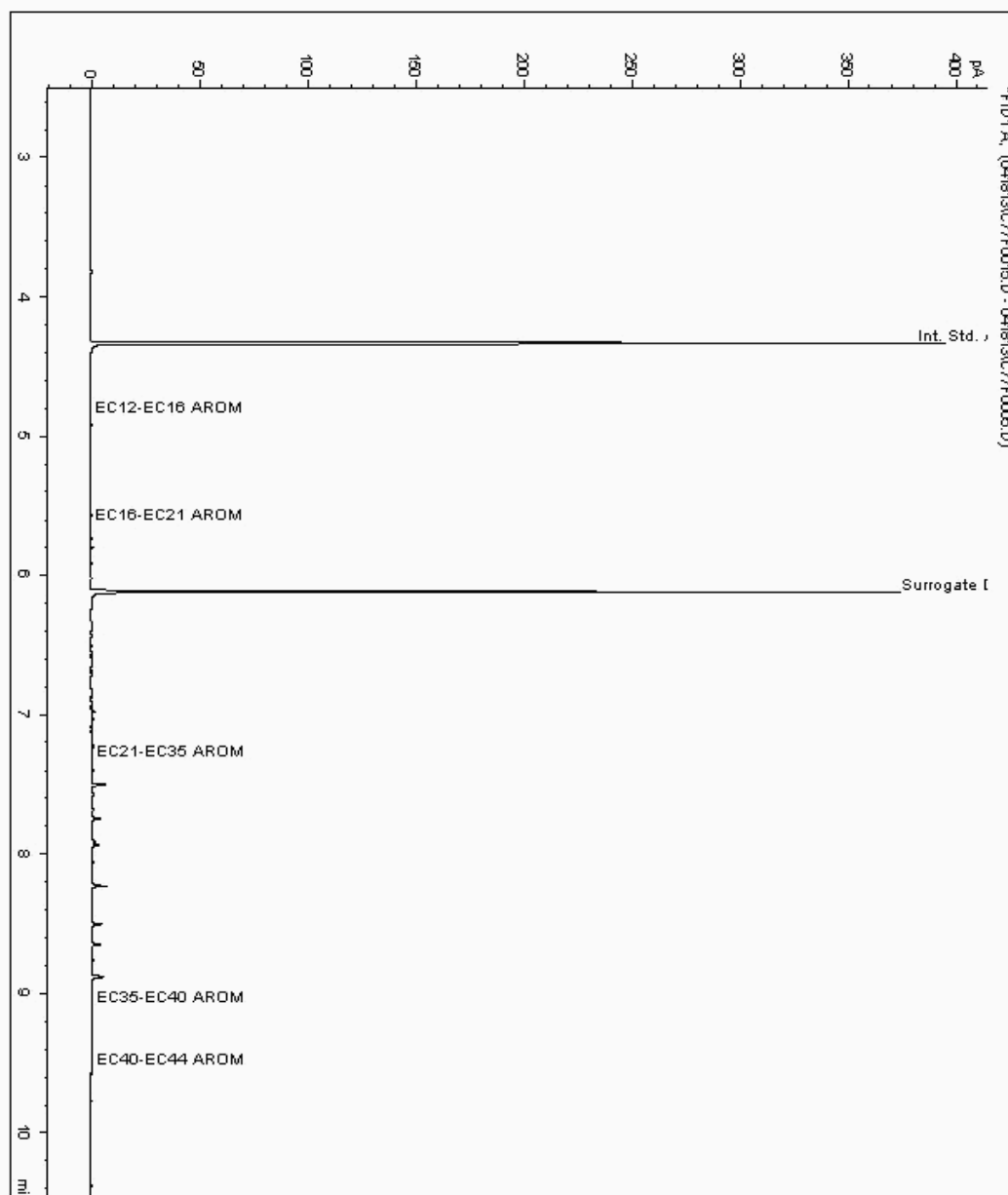
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7254163
Sample ID : BACKFILL03

Depth :

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6952915-7254163
Date Acquired : 18/04/2013 17:31:10 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.971





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

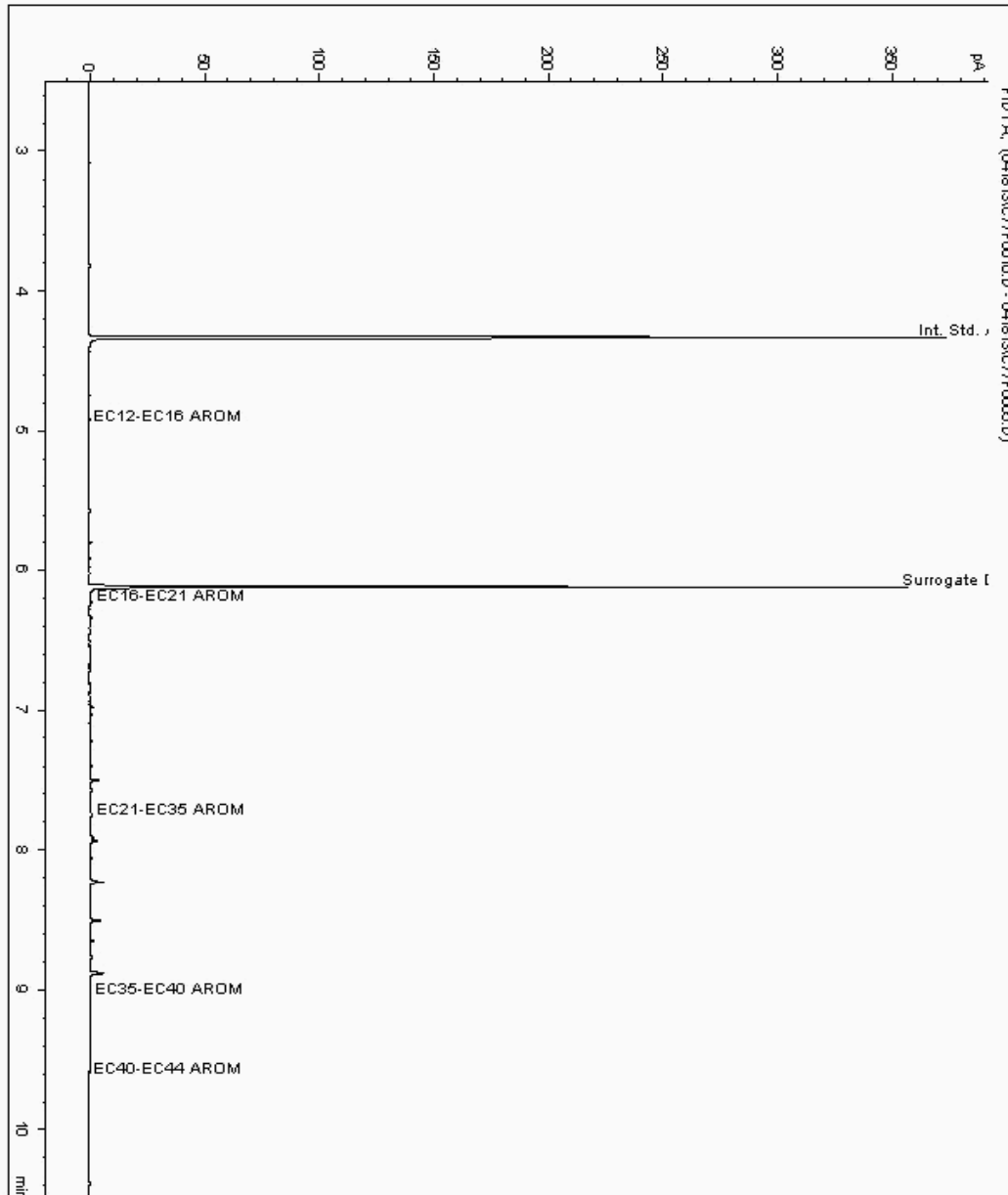
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7254176
Sample ID : BACKFILL02

Depth :

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6952905-7254176
Date Acquired : 18/04/2013 17:51:45 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.025





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

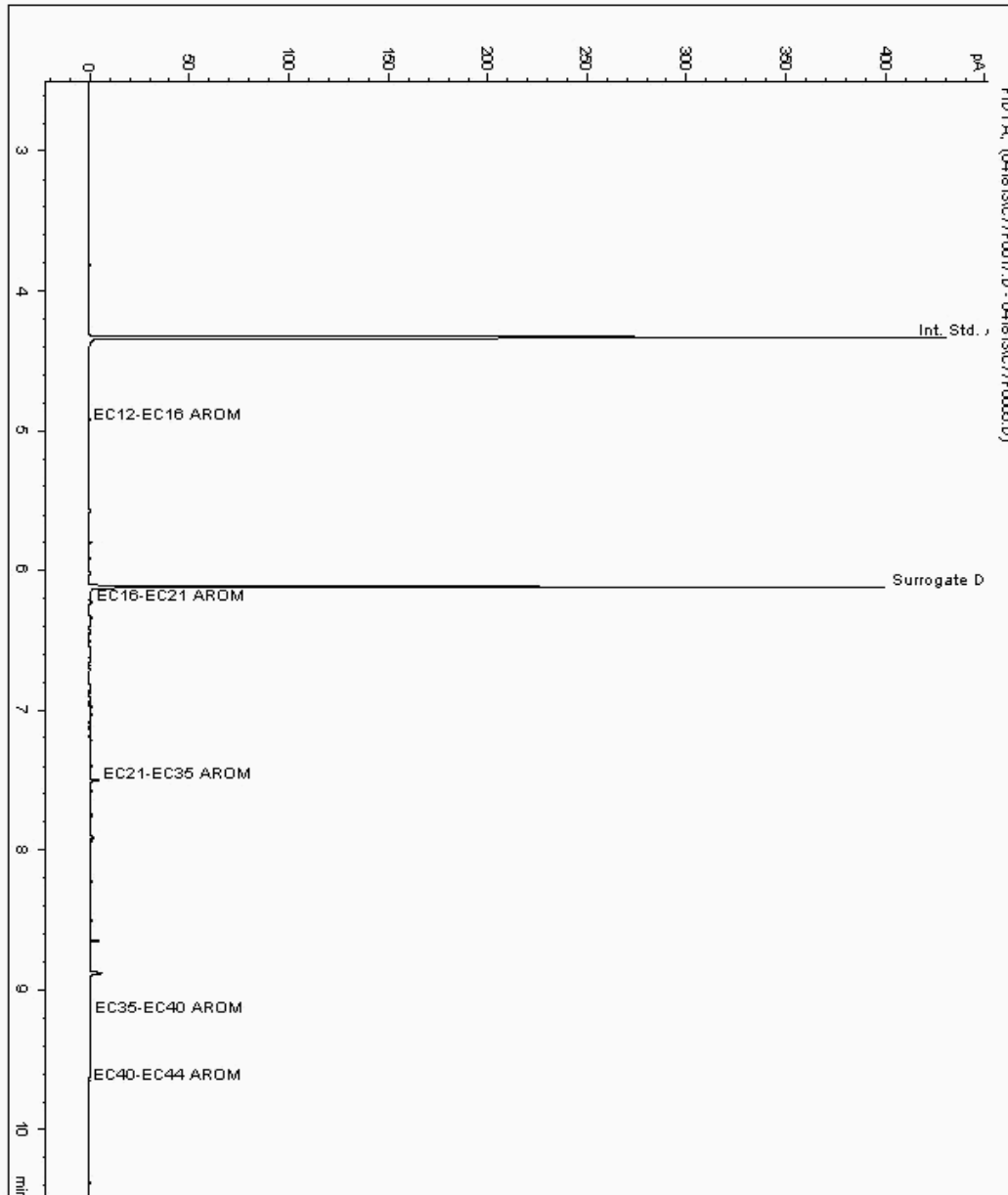
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7254296
Sample ID : BACKFILL01

Depth :

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6952895-7254296
Date Acquired : 18/04/2013 18:12:15 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.007





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

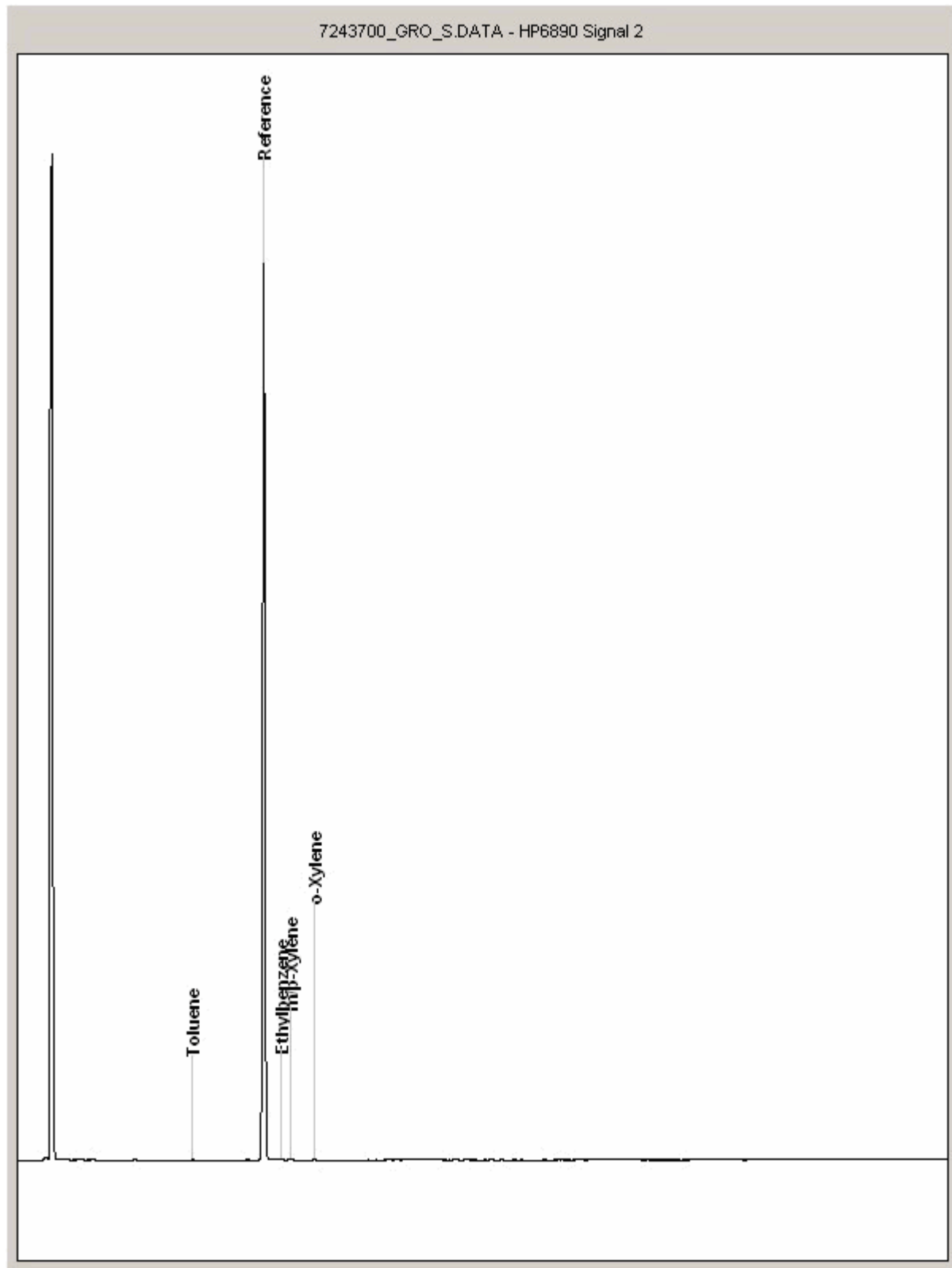
Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7243700
Sample ID : BACKFILL03

Depth :





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

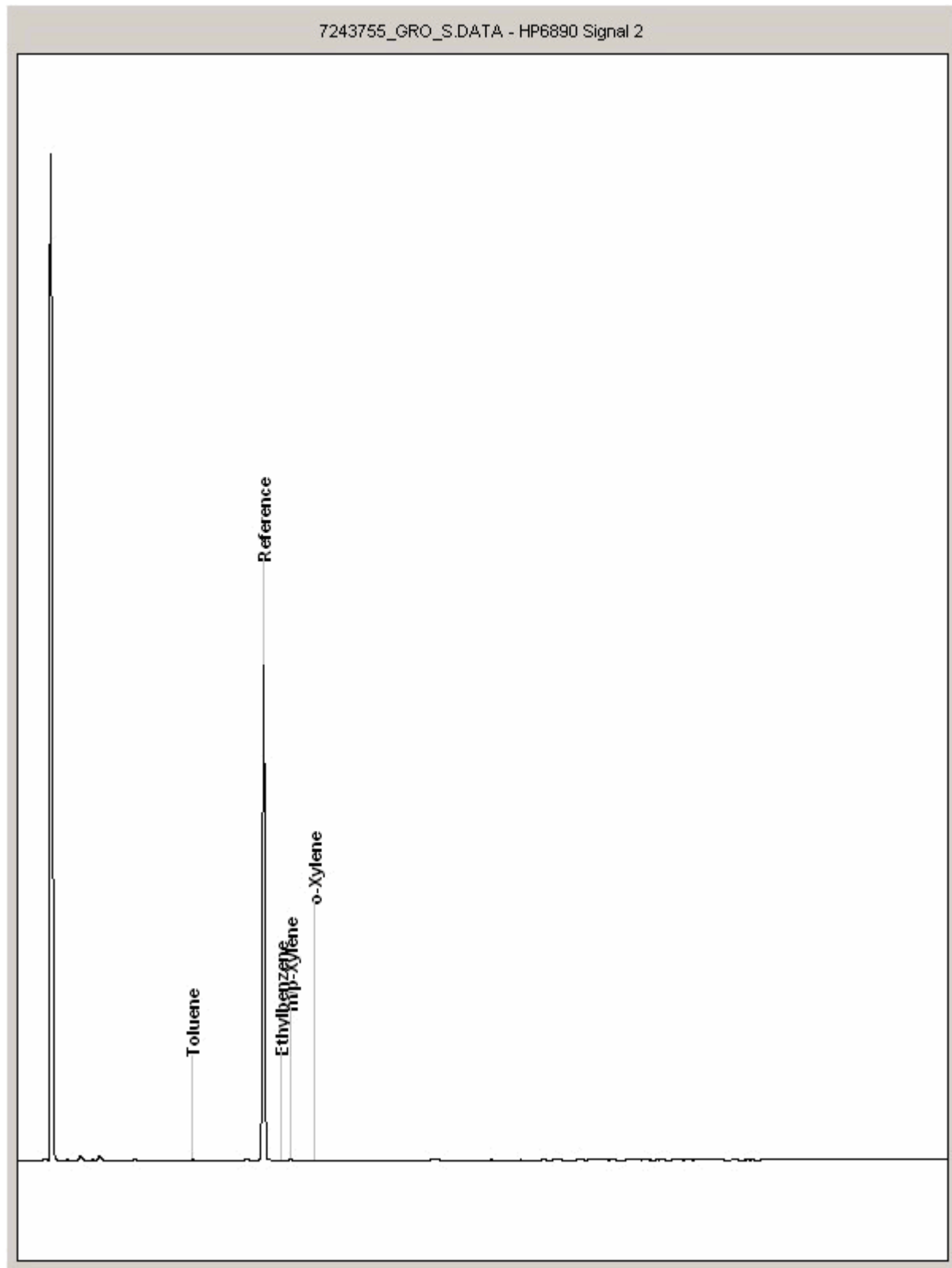
Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7243755
Sample ID : VA129

Depth : 2.00





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

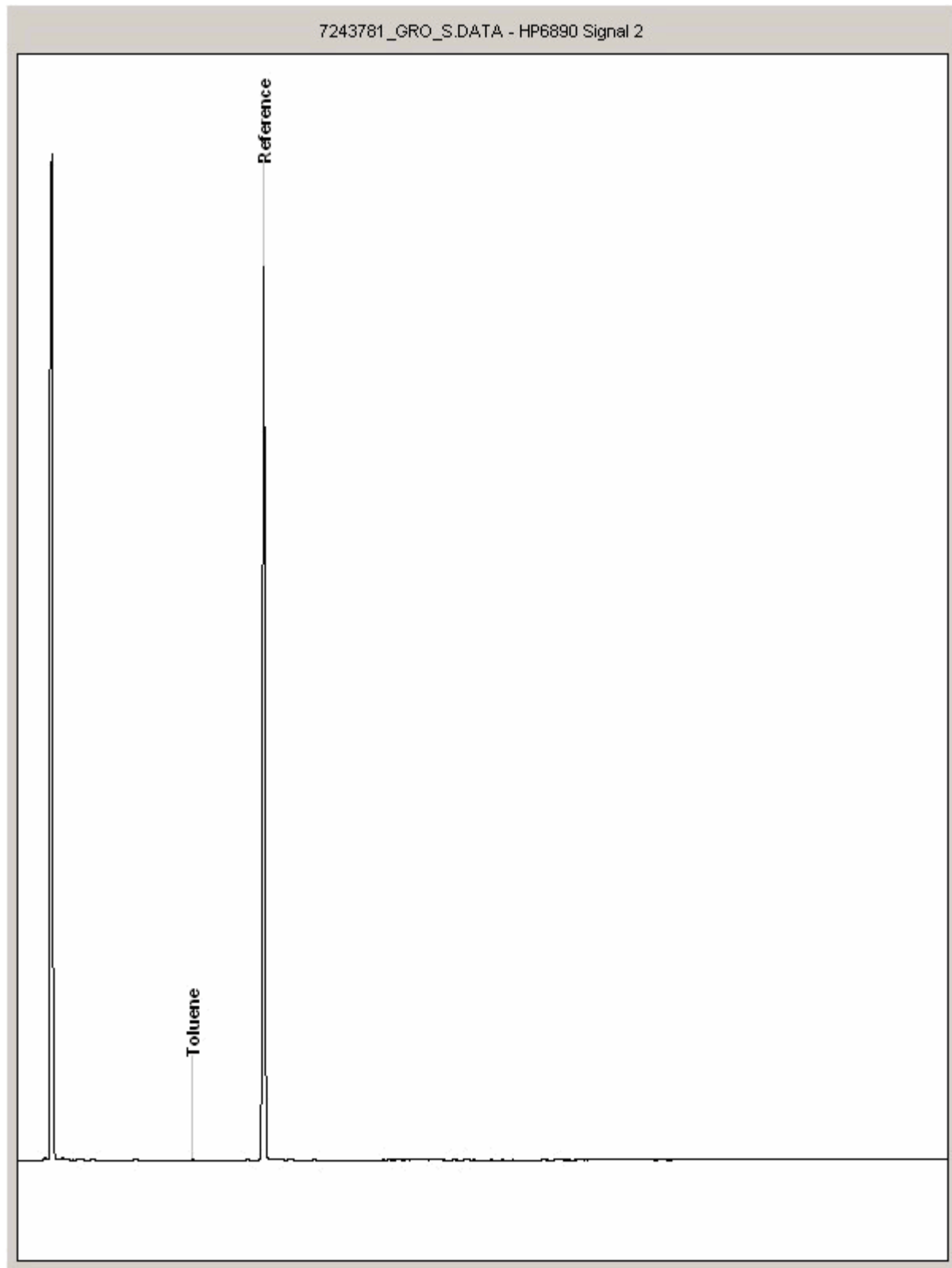
Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7243781
Sample ID : BACKFILL02

Depth :





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

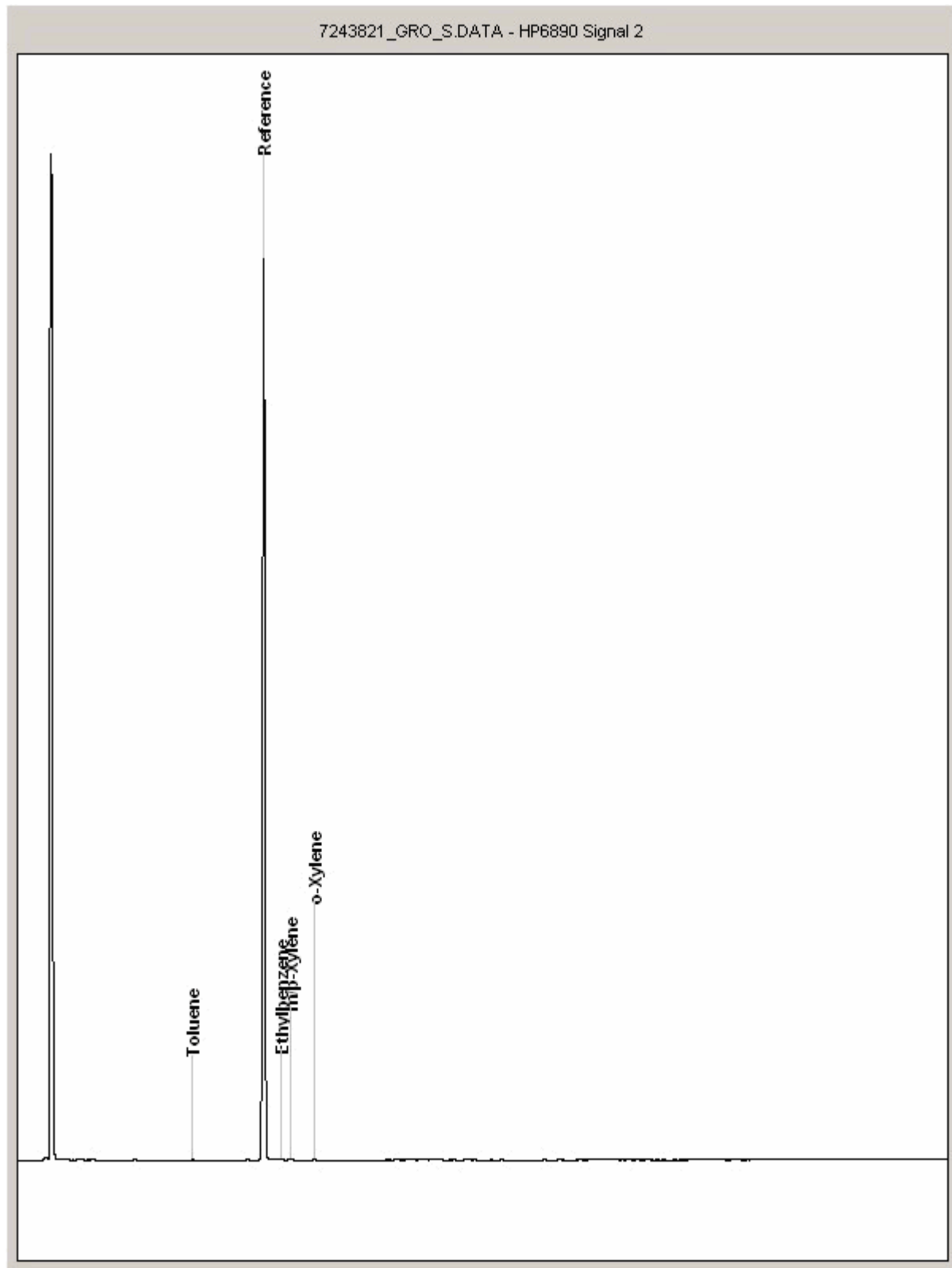
Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7243821
Sample ID : BACKFILL01

Depth :





CERTIFICATE OF ANALYSIS

SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

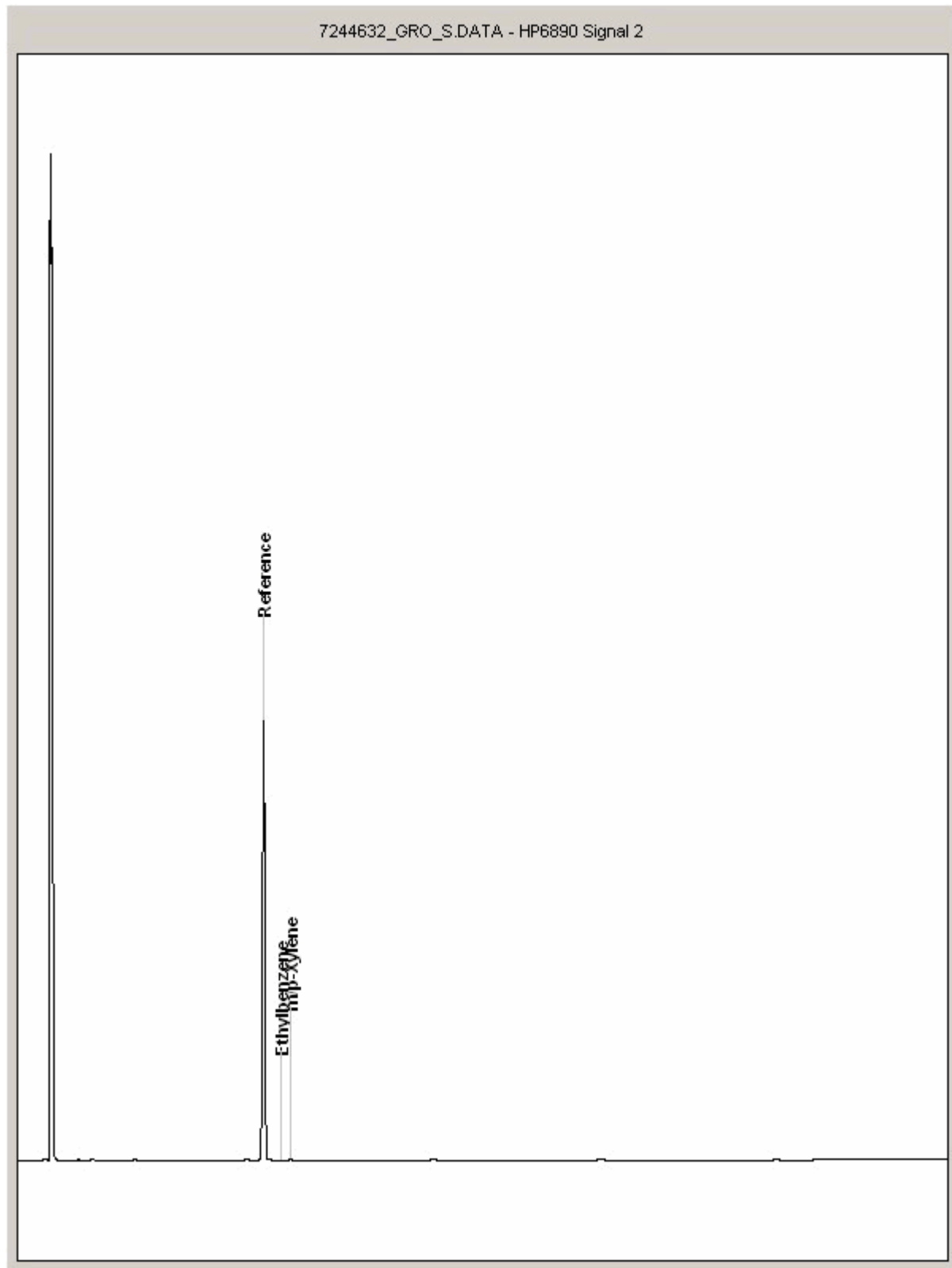
Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7244632
Sample ID : VA125

Depth : 3.00





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

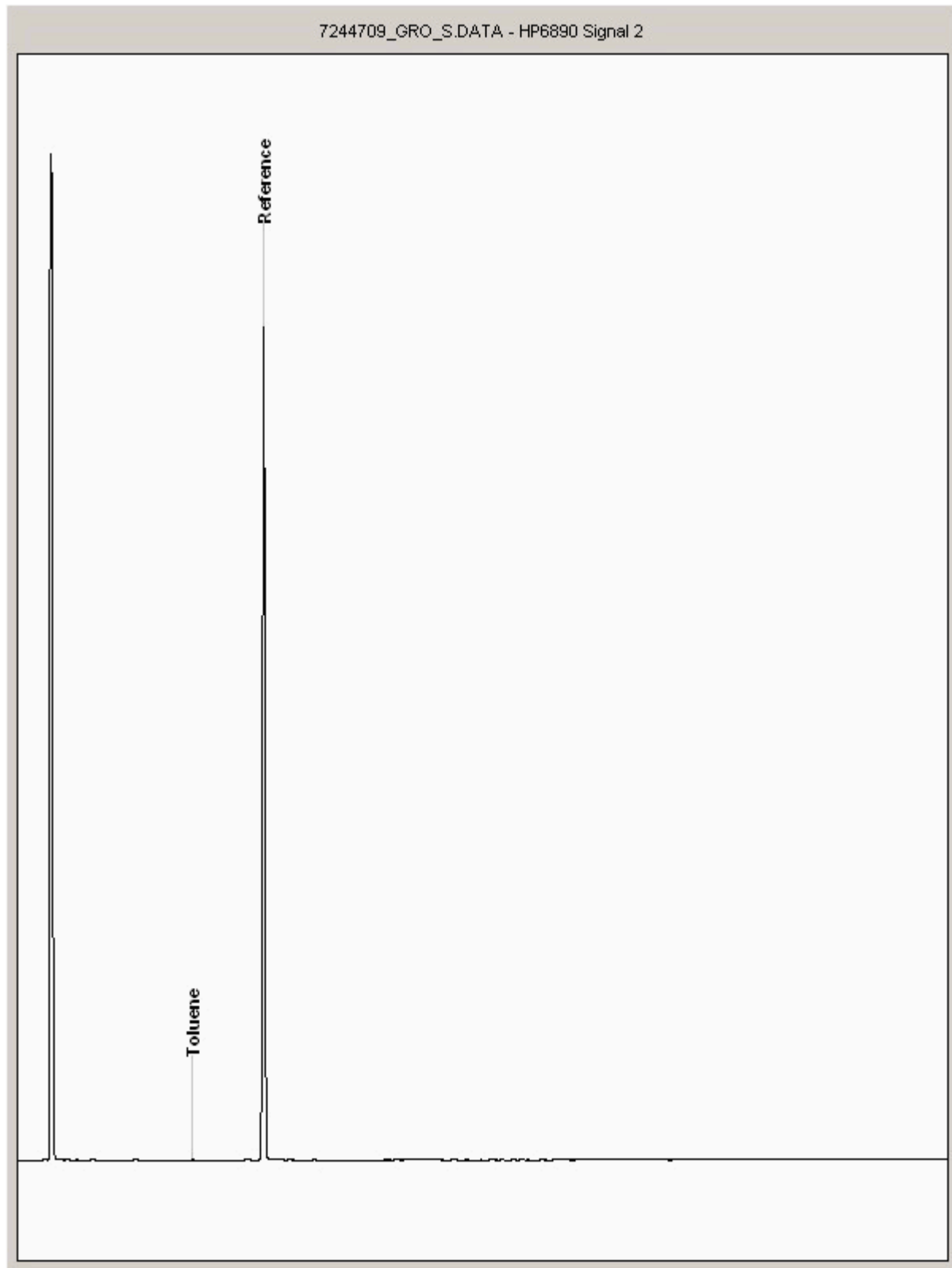
Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7244709
Sample ID : VA127

Depth : 0.80





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

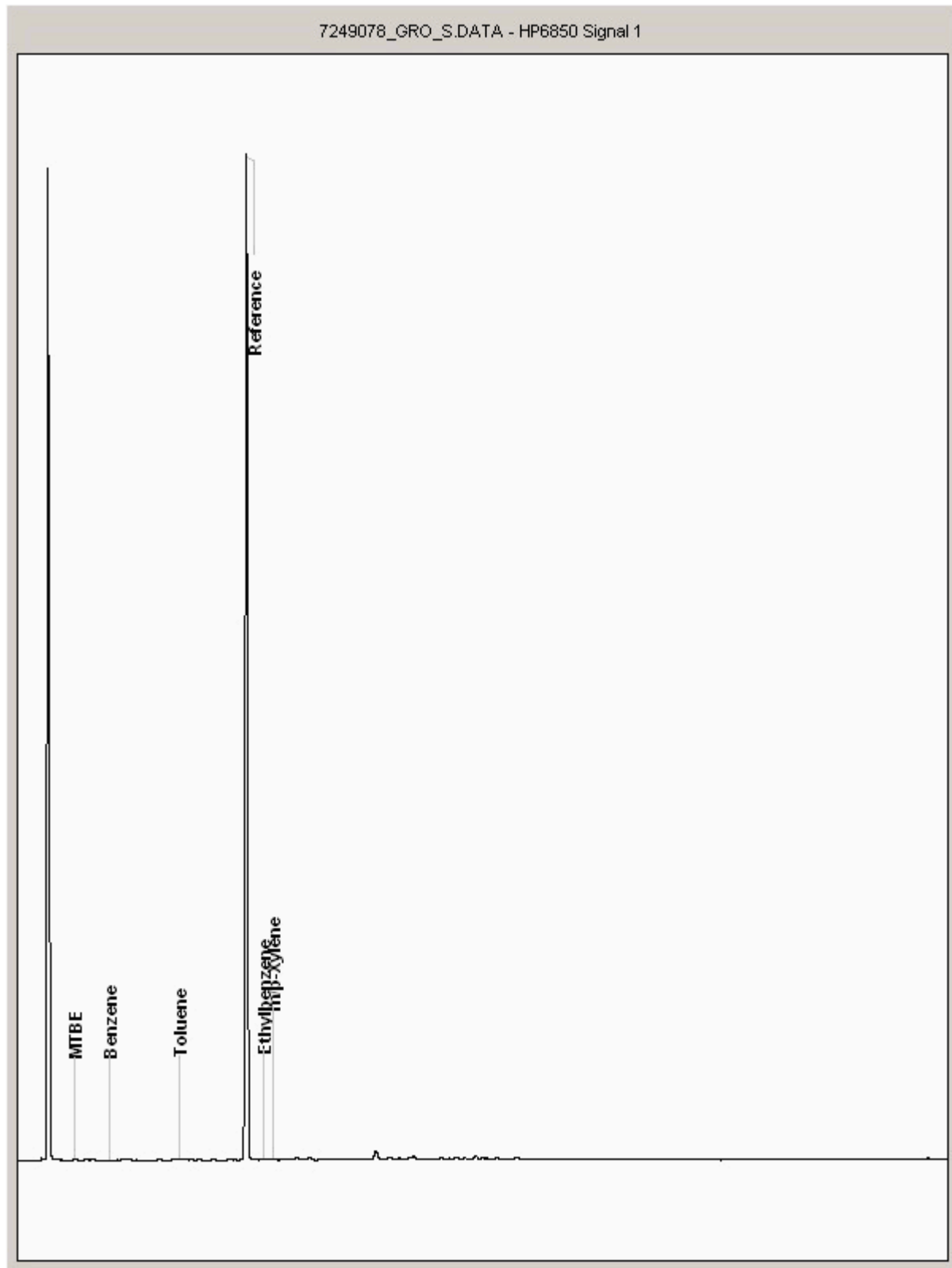
Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7249078
Sample ID : VA128

Depth : 1.50





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

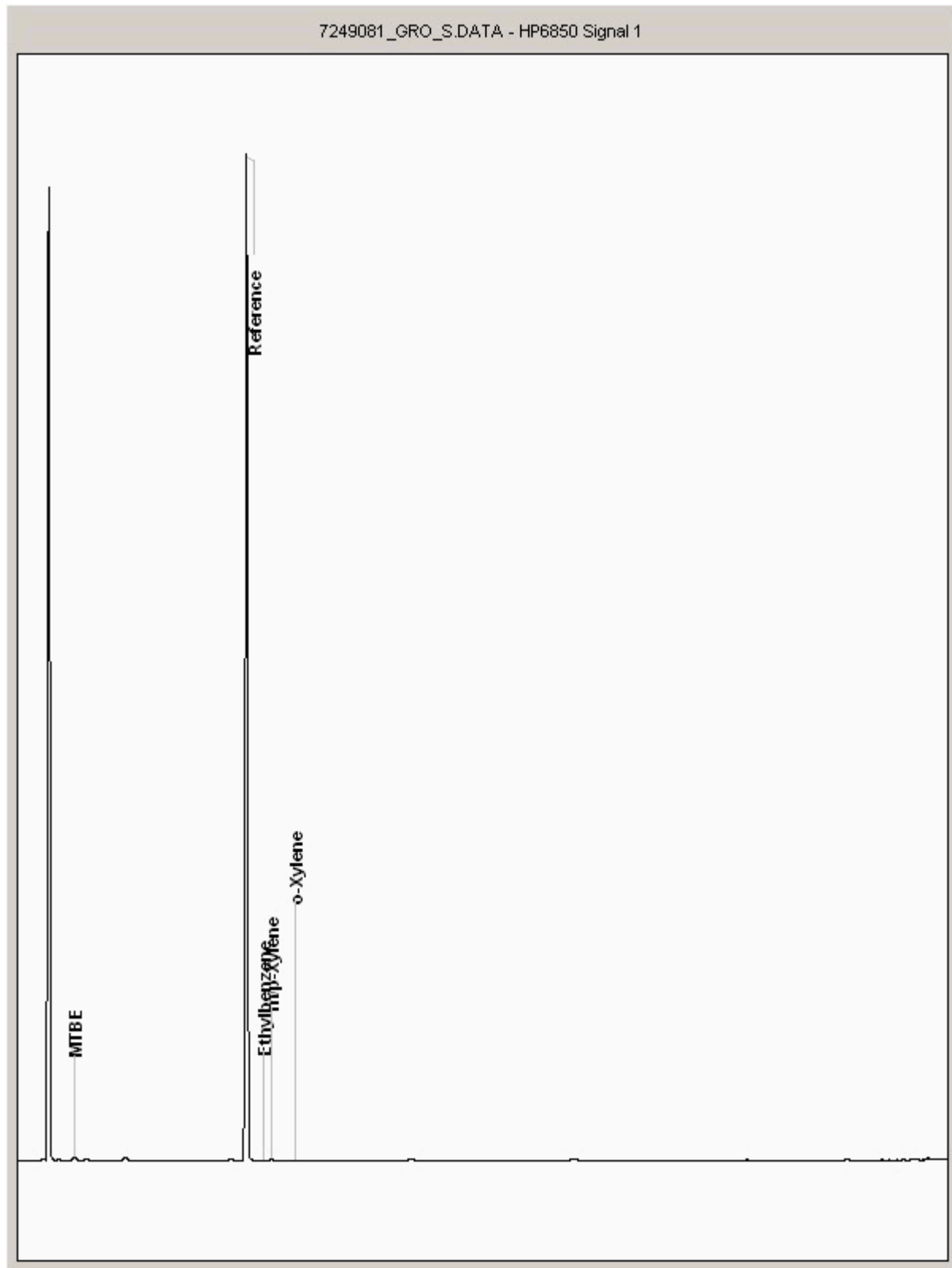
Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7249081
Sample ID : VA124

Depth : 6.70





SDG: 130413-40
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

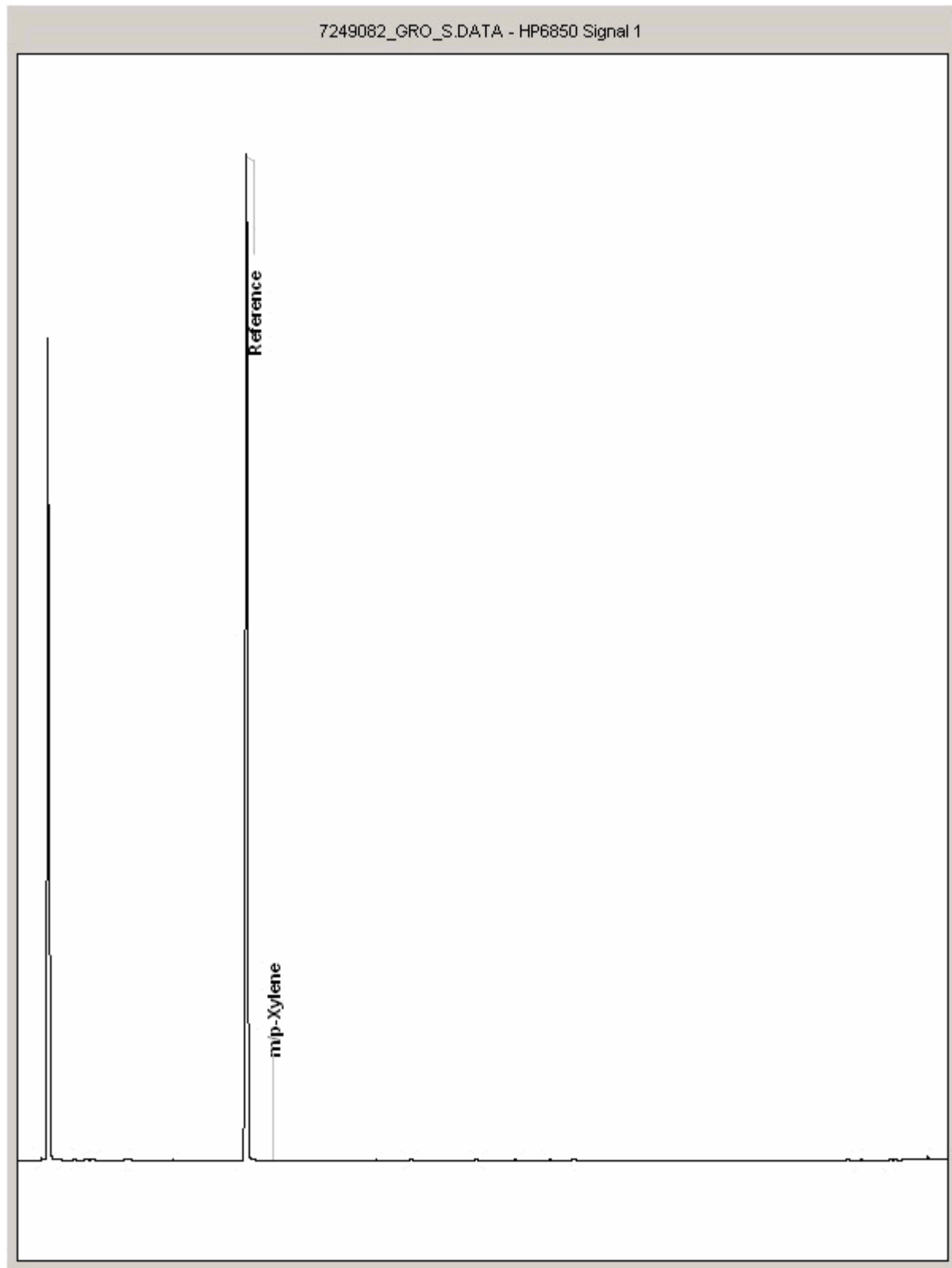
Order Number:
Report Number: 221579
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7249082
Sample ID : VA126

Depth : 3.00





SDG:	130413-40	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	221579
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Appendix General

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICS and SVOC TICS.
2. 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 2 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. ALcontrol Laboratories 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. 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 for wet tests reported on a dry weight basis are not corrected for moisture content.
13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.
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 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.
21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.
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.

Sample Deviations

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Holding time exceeded before sample received
§	Sampled on date not provided
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to sampled on date
&	Sample Holding Time exceeded - Late arrival of instructions.

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.



URS Corporation Limited
St. George's House
2nd Floor
5 St. George's Road
Wimbledon
Greater London
SW19 4DR

Attention: Jocelyn Willis

CERTIFICATE OF ANALYSIS

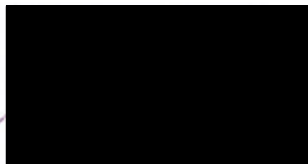
Date: 25 April 2013
Customer: H_URS_WIM
Sample Delivery Group (SDG): 130416-35
Your Reference: 46370079
Location: Shell Hitchin
Report No: 221923

We received 4 samples on Tuesday April 16, 2013 and 4 of these samples were scheduled for analysis which was completed on Thursday April 25, 2013. 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.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Sonia McWhan

Operations Manager





SDG:	130416-35	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	221923
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
7246218	VA130		1.20	15/04/2013
7246219	VA131		1.20	15/04/2013
7246220	VA132		1.20	15/04/2013
7246222	VA133		1.20	15/04/2013

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



SDG: 130416-35
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221923
Superseded Report:

SOLID**Results Legend**

Test



No Determination Possible

Lab Sample No(s)**Customer Sample Reference****AGS Reference****Depth (m)****Container**7246218
7246219
7246220
7246222VA130
VA131
VA132
VA1331.20
1.20
1.20
1.20250g Amber Jar (AL)
250g Amber Jar (AL)
250g Amber Jar (AL)
250g Amber Jar (AL)
60g VOC (ALE215)
60g VOC (ALE215)
60g VOC (ALE215)
60g VOC (ALE215)

Asbestos ID in Solid Samples

All

NDPs: 0
Tests: 1

X

Asbestos Quantification - Full

All

NDPs: 0
Tests: 1

X

EPH CWG (Aliphatic) GC (S)

All

NDPs: 0
Tests: 4

X

X

X

X

EPH CWG (Aromatic) GC (S)

All

NDPs: 0
Tests: 4

X

X

X

X

GRO by GC-FID (S)

All

NDPs: 0
Tests: 4

X

X

X

X

Oxygenates (S)

All

NDPs: 0
Tests: 4

X

X

X

X

PAH by GCMS

All

NDPs: 0
Tests: 2

X

X

Sample description

All

NDPs: 0
Tests: 4

X

X

X

X

Total Organic Carbon

All

NDPs: 0
Tests: 2

X

X

VOC MS (S)

All

NDPs: 0
Tests: 4

X

X

X

X



SDG:	130416-35	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	221923
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions	Inclusions 2
7246218	VA130	1.20	Dark Brown	Sand	0.1 - 2 mm	None	None
7246219	VA131	1.20	Dark Brown	Sand	0.1 - 2 mm	Stones	None
7246220	VA132	1.20	Light Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Crushed Brick
7246222	VA133	1.20	Light Brown	Clay Loam	0.063 - 0.1 mm	None	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.

Order Number:
Report Number: 221923
Superseded Report:

08:23:16 25/04/2013

SDG: 130416-35
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221923
Superseded Report:

EPH CWG (Aliphatic) GC (S)

[illegible]

Order Number:
Report Number: 221923
Superseded Report:

Page 7 of 30

Order Number:
Report Number: 221923
Superseded Report:

Page 8 of 30

Order Number:
Report Number: 221923
Superseded Report:

Page 9 of 30

Order Number:
Report Number: 221923
Superseded Report:

Page 10 of 30



SDG: 130416-35
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221923
Superseded Report:

Asbestos Identification - Soil

		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	VA132 1.20 SOLID 15/04/2013 00:00:00 130416-35 7246220 TM048	19/04/13	Chris Swindells	Loose fibres in soil	Trace (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Asbestos Quantification - Full

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	VA132 1.20 SOLID 15/04/2013 00:00:00 130416-35 7246220 TM 304	Chrysotile (#)	N/C	0.0048 (#)	<0.001 (#)	0.0052 (#)



SDG:	130416-35	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	221923
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample ¹	Surrogate Corrected
ASB_PREP				
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
TM 304				
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds 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		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		
TM288		Determination of Oxygenates in Soils by Headspace/GC-MS		

¹ Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.



SDG:	130416-35	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	221923
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Test Completion Dates

Lab Sample No(s)	7246218	7246219	7246220	7246222
Customer Sample Ref.	VA130	VA131	VA132	VA133
AGS Ref.				
Depth	1.20	1.20	1.20	1.20
Type	SOLID	SOLID	SOLID	SOLID

Asbestos ID in Solid Samples			19-Apr-2013	
Asbestos Quantification - Full			25-Apr-2013	
EPH CWG (Aliphatic) GC (S)	19-Apr-2013	19-Apr-2013	19-Apr-2013	19-Apr-2013
EPH CWG (Aromatic) GC (S)	19-Apr-2013	19-Apr-2013	19-Apr-2013	19-Apr-2013
GRO by GC-FID (S)	19-Apr-2013	19-Apr-2013	17-Apr-2013	19-Apr-2013
Oxygenates (S)	23-Apr-2013	23-Apr-2013	23-Apr-2013	23-Apr-2013
PAH by GCMS		18-Apr-2013		18-Apr-2013
Sample description	16-Apr-2013	16-Apr-2013	16-Apr-2013	16-Apr-2013
Total Organic Carbon		19-Apr-2013		19-Apr-2013
VOC MS (S)	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013



SDG: 130416-35
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221923
Superseded Report:

ASSOCIATED AQC DATA

EPH CWG (Aliphatic) GC (S)

Component	Method Code	QC 71	QC 76
Total Aliphatics >C12-C35	TM173	96.25 72.36 : 109.88	91.46 72.37 : 107.25

EPH CWG (Aromatic) GC (S)

Component	Method Code	QC 71	QC 76
Total Aromatics >EC12-EC35	TM173	86.67 79.85 : 121.16	92.67 73.70 : 120.82

GRO by GC-FID (S)

Component	Method Code	QC 72	QC 76
Benzene by GC (Moisture Corrected)	TM089	91.0 80.15 : 118.91	99.0 80.15 : 118.91
Ethylbenzene by GC (Moisture Corrected)	TM089	96.0 79.83 : 118.16	99.5 79.83 : 118.16
m & p Xylene by GC (Moisture Corrected)	TM089	97.0 78.35 : 120.05	100.25 78.35 : 120.05
MTBE GC-FID (Moisture Corrected)	TM089	94.0 80.54 : 120.94	104.5 80.54 : 120.94
o Xylene by GC (Moisture Corrected)	TM089	97.0 80.90 : 117.77	100.5 80.90 : 117.77
QC	TM089	121.56 85.99 : 125.08	123.92 40.00 : 160.00
Toluene by GC (Moisture Corrected)	TM089	93.5 81.82 : 117.25	98.5 81.82 : 117.25

Oxygenates (S)

Component	Method Code	QC 79
Benzene raw	TM288	95.5 77.94 : 128.84
Diisopropyl ether raw	TM288	95.75 78.68 : 128.65
Ethanol raw	TM288	113.0 56.39 : 148.67
Ethylbenzene raw	TM288	99.0 78.18 : 122.27
o-Xylene raw	TM288	92.5 78.38 : 109.16
p/m-Xylene raw	TM288	100.63 80.22 : 110.48
tert Butanol raw	TM288	122.0 62.51 : 145.03
tert-amyl methyl ether raw	TM288	96.75 71.22 : 127.95



SDG: 130416-35
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221923
Superseded Report:

Oxygenates (S)

		QC 79
tert-butyl ethyl ether raw	TM288	95.75 64.00 : 136.00
tert-butyl methyl ether raw	TM288	98.5 83.50 : 129.91
Toluene raw	TM288	89.75 75.97 : 110.53

PAH by GCMS

Component	Method Code	QC 79
Acenaphthene	TM218	91.5 78.75 : 116.25
Acenaphthylene	TM218	81.5 76.52 : 106.41
Anthracene	TM218	84.5 83.05 : 105.46
Benz(a)anthracene	TM218	92.0 82.29 : 116.68
Benzo(a)pyrene	TM218	90.5 79.35 : 121.65
Benzo(b)fluoranthene	TM218	92.5 83.08 : 116.21
Benzo(ghi)perylene	TM218	90.5 77.55 : 116.77
Benzo(k)fluoranthene	TM218	91.5 82.18 : 115.45
Chrysene	TM218	91.5 81.22 : 115.83
Dibenzo(ah)anthracene	TM218	91.0 78.23 : 120.68
Fluoranthene	TM218	89.0 80.71 : 115.30
Fluorene	TM218	89.0 79.10 : 112.21
Indeno(123cd)pyrene	TM218	92.0 78.53 : 122.18
Naphthalene	TM218	90.5 76.02 : 116.24
Phenanthrene	TM218	90.0 80.81 : 114.47
Pyrene	TM218	88.0 81.24 : 114.02

Total Organic Carbon

Component	Method Code	QC 70
Total Organic Carbon	TM132	88.53 86.66 : 109.87

VOC MS (S)



SDG: 130416-35
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221923
Superseded Report:

VOC MS (S)

Component	Method Code	QC 78
1,1,1,2-tetrachloroethane	TM116	95.8 77.50 : 124.09
1,1,1-Trichloroethane	TM116	101.2 86.36 : 114.14
1,1,2-Trichloroethane	TM116	112.0 93.86 : 131.61
1,1-Dichloroethane	TM116	103.6 83.96 : 125.03
1,2-Dichloroethane	TM116	106.2 88.93 : 122.77
1,4-Dichlorobenzene	TM116	107.4 89.32 : 117.26
2-Chlorotoluene	TM116	134.6 93.47 : 156.27
4-Chlorotoluene	TM116	130.6 92.38 : 149.49
Benzene	TM116	97.0 86.95 : 110.62
Carbon Disulphide	TM116	96.6 76.98 : 118.83
Carbontetrachloride	TM116	105.4 71.94 : 132.65
Chlorobenzene	TM116	99.4 78.33 : 118.74
Chloroform	TM116	102.2 69.66 : 148.03
Chloromethane	TM116	84.8 49.71 : 146.30
Cis-1,2-Dichloroethene	TM116	94.2 87.09 : 113.71
Dibromomethane	TM116	94.2 65.13 : 138.40
Dichloromethane	TM116	107.8 70.67 : 150.15
Ethylbenzene	TM116	93.4 84.09 : 110.87
Hexachlorobutadiene	TM116	164.8 62.74 : 176.60
Isopropylbenzene	TM116	85.4 75.72 : 100.29
Naphthalene	TM116	102.8 80.72 : 132.86
o-Xylene	TM116	90.0 76.04 : 111.23
p/m-Xylene	TM116	95.3 79.03 : 115.32
Sec-Butylbenzene	TM116	106.8 73.42 : 125.99
Tetrachloroethene	TM116	104.8 87.31 : 123.54
Toluene	TM116	91.0 83.48 : 106.73



SDG:	130416-35	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	221923
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

VOC MS (S)

		QC 78
Trichloroethene	TM116	95.0 86.48 : 110.46
Trichlorofluoromethane	TM116	100.8 82.57 : 120.95
Vinyl Chloride	TM116	110.6 62.58 : 154.52

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

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

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



SDG: 130416-35
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221923
Superseded Report:

Chromatogram

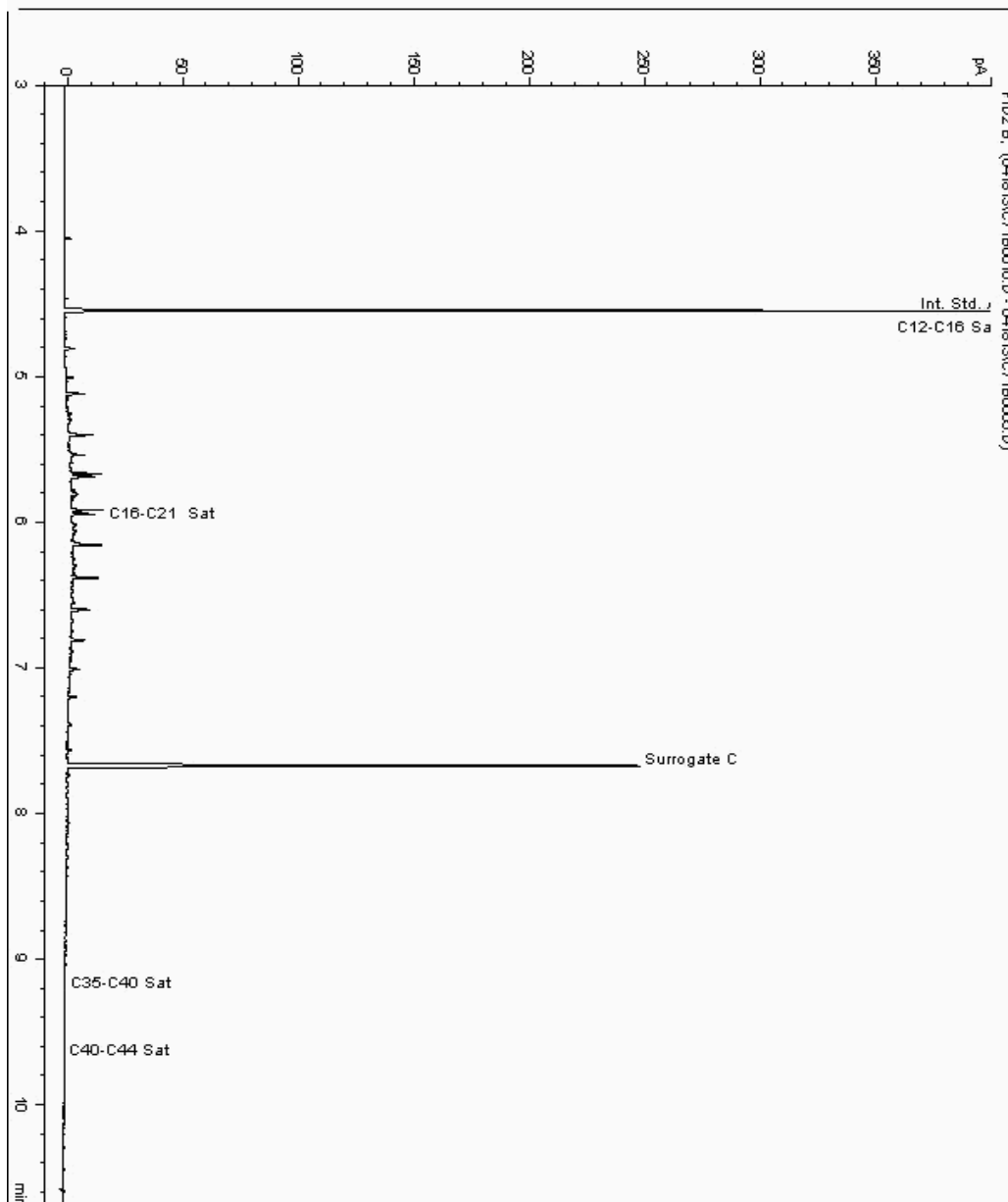
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7255538
Sample ID : VA132

Depth : 1.20

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6963857-7255538
Date Acquired : 18/04/2013 14:45:34 PM
Units : ppb
Dilution:





SDG: 130416-35
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221923
Superseded Report:

Chromatogram

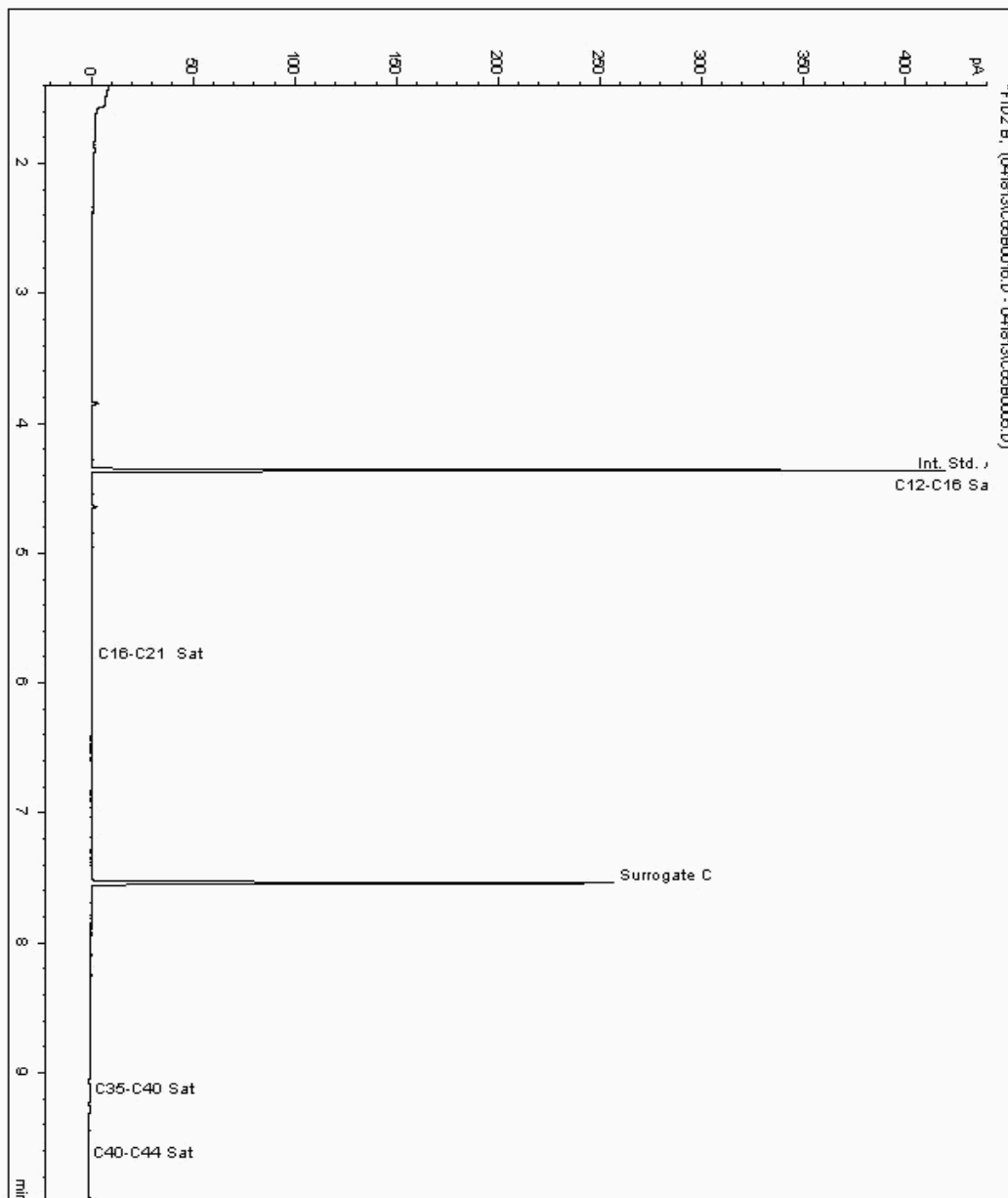
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7257722
Sample ID : VA130

Depth : 1.20

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6963813-7257722
Date Acquired : 18/04/13 16:21:59 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.031





SDG: 130416-35
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221923
Superseded Report:

Chromatogram

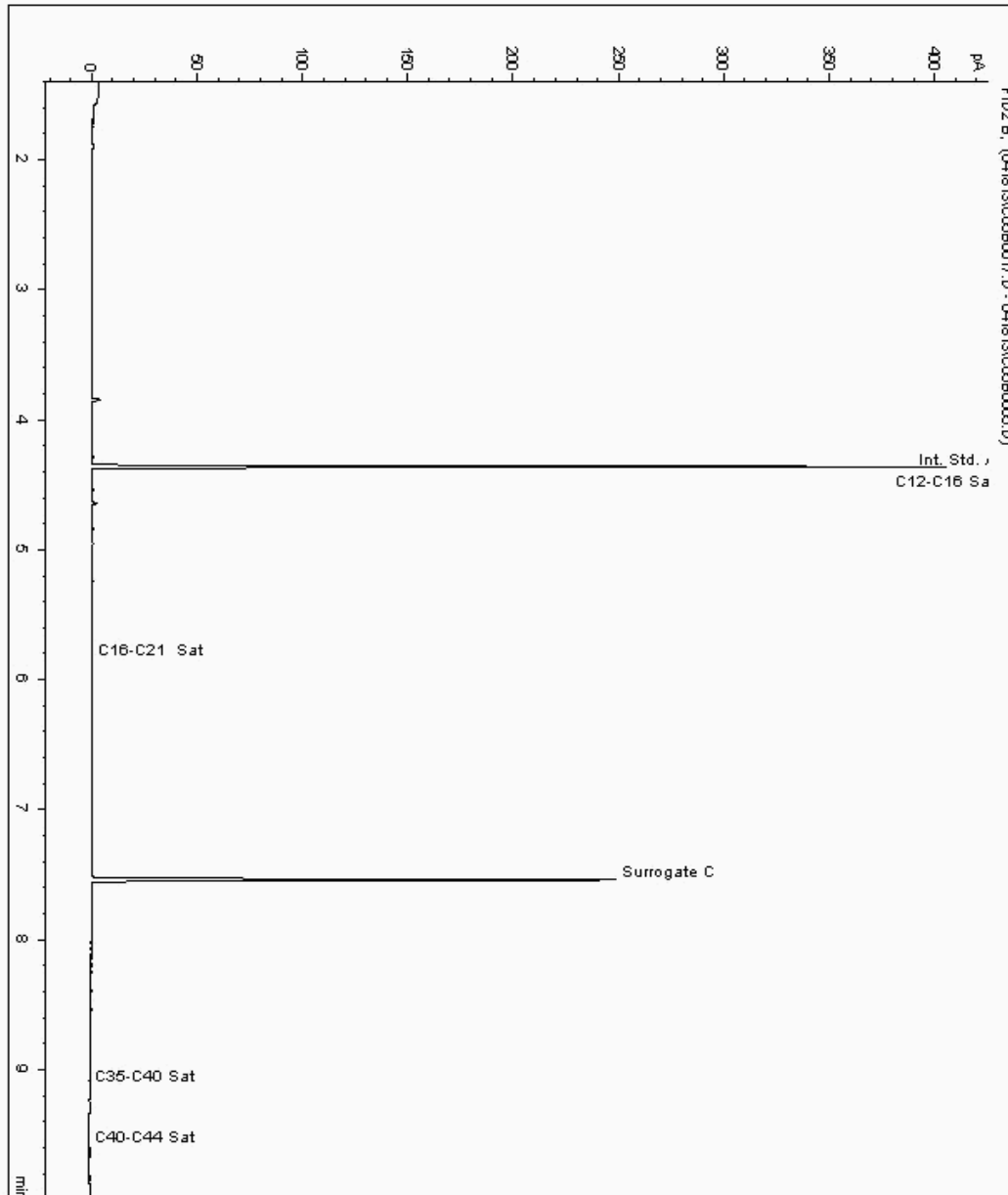
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7257727
Sample ID : VA133

Depth : 1.20

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6963876-7257727
Date Acquired : 18/04/13 16:42:54 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.973





SDG: 130416-35
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221923
Superseded Report:

Chromatogram

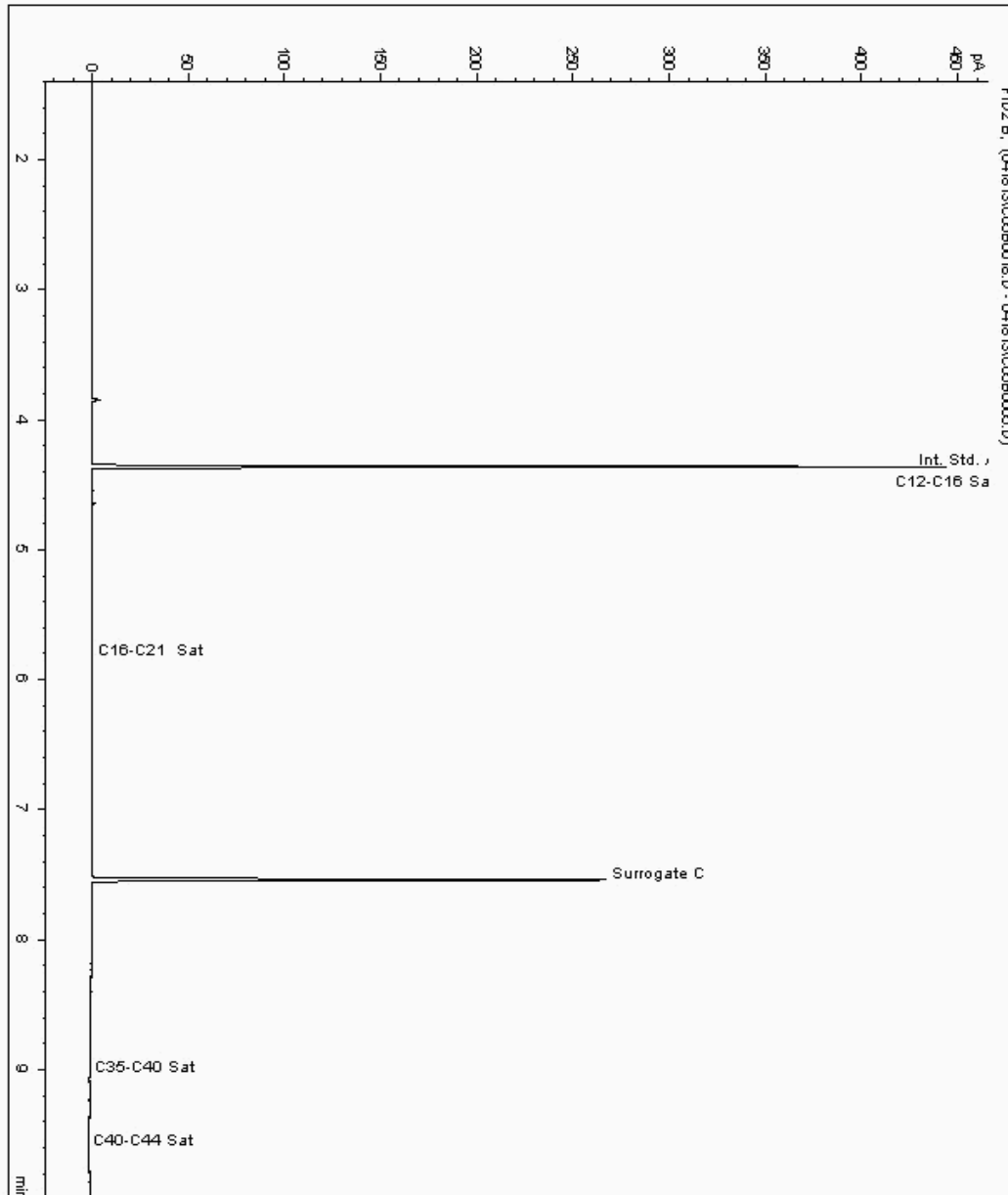
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7257745
Sample ID : VA131

Depth : 1.20

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6963835-7257745
Date Acquired : 18/04/13 17:03:51 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.042





SDG: 130416-35
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221923
Superseded Report:

Chromatogram

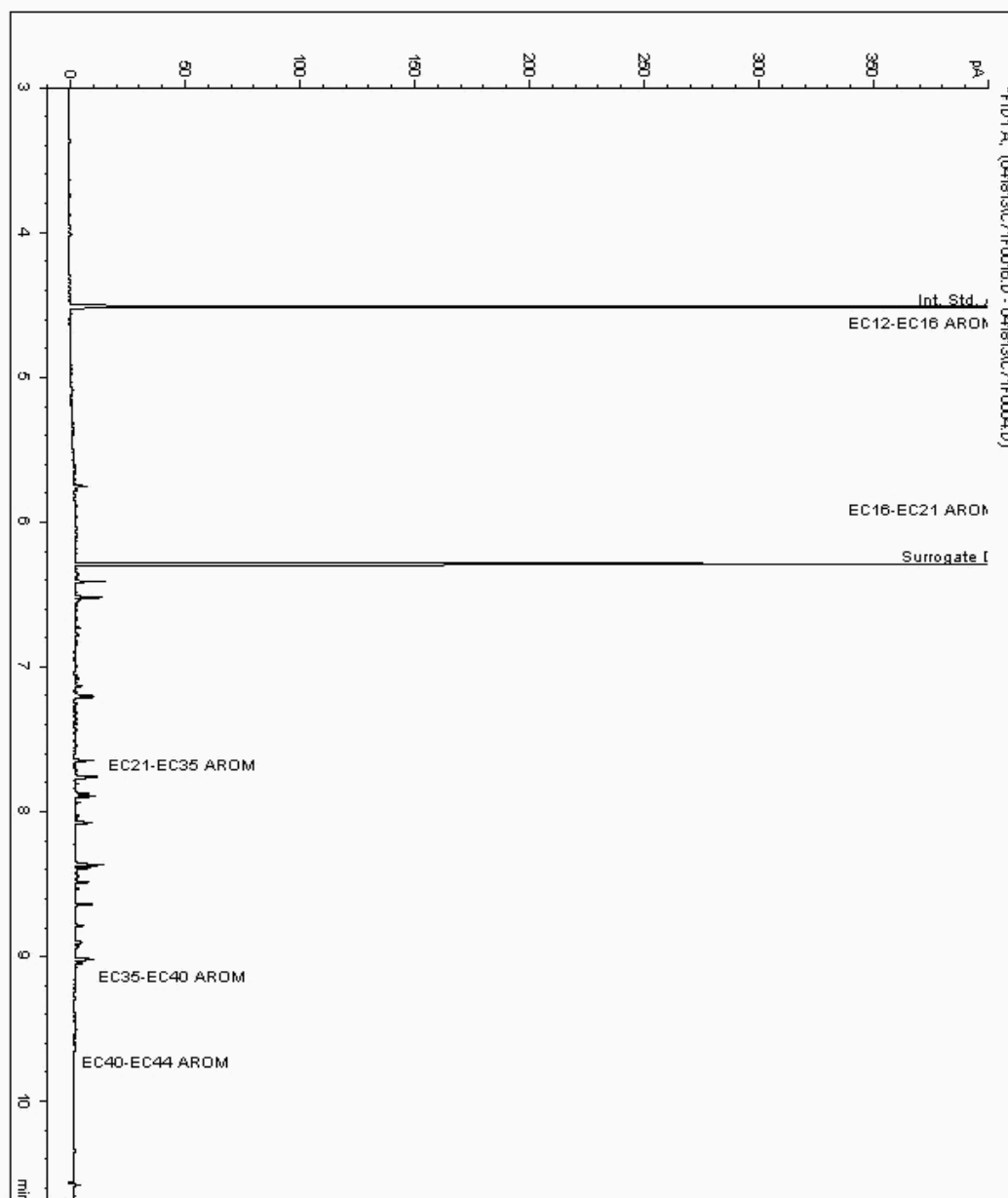
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7255538
Sample ID : VA132

Depth : 1.20

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6963858-7255538
Date Acquired : 18/04/2013 14:45:34 PM
Units : ppb
Dilution:





SDG: 130416-35
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221923
Superseded Report:

Chromatogram

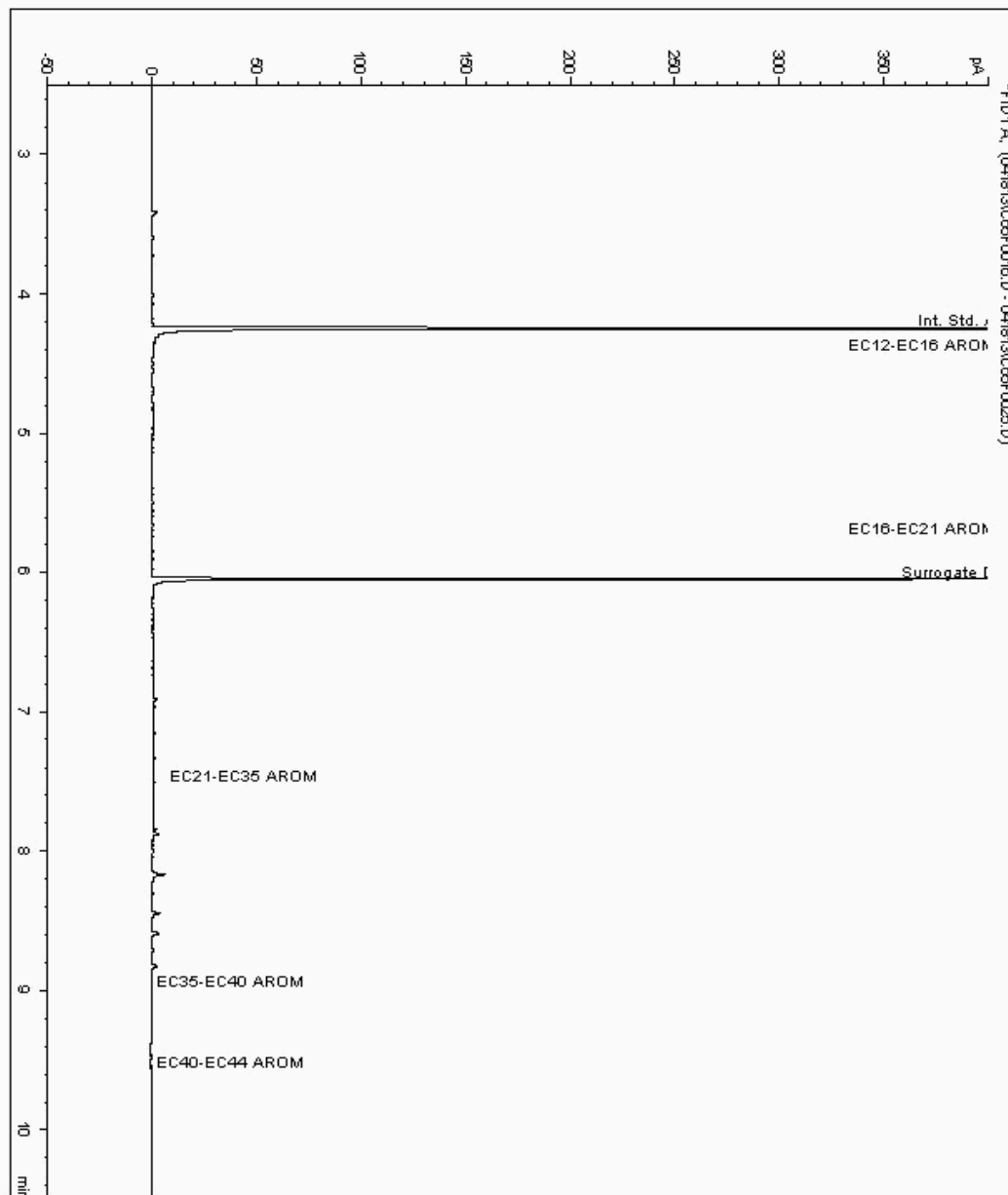
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7257722
Sample ID : VA130

Depth : 1.20

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6963814-7257722
Date Acquired : 18/04/13 16:21:59 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.031





SDG: 130416-35
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221923
Superseded Report:

Chromatogram

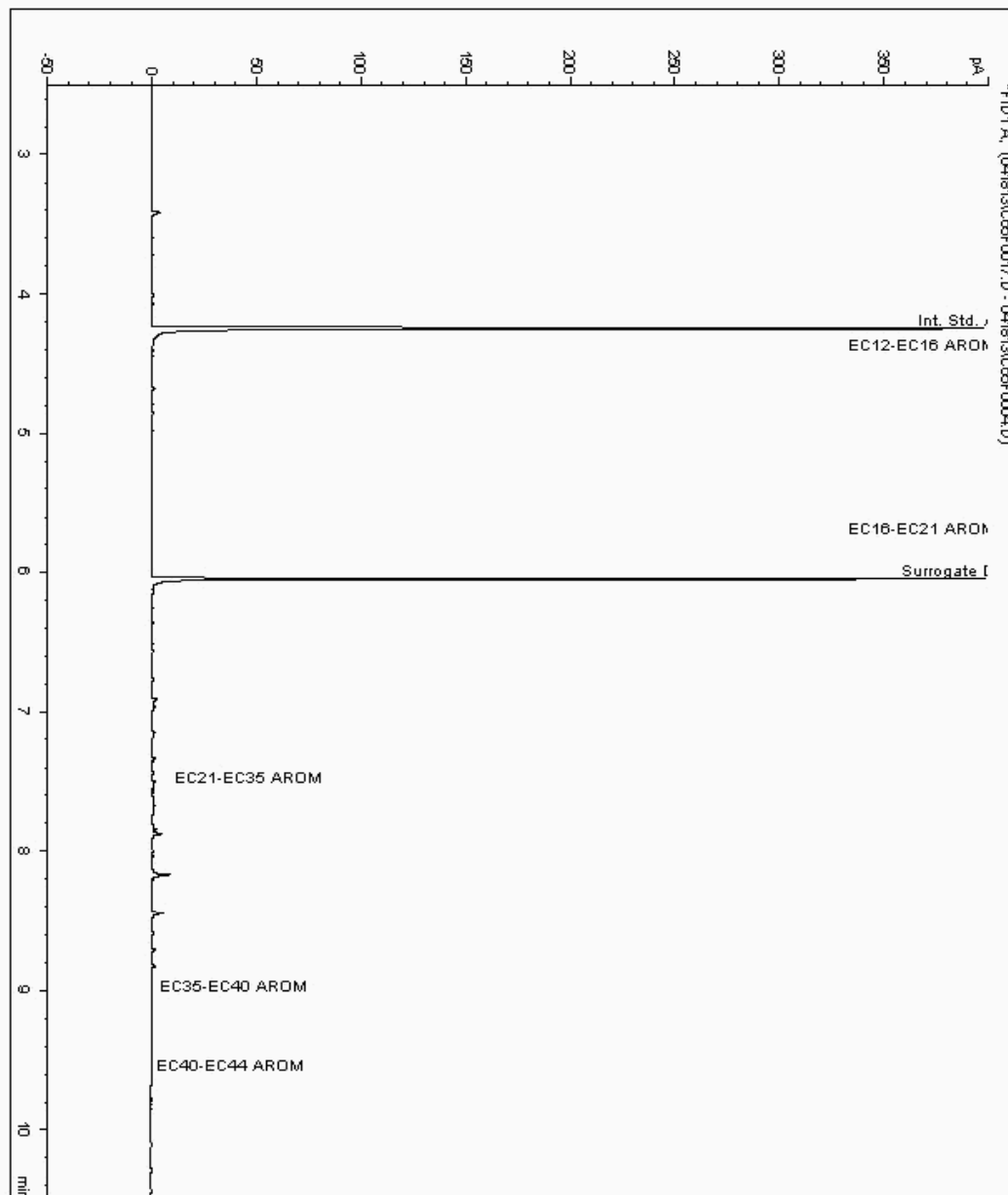
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7257727
Sample ID : VA133

Depth : 1.20

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6963877-7257727
Date Acquired : 18/04/13 16:42:53 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.973





SDG: 130416-35
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221923
Superseded Report:

Chromatogram

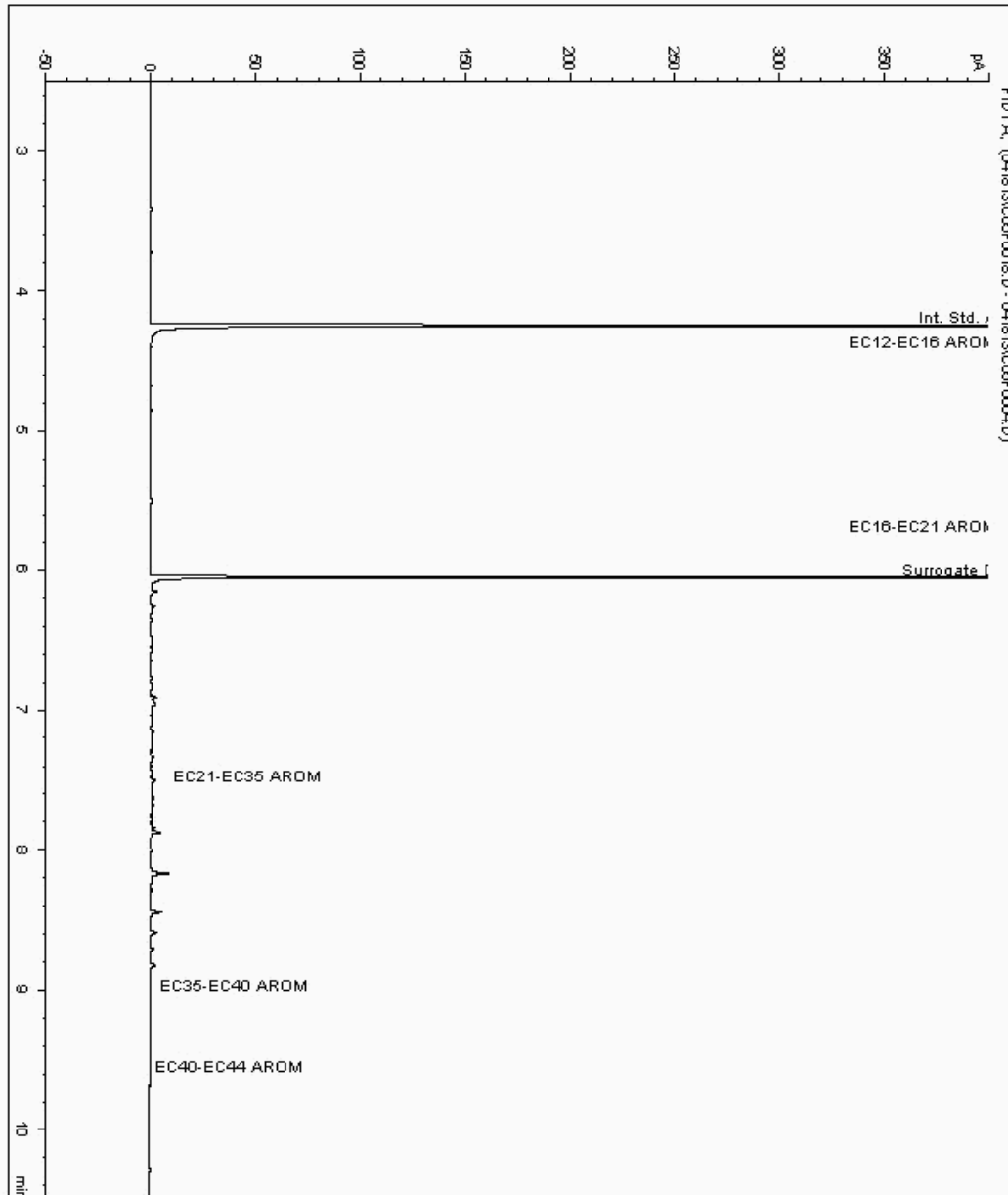
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7257745
Sample ID : VA131

Depth : 1.20

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6963836-7257745
Date Acquired : 18/04/13 17:03:51 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.042





SDG: 130416-35
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

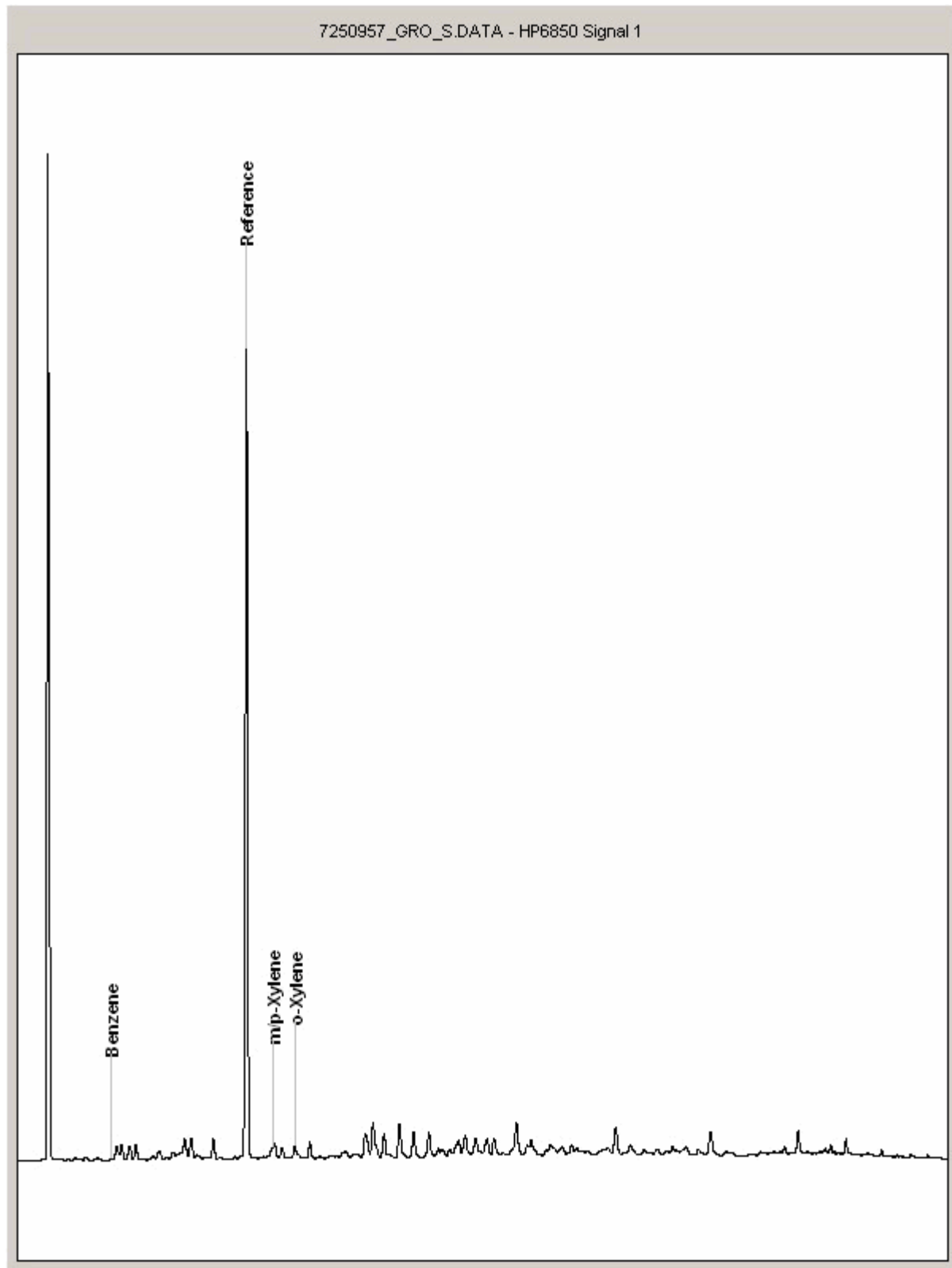
Order Number:
Report Number: 221923
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7250957
Sample ID : VA132

Depth : 1.20





SDG: 130416-35
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

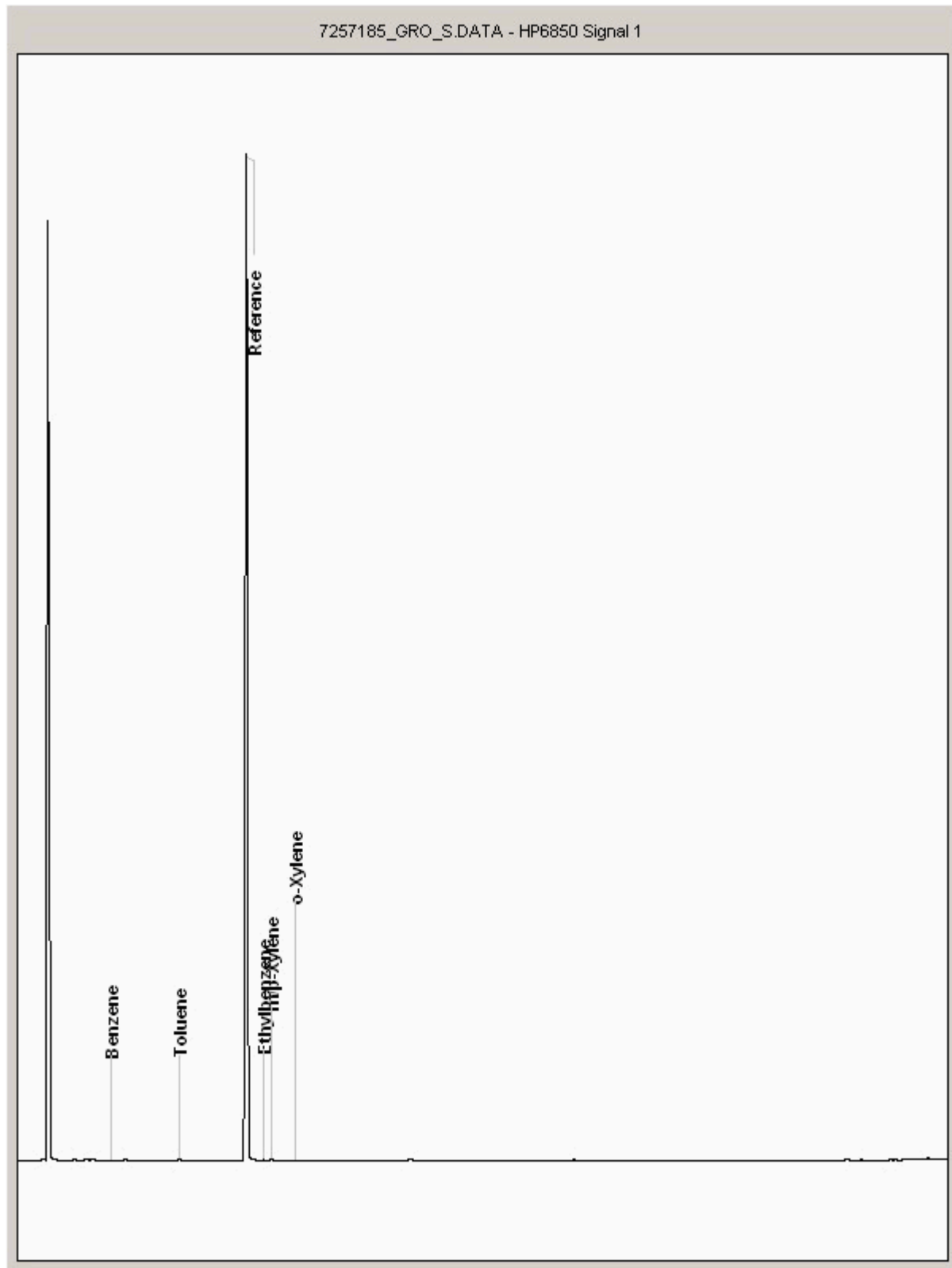
Order Number:
Report Number: 221923
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7257185
Sample ID : VA130

Depth : 1.20





SDG: 130416-35
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

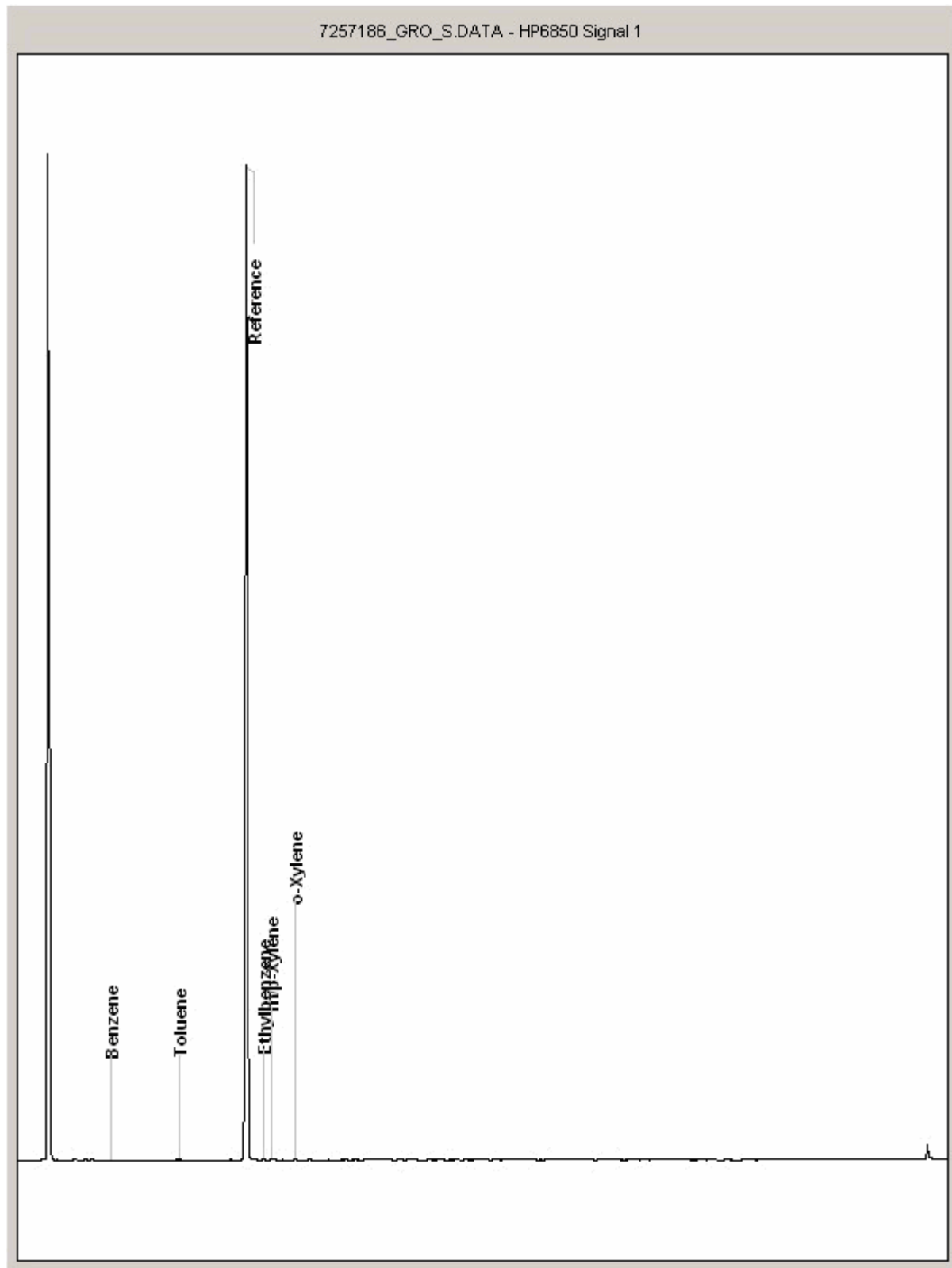
Order Number:
Report Number: 221923
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7257186
Sample ID : VA131

Depth : 1.20





SDG: 130416-35
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

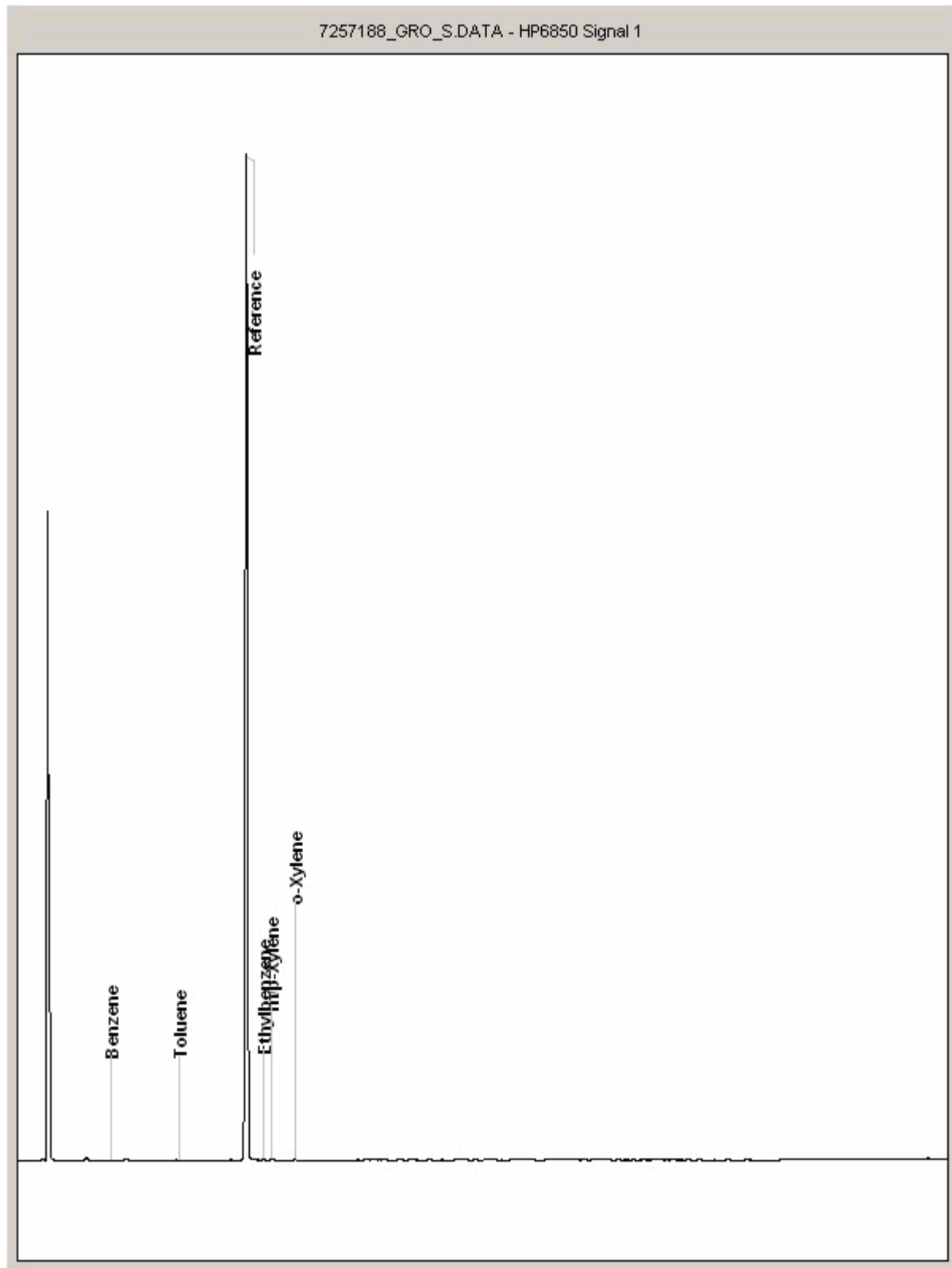
Order Number:
Report Number: 221923
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7257188
Sample ID : VA133

Depth : 1.20





SDG:	130416-35	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	221923
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Appendix General

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICS and SVOC TICS.
2. 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 2 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. ALcontrol Laboratories 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. 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 for wet tests reported on a dry weight basis are not corrected for moisture content.
13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.
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 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.
21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.
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.

Sample Deviations

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Holding time exceeded before sample received
§	Sampled on date not provided
+	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to sampled on date
&	Sample Holding Time exceeded - Late arrival of instructions.

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.



URS Corporation Limited
St. George's House
2nd Floor
5 St. George's Road
Wimbledon
Greater London
SW19 4DR

Attention: Jocelyn Willis

CERTIFICATE OF ANALYSIS

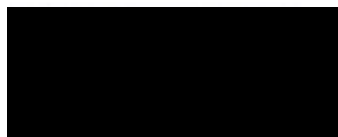
Date: 23 April 2013
Customer: H_URS_WIM
Sample Delivery Group (SDG): 130417-48
Your Reference: 46370079
Location: Hitchin
Report No: 221460

We received 4 samples on Wednesday April 17, 2013 and 4 of these samples were scheduled for analysis which was completed on Tuesday April 23, 2013. 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.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Sonia McWhan

Operations Manager





SDG:	130417-48	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	221460
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
7251514	VA134		6.00	15/04/2013
7251516	VA135		6.00	15/04/2013
7251518	VA136		6.00	15/04/2013
7251520	VA137		6.00	15/04/2013

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



SDG: 130417-48
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221460
Superseded Report:

SOLID**Results Legend**

Test

No Determination
Possible**Lab Sample No(s)****Customer
Sample Reference****AGS Reference****Depth (m)****Container**

7251514

7251516

7251518

7251520

VA134

VA135

VA136

VA137

6.00

6.00

6.00

6.00

250g Amber Jar (AL
60g VOC (ALE215)
250g Amber Jar (AL
60g VOC (ALE215)
250g Amber Jar (AL
60g VOC (ALE215)
250g Amber Jar (AL
60g VOC (ALE215)

EPH CWG (Aliphatic) GC (S)

All

NDPs: 0
Tests: 4

X

X

X

X

EPH CWG (Aromatic) GC (S)

All

NDPs: 0
Tests: 4

X

X

X

X

GRO by GC-FID (S)

All

NDPs: 0
Tests: 4

X

X

X

X

Oxygenates (S)

All

NDPs: 0
Tests: 4

X

X

X

X

PAH by GCMS

All

NDPs: 0
Tests: 4

X

X

X

X

Sample description

All

NDPs: 0
Tests: 4

X

X

X

X

Total Organic Carbon

All

NDPs: 0
Tests: 2

X

X

VOC MS (S)

All

NDPs: 0
Tests: 4

X

X

X

X



SDG:	130417-48	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	221460
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions	Inclusions 2
7251514	VA134	6.00	Light Brown	Sand	0.1 - 2 mm	Stones	None
7251516	VA135	6.00	Light Brown	Sand	0.1 - 2 mm	None	None
7251518	VA136	6.00	Light Brown	Sand	0.1 - 2 mm	None	None
7251520	VA137	6.00	Light Brown	Silt Loam	0.063 - 0.1 mm	None	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.

Order Number:
Report Number: 221460
Superseded Report:

10:05:24 23/04/2013

SDG: 130417-48
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221460
Superseded Report:

EPH CWG (Aliphatic) GC (S)

[illegible]

Order Number:
Report Number: 221460
Superseded Report:

Page 7 of 29

Order Number:
Report Number: 221460
Superseded Report:

Page 8 of 29

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221460
Superseded Report:

[illegible]

Order Number:
Report Number: 221460
Superseded Report:

Page 10 of 29



SDG:	130417-48	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	221460
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample ¹	Surrogate Corrected
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds 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		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		
TM288		Determination of Oxygenates in Soils by Headspace/GC-MS		

¹ Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.



SDG:	130417-48	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	221460
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Test Completion Dates

Lab Sample No(s)	7251514	7251516	7251518	7251520
Customer Sample Ref.	VA134	VA135	VA136	VA137
AGS Ref.				
Depth	6.00	6.00	6.00	6.00
Type	SOLID	SOLID	SOLID	SOLID
EPH CWG (Aliphatic) GC (S)	22-Apr-2013	22-Apr-2013	22-Apr-2013	22-Apr-2013
EPH CWG (Aromatic) GC (S)	22-Apr-2013	22-Apr-2013	22-Apr-2013	22-Apr-2013
GRO by GC-FID (S)	20-Apr-2013	20-Apr-2013	20-Apr-2013	22-Apr-2013
Oxygenates (S)	23-Apr-2013	23-Apr-2013	23-Apr-2013	23-Apr-2013
PAH by GCMS	19-Apr-2013	22-Apr-2013	22-Apr-2013	22-Apr-2013
Sample description	17-Apr-2013	17-Apr-2013	17-Apr-2013	17-Apr-2013
Total Organic Carbon		22-Apr-2013		22-Apr-2013
VOC MS (S)	20-Apr-2013	20-Apr-2013	20-Apr-2013	20-Apr-2013



SDG: 130417-48
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221460
Superseded Report:

ASSOCIATED AQC DATA

EPH CWG (Aliphatic) GC (S)

Component	Method Code	QC 74
Total Aliphatics >C12-C35	TM173	87.92 73.54 : 110.66

EPH CWG (Aromatic) GC (S)

Component	Method Code	QC 74
Total Aromatics >EC12-EC35	TM173	86.0 78.23 : 114.94

GRO by GC-FID (S)

Component	Method Code	QC 74	QC 74
Benzene by GC (Moisture Corrected)	TM089	95.5 79.00 : 121.00	91.5 80.15 : 118.91
Ethylbenzene by GC (Moisture Corrected)	TM089	91.5 79.00 : 121.00	92.0 79.83 : 118.16
m & p Xylene by GC (Moisture Corrected)	TM089	91.25 79.00 : 121.00	92.75 78.35 : 120.05
MTBE GC-FID (Moisture Corrected)	TM089	89.5 74.48 : 125.29	93.5 80.54 : 120.94
o Xylene by GC (Moisture Corrected)	TM089	89.5 79.00 : 121.00	92.0 80.90 : 117.77
QC	TM089	114.24 40.00 : 160.00	116.51 40.00 : 160.00
Toluene by GC (Moisture Corrected)	TM089	94.0 79.00 : 121.00	92.0 81.82 : 117.25

Oxygenates (S)

Component	Method Code	QC 78
Benzene raw	TM288	96.5 77.94 : 128.84
Diisopropyl ether raw	TM288	97.25 78.68 : 128.65
Ethanol raw	TM288	103.0 56.39 : 148.67
Ethylbenzene raw	TM288	99.5 78.18 : 122.27
o-Xylene raw	TM288	93.75 78.38 : 109.16
p/m-Xylene raw	TM288	101.5 80.22 : 110.48
tert Butanol raw	TM288	120.0 62.51 : 145.03
tert-amyl methyl ether raw	TM288	98.0 71.22 : 127.95



CERTIFICATE OF ANALYSIS

SDG: 130417-48
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221460
Superseded Report:

Oxygenates (S)

		QC 78
tert-butyl ethyl ether raw	TM288	97.0 64.00 : 136.00
tert-butyl methyl ether raw	TM288	99.5 83.50 : 129.91
Toluene raw	TM288	90.75 75.97 : 110.53

PAH by GCMS

Component	Method Code	QC 76	QC 78
Acenaphthene	TM218	91.5 83.80 : 121.00	96.5 83.80 : 121.00
Acenaphthylene	TM218	82.5 72.38 : 111.60	85.5 72.38 : 111.60
Anthracene	TM218	87.0 79.70 : 113.00	94.5 79.70 : 113.00
Benz(a)anthracene	TM218	91.5 82.86 : 122.05	102.5 82.86 : 122.05
Benzo(a)pyrene	TM218	91.0 82.40 : 123.80	103.5 82.40 : 123.80
Benzo(b)fluoranthene	TM218	91.5 77.82 : 128.87	109.5 77.82 : 128.87
Benzo(ghi)perylene	TM218	90.5 81.67 : 122.61	101.5 81.67 : 122.61
Benzo(k)fluoranthene	TM218	90.0 81.20 : 118.10	100.5 81.20 : 118.10
Chrysene	TM218	91.5 80.60 : 117.80	99.5 80.60 : 117.80
Dibenzo(ah)anthracene	TM218	92.5 77.93 : 124.42	103.0 77.93 : 124.42
Fluoranthene	TM218	90.0 82.25 : 115.25	96.5 82.25 : 115.25
Fluorene	TM218	90.5 80.60 : 118.10	95.5 80.60 : 118.10
Indeno(123cd)pyrene	TM218	91.0 83.07 : 119.48	103.5 83.07 : 119.48
Naphthalene	TM218	88.5 83.14 : 111.37	92.0 83.14 : 111.37
Phenanthrene	TM218	91.0 81.45 : 121.95	98.0 81.45 : 121.95
Pyrene	TM218	89.0 75.20 : 108.20	96.5 75.20 : 108.20

Total Organic Carbon

Component	Method Code	QC 75
Total Organic Carbon	TM132	103.67 86.66 : 109.87

VOC MS (S)



SDG: 130417-48
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
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Order Number:
Report Number: 221460
Superseded Report:

VOC MS (S)

Component	Method Code	QC 79
1,1,1,2-tetrachloroethane	TM116	93.6 77.50 : 124.09
1,1,1-Trichloroethane	TM116	97.4 86.36 : 114.14
1,1,2-Trichloroethane	TM116	104.6 93.86 : 131.61
1,1-Dichloroethane	TM116	97.0 83.96 : 125.03
1,2-Dichloroethane	TM116	97.4 88.93 : 122.77
1,4-Dichlorobenzene	TM116	99.4 89.32 : 117.26
2-Chlorotoluene	TM116	125.8 93.47 : 156.27
4-Chlorotoluene	TM116	123.4 92.38 : 149.49
Benzene	TM116	92.6 86.95 : 110.62
Carbon Disulphide	TM116	93.2 76.98 : 118.83
Carbontetrachloride	TM116	102.6 71.94 : 132.65
Chlorobenzene	TM116	94.0 78.33 : 118.74
Chloroform	TM116	96.8 69.66 : 148.03
Chloromethane	TM116	98.4 49.71 : 146.30
Cis-1,2-Dichloroethene	TM116	91.6 87.09 : 113.71
Dibromomethane	TM116	89.2 65.13 : 138.40
Dichloromethane	TM116	93.4 70.67 : 150.15
Ethylbenzene	TM116	94.4 84.09 : 110.87
Hexachlorobutadiene	TM116	177.8 62.74 : 176.60
Isopropylbenzene	TM116	89.4 75.72 : 100.29
Naphthalene	TM116	98.6 80.72 : 132.86
o-Xylene	TM116	90.6 76.04 : 111.23
p/m-Xylene	TM116	96.3 79.03 : 115.32
Sec-Butylbenzene	TM116	112.0 73.42 : 125.99
Tetrachloroethene	TM116	105.2 87.31 : 123.54
Toluene	TM116	89.8 83.48 : 106.73



SDG:	130417-48	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	221460
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

VOC MS (S)

		QC 79
Trichloroethene	TM116	94.6 86.48 : 110.46
Trichlorofluoromethane	TM116	98.2 82.57 : 120.95
Vinyl Chloride	TM116	107.0 62.58 : 154.52

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

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

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



SDG: 130417-48
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221460
Superseded Report:

Chromatogram

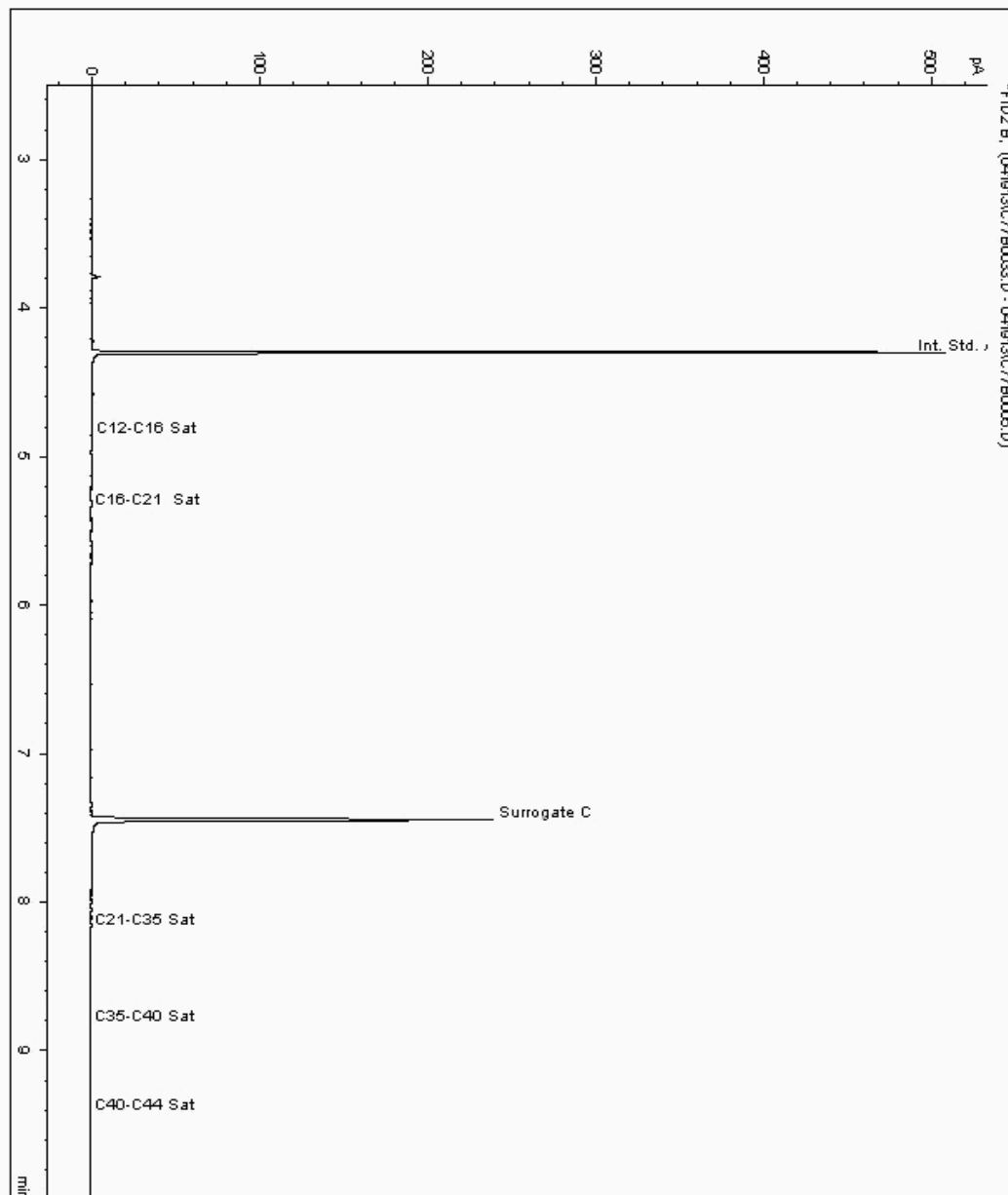
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7267472
Sample ID : VA137

Depth : 6.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6969222-7267472
Date Acquired : 19/04/2013 21:01:17 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.031





SDG: 130417-48
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221460
Superseded Report:

Chromatogram

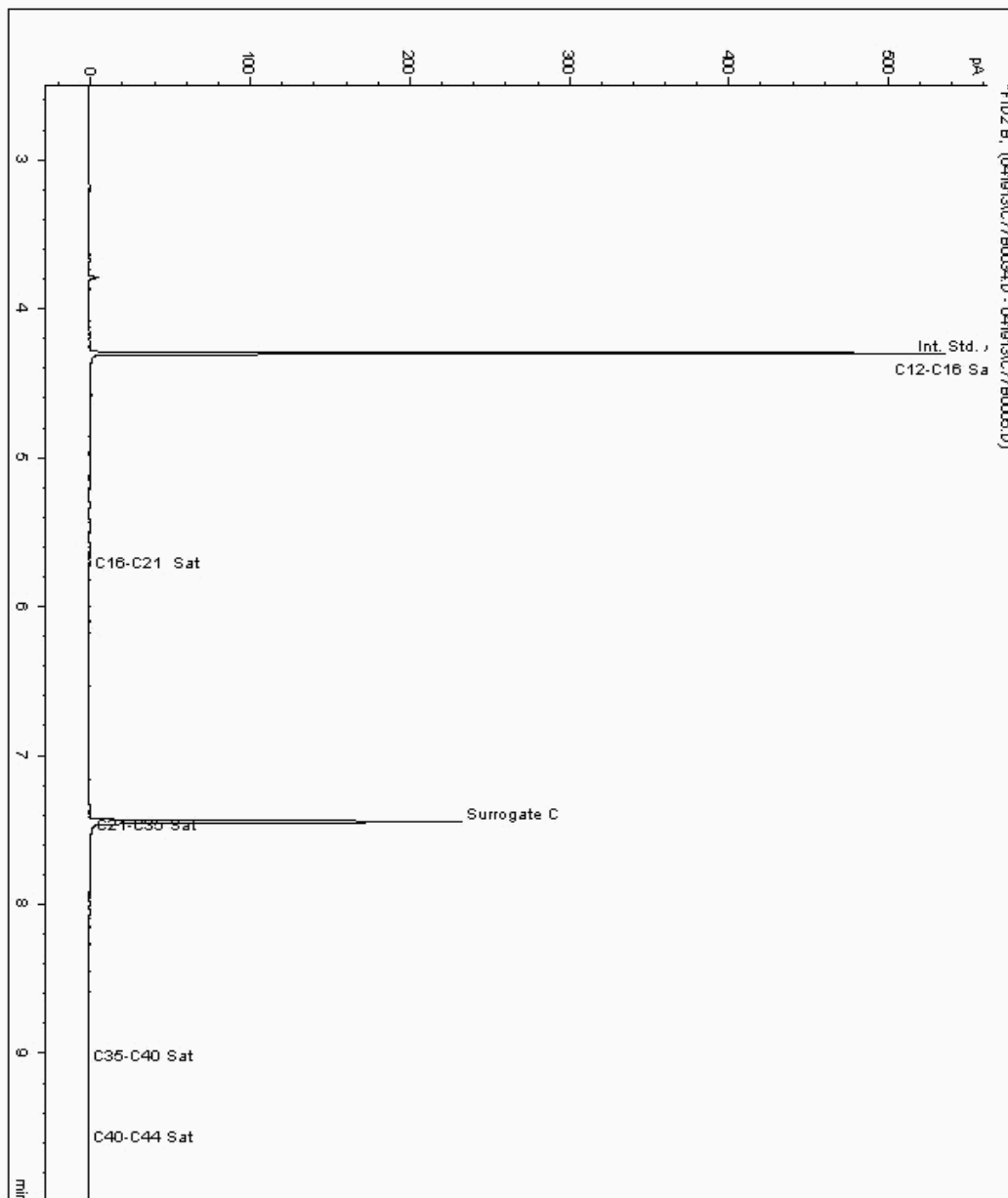
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7267495
Sample ID : VA135

Depth : 6.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6969203-7267495
Date Acquired : 19/04/2013 21:22:08 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.979





SDG: 130417-48
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221460
Superseded Report:

Chromatogram

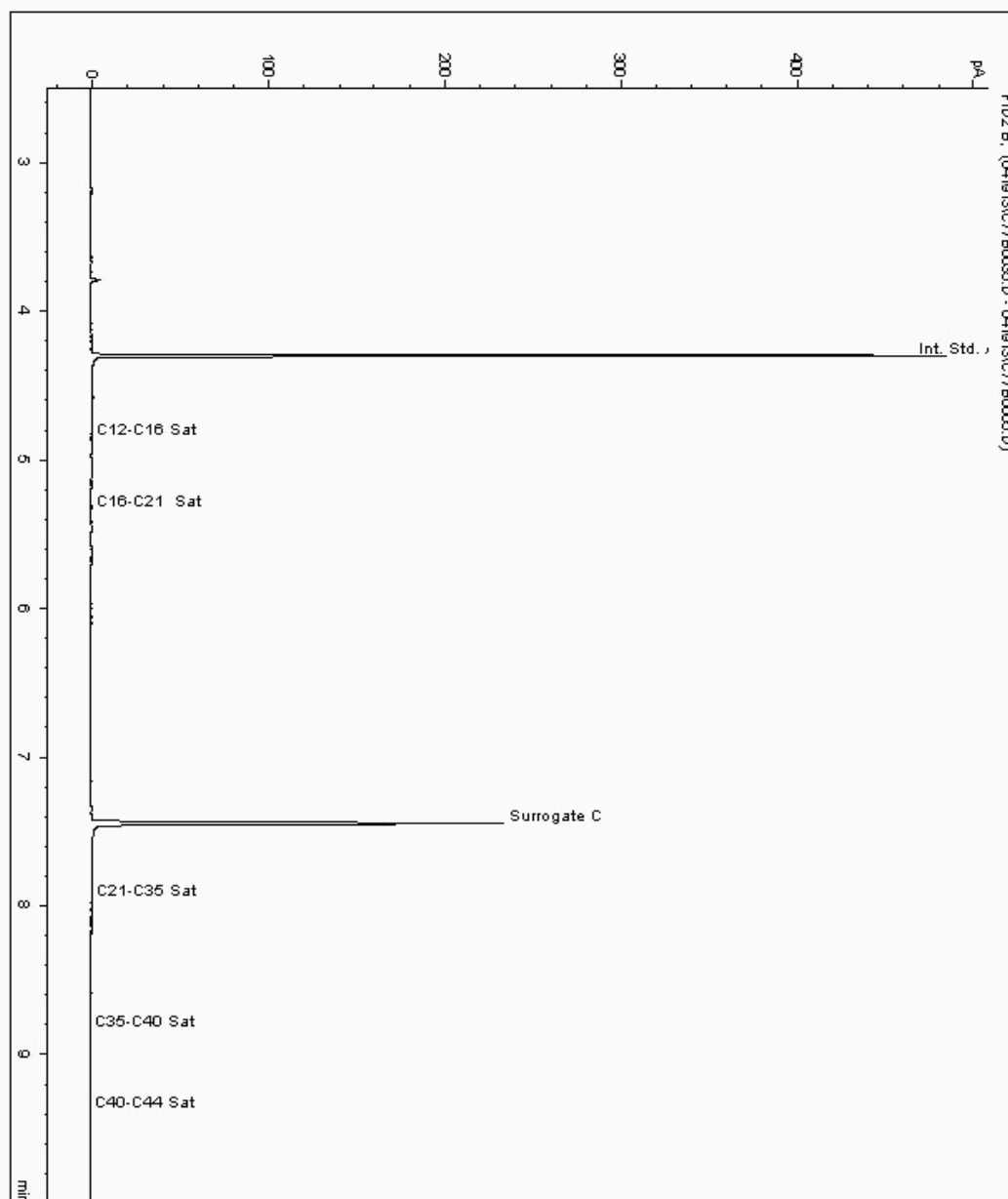
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7267544
Sample ID : VA136

Depth : 6.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6969213-7267544
Date Acquired : 19/04/2013 21:43:08 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.978





SDG: 130417-48
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221460
Superseded Report:

Chromatogram

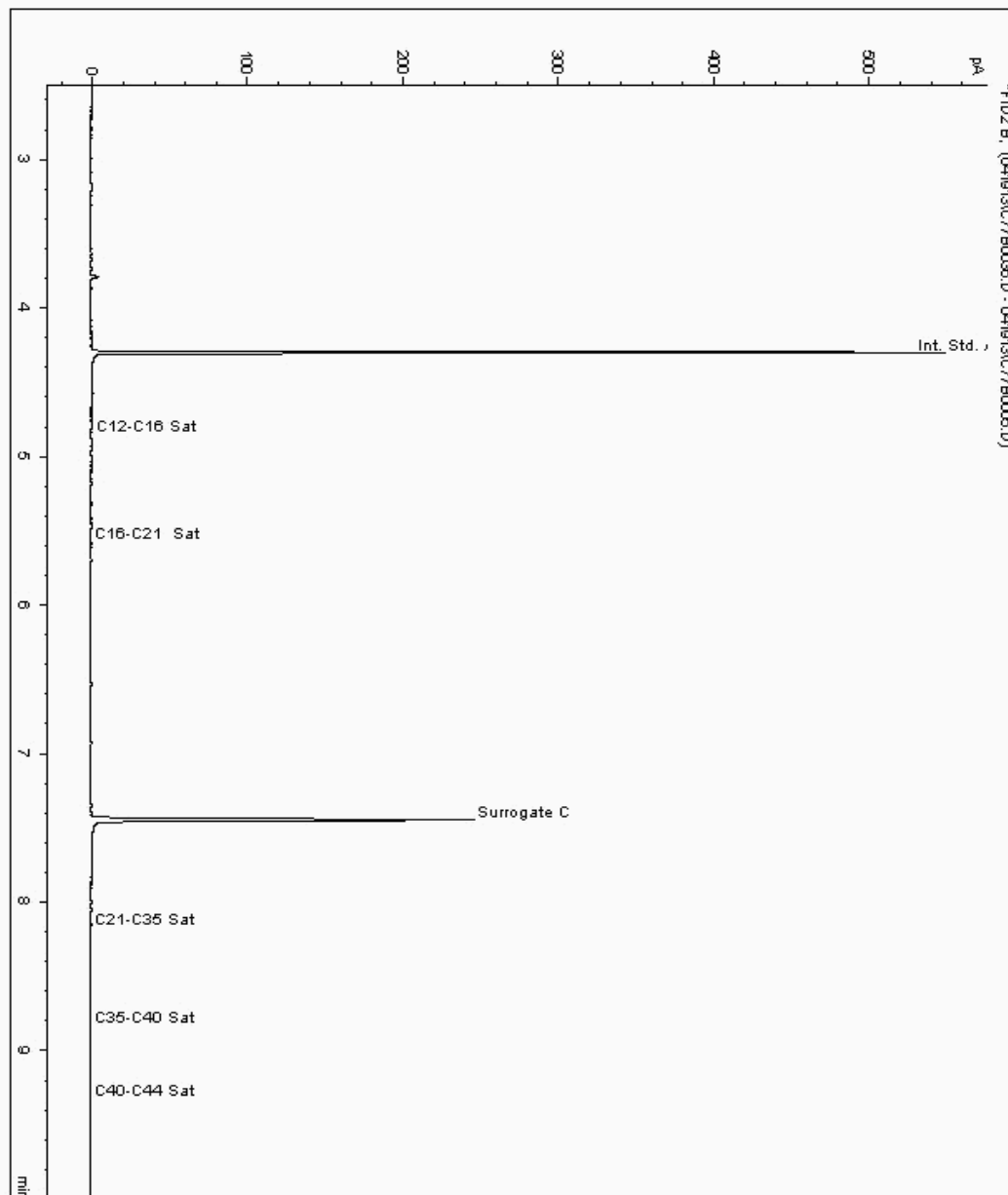
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7267568
Sample ID : VA134

Depth : 6.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6969190-7267568
Date Acquired : 19/04/2013 22:04:05 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.957





SDG: 130417-48
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221460
Superseded Report:

Chromatogram

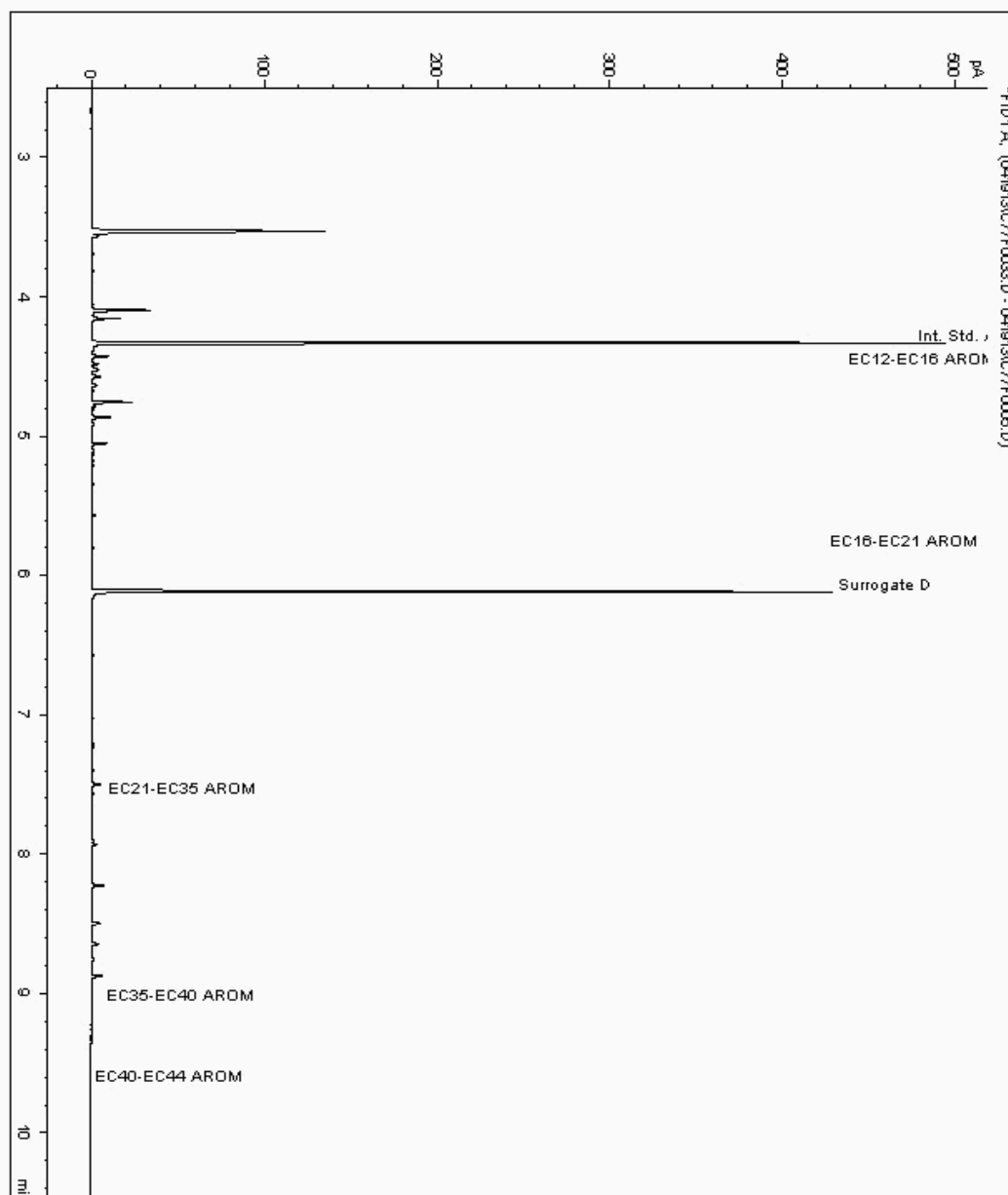
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7267472
Sample ID : VA137

Depth : 6.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6969222-7267472
Date Acquired : 19/04/2013 21:01:16 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.031





SDG: 130417-48
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221460
Superseded Report:

Chromatogram

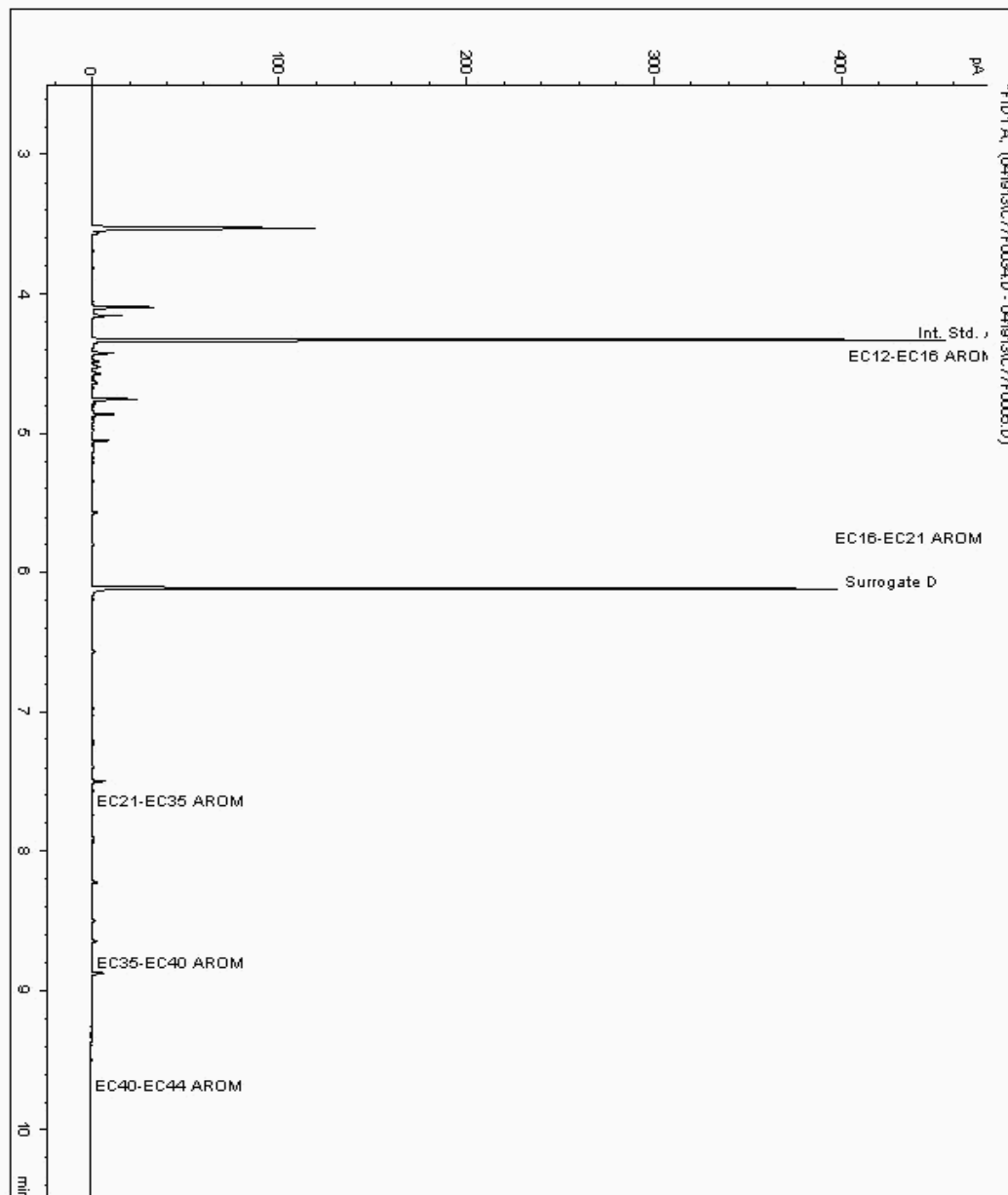
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7267495
Sample ID : VA135

Depth : 6.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6969203-7267495
Date Acquired : 19/04/2013 21:22:08 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.979





SDG: 130417-48
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221460
Superseded Report:

Chromatogram

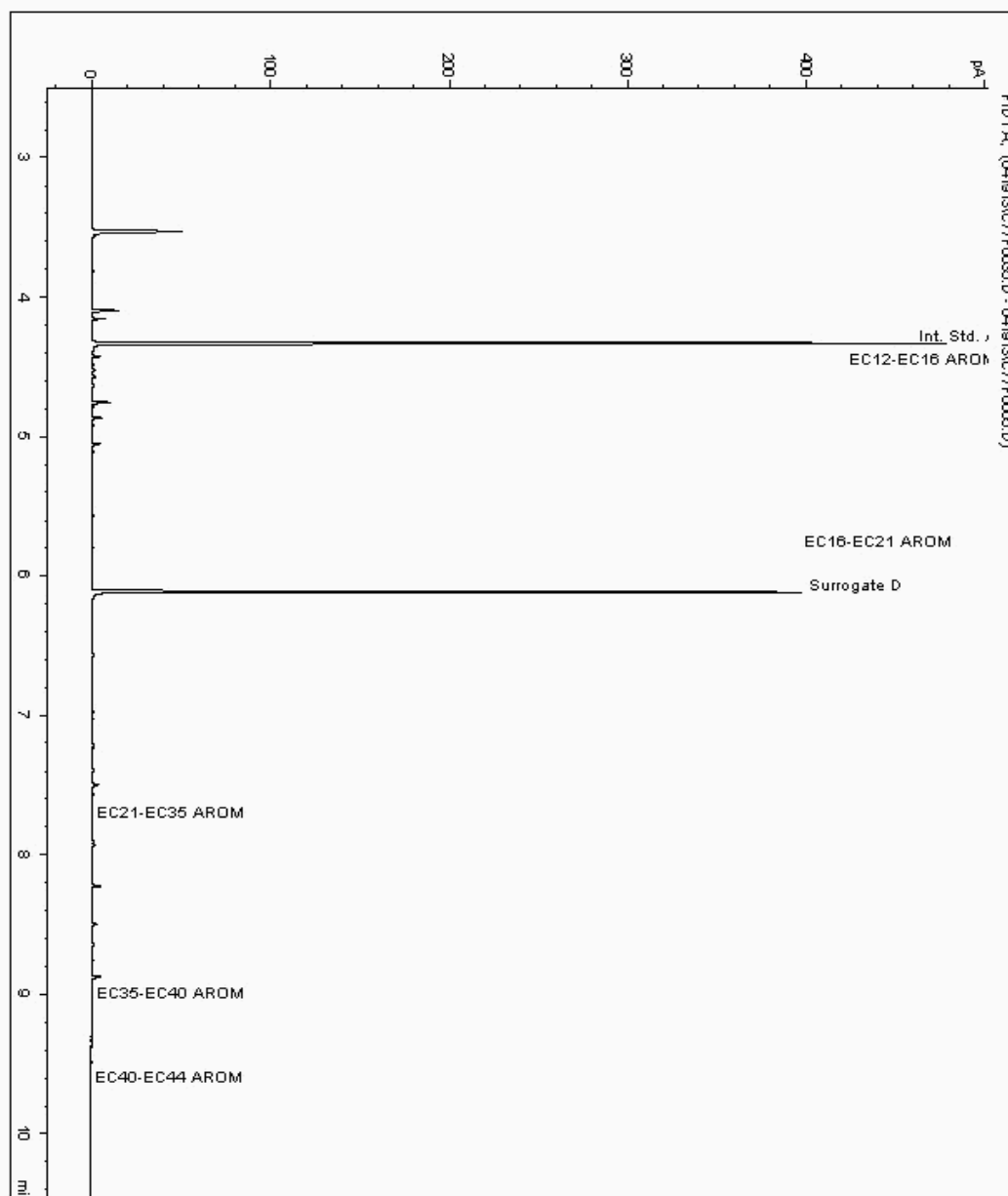
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7267544
Sample ID : VA136

Depth : 6.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6969213-7267544
Date Acquired : 19/04/2013 21:43:09 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.978





SDG: 130417-48
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221460
Superseded Report:

Chromatogram

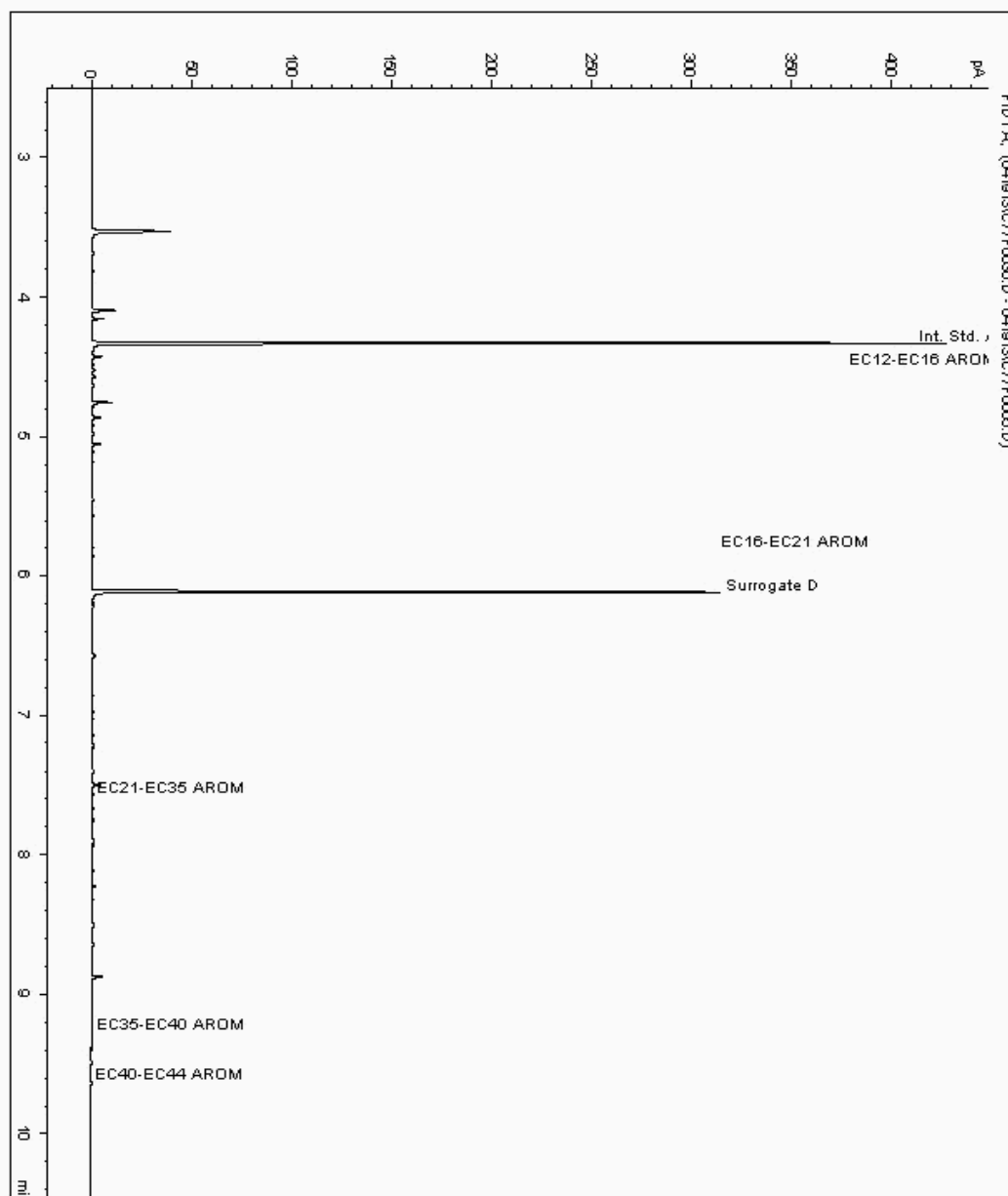
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7267568
Sample ID : VA134

Depth : 6.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6969190-7267568
Date Acquired : 19/04/2013 22:04:04 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.957





SDG: 130417-48
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

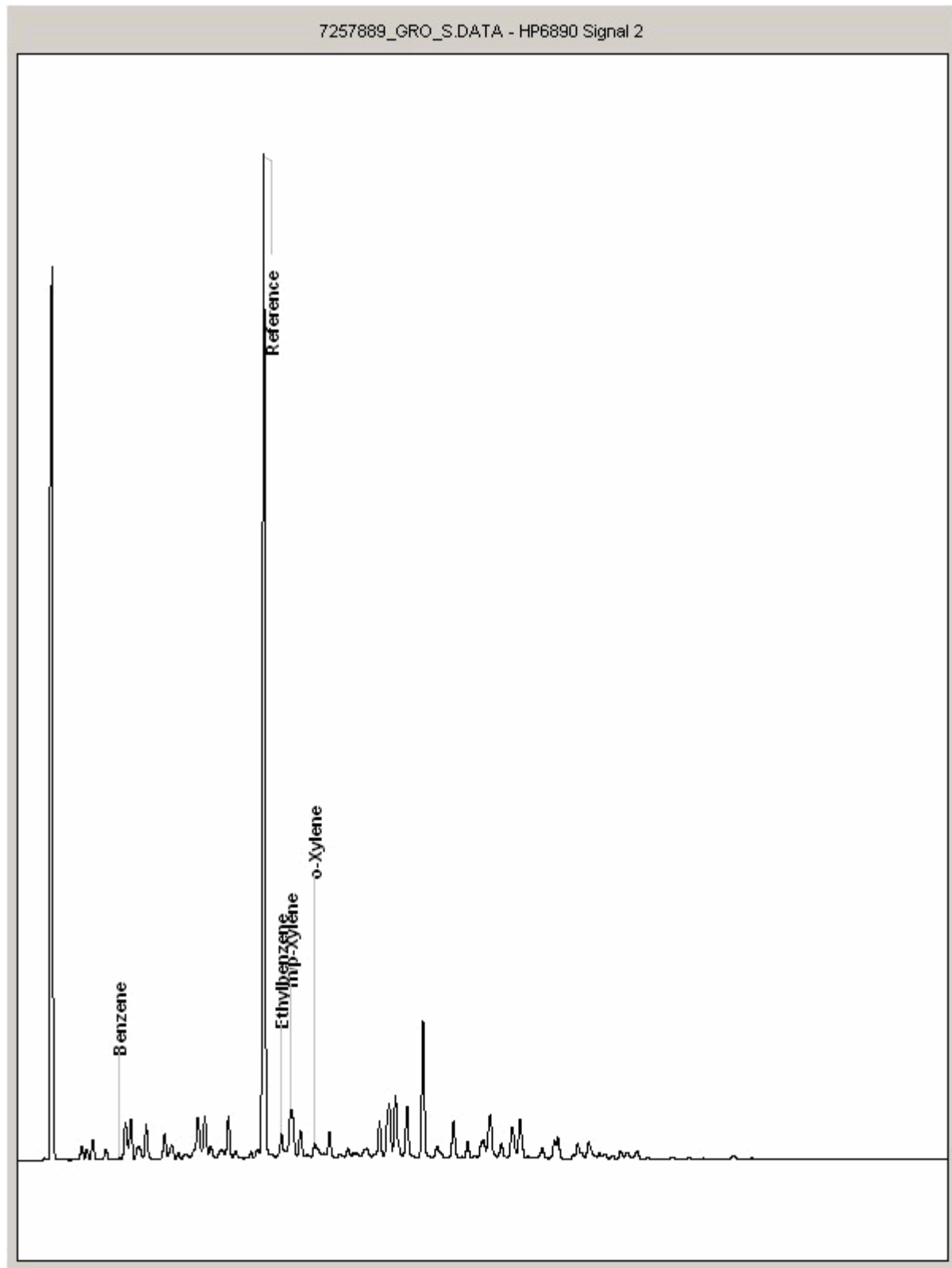
Order Number:
Report Number: 221460
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7257889
Sample ID : VA137

Depth : 6.00





SDG: 130417-48
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

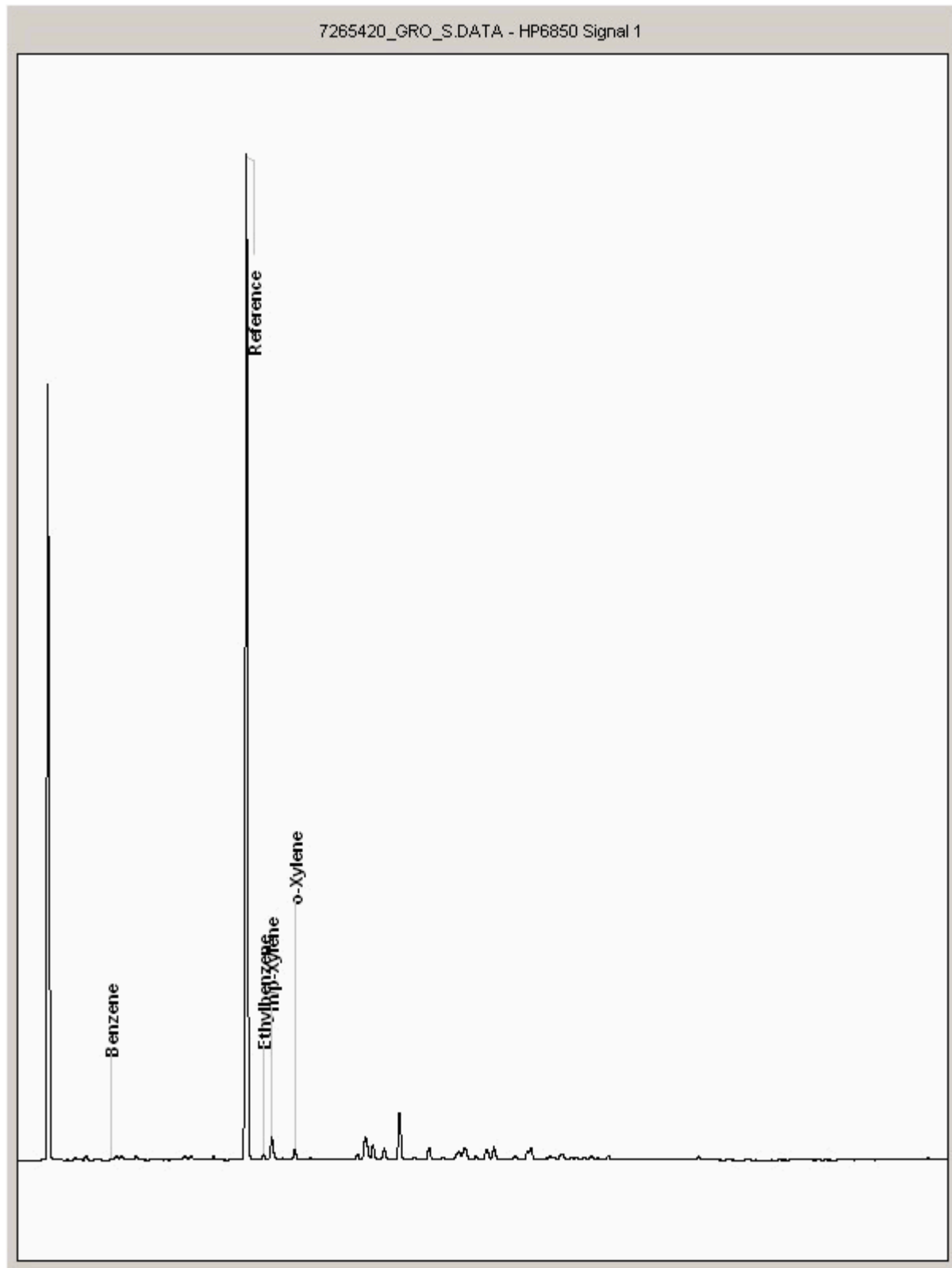
Order Number:
Report Number: 221460
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7265420
Sample ID : VA134

Depth : 6.00





SDG: 130417-48
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

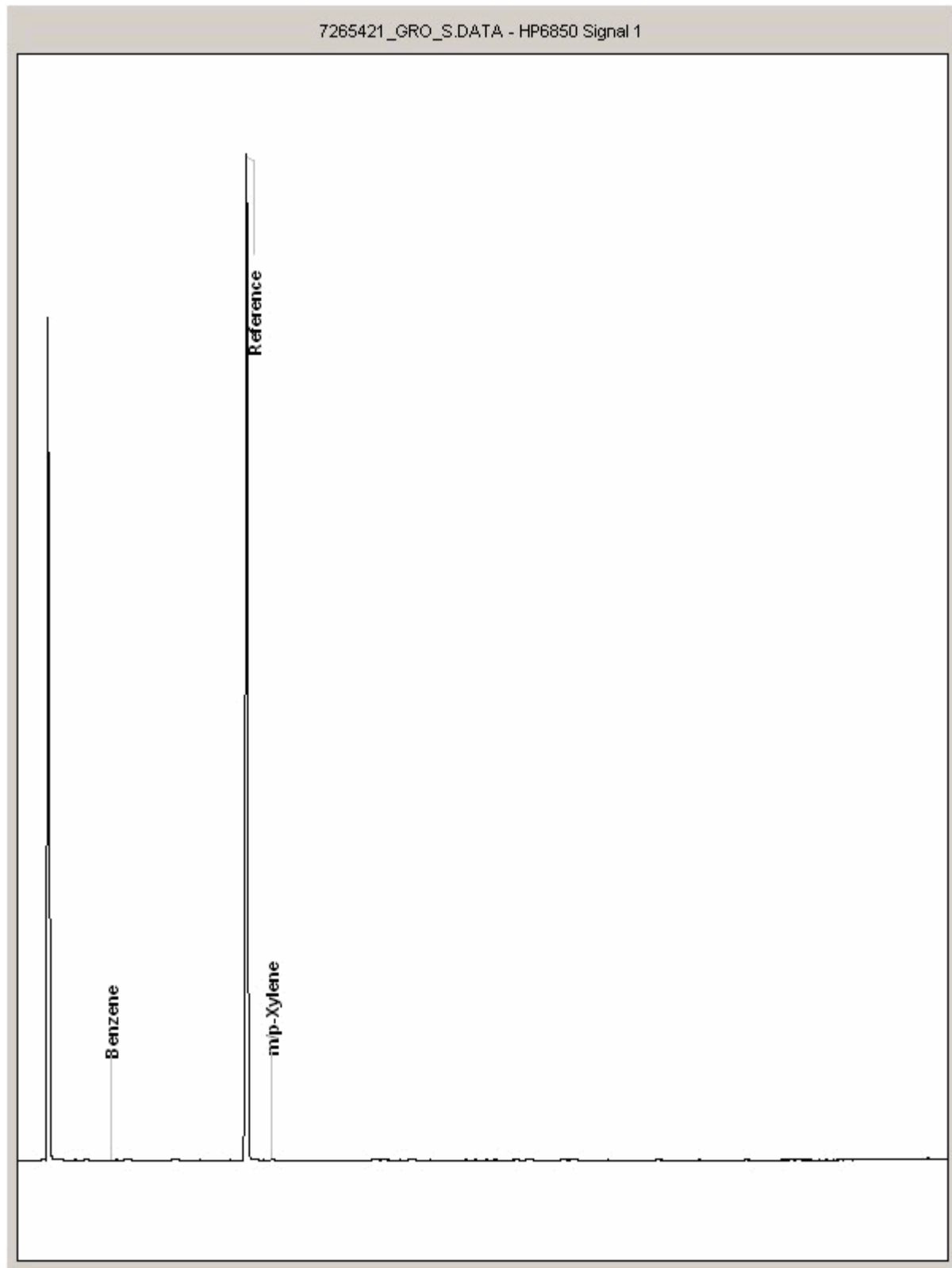
Order Number:
Report Number: 221460
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7265421
Sample ID : VA135

Depth : 6.00





SDG: 130417-48
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

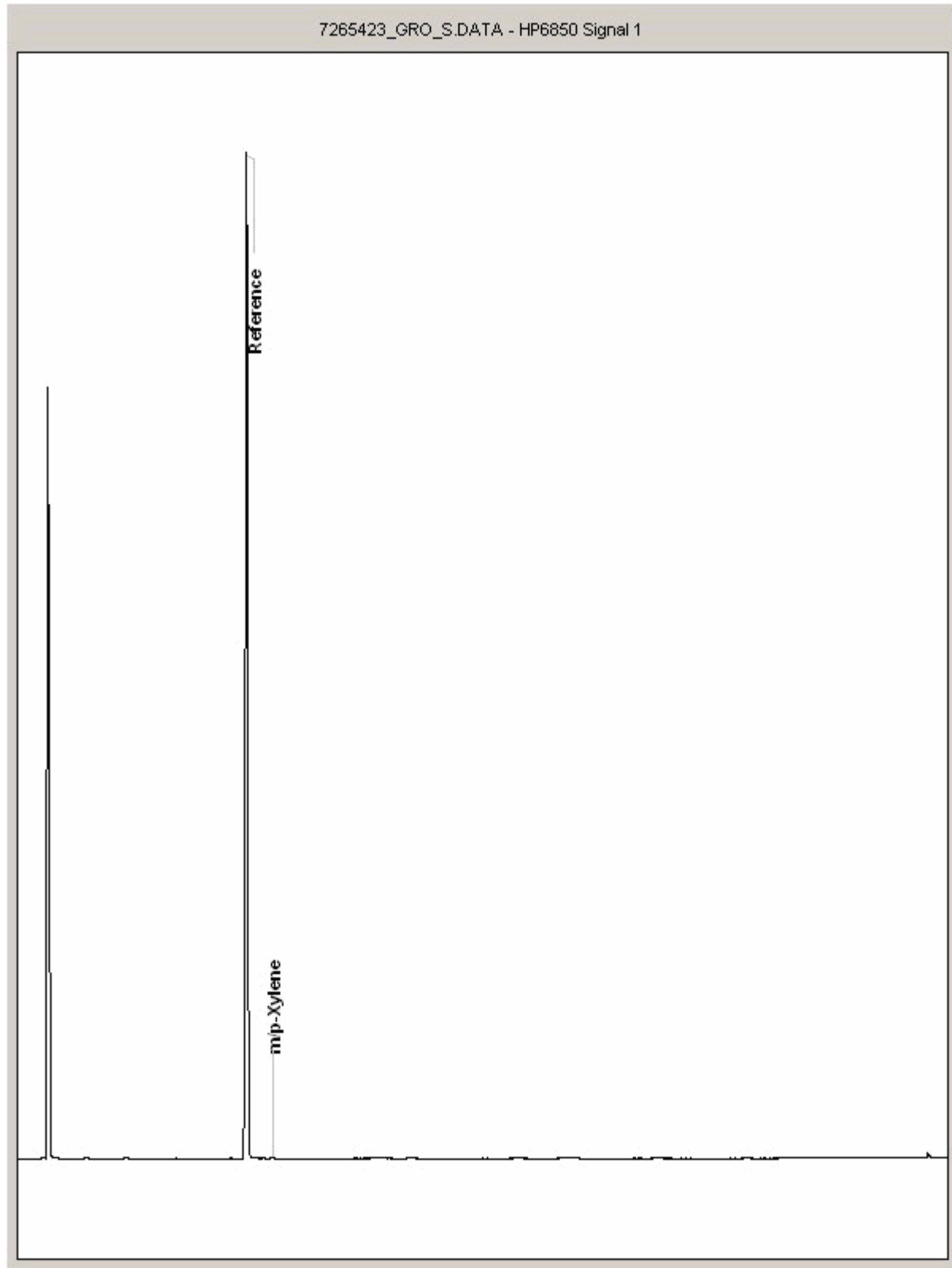
Order Number:
Report Number: 221460
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7265423
Sample ID : VA136

Depth : 6.00





SDG: 130417-48
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221460
Superseded Report:

Appendix General

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

2. 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 2 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. ALcontrol Laboratories 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. 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 for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

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 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.

21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.

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.

Sample Deviations

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Holding time exceeded before sample received
§	Sampled on date not provided
+	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to sampled on date
&	Sample Holding Time exceeded - Late arrival of instructions.

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.



URS Corporation Limited
St. George's House
2nd Floor
5 St. George's Road
Wimbledon
Greater London
SW19 4DR

Attention: Jocelyn Willis

CERTIFICATE OF ANALYSIS

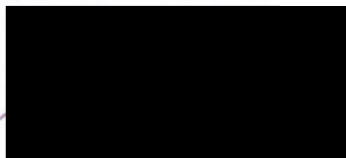
Date: 24 April 2013
Customer: H_URS_WIM
Sample Delivery Group (SDG): 130418-49
Your Reference: 46370079
Location: Hitchin
Report No: 221747

We received 10 samples on Thursday April 18, 2013 and 10 of these samples were scheduled for analysis which was completed on Wednesday April 24, 2013. 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.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Sonia McWhan

Operations Manager





SDG:	130418-49	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	221747
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
7259928	VA138		3.00	17/04/2013
7259929	VA139		5.50	17/04/2013
7259930	VA140		3.00	17/04/2013
7259931	VA141		6.50	17/04/2013
7259932	VA142		3.00	17/04/2013
7259933	VA143		6.50	17/04/2013
7259934	VA144		3.00	17/04/2013
7259935	VA145		6.50	17/04/2013
7259937	VA146		3.00	17/04/2013
7259938	VA147		6.50	17/04/2013

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



SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

SOLID**Results Legend**

Test

No Determination
Possible**Lab Sample No(s)****Customer
Sample Reference****AGS Reference****Depth (m)****Container**

7259938	VA147		6.50	60g VOC (ALE215)
7259937	VA146		3.00	250g Amber Jar (AL)
7259935	VA145		6.50	60g VOC (ALE215)
7259934	VA144		3.00	250g Amber Jar (AL)
7259933	VA143		6.50	60g VOC (ALE215)
7259932	VA142		3.00	250g Amber Jar (AL)
7259931	VA141		6.50	60g VOC (ALE215)
7259930	VA140		3.00	250g Amber Jar (AL)
7259929	VA139		5.50	60g VOC (ALE215)
7259928	VA138		3.00	250g Amber Jar (AL)
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 10		
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 10		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 10		
Oxygenates (S)	All	NDPs: 0 Tests: 10		
PAH by GCMS	All	NDPs: 0 Tests: 10		
Sample description	All	NDPs: 0 Tests: 10		
Total Organic Carbon	All	NDPs: 0 Tests: 5		
VOC MS (S)	All	NDPs: 0 Tests: 10		



SDG:	130418-49	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	221747
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions	Inclusions 2
7259928	VA138	3.00	Red	Sand	0.1 - 2 mm	None	None
7259929	VA139	5.50	Red	Sand	0.1 - 2 mm	Stones	None
7259930	VA140	3.00	Light Brown	Silt Loam	0.063 - 0.1 mm	Stones	None
7259931	VA141	6.50	Red	Sand	0.1 - 2 mm	None	None
7259932	VA142	3.00	Light Brown	Sand	0.1 - 2 mm	Stones	None
7259933	VA143	6.50	Red	Sand	0.1 - 2 mm	None	None
7259934	VA144	3.00	Light Brown	Sand	0.1 - 2 mm	Stones	None
7259935	VA145	6.50	Red	Sand	0.1 - 2 mm	None	None
7259937	VA146	3.00	Red	Sand	0.1 - 2 mm	Stones	None
7259938	VA147	6.50	Red	Sand	0.1 - 2 mm	None	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.

Order Number:
Report Number: 221747
Superseded Report:

11:44:16 24/04/2013

Order Number:
Report Number: 221747
Superseded Report:

Page 8 of 53

Order Number:
Report Number: 221747
Superseded Report:

Page 12 of 53

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Order Number:
Report Number: 221747
Superseded Report:

Page 15 of 53

Order Number:
Report Number: 221747
Superseded Report:

Page 16 of 53



SDG:	130418-49	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	221747
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample ¹	Surrogate Corrected
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds 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		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		
TM288		Determination of Oxygenates in Soils by Headspace/GC-MS		

¹ Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.



SDG:	130418-49	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	221747
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Test Completion Dates

Lab Sample No(s)	7259928	7259929	7259930	7259931	7259932	7259933	7259934	7259935	7259937	7259938
Customer Sample Ref.	VA138	VA139	VA140	VA141	VA142	VA143	VA144	VA145	VA146	VA147
AGS Ref.										
Depth	3.00	5.50	3.00	6.50	3.00	6.50	3.00	6.50	3.00	6.50
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID

EPH CWG (Aliphatic) GC (S)	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013
EPH CWG (Aromatic) GC (S)	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013
GRO by GC-FID (S)	21-Apr-2013	22-Apr-2013	21-Apr-2013	21-Apr-2013	23-Apr-2013	21-Apr-2013	21-Apr-2013	21-Apr-2013	21-Apr-2013	24-Apr-2013
Oxygenates (S)	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013	24-Apr-2013
PAH by GCMS	23-Apr-2013	23-Apr-2013	23-Apr-2013	23-Apr-2013	23-Apr-2013	23-Apr-2013	23-Apr-2013	23-Apr-2013	23-Apr-2013	23-Apr-2013
Sample description	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013	18-Apr-2013
Total Organic Carbon		22-Apr-2013	22-Apr-2013			22-Apr-2013		22-Apr-2013		22-Apr-2013
VOC MS (S)	22-Apr-2013	22-Apr-2013	22-Apr-2013	22-Apr-2013	22-Apr-2013	22-Apr-2013	22-Apr-2013	22-Apr-2013	22-Apr-2013	22-Apr-2013



SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

ASSOCIATED AQC DATA

EPH CWG (Aliphatic) GC (S)

Component	Method Code	QC 74
Total Aliphatics >C12-C35	TM173	93.13 72.37 : 107.25

EPH CWG (Aromatic) GC (S)

Component	Method Code	QC 74
Total Aromatics >EC12-EC35	TM173	87.33 73.70 : 120.82

GRO by GC-FID (S)

Component	Method Code	QC 79	QC 79	QC 74	QC 79
Benzene by GC (Moisture Corrected)	TM089	95.0 79.00 : 121.00	105.5 80.15 : 118.91	98.0 80.02 : 117.27	101.0 79.00 : 121.00
Ethylbenzene by GC (Moisture Corrected)	TM089	96.0 79.00 : 121.00	106.0 79.83 : 118.16	100.0 84.04 : 116.69	101.0 79.00 : 121.00
m & p Xylene by GC (Moisture Corrected)	TM089	96.5 79.00 : 121.00	106.75 78.35 : 120.05	100.5 84.58 : 114.27	101.0 79.00 : 121.00
MTBE GC-FID (Moisture Corrected)	TM089	95.5 74.48 : 125.29	107.5 80.54 : 120.94	97.5 79.00 : 121.00	102.5 74.48 : 125.29
o Xylene by GC (Moisture Corrected)	TM089	94.5 79.00 : 121.00	104.5 80.90 : 117.77	98.0 84.97 : 115.07	100.5 79.00 : 121.00
QC	TM089	121.4 40.00 : 160.00	129.11 40.00 : 160.00	122.4 40.00 : 160.00	131.47 40.00 : 160.00
Toluene by GC (Moisture Corrected)	TM089	95.0 79.00 : 121.00	105.5 81.82 : 117.25	98.0 84.65 : 117.24	100.5 79.00 : 121.00

Oxygenates (S)

Component	Method Code	QC 72
Benzene raw	TM288	91.0 77.94 : 128.84
Diisopropyl ether raw	TM288	93.5 78.68 : 128.65
Ethanol raw	TM288	78.0 56.39 : 148.67
Ethylbenzene raw	TM288	96.75 78.18 : 122.27
o-Xylene raw	TM288	89.75 78.38 : 109.16
p/m-Xylene raw	TM288	97.75 80.22 : 110.48
tert Butanol raw	TM288	86.0 62.51 : 145.03
tert-amyl methyl ether raw	TM288	92.5 71.22 : 127.95



SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Oxygenates (S)

		QC 72
tert-butyl ethyl ether raw	TM288	93.0 64.00 : 136.00
tert-butyl methyl ether raw	TM288	93.5 83.50 : 129.91
Toluene raw	TM288	88.75 75.97 : 110.53

PAH by GCMS

Component	Method Code	QC 75
Acenaphthene	TM218	91.5 85.41 : 112.62
Acenaphthylene	TM218	87.0 75.00 : 105.00
Anthracene	TM218	89.0 77.86 : 109.85
Benz(a)anthracene	TM218	97.5 78.00 : 115.50
Benzo(a)pyrene	TM218	96.0 78.00 : 114.00
Benzo(b)fluoranthene	TM218	96.5 79.35 : 115.65
Benzo(ghi)perylene	TM218	89.0 73.75 : 111.25
Benzo(k)fluoranthene	TM218	93.0 77.00 : 113.00
Chrysene	TM218	90.5 83.80 : 113.87
Dibenzo(ah)anthracene	TM218	91.0 81.47 : 118.85
Fluoranthene	TM218	93.0 85.51 : 112.48
Fluorene	TM218	92.0 82.83 : 113.52
Indeno(123cd)pyrene	TM218	91.5 80.25 : 114.75
Naphthalene	TM218	90.5 79.59 : 115.14
Phenanthrene	TM218	92.0 83.98 : 112.67
Pyrene	TM218	93.0 84.64 : 111.39

Total Organic Carbon

Component	Method Code	QC 78
Total Organic Carbon	TM132	96.33 86.66 : 109.87

VOC MS (S)



SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

VOC MS (S)

Component	Method Code	QC 73	QC 72
1,1,1,2-tetrachloroethane	TM116	91.4 77.50 : 124.09	96.8 77.50 : 124.09
1,1,1-Trichloroethane	TM116	94.0 86.36 : 114.14	105.6 86.36 : 114.14
1,1,2-Trichloroethane	TM116	100.6 93.86 : 131.61	112.2 93.86 : 131.61
1,1-Dichloroethane	TM116	99.4 83.96 : 125.03	111.2 83.96 : 125.03
1,2-Dichloroethane	TM116	96.2 88.93 : 122.77	108.2 88.93 : 122.77
1,4-Dichlorobenzene	TM116	105.4 89.32 : 117.26	108.4 89.32 : 117.26
2-Chlorotoluene	TM116	132.4 93.47 : 156.27	141.0 93.47 : 156.27
4-Chlorotoluene	TM116	130.4 92.38 : 149.49	135.8 92.38 : 149.49
Benzene	TM116	92.4 86.95 : 110.62	103.4 86.95 : 110.62
Carbon Disulphide	TM116	95.0 76.98 : 118.83	107.4 76.98 : 118.83
Carbontetrachloride	TM116	100.4 71.94 : 132.65	108.4 71.94 : 132.65
Chlorobenzene	TM116	94.4 78.33 : 118.74	99.8 78.33 : 118.74
Chloroform	TM116	94.6 69.66 : 148.03	107.0 69.66 : 148.03
Chloromethane	TM116	96.0 49.71 : 146.30	116.8 49.71 : 146.30
Cis-1,2-Dichloroethene	TM116	92.2 87.09 : 113.71	100.2 87.09 : 113.71
Dibromomethane	TM116	85.4 65.13 : 138.40	95.8 65.13 : 138.40
Dichloromethane	TM116	98.0 70.67 : 150.15	108.6 70.67 : 150.15
Ethylbenzene	TM116	91.8 84.09 : 110.87	97.6 84.09 : 110.87
Hexachlorobutadiene	TM116	138.4 62.74 : 176.60	196.0 62.74 : 176.60
Isopropylbenzene	TM116	84.6 75.72 : 100.29	93.0 75.72 : 100.29
Naphthalene	TM116	92.8 80.72 : 132.86	105.8 80.72 : 132.86
o-Xylene	TM116	90.4 76.04 : 111.23	96.2 76.04 : 111.23
p/m-Xylene	TM116	93.2 79.03 : 115.32	100.0 79.03 : 115.32
Sec-Butylbenzene	TM116	102.0 73.42 : 125.99	122.8 73.42 : 125.99
Tetrachloroethene	TM116	103.2 87.31 : 123.54	110.0 87.31 : 123.54
Toluene	TM116	88.2 83.48 : 106.73	98.4 83.48 : 106.73



SDG:	130418-49	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	221747
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

VOC MS (S)

		QC 73	QC 72
Trichloroethene	TM116	92.8 86.48 : 110.46	103.2 86.48 : 110.46
Trichlorofluoromethane	TM116	95.0 82.57 : 120.95	109.6 82.57 : 120.95
Vinyl Chloride	TM116	110.4 62.58 : 154.52	126.8 62.58 : 154.52

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

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

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



SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

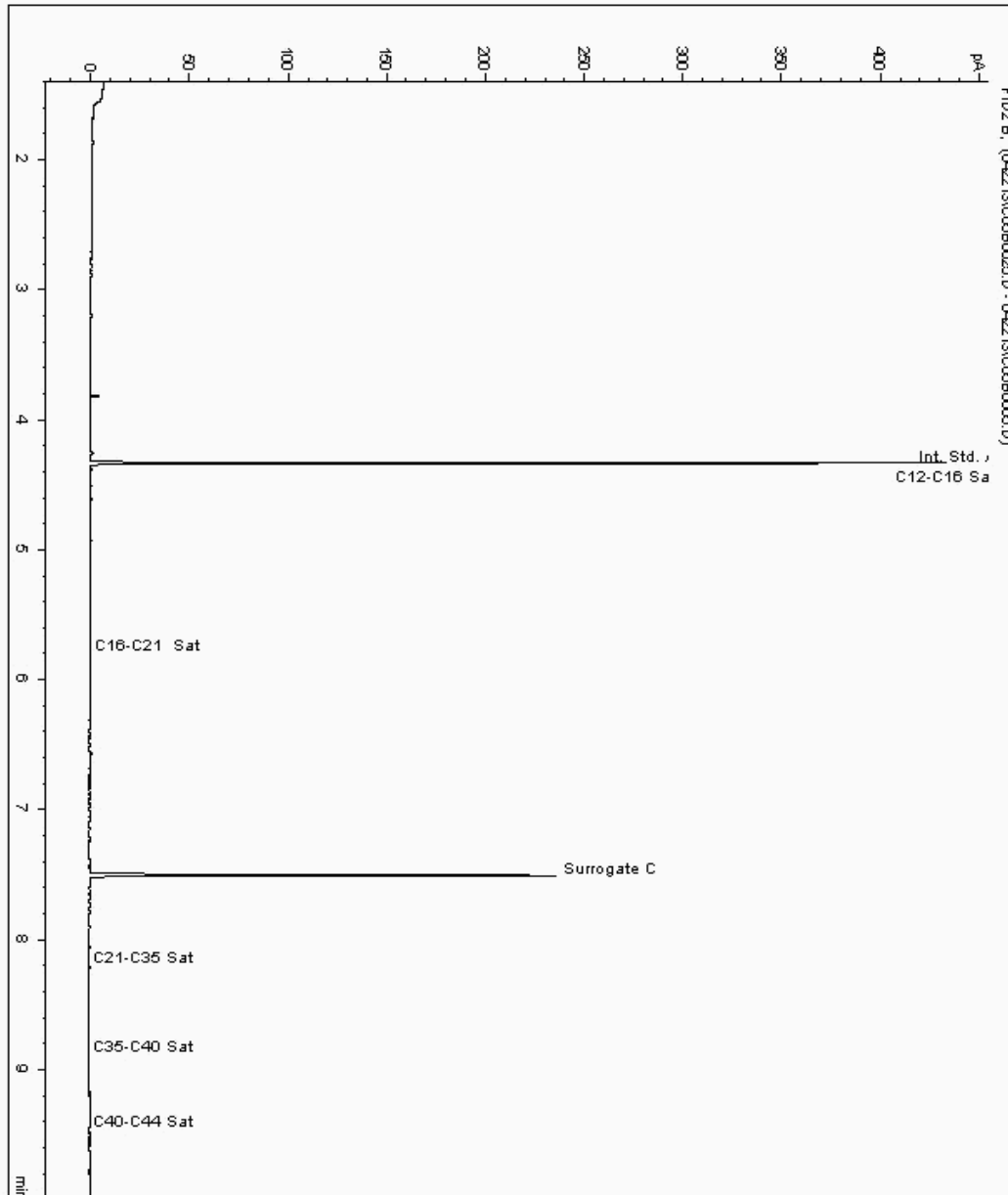
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7277819
Sample ID : VA138

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6976614-7277819
Date Acquired : 22/04/13 22:41:35 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.013





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

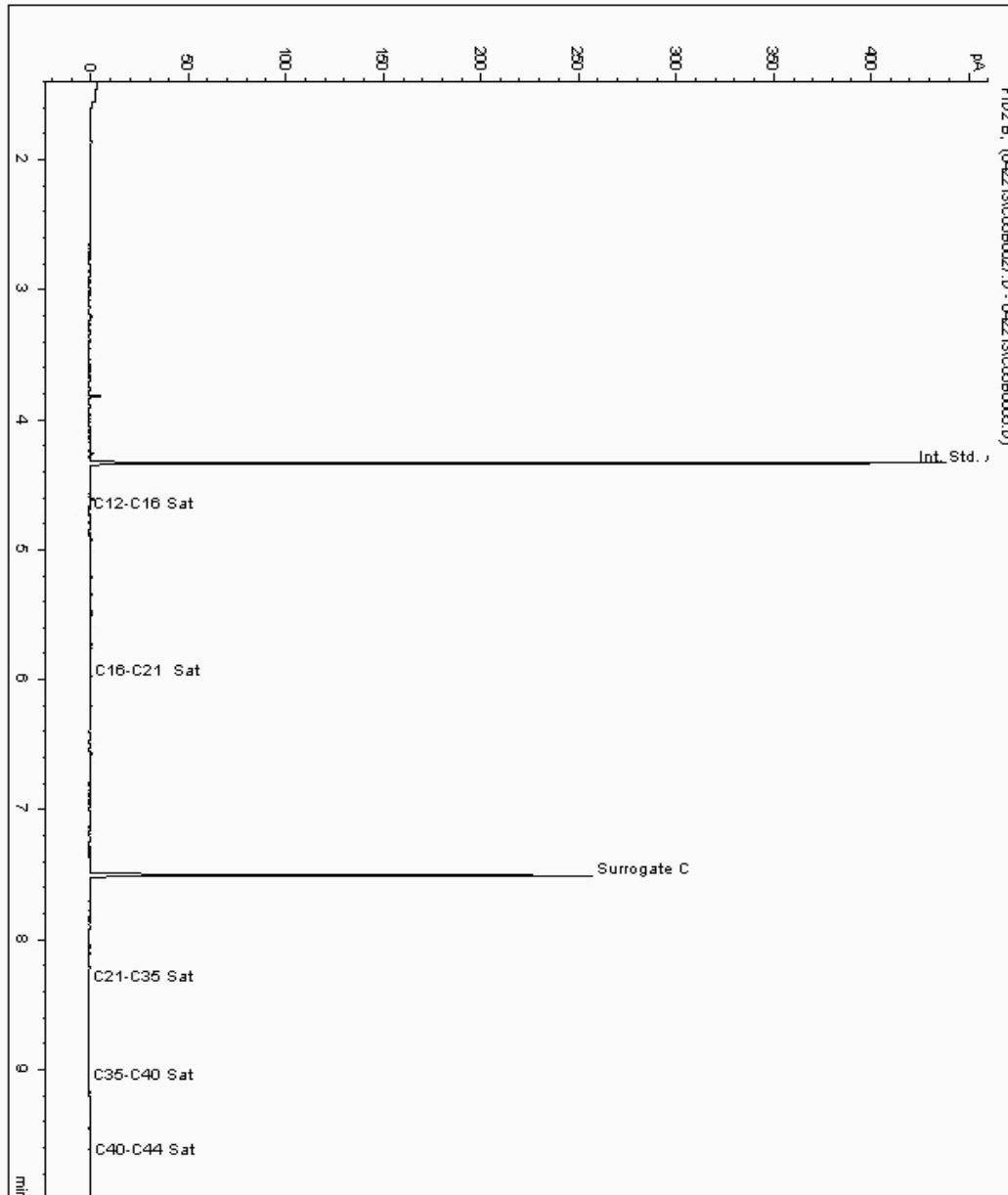
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7277862
Sample ID : VA142

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6976652-7277862
Date Acquired : 22/04/13 23:23:56 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.033





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

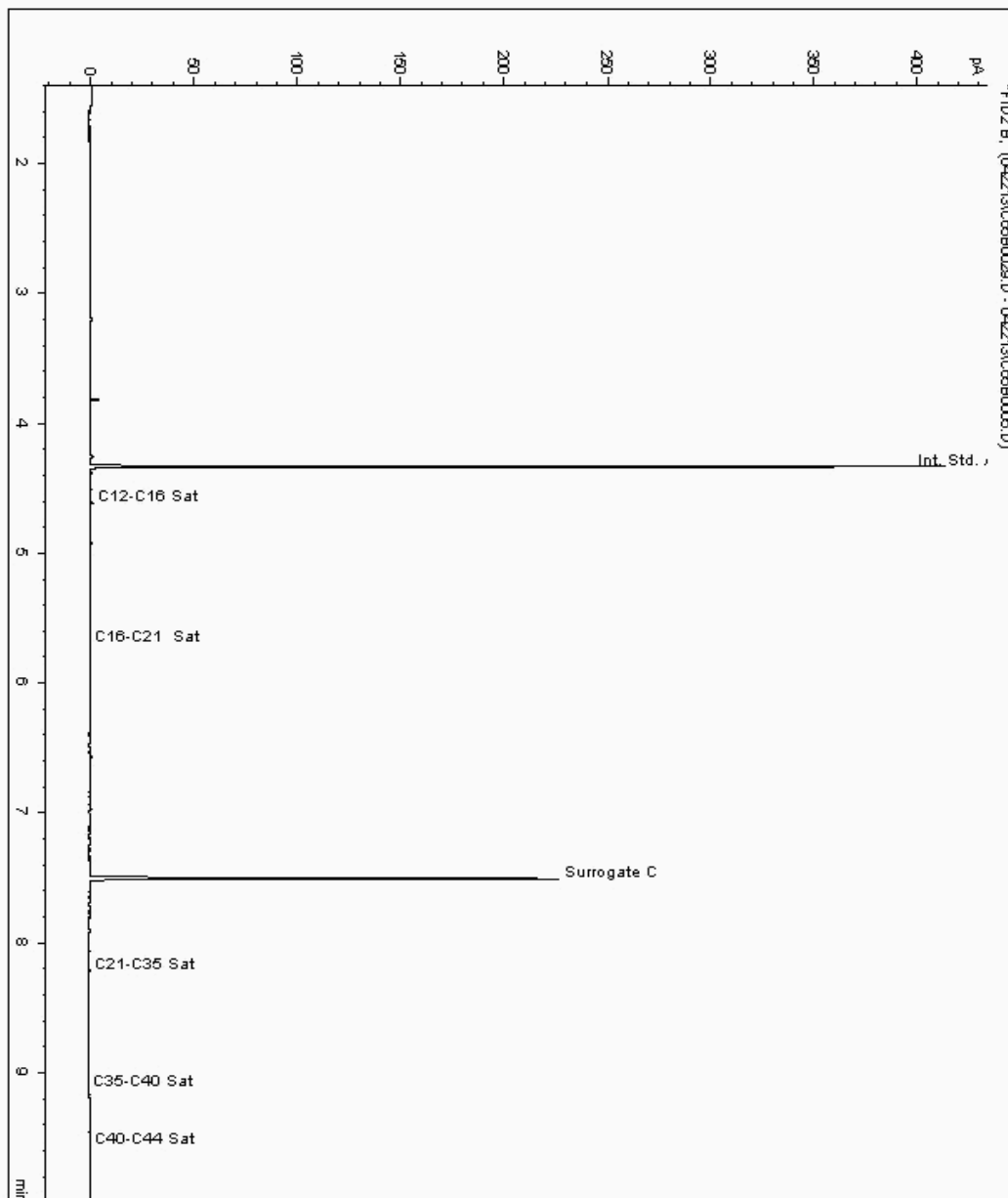
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7277899
Sample ID : VA146

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6976732-7277899
Date Acquired : 23/04/13 00:06:23 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.044

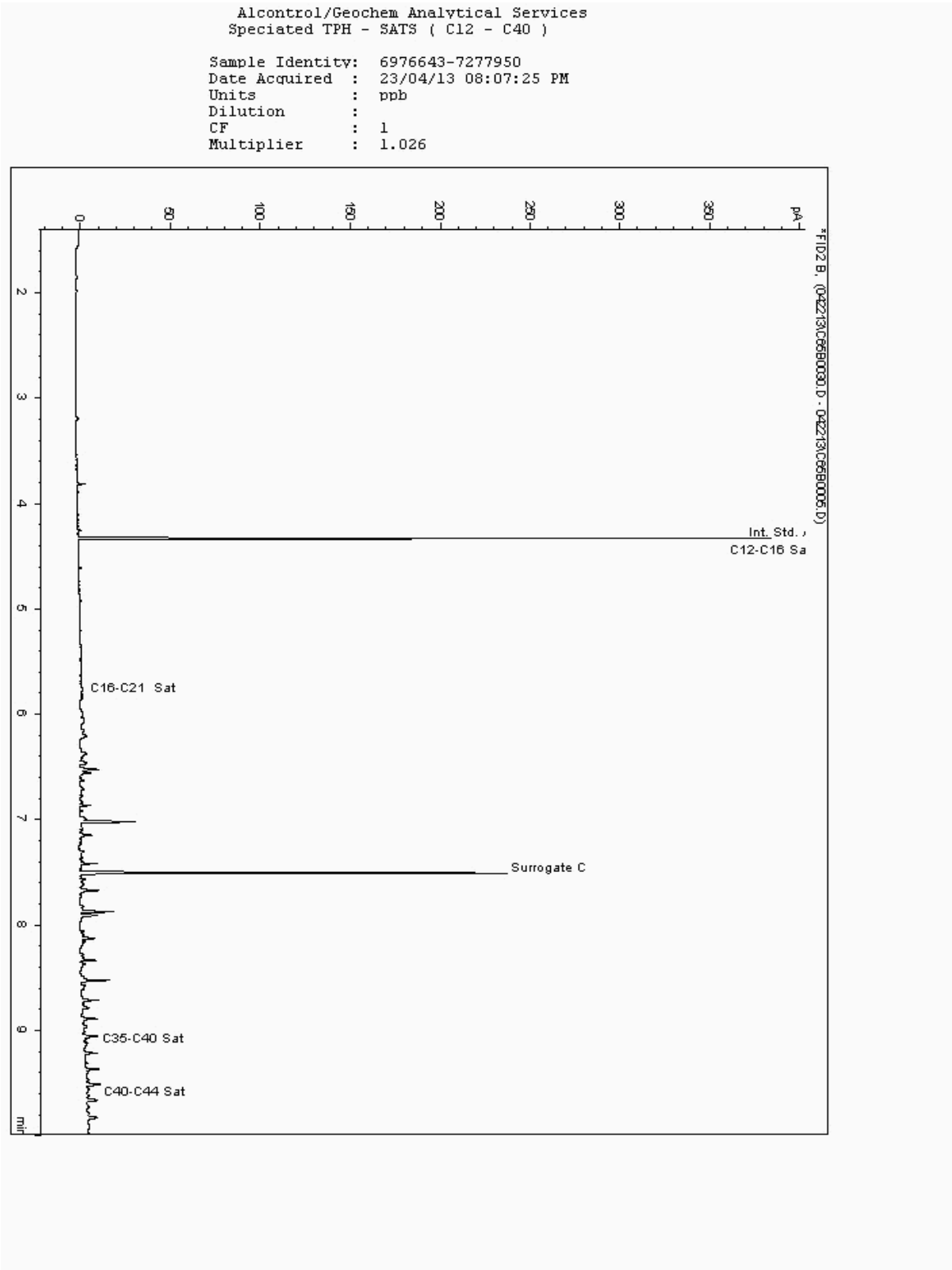




SDG:	130418-49	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	221747
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Chromatogram

Analysis:	EPH CWG (Aliphatic) GC (S)	Sample No :	7277950	Depth :	6.50
		Sample ID :	VA141		





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

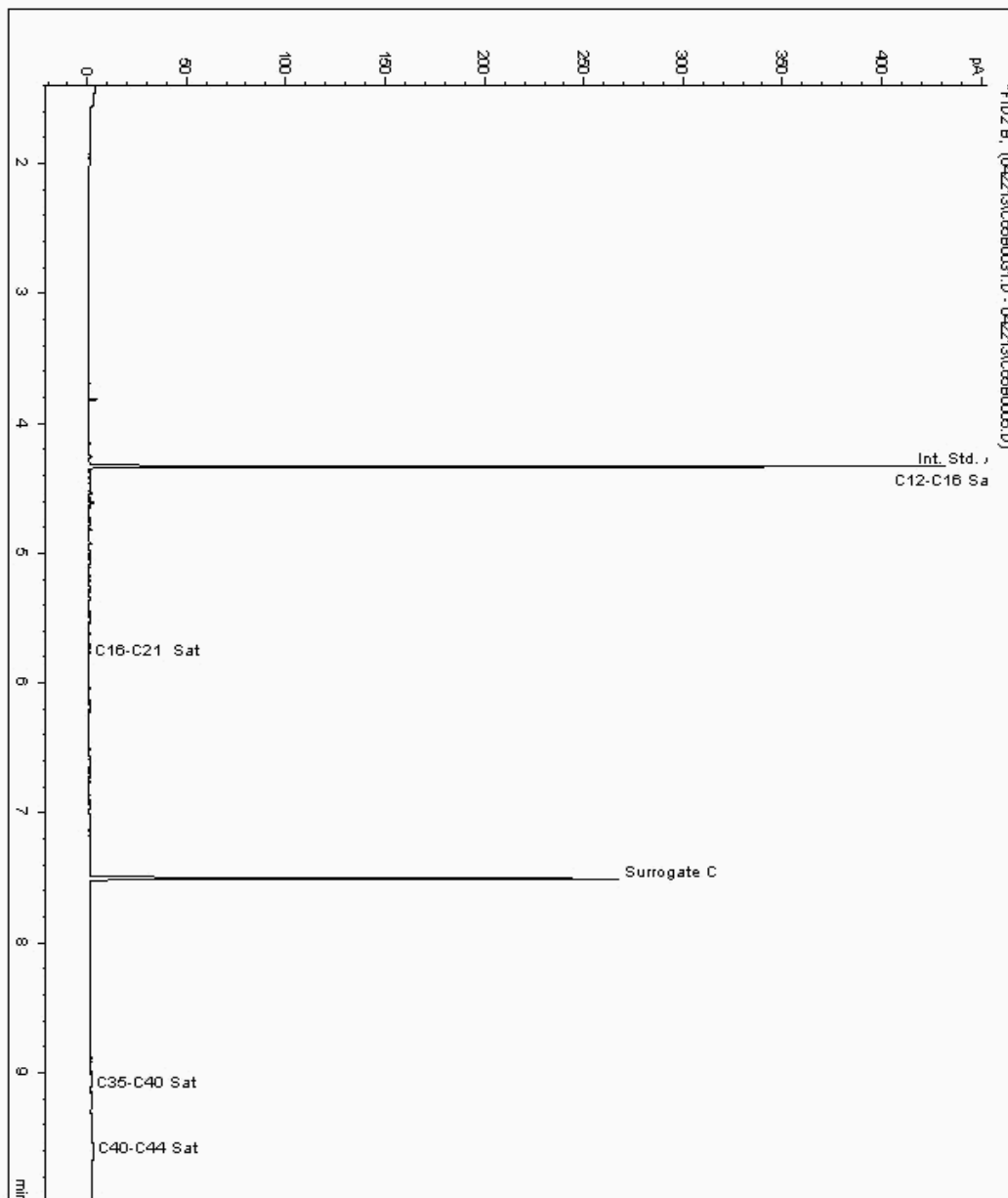
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7277970
Sample ID : VA144

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6976682-7277970
Date Acquired : 23/04/13 08:27:55 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.976





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

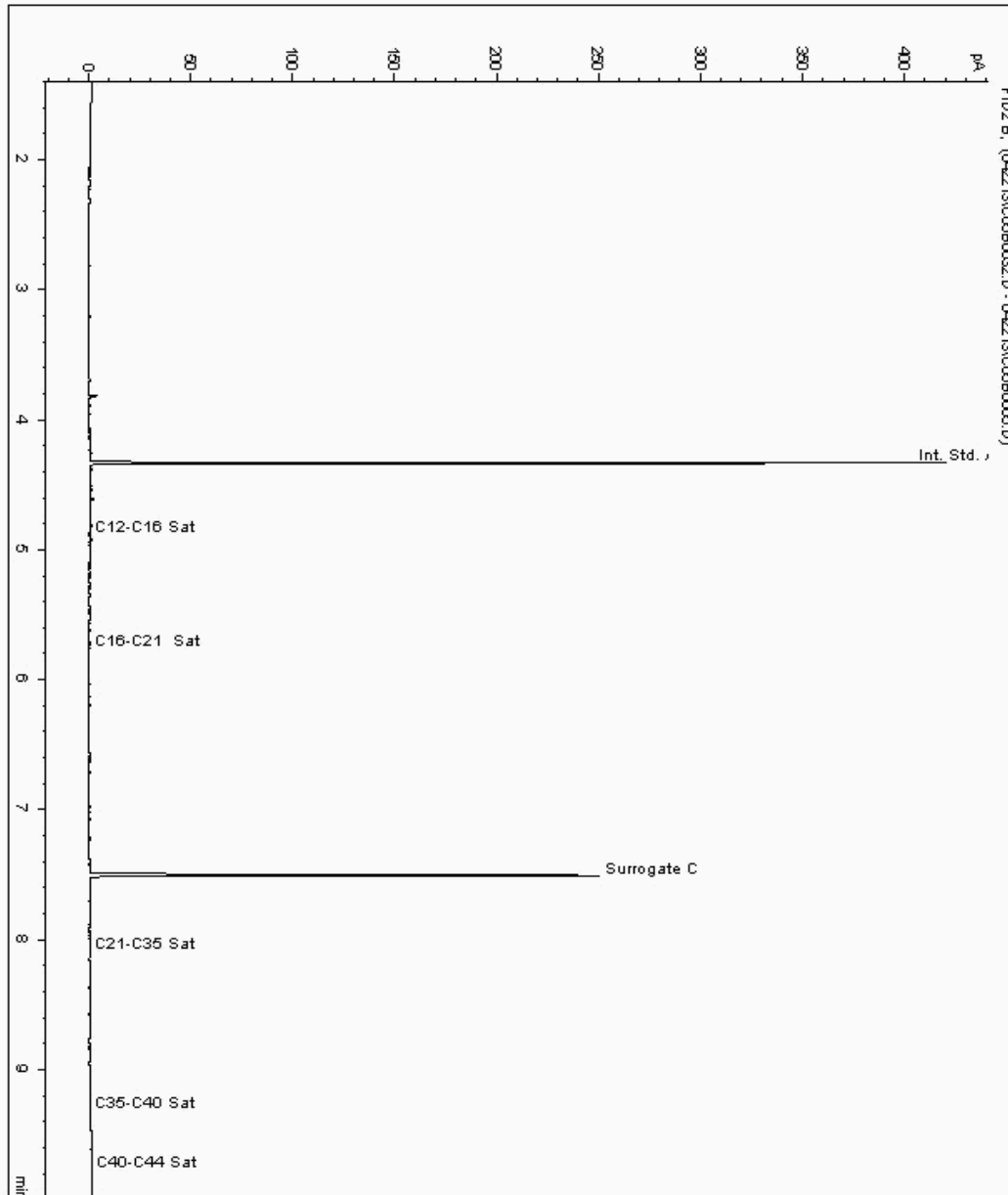
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7277978
Sample ID : VA145

Depth : 6.50

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6976711-7277978
Date Acquired : 23/04/13 08:48:39 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.009





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

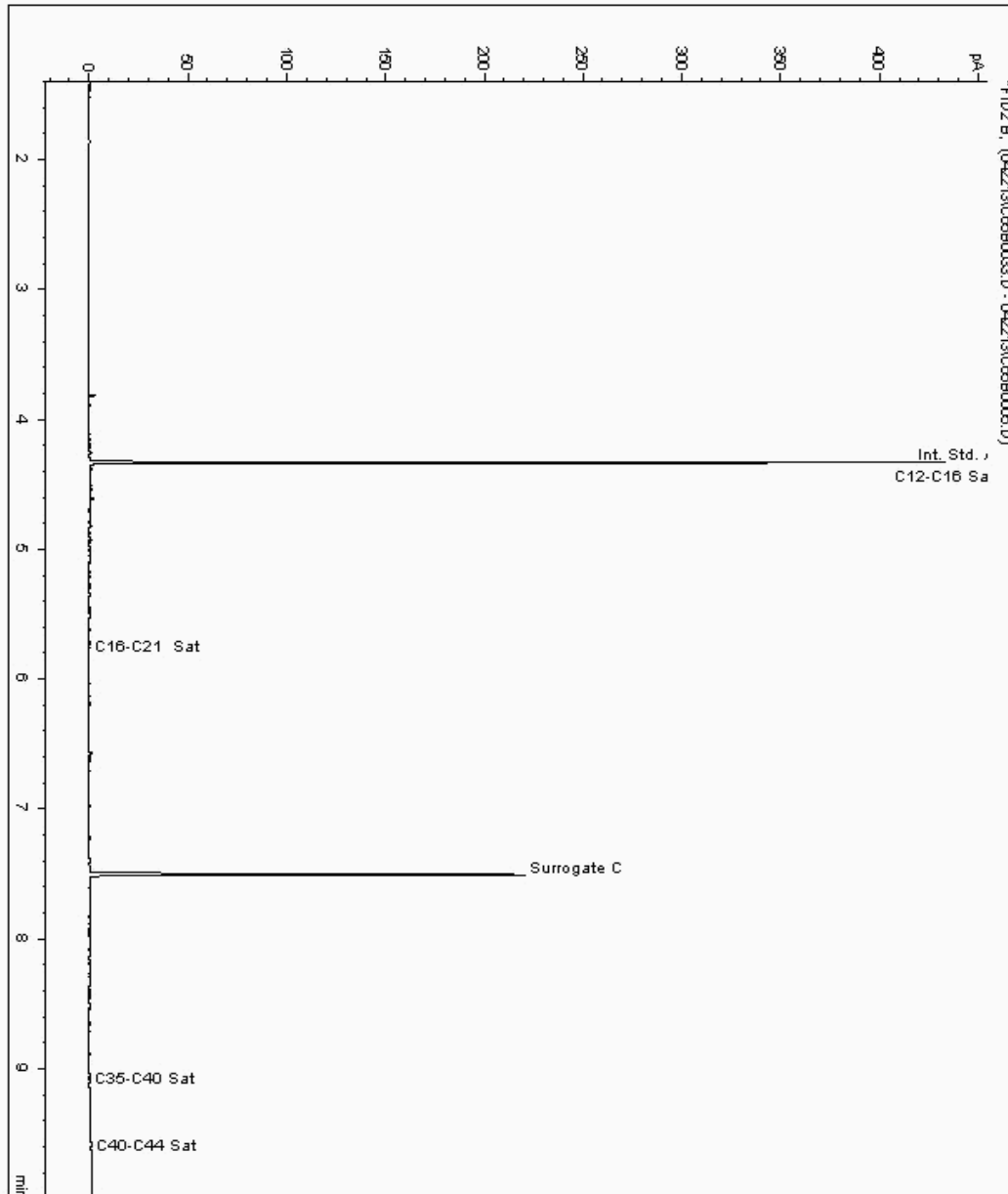
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7277991
Sample ID : VA143

Depth : 6.50

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6976662-7277991
Date Acquired : 23/04/13 09:09:41 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.028





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

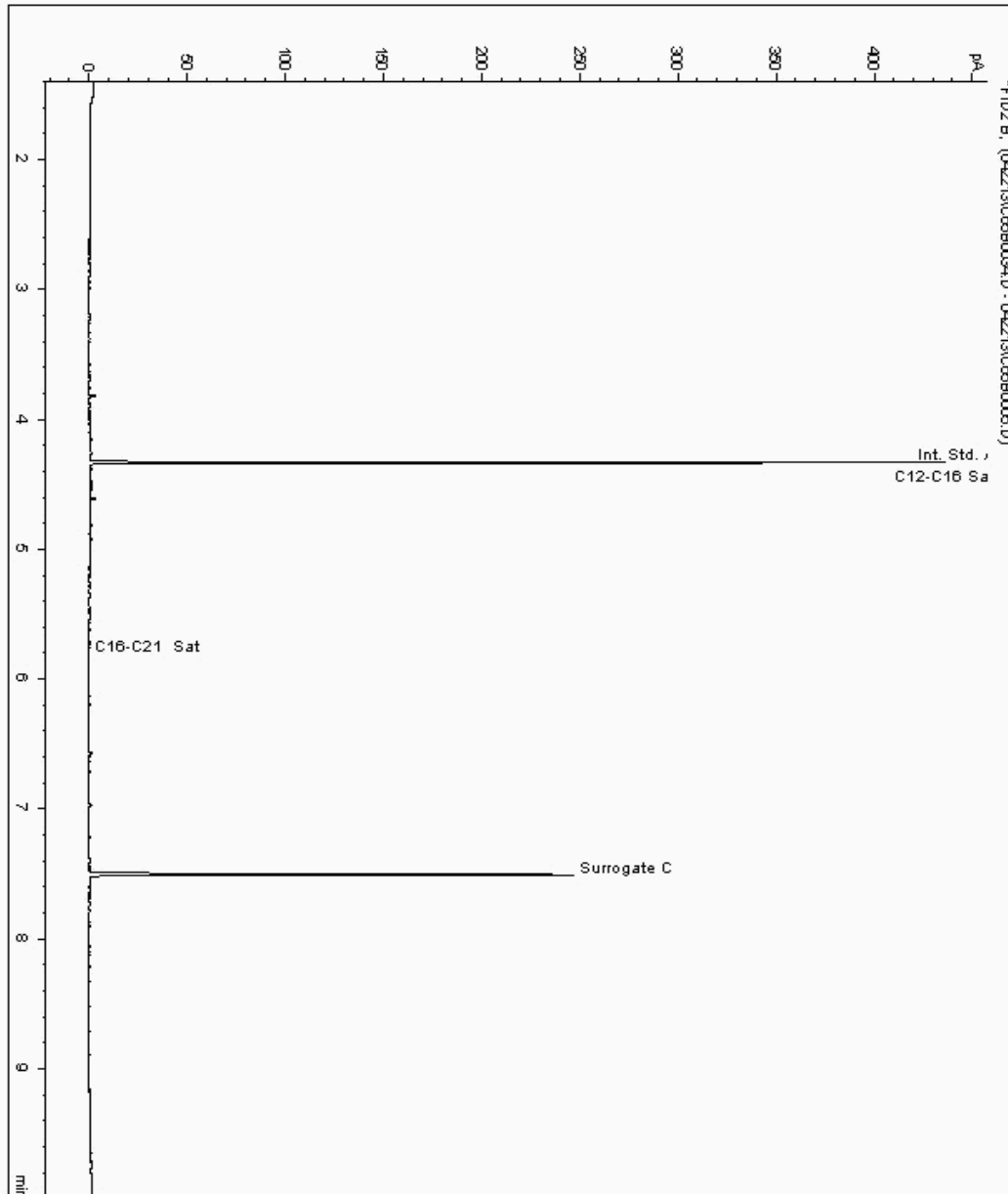
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7278013
Sample ID : VA139

Depth : 5.50

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6976623-7278013
Date Acquired : 23/04/13 09:30:36 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.992





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

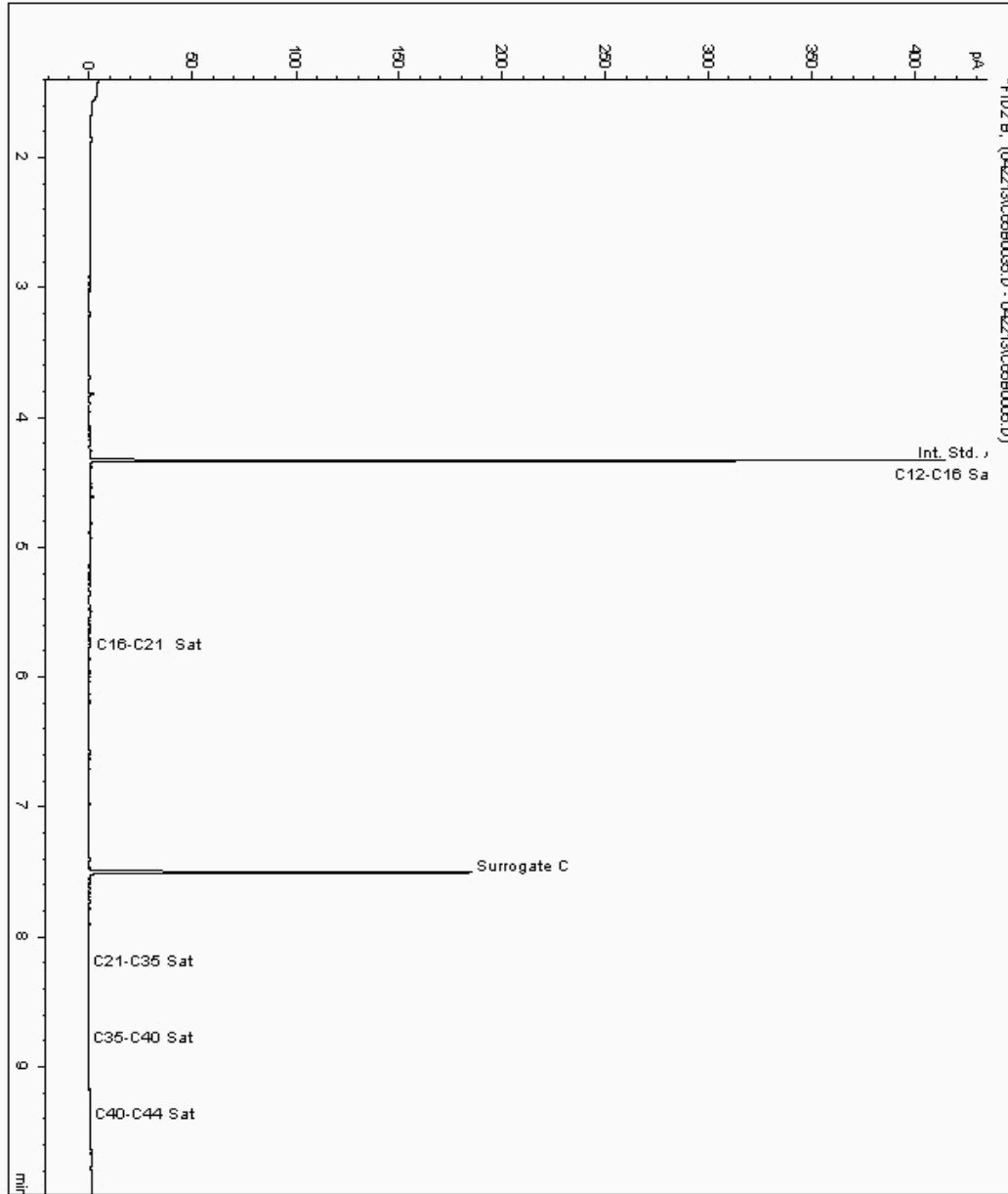
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7278046
Sample ID : VA147

Depth : 6.50

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6976746-7278046
Date Acquired : 23/04/13 09:51:31 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.004





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

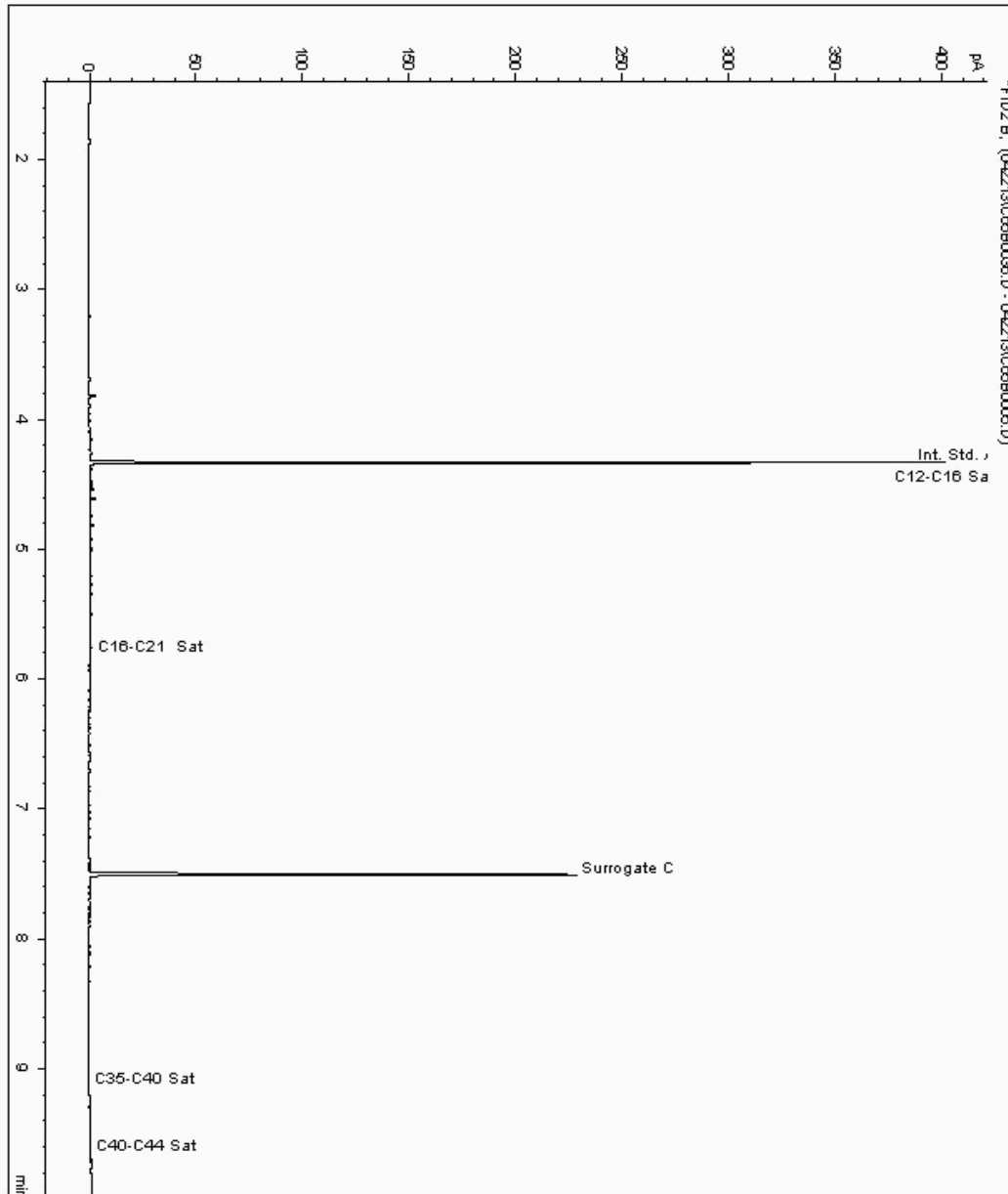
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7278060
Sample ID : VA140

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 6976633-7278060
Date Acquired : 23/04/13 10:12:38 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.014





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

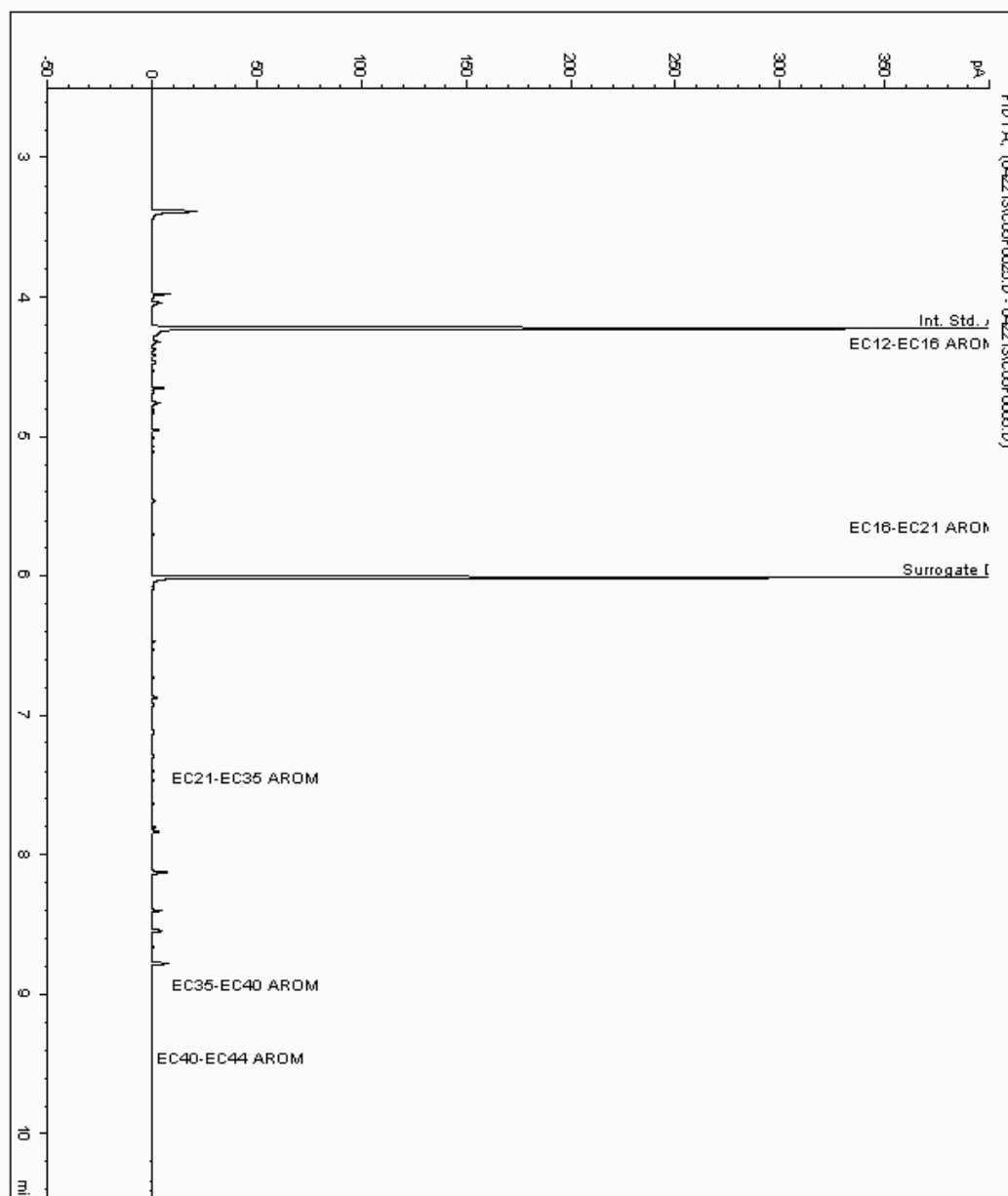
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7277819
Sample ID : VA138

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6976615-7277819
Date Acquired : 22/04/13 22:41:35 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.013





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

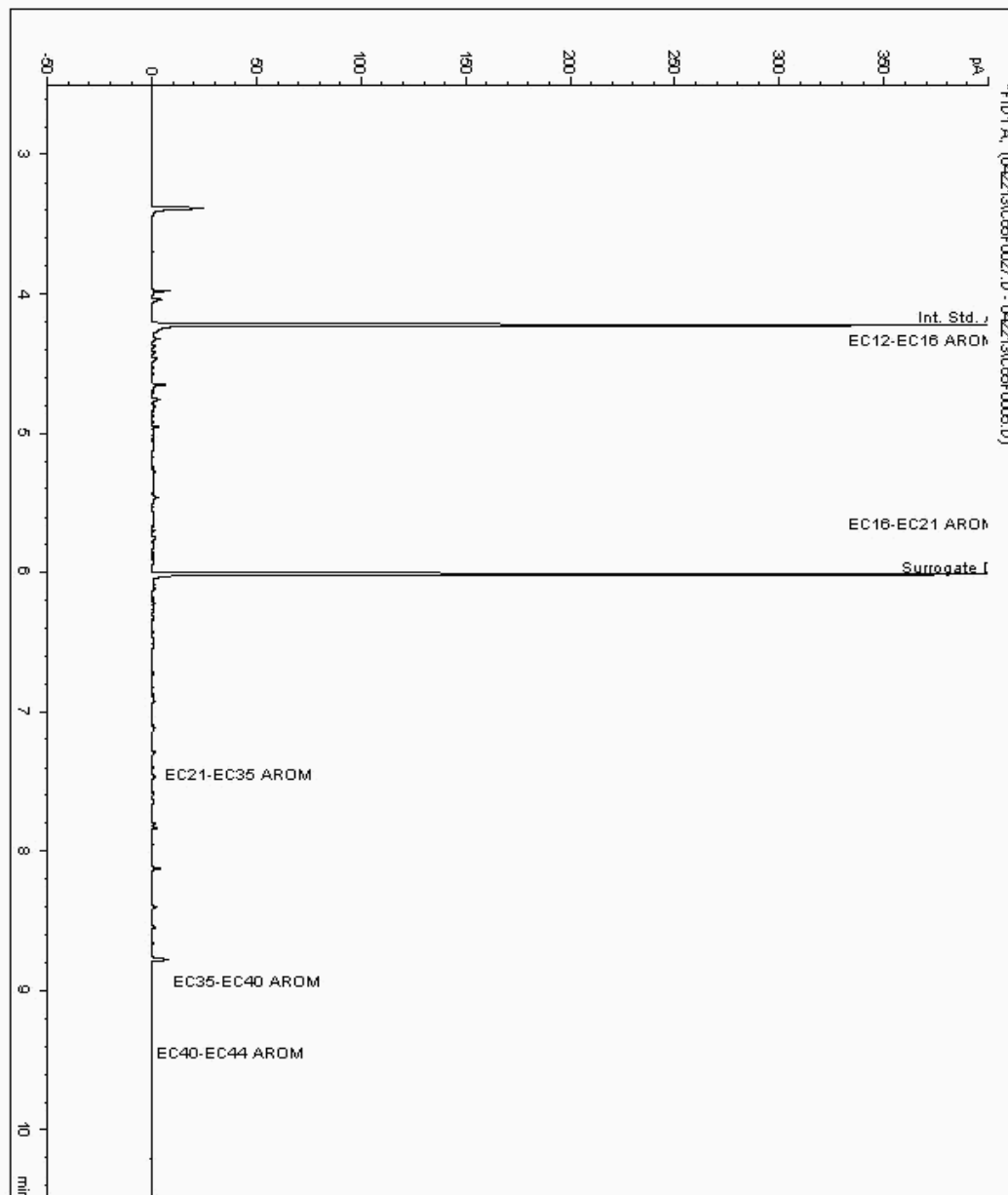
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7277862
Sample ID : VA142

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6976653-7277862
Date Acquired : 22/04/13 23:23:56 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.033





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

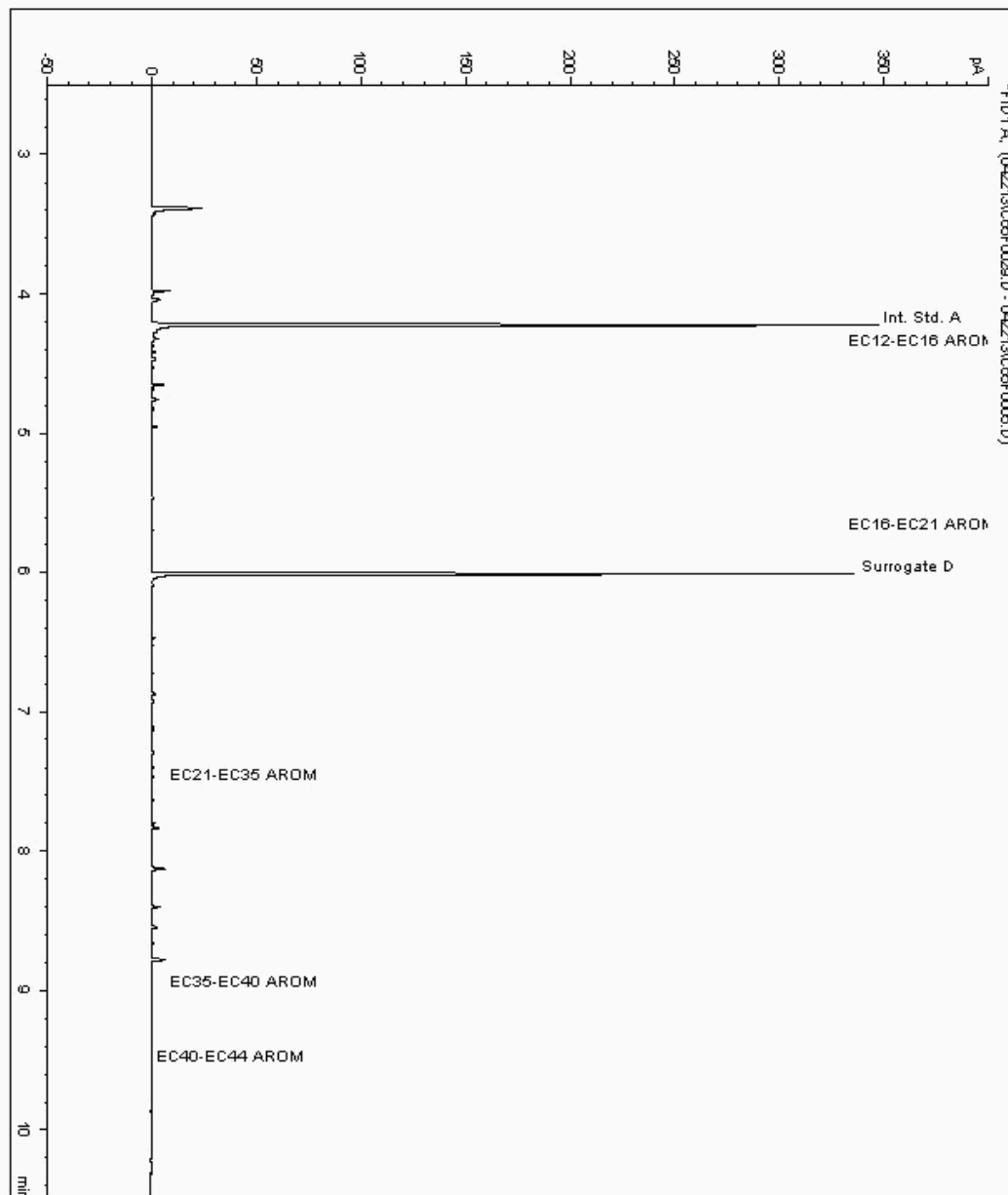
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7277899
Sample ID : VA146

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6976733-7277899
Date Acquired : 23/04/13 00:06:23 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.044





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

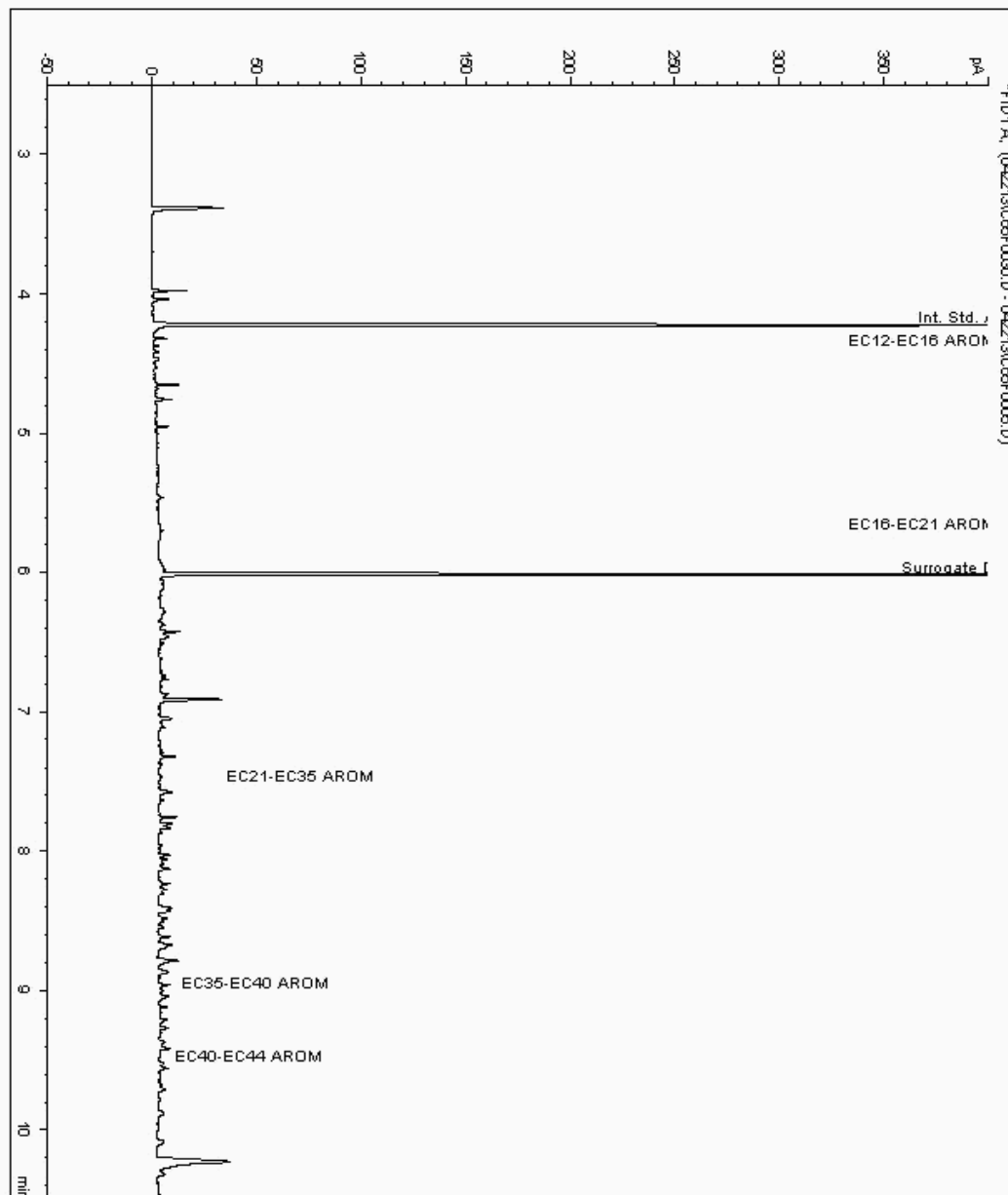
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7277950
Sample ID : VA141

Depth : 6.50

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6976644-7277950
Date Acquired : 23/04/13 08:07:24 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.026





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

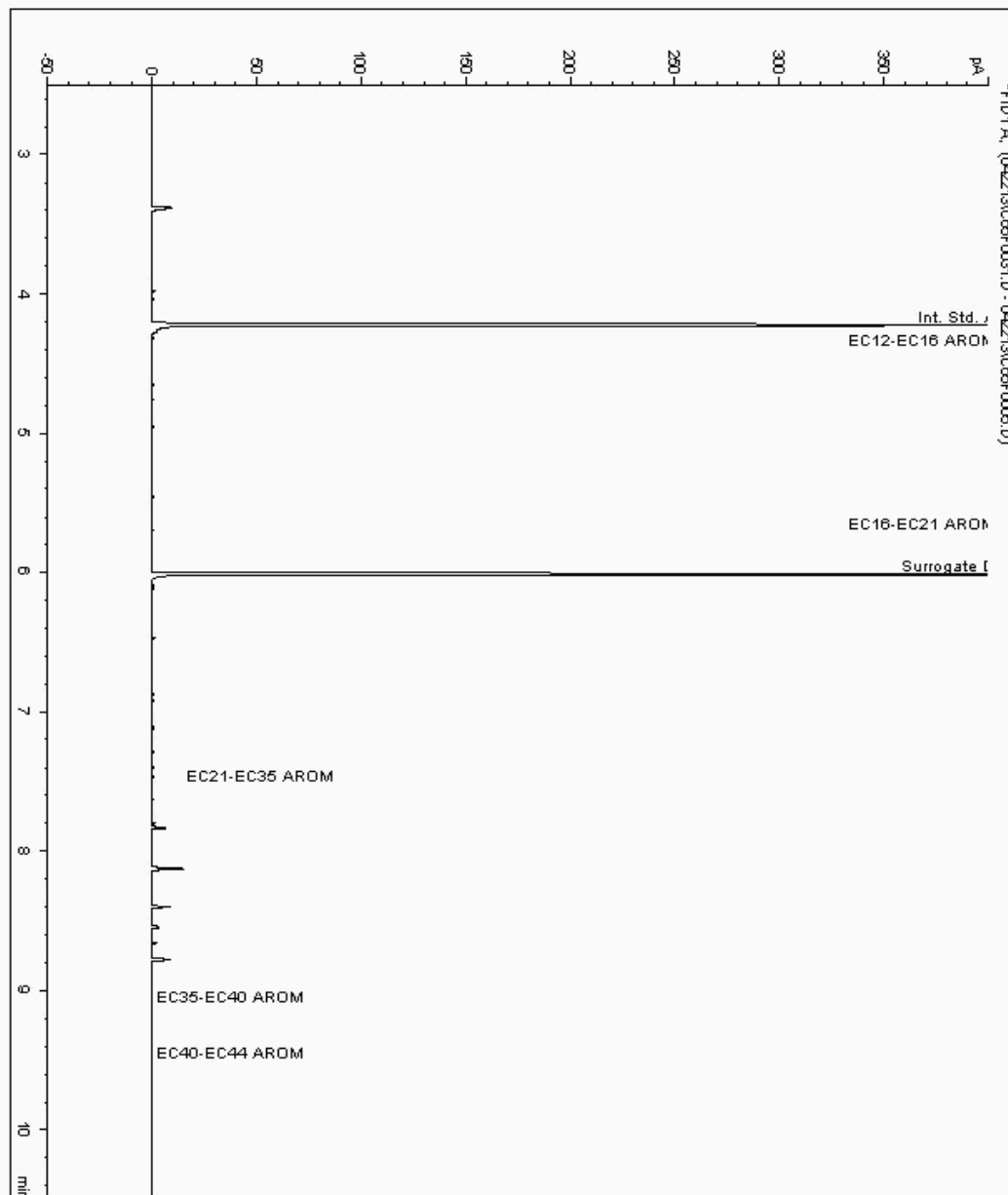
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7277970
Sample ID : VA144

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6976683-7277970
Date Acquired : 23/04/13 08:27:55 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.976





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

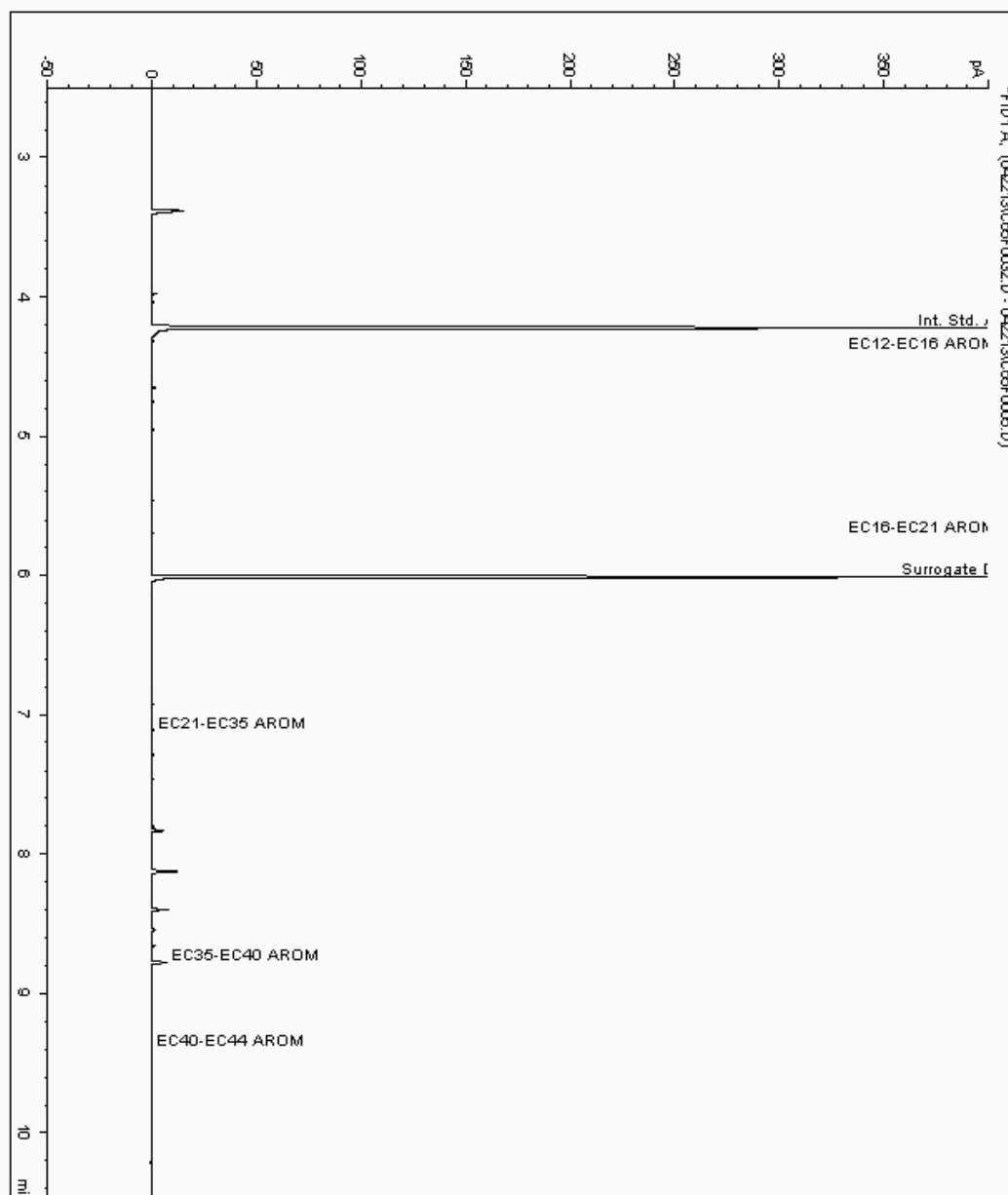
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7277978
Sample ID : VA145

Depth : 6.50

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6976712-7277978
Date Acquired : 23/04/13 08:48:39 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.009





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

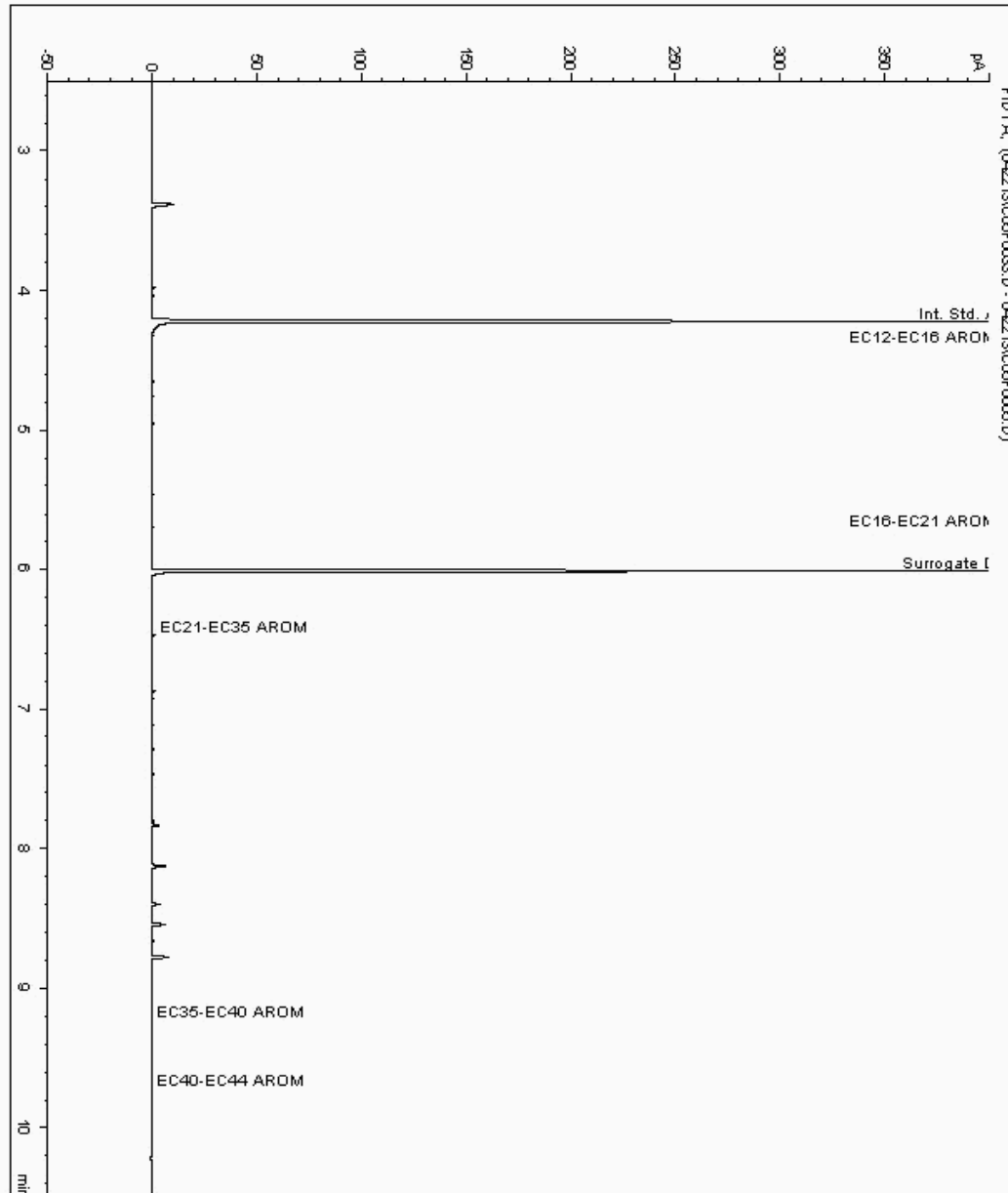
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7277991
Sample ID : VA143

Depth : 6.50

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6976663-7277991
Date Acquired : 23/04/13 09:09:41 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.028





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

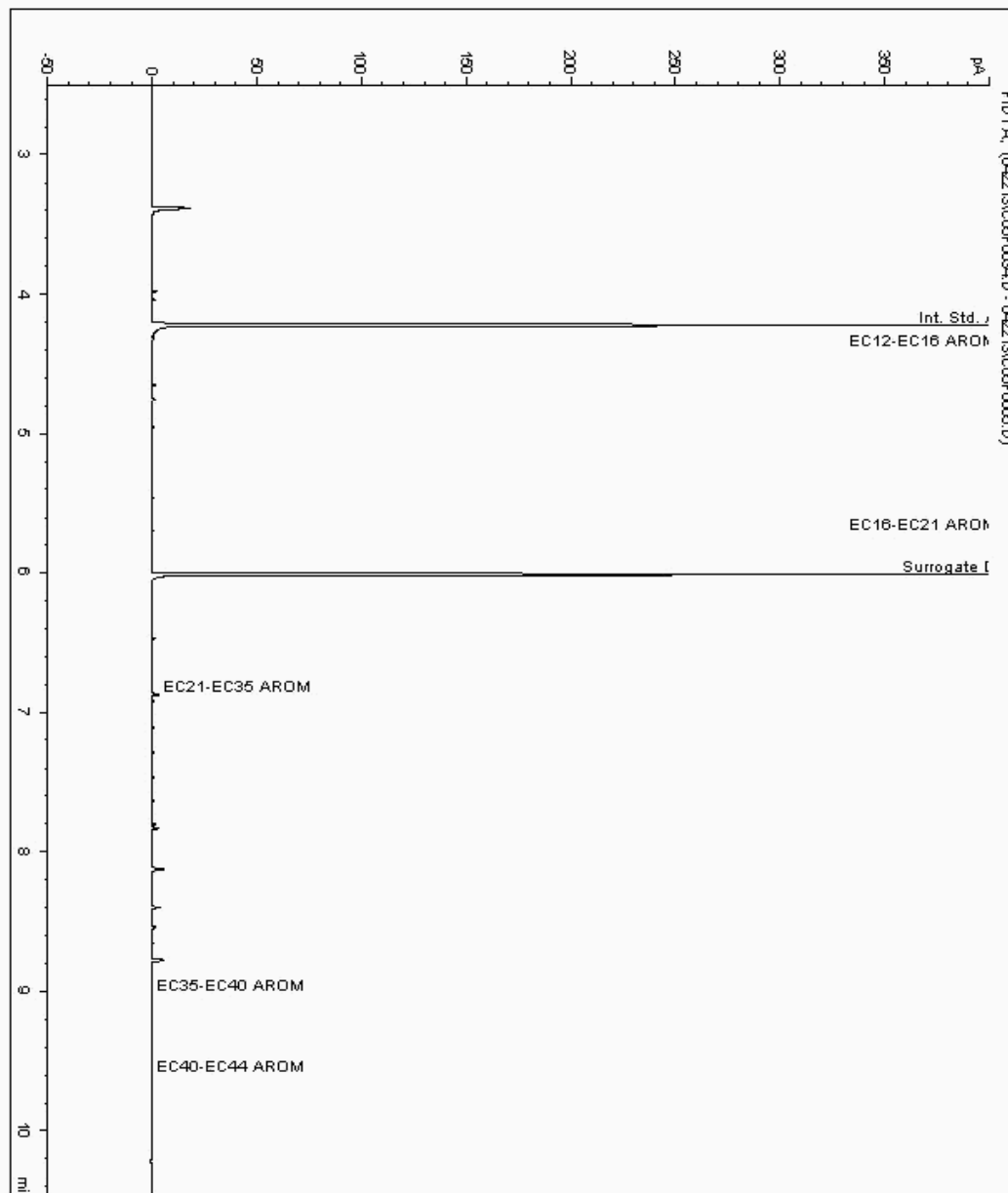
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7278013
Sample ID : VA139

Depth : 5.50

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6976624-7278013
Date Acquired : 23/04/13 09:30:36 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.992





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

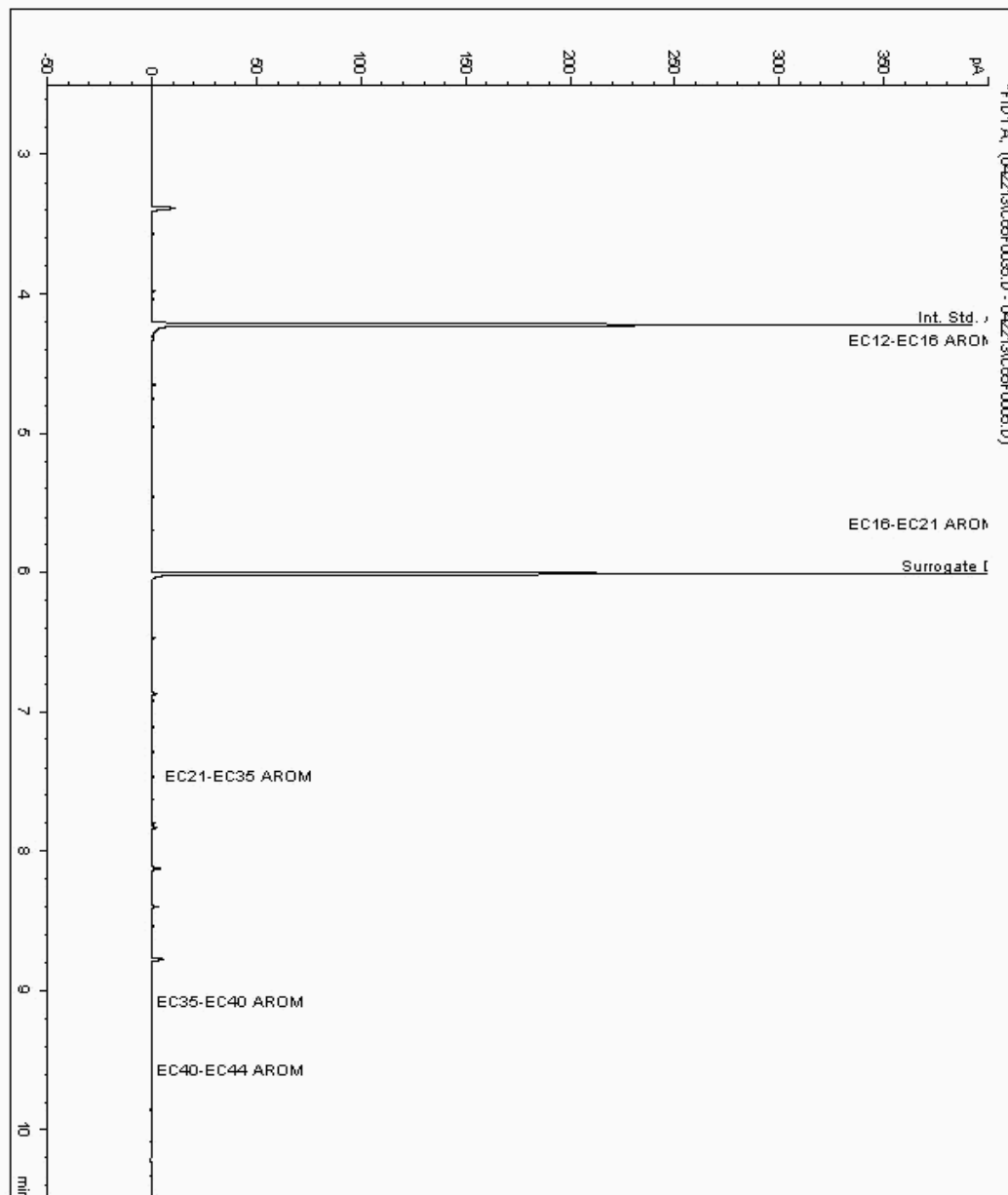
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7278046
Sample ID : VA147

Depth : 6.50

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6976747-7278046
Date Acquired : 23/04/13 09:51:31 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.004





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

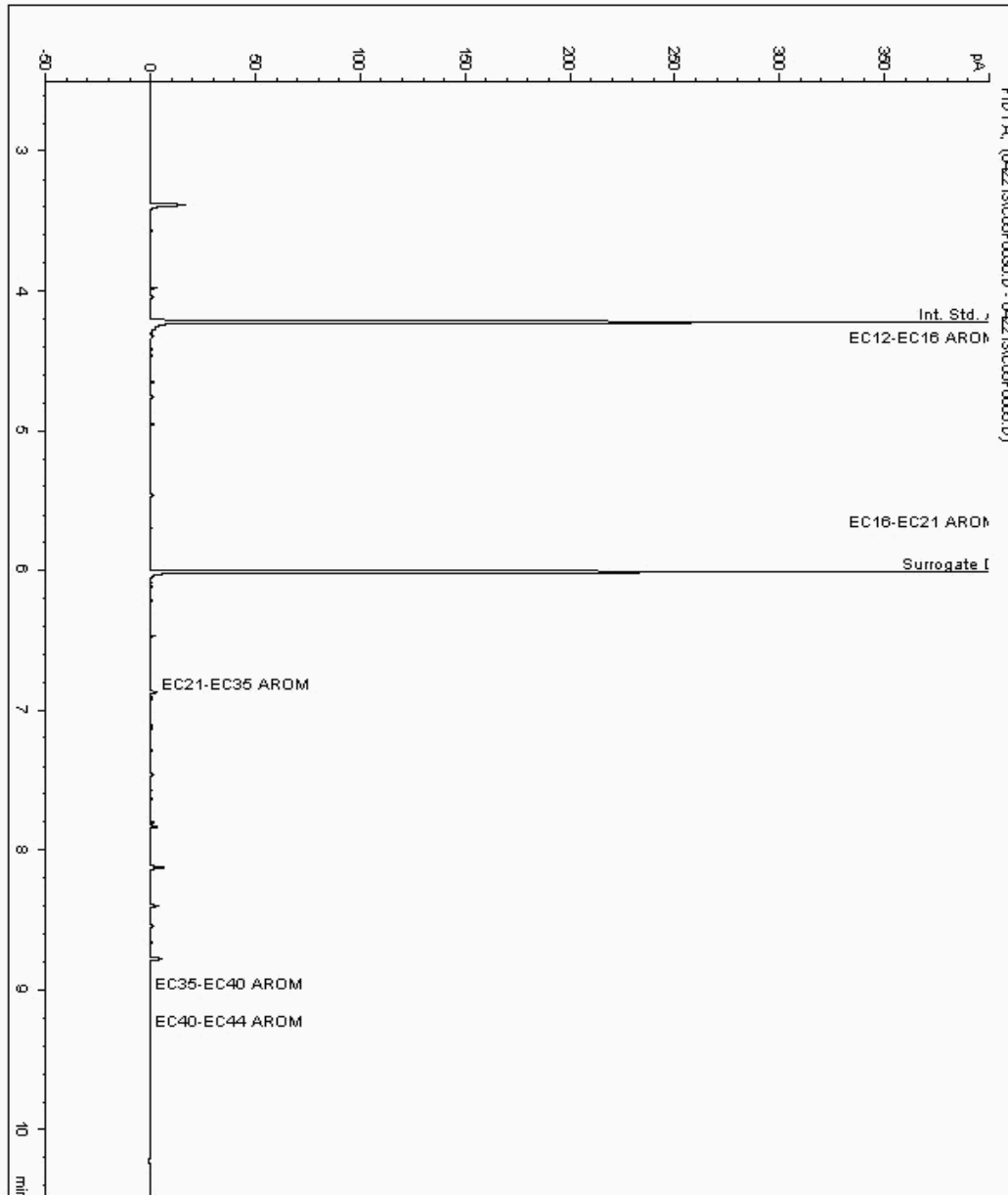
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7278060
Sample ID : VA140

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 6976634-7278060
Date Acquired : 23/04/13 10:12:38 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.014





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

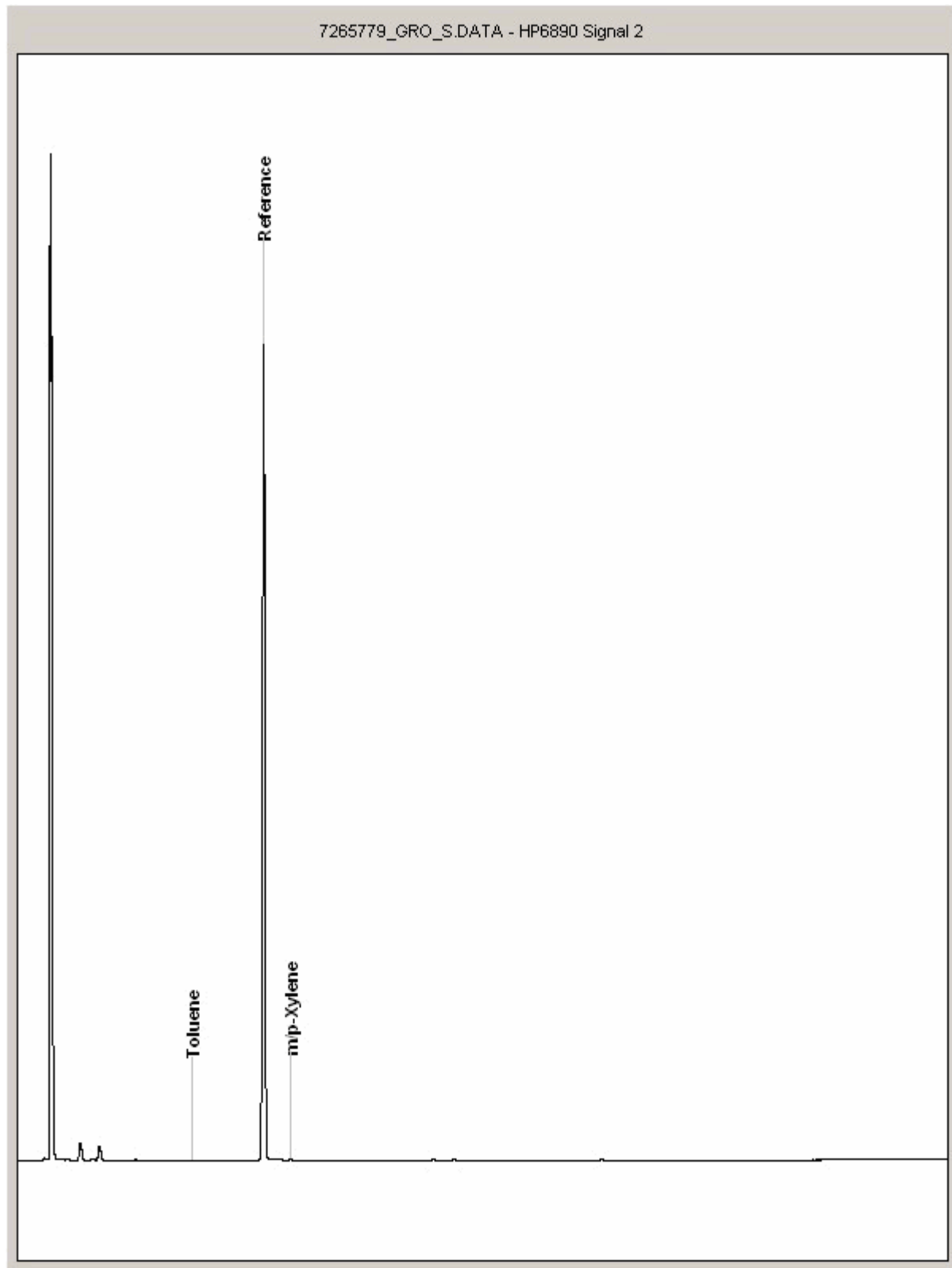
Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7265779
Sample ID : VA140

Depth : 3.00





CERTIFICATE OF ANALYSIS

SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

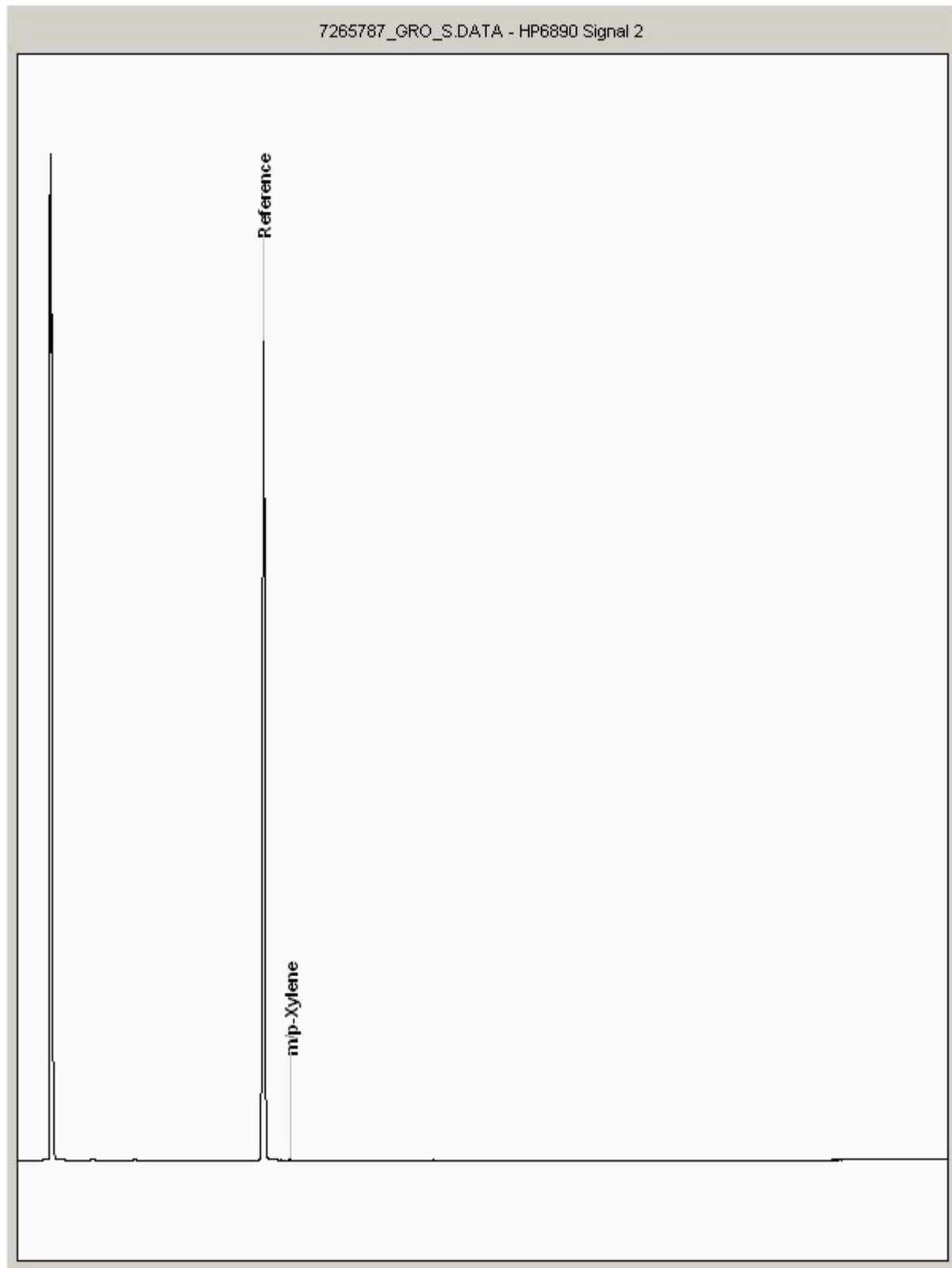
Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7265787
Sample ID : VA145

Depth : 6.50





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

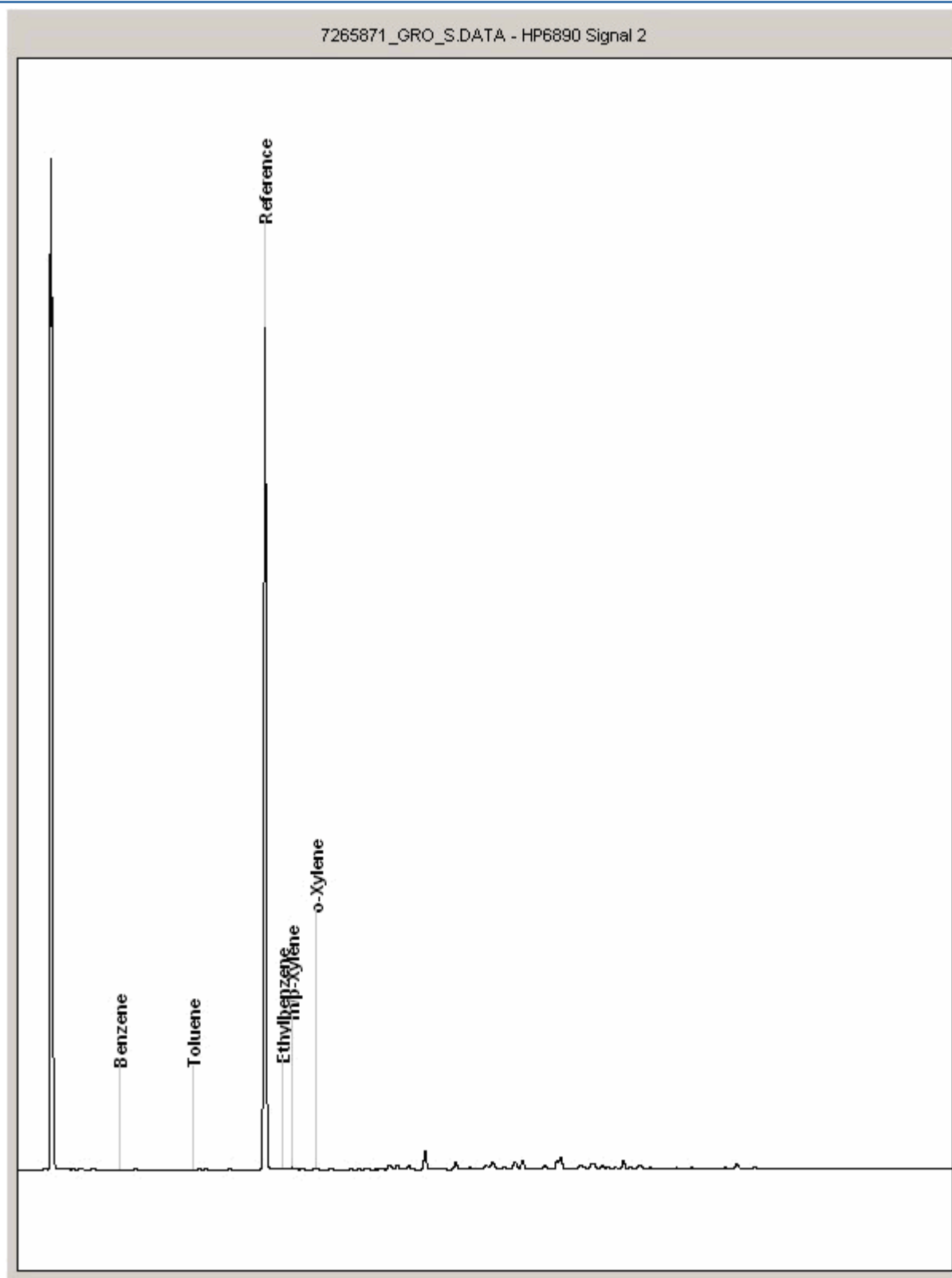
Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7265871
Sample ID : VA143

Depth : 6.50





CERTIFICATE OF ANALYSIS

SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

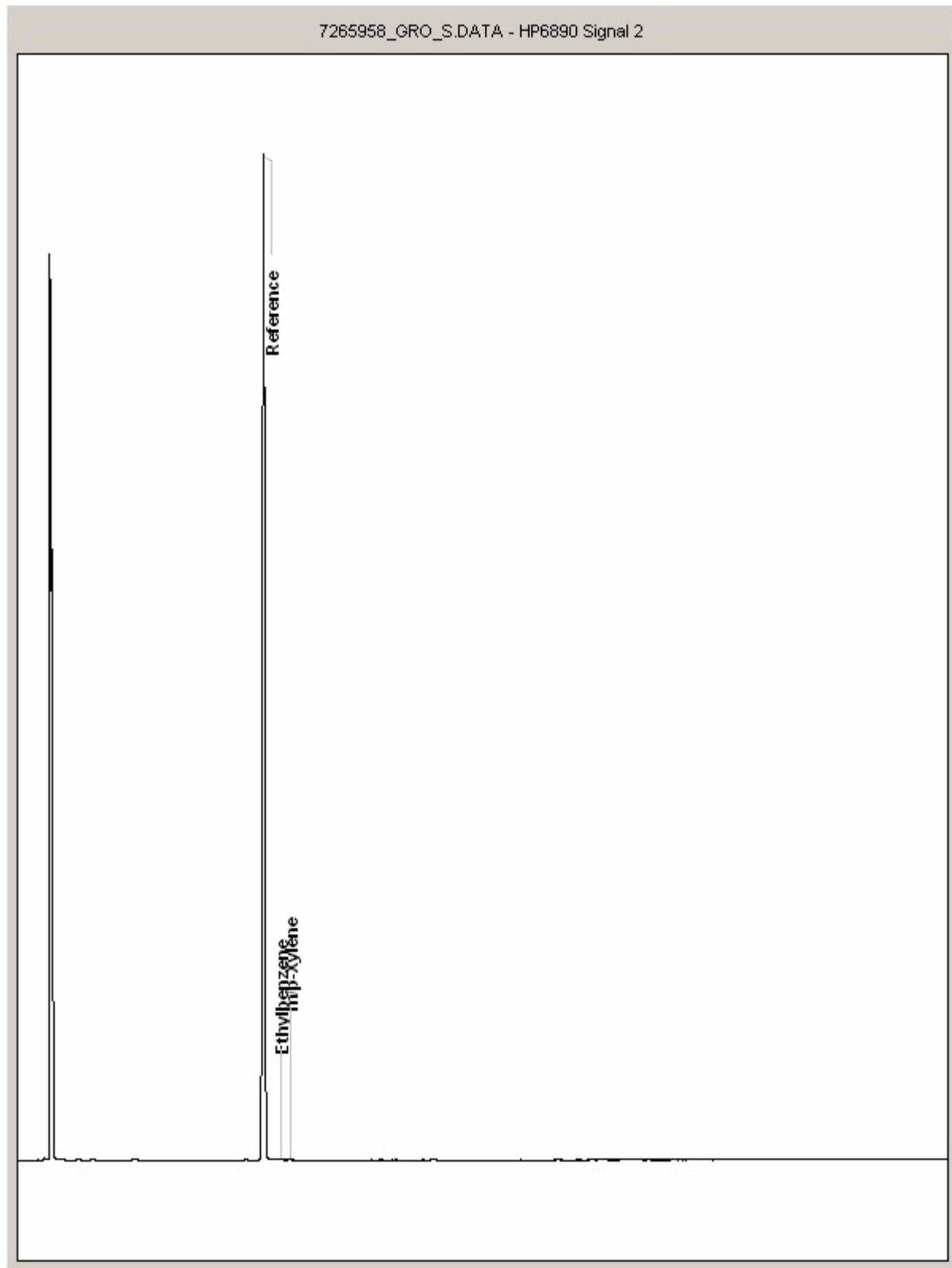
Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7265958
Sample ID : VA144

Depth : 3.00





CERTIFICATE OF ANALYSIS

SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

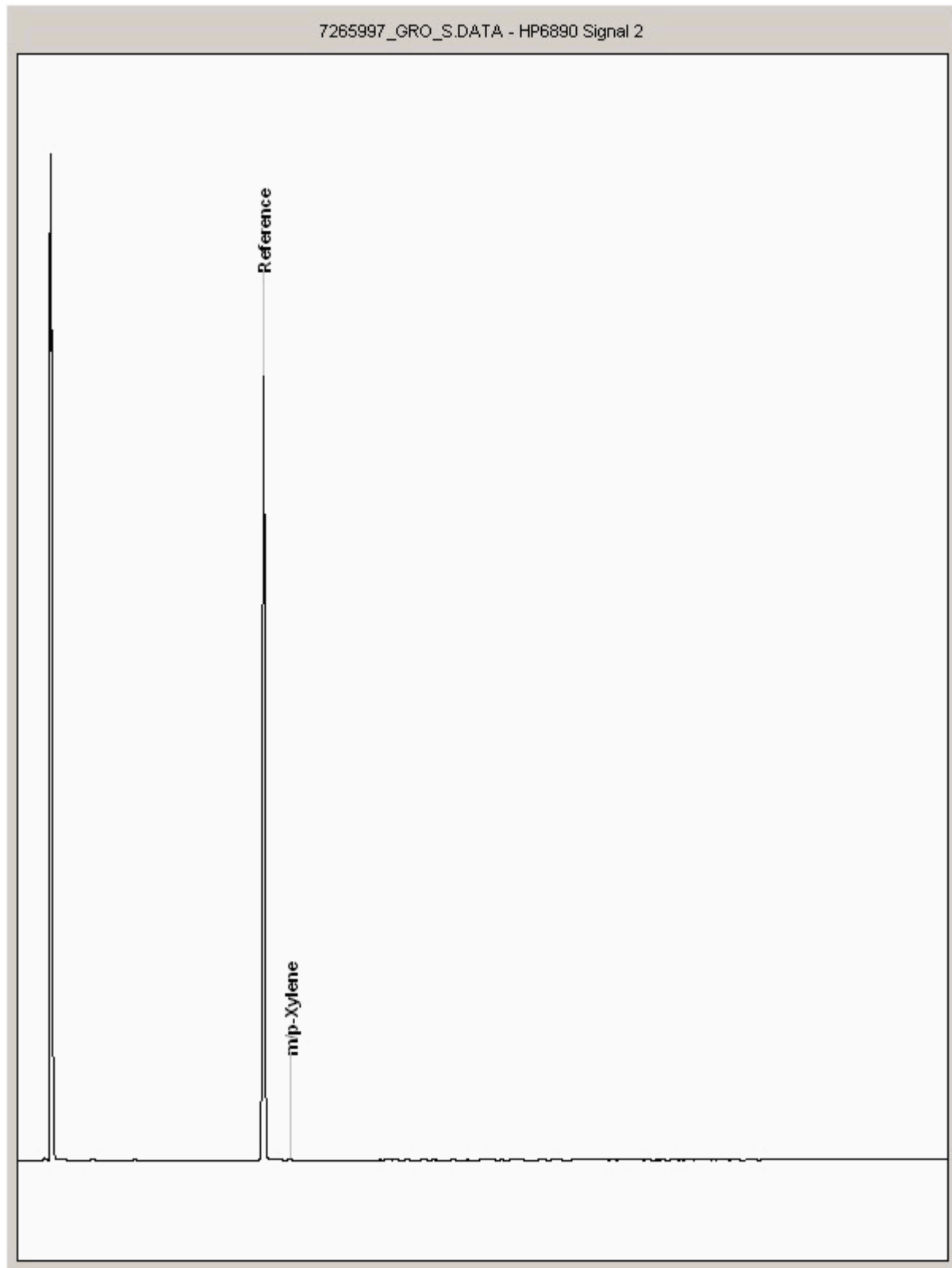
Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7265997
Sample ID : VA138

Depth : 3.00





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

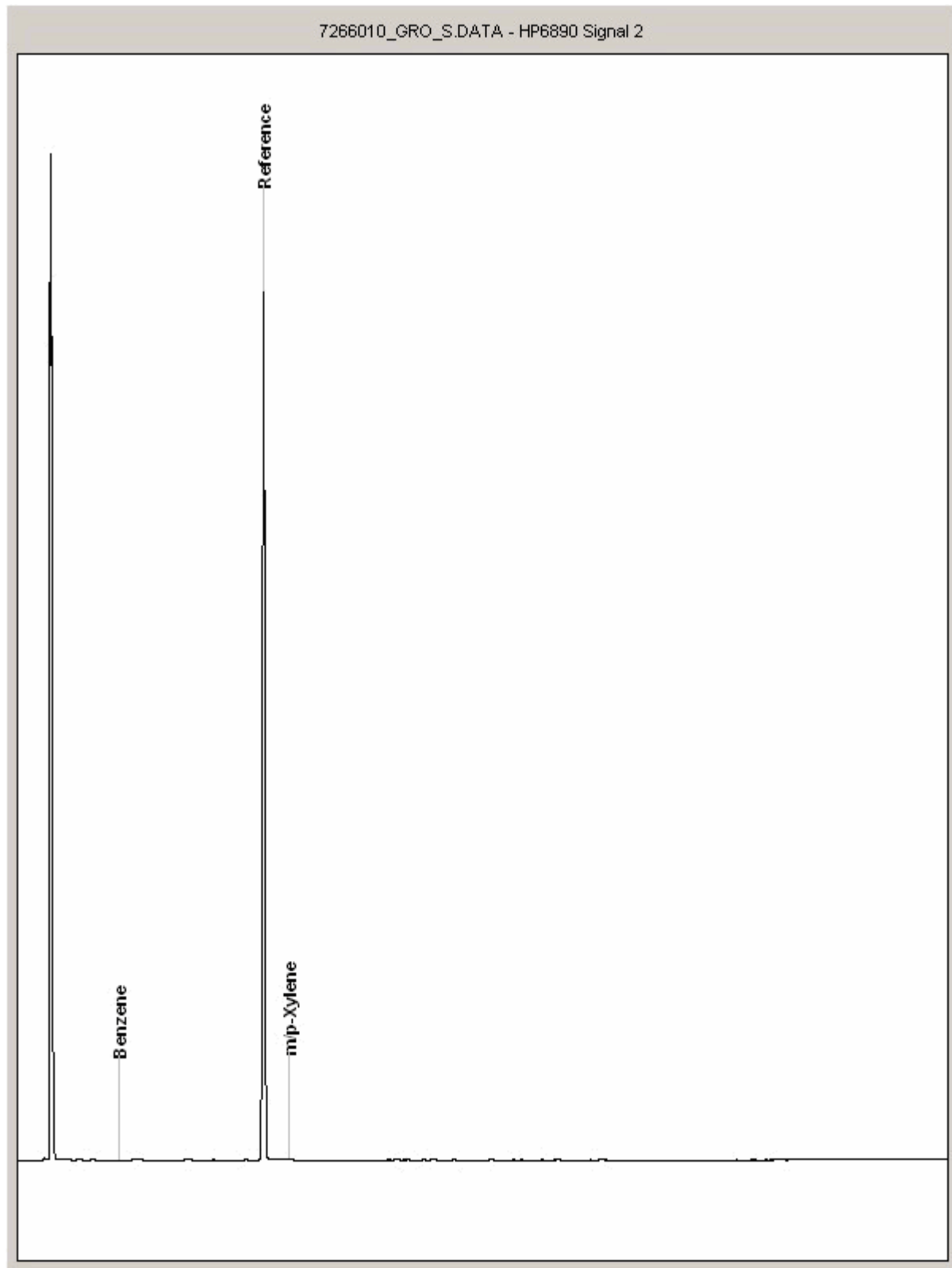
Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7266010
Sample ID : VA141

Depth : 6.50





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

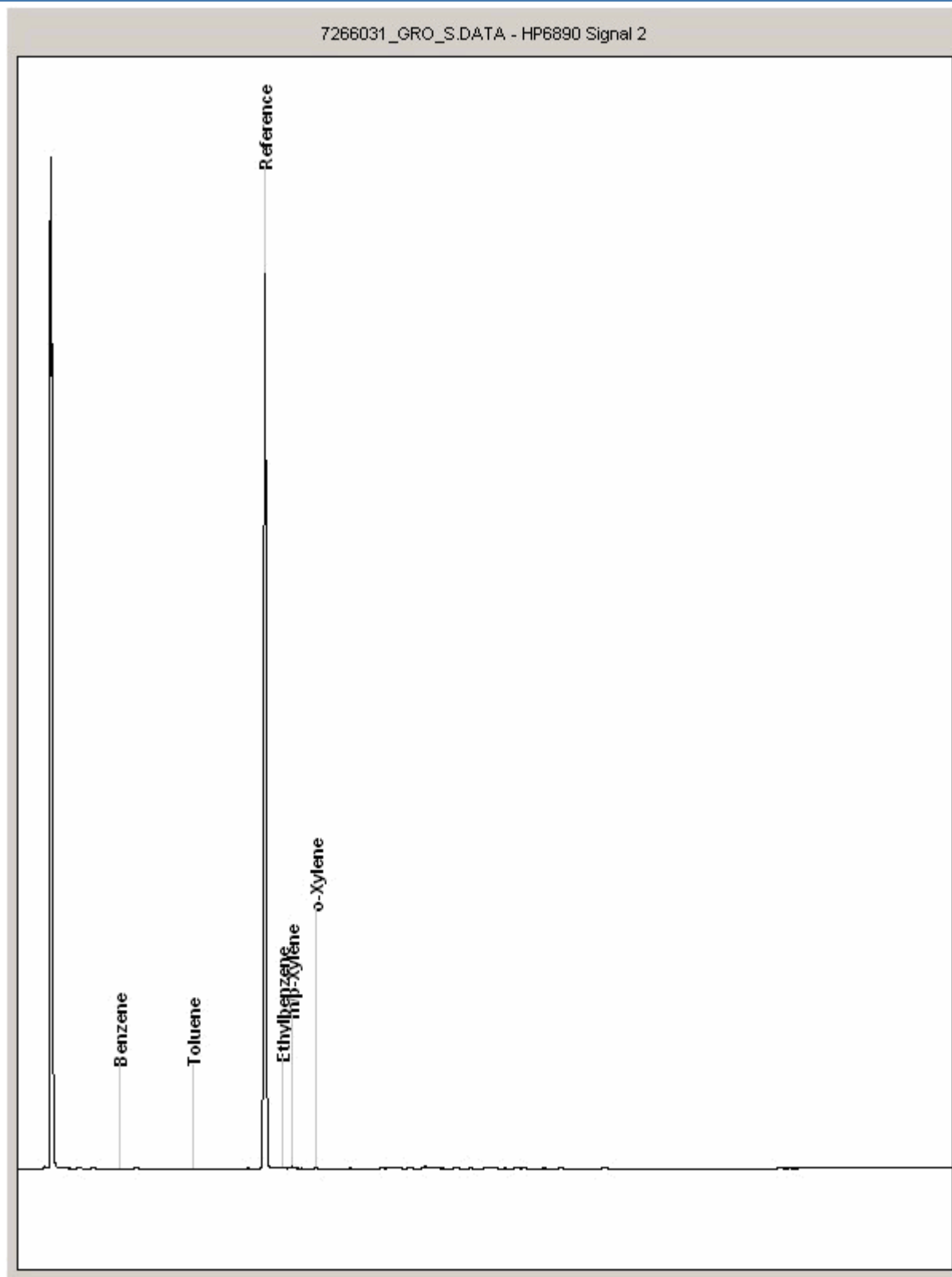
Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7266031
Sample ID : VA146

Depth : 3.00





SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

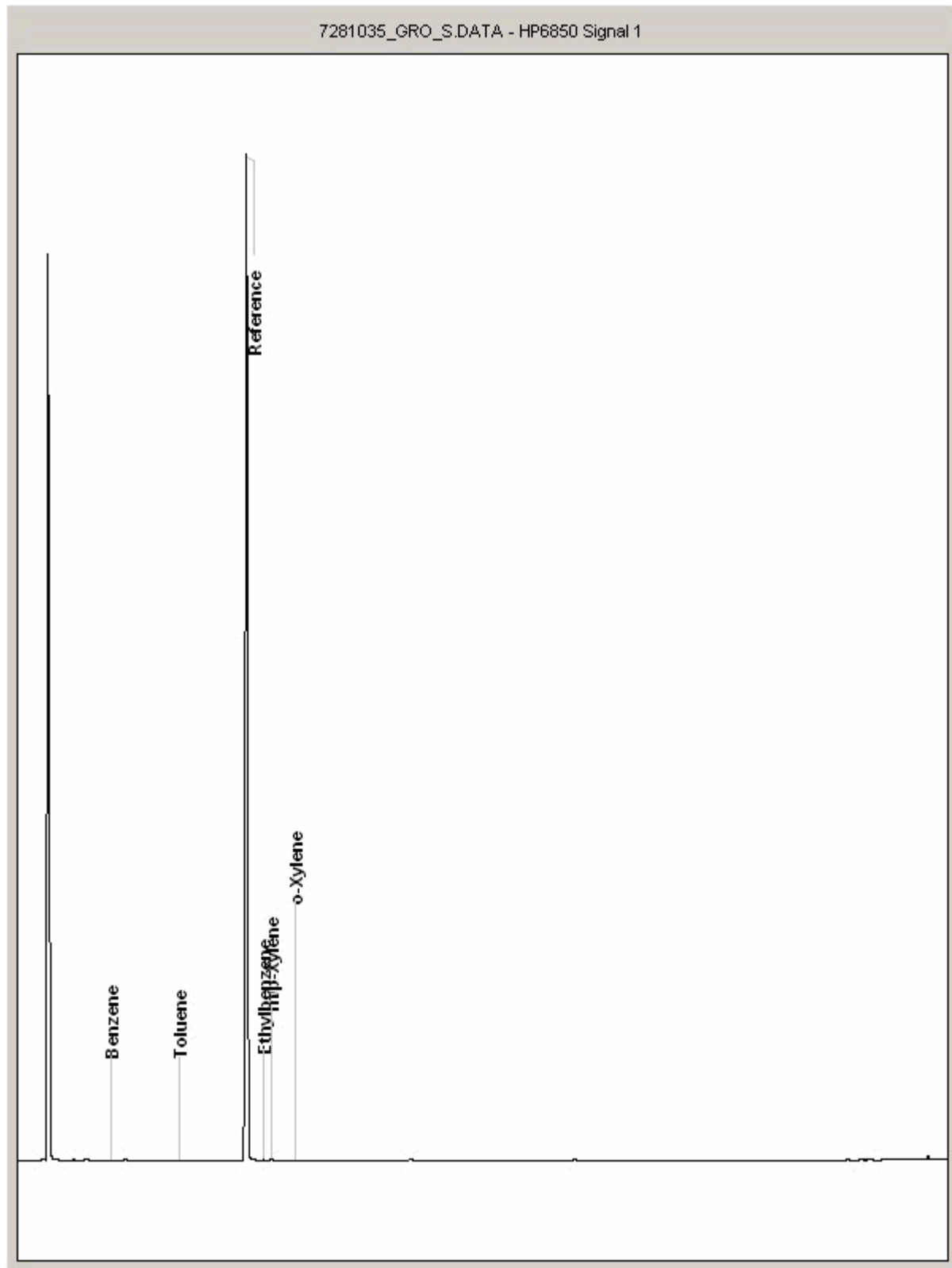
Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7281035
Sample ID : VA139

Depth : 5.50





CERTIFICATE OF ANALYSIS

SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

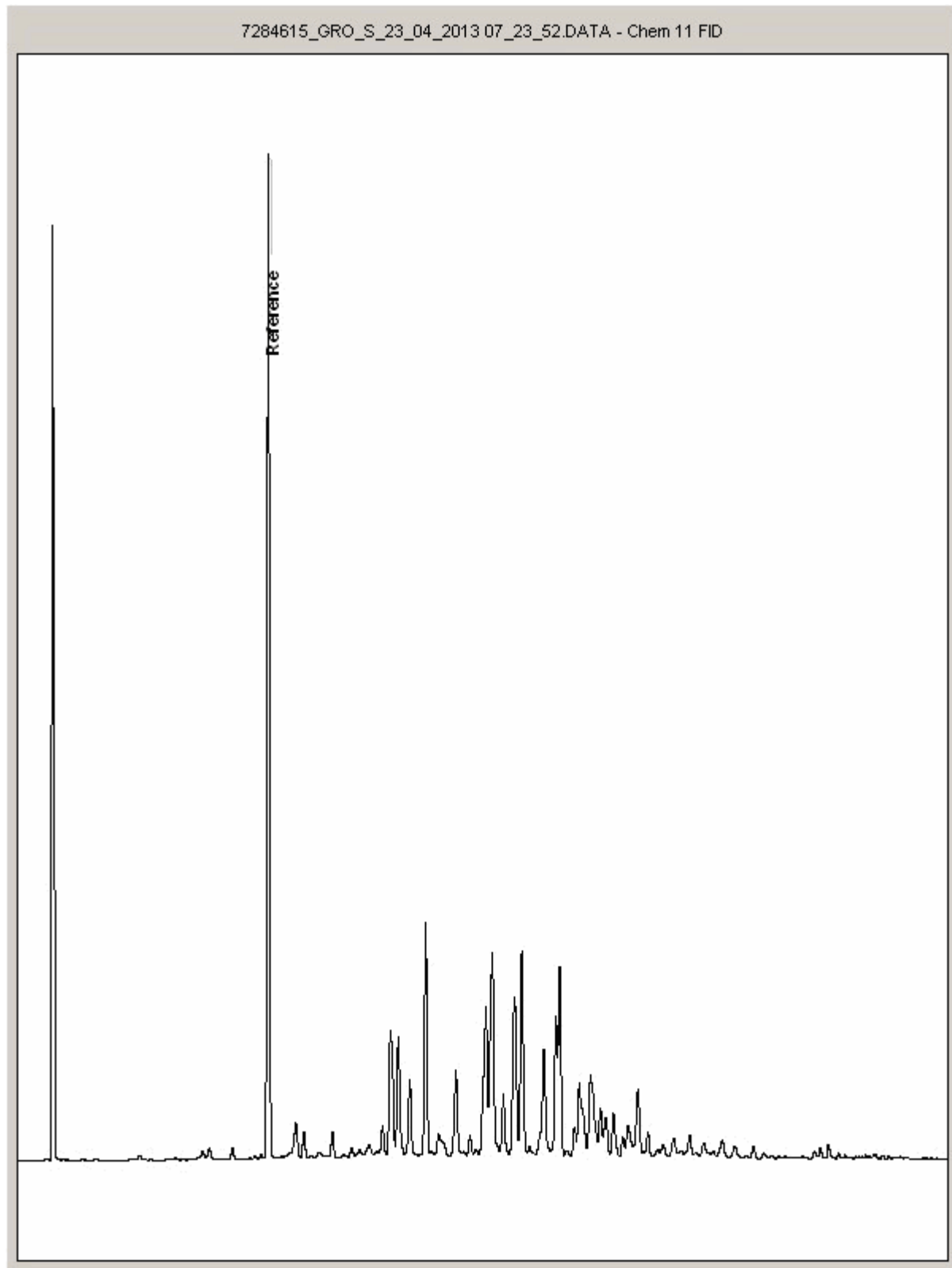
Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7284615
Sample ID : VA142

Depth : 3.00





CERTIFICATE OF ANALYSIS

SDG: 130418-49
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

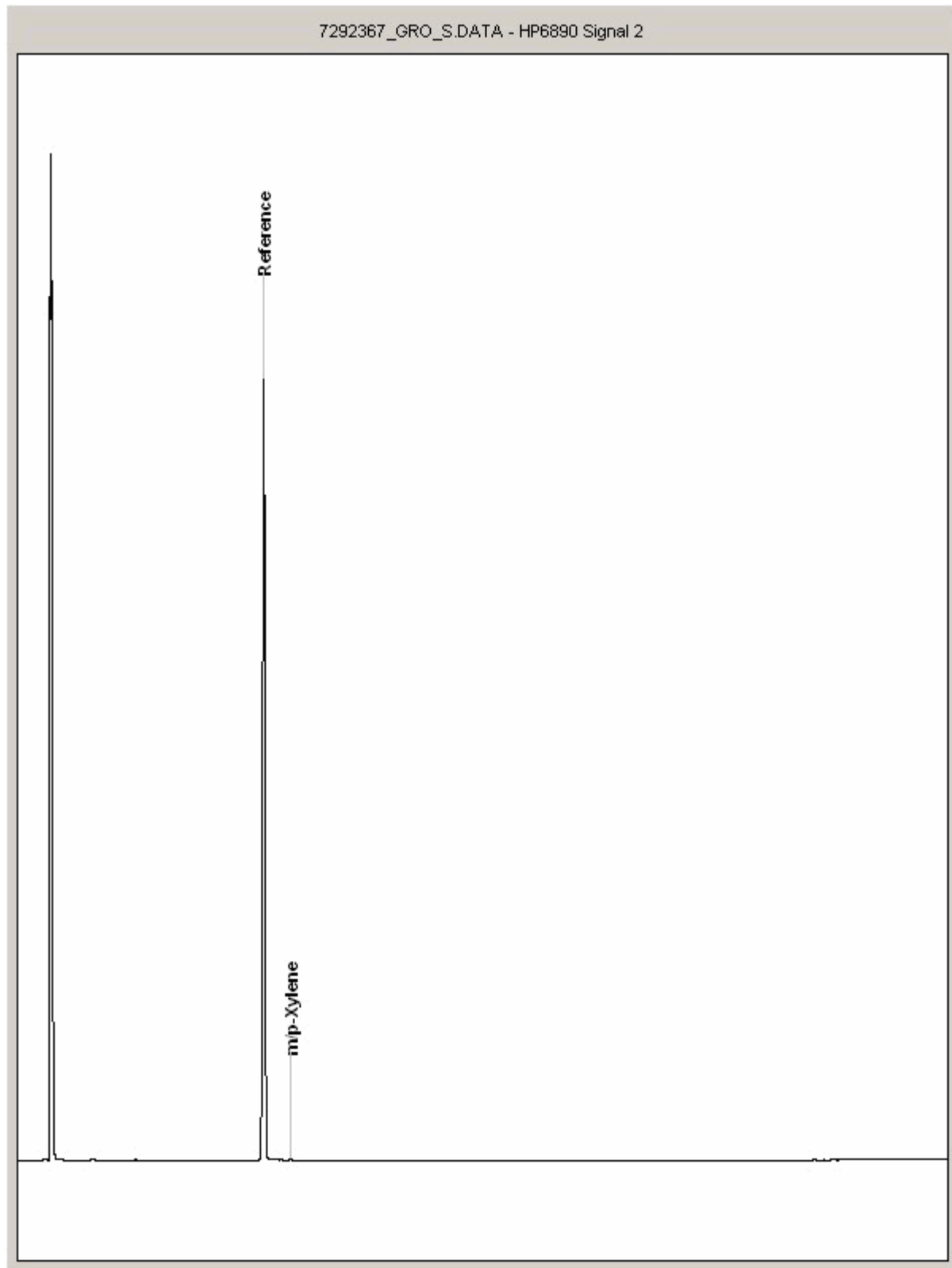
Order Number:
Report Number: 221747
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7292367
Sample ID : VA147

Depth : 6.50





SDG:	130418-49	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	221747
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Appendix General

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICS and SVOC TICS.
2. 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 2 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. ALcontrol Laboratories 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. 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 for wet tests reported on a dry weight basis are not corrected for moisture content.
13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.
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 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.
21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.
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.

Sample Deviations

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Holding time exceeded before sample received
§	Sampled on date not provided
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to sampled on date
&	Sample Holding Time exceeded - Late arrival of instructions.

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.



URS Corporation Limited
St. George's House
2nd Floor
5 St. George's Road
Wimbledon
Greater London
SW19 4DR

Attention: Jocelyn Willis

CERTIFICATE OF ANALYSIS

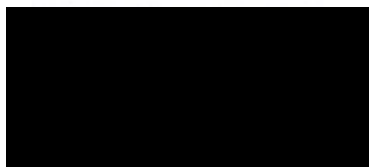
Date: 10 June 2013
Customer: H_URS_WIM
Sample Delivery Group (SDG): 130521-37
Your Reference: 46370079
Location: Shell Hitchin
Report No: 228142

We received 6 samples on Tuesday May 21, 2013 and 6 of these samples were scheduled for analysis which was completed on Monday June 10, 2013. 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.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Sonia McWhan

Operations Manager





SDG:	130521-37	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	228142
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
7447496	FILL		0.00	20/05/2013
7447489	VA148		6.60	20/05/2013
7447490	VA149		6.80	20/05/2013
7447493	VA150		7.00	20/05/2013
7447495	WAC		0.00	20/05/2013
7447497	WAC 2		0.00	20/05/2013

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

Order Number:
Report Number: 228142
Superseded Report:

No Determination Possible

Container

7447487	WAC 2	0.00	1kg TUB
7447485	MAC	0.00	60g VOC (ALEE215)
7447483	VA150	7.00	250g Amber Jar (AL
7447480	VA149	6.80	60g VOC (ALEE215)
7447489	VA148	6.60	250g Amber Jar (AL
			60g VOC (ALEE215)
			250g Amber Jar (AL
7447486	FILL	0.00	60g VOC (ALEE215)

X	X

X	X

	X

	X

	X	X

	X	X

	X	X

	X	X

X		X		X		X

X		X		X		X

	X	X

X		X		X		X	X	X

X	

	X	X

	X	X



SDG: 130521-37
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 228142
Superseded Report:

SOLID Results Legend X Test N No Determination Possible	Lab Sample No(s)		7447496	7447489	7447490	7447493	7447495	7447497
	Customer Sample Reference		FILL	VA148	VA149	VA150	WAC	WAC 2
	AGS Reference							
	Depth (m)		0.00	6.60	6.80	7.00	0.00	0.00
	Container		250g Amber Jar (AL)	250g Amber Jar (AL)	250g Amber Jar (AL)	250g Amber Jar (AL)	60g VOC (ALE215)	1kg TUB
Oxygenates (S)	All	NDPs: 0 Tests: 4	X	X	X	X		
PAH by GCMS	All	NDPs: 0 Tests: 4	X	X	X	X		
PAH Value of soil	All	NDPs: 0 Tests: 2					X	X
PCBs by GCMS	All	NDPs: 0 Tests: 2					X	X
pH	All	NDPs: 0 Tests: 2					X	X
Phenols by HPLC (W)	All	NDPs: 0 Tests: 2					X	X
Sample description	All	NDPs: 0 Tests: 6	X	X	X	X	X	X
Total Dissolved Solids	All	NDPs: 0 Tests: 2					X	X
Total Organic Carbon	All	NDPs: 1 Tests: 1					X	N
Total Organic Carbon (Asb)	All	NDPs: 0 Tests: 1						X
VOC MS (S)	All	NDPs: 0 Tests: 4	X	X	X	X		



SDG:	130521-37	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	228142
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Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions	Inclusions 2
7447496	FILL	0.00	Dark Brown	Sand	0.1 - 2 mm	Stones	None
7447489	VA148	6.60	Light Brown	Sand	0.1 - 2 mm	Stones	Oil/Petroleum
7447490	VA149	6.80	Light Brown	Sandy Loam	0.1 - 2 mm	Oil/Petroleum	None
7447493	VA150	7.00	Light Brown	Sandy Loam	0.1 - 2 mm	Stones	None
7447495	WAC	0.00	Light Brown	Sandy Loam	0.1 - 2 mm	Stones	Oil/Petroleum
7447497	WAC 2	0.00	Light Brown	Sand	0.1 - 2 mm	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.

Order Number:
Report Number: 228142
Superseded Report:

Page 6 of 41

Order Number:
Report Number: 228142
Superseded Report:

Page 7 of 41

Order Number:
Report Number: 228142
Superseded Report:

Page 8 of 41

Order Number:
Report Number: 228142
Superseded Report:

Page 9 of 41

Order Number:
Report Number: 228142
Superseded Report:

Page 10 of 41

Order Number:
Report Number: 228142
Superseded Report:

Page 11 of 41



SDG:	130521-37	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	228142
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Asbestos Identification - Soil

		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.	WAC 2	28/05/13	Paul Fenney	Soil containing loose fibres and ACM debris	Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Depth (m)	0.00										
Sample Type	SOLID										
Date Sampled	20/05/2013 00:00:00										
Date Received											
SDG	130521-37										
Original Sample	7447497										
Method Number	TM048										

Asbestos Quantification - Waste Limit

		Additional Asbestos Components (Using TM048)	Analysts Comments	Waste Limit, Gravimetric - %	Waste Limit, PCOM evaluation - %	Waste Limit, Total - %
Cust. Sample Ref.	WAC 2	None (#)	N/C	0.0657 (#)	<0.001 (#)	<0.1 (#)
Depth (m)	0.00					
Sample Type	SOLID					
Date Sampled	20/05/2013 00:00:00					
Date Received						
SDG	130521-37					
Original Sample	7447497					
Method Number	TM 304					



SDG:	130521-37	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	228142
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

CEN 10:1 CUMULATIVE TWO STAGE BATCH TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/3

Client Reference		Site Location	Shell Hitchin
Mass Sample taken (kg)	0.213	Moisture Content Ratio (%)	21.6
Mass of dry sample (kg)	0.175	Dry Matter Content Ratio (%)	82.3
Particle Size <4mm	>95%		

Case SDG130521-37 Lab Sample Number(s)7447495 Sampled Date20-May-2013 Customer Sample Ref.WAC Depth (m)0.00		Landfill Waste Acceptance Criteria Limits		
		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Solid Waste Analysis				
Total Organic Carbon (%)	<0.2	3	5	6
Loss on Ignition (%)	1.49	-	-	10
Sum of BTEX (mg/kg)	3.72	6	-	-
Sum of 7 PCBs (mg/kg)	<0.021	1	-	-
Mineral Oil (mg/kg)	32.8	500	-	-
PAH Sum of 17 (mg/kg)	<10	100	-	-
pH (pH Units)	8.26	-	<6 or >9	-
ANC to pH 6 (mol/kg)	0.278	-	-	-
ANC to pH 4 (mol/kg)	3.35	-	-	-

Eluate Analysis	C2	C8	A2	A2-10	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Conc ⁿ in 2:1 eluate	Conc ⁿ in 8:1 eluate	2:1 conc ⁿ leached	Cumulative conc ⁿ leached			
	mg/l		mg/kg				
Arsenic	0.00358	0.00289	0.00716	0.0301	0.5	2	25
Barium	0.0427	0.0138	0.0853	0.187	20	100	300
Cadmium	<0.0001	<0.0001	<0.0002	<0.001	0.04	1	5
Chromium	0.00109	0.000334	0.00217	0.00464	0.5	10	70
Copper	0.00145	<0.00085	0.0029	<0.0085	2	50	100
Mercury Dissolved (CVAf)	0.0000142	0.0000308	0.0000285	0.00028	0.01	0.2	2
Molybdenum	0.00698	0.00407	0.014	0.0457	0.5	10	30
Nickel	0.00183	0.000661	0.00365	0.00861	0.4	10	40
Lead	0.0182	0.0027	0.0364	0.0535	0.5	10	50
Antimony	0.0022	0.00112	0.0044	0.013	0.06	0.7	5
Selenium	0.00157	<0.00039	0.00313	<0.0039	0.1	0.5	7
Zinc	<0.00041	0.000602	<0.00082	0.00499	4	50	200
Chloride	16.8	<2	33.6	28.8	800	15000	25000
Fluoride	<0.5	<0.5	<0.999	<5	10	150	500
Sulphate (soluble)	11.8	<2	23.6	20.2	1000	20000	50000
Total Dissolved Solids	195	70.7	389	920	4000	60000	100000
Total Monohydric Phenols (W)	0.21	<0.016	0.42	0.36	1	-	-
Dissolved Organic Carbon	5.68	<3	11.3	<30	500	800	1000

Leach Test Information	2:1	8:1
Date Prepared	22-May-2013	23-May-2013
pH (pH Units)	8.317	8.521
Conductivity (µS/cm)	243.00	82.50
Temperature (°C)	19.70	19.90
Volume Leachant (Litres)	0.312	1.400
Volume of Eluate VE1 (Litres)	0.300	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable
Stated limits are for guidance only and ALcontrol cannot be held responsible for any discrepancies with current legislation
Mcerts Certification does not apply to leachates
10/06/2013 13:49:36



SDG:	130521-37	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	228142
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

CEN 10:1 CUMULATIVE TWO STAGE BATCH TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/3

Client Reference		Site Location	Shell Hitchin
Mass Sample taken (kg)	0.194	Moisture Content Ratio (%)	10.9
Mass of dry sample (kg)	0.175	Dry Matter Content Ratio (%)	90.2
Particle Size <4mm	>95%		

Case SDG130521-37 Lab Sample Number(s)7447497 Sampled Date20-May-2013 Customer Sample Ref.WAC 2 Depth (m)0.00		Landfill Waste Acceptance Criteria Limits		
		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Solid Waste Analysis				
Total Organic Carbon (%)	<0.1	3	5	6
Loss on Ignition (%)	-	-	-	-
Sum of BTEX (mg/kg)	<0.024	6	-	-
Sum of 7 PCBs (mg/kg)	<0.021	1	-	-
Mineral Oil (mg/kg)	109	500	-	-
PAH Sum of 17 (mg/kg)	17.2	100	-	-
pH (pH Units)	10.8	-	<6 or >9	-
ANC to pH 6 (mol/kg)	0.331	-	-	-
ANC to pH 4 (mol/kg)	1.44	-	-	-

Eluate Analysis	C2	Conc ⁿ in 2:1 eluate	C8	Conc ⁿ in 8:1 eluate	A2	2:1 conc ⁿ leached	A2-10	Cumulative conc ⁿ leached	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	mg/l		mg/kg		mg/kg		mg/kg				
Arsenic		0.0092		0.0104		0.0184		0.102	0.5	2	25
Barium		0.431		0.00533		0.862		0.759	20	100	300
Cadmium		<0.0001		<0.0001		<0.0002		<0.001	0.04	1	5
Chromium		0.0291		0.0114		0.0582		0.143	0.5	10	70
Copper		0.0164		0.00372		0.0327		0.0582	2	50	100
Mercury Dissolved (CVAf)		0.0000126		<0.00001		0.0000251		<0.0001	0.01	0.2	2
Molybdenum		0.0384		0.005		0.0768		0.105	0.5	10	30
Nickel		0.0031		0.00482		0.0062		0.0453	0.4	10	40
Lead		0.00102		0.000376		0.00205		0.00483	0.5	10	50
Antimony		0.00195		0.00153		0.00389		0.016	0.06	0.7	5
Selenium		0.00105		0.000803		0.00209		0.00844	0.1	0.5	7
Zinc		0.00124		<0.00041		0.00249		<0.0041	4	50	200
Chloride		35.6		2.1		71.2		76.5	800	15000	25000
Fluoride		0.912		<0.5		1.82		<5	10	150	500
Sulphate (soluble)		192		24.6		384		523	1000	20000	50000
Total Dissolved Solids		439		104		878		1600	4000	60000	100000
Total Monohydric Phenols (W)		<0.016		<0.016		<0.032		<0.16	1	-	-
Dissolved Organic Carbon		10.9		3.45		21.8		46.9	500	800	1000

Leach Test Information	2:1	8:1
Date Prepared	23-May-2013	24-May-2013
pH (pH Units)	8.917	10.517
Conductivity (µS/cm)	602.00	157.10
Temperature (°C)	20.80	19.60
Volume Leachant (Litres)	0.331	1.400
Volume of Eluate VE1 (Litres)	0.290	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable
Stated limits are for guidance only and ALcontrol cannot be held responsible for any discrepancies with current legislation
Mcerts Certification does not apply to leachates
10/06/2013 13:49:36



SDG:	130521-37	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	228142
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Notification of NDPs (No determination possible)

Date Received : 21/05/2013 11:08:47

Sample No	Customer Sample Ref.	Depth (m)	Test	Comment
7447497	WAC 2	0.00	Total Organic Carbon	Unsuitable for analysis due to potential Asbestos
7447497	WAC 2	0.00	Loss on Ignition in soils	Unsuitable for analysis due to potential Asbestos



SDG: 130521-37
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 228142
Superseded Report:

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample ¹	Surrogate Corrected
ASB_PREP				
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
PM114		Leaching Procedure for CEN Two Stage BatchTest 2:1/8:1 Cumulative		
TM 304				
TM018	BS 1377: Part 3 1990	Determination of Loss on Ignition		
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)		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)		
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water		
TM104	Method 4500F, AWWA/APHA, 20th Ed., 1999	Determination of Fluoride using the Kone Analyser		
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS		
TM123	BS 2690: Part 121:1981	The Determination of Total Dissolved Solids in Water		
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		
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS		
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM182	CEN/TC 292 - WI 292046-characterization of waste-leaching Behaviour Tests- Acid and Base Neutralization Capacity Test	Determination of Acid Neutralisation Capacity (ANC) Using Autotitration in Soils		
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry		
TM184	EPA Methods 325.1 & 325.2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers		
TM213	In-house Method	Rapid Determination of PAHs by GC-FID		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		
TM259	by HPLC	Determination of Phenols in Waters and Leachates by HPLC		
TM288		Determination of Oxygenates in Soils by Headspace/GC-MS		
TM321		Organic matter Content of Soil By Titration		

¹ Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.



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Order Number:
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Superseded Report:

Test Completion Dates

Lab Sample No(s)	7447496	7447489	7447490	7447493	7447495	7447497
Customer Sample Ref.	FILL	VA148	VA149	VA150	WAC	WAC 2
AGS Ref.						
Depth	0.00	6.60	6.80	7.00	0.00	0.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
ANC at pH4 and ANC at pH 6					24-May-2013	24-May-2013
Anions by Kone (w)					28-May-2013	29-May-2013
Asbestos ID in Solid Samples						29-May-2013
Asbestos Quant. - Waste Limit						10-Jun-2013
CEN 2:1 Leachate (2 Stage)					22-May-2013	23-May-2013
CEN 2:1 Readings					24-May-2013	28-May-2013
CEN 8:1 Leachate (2 Stage)					24-May-2013	28-May-2013
CEN 8:1 Readings					28-May-2013	29-May-2013
Dissolved Metals by ICP-MS					28-May-2013	29-May-2013
Dissolved Organic/Inorganic Carbon					29-May-2013	30-May-2013
EPH CWG (Aliphatic) GC (S)	28-May-2013	28-May-2013	28-May-2013	28-May-2013		
EPH CWG (Aromatic) GC (S)	28-May-2013	28-May-2013	28-May-2013	28-May-2013		
Fluoride					29-May-2013	29-May-2013
GRO by GC-FID (S)	24-May-2013	28-May-2013	28-May-2013	28-May-2013	25-May-2013	28-May-2013
Loss on Ignition in soils					23-May-2013	
Mercury Dissolved					29-May-2013	30-May-2013
Mineral Oil					28-May-2013	29-May-2013
Oxygenates (S)	28-May-2013	28-May-2013	28-May-2013	28-May-2013		
PAH by GCMS	26-May-2013	25-May-2013	28-May-2013	25-May-2013		
PAH Value of soil					24-May-2013	29-May-2013
PCBs by GCMS					24-May-2013	28-May-2013
pH					29-May-2013	24-May-2013
Phenols by HPLC (W)					29-May-2013	31-May-2013
Sample description	21-May-2013	21-May-2013	21-May-2013	21-May-2013	21-May-2013	22-May-2013
Total Dissolved Solids					28-May-2013	29-May-2013
Total Organic Carbon					29-May-2013	
Total Organic Carbon (Asb)						29-May-2013
VOC MS (S)	24-May-2013	28-May-2013	28-May-2013	24-May-2013		



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ASSOCIATED AQC DATA

ANC at pH4 and ANC at pH 6

Component	Method Code	QC 78
ANC pH_4 dry soil	TM182	98.41 88.52 : 112.27
ANC pH_6 dry soil	TM182	62.93 23.30 : 163.10

Anions by Kone (w)

Component	Method Code	QC 73	QC 72	QC 72	QC 77
Chloride	TM184	98.9 94.64 : 106.82	101.0 94.64 : 106.82	102.0 94.64 : 106.82	103.0 94.64 : 106.82
Phosphate (Ortho as PO4)	TM184	100.8 95.87 : 107.76	95.87 : 107.76	95.87 : 107.76	100.8 95.87 : 107.76
Sulphate (soluble)	TM184	100.8 96.47 : 104.74	101.6 96.47 : 104.74	101.6 96.47 : 104.74	98.8 96.47 : 104.74
TON as NO3	TM184	104.0 93.05 : 112.12	106.0 93.05 : 112.12	93.05 : 112.12	103.0 93.05 : 112.12

Dissolved Metals by ICP-MS

Component	Method Code	QC 77	QC 70	QC 79	QC 78
Aluminium	TM152	96.93 84.88 : 118.17	100.93 87.65 : 115.02	102.4 87.65 : 115.02	99.33 87.65 : 115.02
Antimony	TM152	98.13 81.04 : 115.95	96.13 85.93 : 114.02	101.33 85.93 : 114.02	96.8 85.93 : 114.02
Arsenic	TM152	102.13 87.80 : 113.86	100.8 90.54 : 111.83	109.6 90.54 : 111.83	104.53 90.54 : 111.83
Barium	TM152	99.6 90.28 : 114.53	98.67 91.76 : 113.26	98.8 91.76 : 113.26	101.33 91.76 : 113.26
Beryllium	TM152	103.2 81.33 : 122.30	103.87 83.38 : 117.85	105.6 83.38 : 117.85	103.6 83.38 : 117.85
Boron	TM152	102.67 78.31 : 124.49	103.47 77.94 : 122.57	92.67 77.94 : 122.57	100.0 77.94 : 122.57
Cadmium	TM152	100.4 88.41 : 115.40	100.13 89.40 : 112.58	103.07 89.40 : 112.58	104.53 89.40 : 112.58
Chromium	TM152	103.47 89.44 : 114.33	99.07 91.38 : 112.32	102.13 91.38 : 112.32	99.47 91.38 : 112.32
Cobalt	TM152	106.4 89.31 : 115.17	100.93 91.06 : 113.39	103.47 91.06 : 113.39	100.0 91.06 : 113.39
Copper	TM152	102.53 87.81 : 115.97	99.2 89.28 : 113.01	104.0 89.28 : 113.01	104.4 89.28 : 113.01
Lead	TM152	101.2 90.95 : 113.13	99.47 92.61 : 108.98	97.07 92.61 : 108.98	100.13 92.61 : 108.98
Lithium	TM152	105.33 77.66 : 125.96	108.0 83.75 : 118.70	102.8 83.75 : 118.70	102.0 83.75 : 118.70
Manganese	TM152	106.8 90.41 : 113.03	101.07 91.97 : 111.68	99.73 91.97 : 111.68	100.13 91.97 : 111.68
Molybdenum	TM152	99.33 87.58 : 112.36	100.8 86.81 : 113.52	105.73 86.81 : 113.52	103.33 86.81 : 113.52
Nickel	TM152	101.47 88.11 : 114.65	99.87 89.87 : 112.52	102.93 89.87 : 112.52	102.4 89.87 : 112.52



CERTIFICATE OF ANALYSIS

SDG: 130521-37
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 228142
Superseded Report:

Dissolved Metals by ICP-MS

		QC 77	QC 70	QC 79	QC 78
Phosphorus	TM152	103.47 87.73 : 115.35	102.13 86.57 : 115.67	106.8 86.57 : 115.67	104.13 86.57 : 115.67
Selenium	TM152	101.07 88.20 : 114.46	100.67 90.78 : 112.05	102.27 90.78 : 112.05	104.53 90.78 : 112.05
Strontium	TM152	102.8 90.87 : 114.31	102.53 91.79 : 113.74	99.47 91.79 : 113.74	101.2 91.79 : 113.74
Tellurium	TM152	99.73 85.47 : 117.54	98.8 87.64 : 115.38	100.27 87.64 : 115.38	103.33 87.64 : 115.38
Thallium	TM152	99.33 90.17 : 113.15	99.07 91.72 : 111.90	95.07 91.72 : 111.90	99.47 91.72 : 111.90
Tin	TM152	100.0 87.92 : 113.64	97.47 88.38 : 106.83	100.13 88.38 : 106.83	98.53 88.38 : 106.83
Titanium	TM152	102.0 89.34 : 112.93	100.4 91.80 : 108.47	102.67 91.80 : 108.47	101.2 91.80 : 108.47
Uranium	TM152	99.47 89.44 : 112.65	100.53 90.95 : 107.99	95.73 90.95 : 107.99	98.67 90.95 : 107.99
Vanadium	TM152	104.13 88.92 : 115.00	101.33 90.81 : 113.67	105.07 90.81 : 113.67	100.0 90.81 : 113.67
Zinc	TM152	102.93 88.35 : 115.11	100.67 90.00 : 112.54	104.67 90.00 : 112.54	103.6 90.00 : 112.54

Dissolved Organic/Inorganic Carbon

Component	Method Code	QC 77	QC 77	QC 75	QC 76
Dissolved Inorganic Carbon	TM090	97.0 85.17 : 108.79	98.83 85.17 : 108.79	103.67 92.11 : 106.71	95.0 92.11 : 106.71
Dissolved Organic Carbon	TM090	109.67 90.80 : 116.75	103.0 90.80 : 116.75	102.17 92.06 : 107.07	99.33 92.06 : 107.07

EPH CWG (Aliphatic) GC (S)

Component	Method Code	QC 74
Total Aliphatics >C12-C35	TM173	90.42 68.25 : 114.73

EPH CWG (Aromatic) GC (S)

Component	Method Code	QC 74
Total Aromatics >EC12-EC35	TM173	112.0 78.23 : 114.94

Fluoride



SDG: 130521-37
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 228142
Superseded Report:

Fluoride

Component	Method Code	QC 77	QC 76	QC 75
Fluoride	TM104	101.33 93.92 : 104.02	99.33 93.20 : 104.48	100.0 93.20 : 104.48

GRO by GC-FID (S)

Component	Method Code	QC 74	QC 72	QC 78	QC 79
Benzene by GC (Moisture Corrected)	TM089	98.0 71.62 : 122.71	99.0 79.00 : 121.00	98.5 78.71 : 115.47	98.0 78.71 : 115.47
Ethylbenzene by GC (Moisture Corrected)	TM089	97.0 70.69 : 122.64	101.5 79.00 : 121.00	102.5 79.00 : 121.00	100.5 79.00 : 121.00
m & p Xylene by GC (Moisture Corrected)	TM089	97.0 69.15 : 125.16	101.75 79.00 : 121.00	102.75 72.74 : 119.58	100.25 72.74 : 119.58
MTBE GC-FID (Moisture Corrected)	TM089	100.0 79.00 : 121.00	98.5 74.48 : 125.29	101.0 81.12 : 122.96	101.5 81.12 : 122.96
o Xylene by GC (Moisture Corrected)	TM089	97.5 70.21 : 124.53	102.0 79.00 : 121.00	104.0 72.12 : 118.04	101.5 72.12 : 118.04
QC	TM089	103.86 40.00 : 160.00	109.27 40.00 : 160.00	120.31 40.00 : 160.00	115.65 40.00 : 160.00
Toluene by GC (Moisture Corrected)	TM089	99.0 79.00 : 121.00	101.5 79.00 : 121.00	101.0 79.89 : 120.53	100.0 79.89 : 120.53

Loss on Ignition in soils

Component	Method Code	QC 74
Loss on Ignition	TM018	98.5 81.78 : 103.46

Mercury Dissolved

Component	Method Code	QC 74	QC 73	QC 71	QC 75
Mercury Dissolved (CVAf)	TM183	98.4 85.87 : 123.88	106.0 64.32 : 119.44	102.0 85.87 : 123.88	89.8 85.87 : 123.88

Mineral Oil

Component	Method Code	QC 78	QC 74
Mineral Oil	TM061	90.83 72.52 : 95.28	82.0 72.83 : 103.78

Oxygenates (S)



SDG: 130521-37
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
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Order Number:
Report Number: 228142
Superseded Report:

Oxygenates (S)

Component	Method Code	QC 72
Benzene raw	TM288	95.0 77.94 : 128.84
Diisopropyl ether raw	TM288	91.0 78.68 : 128.65
Ethanol raw	TM288	110.0 56.39 : 148.67
Ethylbenzene raw	TM288	86.0 78.18 : 122.27
o-Xylene raw	TM288	87.75 78.38 : 109.16
p/m-Xylene raw	TM288	88.5 76.92 : 116.65
tert Butanol raw	TM288	103.5 62.51 : 145.03
tert-amyl methyl ether raw	TM288	96.25 71.22 : 127.95
tert-butyl ethyl ether raw	TM288	92.0 64.00 : 136.00
tert-butyl methyl ether raw	TM288	95.25 83.50 : 129.91
Toluene raw	TM288	89.5 75.97 : 110.53

PAH by GCMS

Component	Method Code	QC 72	QC 79	QC 78
Acenaphthene	TM218	101.5 83.80 : 121.00	100.0 78.75 : 116.25	101.0 78.75 : 116.25
Acenaphthylene	TM218	94.5 72.38 : 111.60	88.5 76.52 : 106.41	91.5 76.52 : 106.41
Anthracene	TM218	95.5 79.70 : 113.00	95.0 78.75 : 113.25	95.0 78.75 : 113.25
Benz(a)anthracene	TM218	102.5 79.50 : 130.50	98.5 89.68 : 127.74	99.5 89.68 : 127.74
Benzo(a)pyrene	TM218	101.5 79.50 : 130.50	96.5 80.38 : 123.63	101.5 80.38 : 123.63
Benzo(b)fluoranthene	TM218	97.5 77.82 : 128.87	97.5 81.20 : 121.77	100.5 81.20 : 121.77
Benzo(ghi)perylene	TM218	97.0 81.67 : 122.61	94.0 77.49 : 119.12	96.5 77.49 : 119.12
Benzo(k)fluoranthene	TM218	97.5 81.20 : 118.10	96.0 83.50 : 116.50	98.5 83.50 : 116.50
Chrysene	TM218	101.0 80.60 : 117.80	96.0 89.85 : 122.85	97.5 89.85 : 122.85
Dibenzo(ah)anthracene	TM218	99.5 77.93 : 124.42	95.0 77.15 : 122.45	97.5 77.15 : 122.45
Fluoranthene	TM218	97.5 82.25 : 115.25	97.0 80.71 : 115.30	100.5 80.71 : 115.30
Fluorene	TM218	99.0 80.60 : 118.10	98.0 78.25 : 115.75	100.0 78.25 : 115.75
Indeno(123cd)pyrene	TM218	101.0 83.07 : 119.48	94.5 78.53 : 122.18	99.5 78.53 : 122.18
Naphthalene	TM218	99.5 83.14 : 111.37	97.5 76.02 : 116.24	96.5 76.02 : 116.24



SDG: 130521-37
Job: H_URS_WIM-174
Client Reference: 46370079

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Order Number:
Report Number: 228142
Superseded Report:

PAH by GCMS

		QC 72	QC 79	QC 78
Phenanthrene	TM218	99.5 81.45 : 121.95	98.5 80.81 : 114.47	101.5 80.81 : 114.47
Pyrene	TM218	97.0 76.61 : 115.83	96.5 81.24 : 114.02	100.0 81.24 : 114.02

PAH Value of soil

Component	Method Code	QC 77	QC 71
PAH Total 17 (inc Coronene)	TM213	96.47 82.58 : 131.97	88.94 88.93 : 128.30

PCBs by GCMS

Component	Method Code	QC 74	QC 73
PCB congener 101	TM168	90.4 67.81 : 119.19	98.6 70.00 : 130.00
PCB congener 105	TM168	89.6 69.00 : 123.00	97.9 84.00 : 116.00
PCB congener 114	TM168	91.0 66.93 : 124.39	98.6 70.00 : 130.00
PCB congener 118	TM168	89.2 70.00 : 119.00	98.4 82.00 : 112.00
PCB congener 123	TM168	91.1 69.00 : 121.00	96.8 83.00 : 118.00
PCB congener 126	TM168	92.7 69.00 : 124.00	99.3 87.00 : 122.00
PCB congener 138	TM168	92.8 67.00 : 124.00	100.0 87.00 : 118.00
PCB congener 153	TM168	89.9 69.00 : 123.00	99.8 85.00 : 116.00
PCB congener 156	TM168	91.1 67.42 : 127.28	100.0 72.16 : 130.30
PCB congener 157	TM168	91.2 70.00 : 125.00	101.0 87.00 : 118.00
PCB congener 167	TM168	91.3 69.00 : 125.00	99.8 86.00 : 119.00
PCB congener 169	TM168	95.2 68.00 : 127.00	100.0 86.00 : 123.00
PCB congener 180	TM168	91.8 68.17 : 126.68	102.0 70.00 : 130.00
PCB congener 189	TM168	93.0 69.00 : 126.00	100.0 88.00 : 124.00
PCB congener 28	TM168	91.0 74.46 : 120.80	97.2 70.00 : 130.00
PCB congener 52	TM168	90.8 72.00 : 114.00	98.5 84.00 : 118.00
PCB congener 77	TM168	91.8 67.00 : 121.00	97.3 81.00 : 120.00
PCB congener 81	TM168	94.8 70.00 : 120.00	98.2 88.00 : 119.00



CERTIFICATE OF ANALYSIS

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Order Number:
Report Number: 228142
Superseded Report:

pH

Component	Method Code	QC 79	QC 74
pH	TM133	99.75 96.83 : 103.00	99.14 96.83 : 103.00

Phenols by HPLC (W)

Component	Method Code	QC 78	QC 70	QC 77	QC 70
2,3,5 Trimethyl-Phenol by HPLC (W)	TM259	101.0 91.47 : 105.57	87.0 91.47 : 105.57	98.0 91.47 : 105.57	98.0 91.47 : 105.57
2-Isopropyl Phenol by HPLC (W)	TM259	115.0 107.70 : 118.92	113.0 107.70 : 118.92	110.0 107.70 : 118.92	112.0 107.70 : 118.92
Cresols by HPLC (W)	TM259	103.0 98.08 : 108.54	103.0 98.08 : 108.54	102.0 98.08 : 108.54	101.67 98.08 : 108.54
Napthol by HPLC (W)	TM259	96.0 95.64 : 107.64	95.0 95.64 : 107.64	91.0 95.64 : 107.64	91.0 95.64 : 107.64
Phenol by HPLC (W)	TM259	96.0 91.31 : 101.93	97.0 91.31 : 101.93	94.0 91.31 : 101.93	94.0 91.31 : 101.93
Xylenols by HPLC (W)	TM259	105.33 98.21 : 109.07	103.0 98.21 : 109.07	104.17 98.21 : 109.07	104.0 98.21 : 109.07

Total Dissolved Solids

Component	Method Code	QC 79	QC 71	QC 74
Total Dissolved Solids	TM123	100.0 97.22 : 102.24	98.9 97.22 : 102.24	99.1 97.22 : 102.24

Total Organic Carbon

Component	Method Code	QC 73
Total Organic Carbon	TM132	101.83 86.66 : 109.87

VOC MS (S)

Component	Method Code	QC 75	QC 75
1,1,1,2-tetrachloroethane	TM116	106.8 77.50 : 124.09	105.8 77.50 : 124.09
1,1,1-Trichloroethane	TM116	102.0 86.36 : 114.14	103.2 86.36 : 114.14
1,1,2-Trichloroethane	TM116	114.0 93.86 : 131.61	116.0 93.86 : 131.61
1,1-Dichloroethane	TM116	97.2 83.96 : 125.03	103.4 83.96 : 125.03
1,2-Dichloroethane	TM116	107.2 88.93 : 122.77	102.4 88.93 : 122.77



SDG: 130521-37
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Order Number:
Report Number: 228142
Superseded Report:

VOC MS (S)

		QC 75	QC 75
1,4-Dichlorobenzene	TM116	106.8 89.32 : 117.26	103.4 89.32 : 117.26
2-Chlorotoluene	TM116	134.0 93.47 : 156.27	127.8 93.47 : 156.27
4-Chlorotoluene	TM116	127.0 92.38 : 149.49	122.8 92.38 : 149.49
Benzene	TM116	95.2 86.95 : 110.62	97.8 86.95 : 110.62
Carbon Disulphide	TM116	78.6 76.98 : 118.83	94.0 76.98 : 118.83
Carbontetrachloride	TM116	111.6 71.94 : 132.65	110.6 71.94 : 132.65
Chlorobenzene	TM116	101.2 78.33 : 118.74	103.8 78.33 : 118.74
Chloroform	TM116	99.4 69.66 : 148.03	103.2 69.66 : 148.03
Chloromethane	TM116	80.2 49.71 : 146.30	77.6 49.71 : 146.30
Cis-1,2-Dichloroethene	TM116	92.8 83.23 : 111.14	96.4 83.23 : 111.14
Dibromomethane	TM116	100.2 65.13 : 138.40	101.0 65.13 : 138.40
Dichloromethane	TM116	98.4 70.67 : 150.15	105.0 70.67 : 150.15
Ethylbenzene	TM116	100.6 84.09 : 110.87	103.0 84.09 : 110.87
Hexachlorobutadiene	TM116	102.8 67.98 : 202.14	138.0 67.98 : 202.14
Isopropylbenzene	TM116	88.2 75.72 : 100.29	94.8 75.72 : 100.29
Naphthalene	TM116	99.6 80.72 : 132.86	97.2 80.72 : 132.86
o-Xylene	TM116	98.8 76.04 : 111.23	100.8 76.04 : 111.23
p/m-Xylene	TM116	99.9 79.03 : 115.32	102.0 79.03 : 115.32
Sec-Butylbenzene	TM116	91.2 73.42 : 125.99	105.0 73.42 : 125.99
Tetrachloroethene	TM116	112.4 87.31 : 123.54	115.0 87.31 : 123.54
Toluene	TM116	92.0 83.48 : 106.73	93.0 83.48 : 106.73
Trichloroethene	TM116	95.8 86.48 : 110.46	100.0 86.48 : 110.46
Trichlorofluoromethane	TM116	101.4 82.57 : 120.95	109.4 82.57 : 120.95
Vinyl Chloride	TM116	103.2 62.58 : 154.52	113.6 62.58 : 154.52

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

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

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



SDG: 130521-37
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
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Order Number:
Report Number: 228142
Superseded Report:

Chromatogram

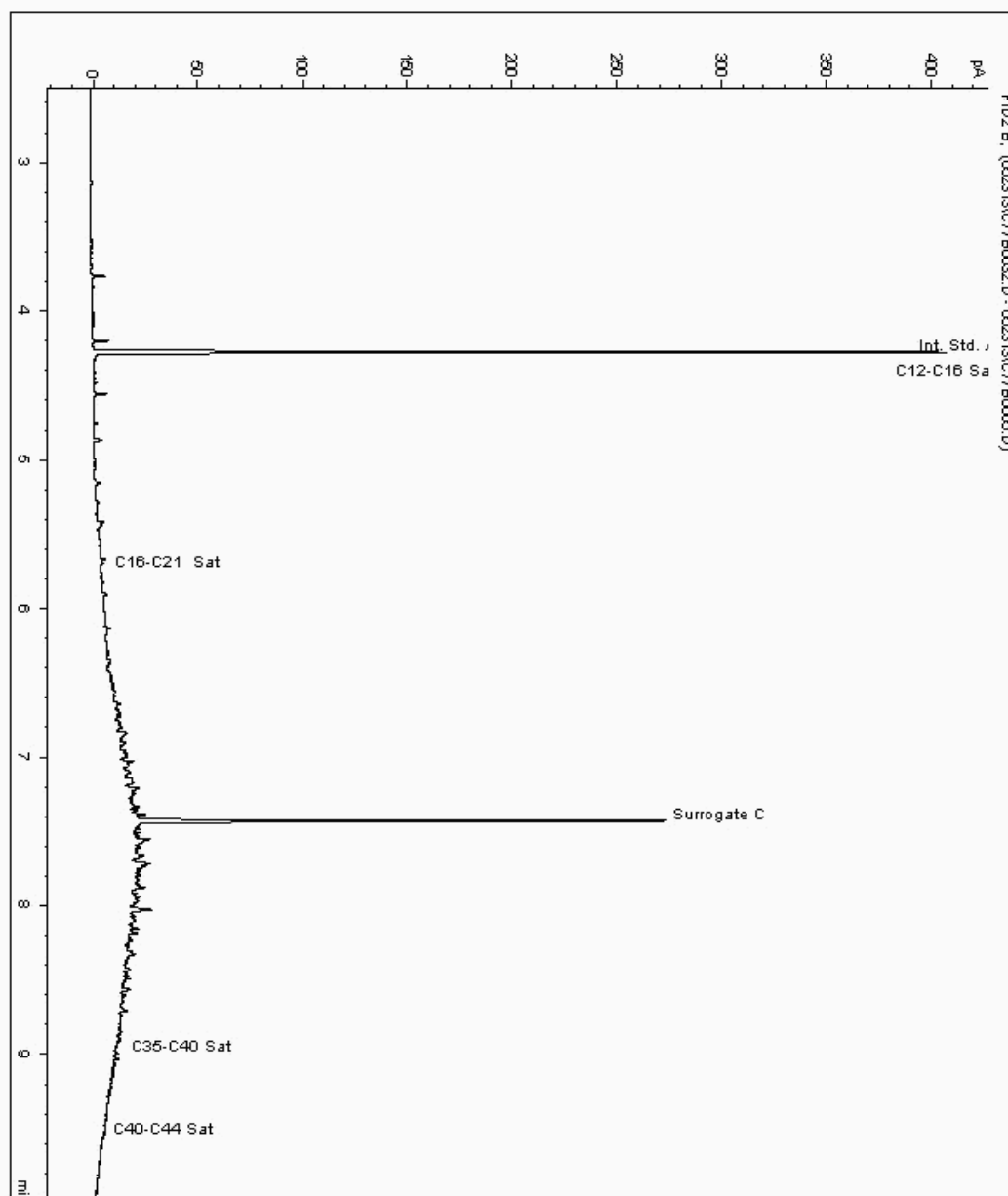
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7454693
Sample ID : VA148

Depth : 6.60

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7150846-7454693
Date Acquired : 24/05/2013 01:00:08 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.021





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Chromatogram

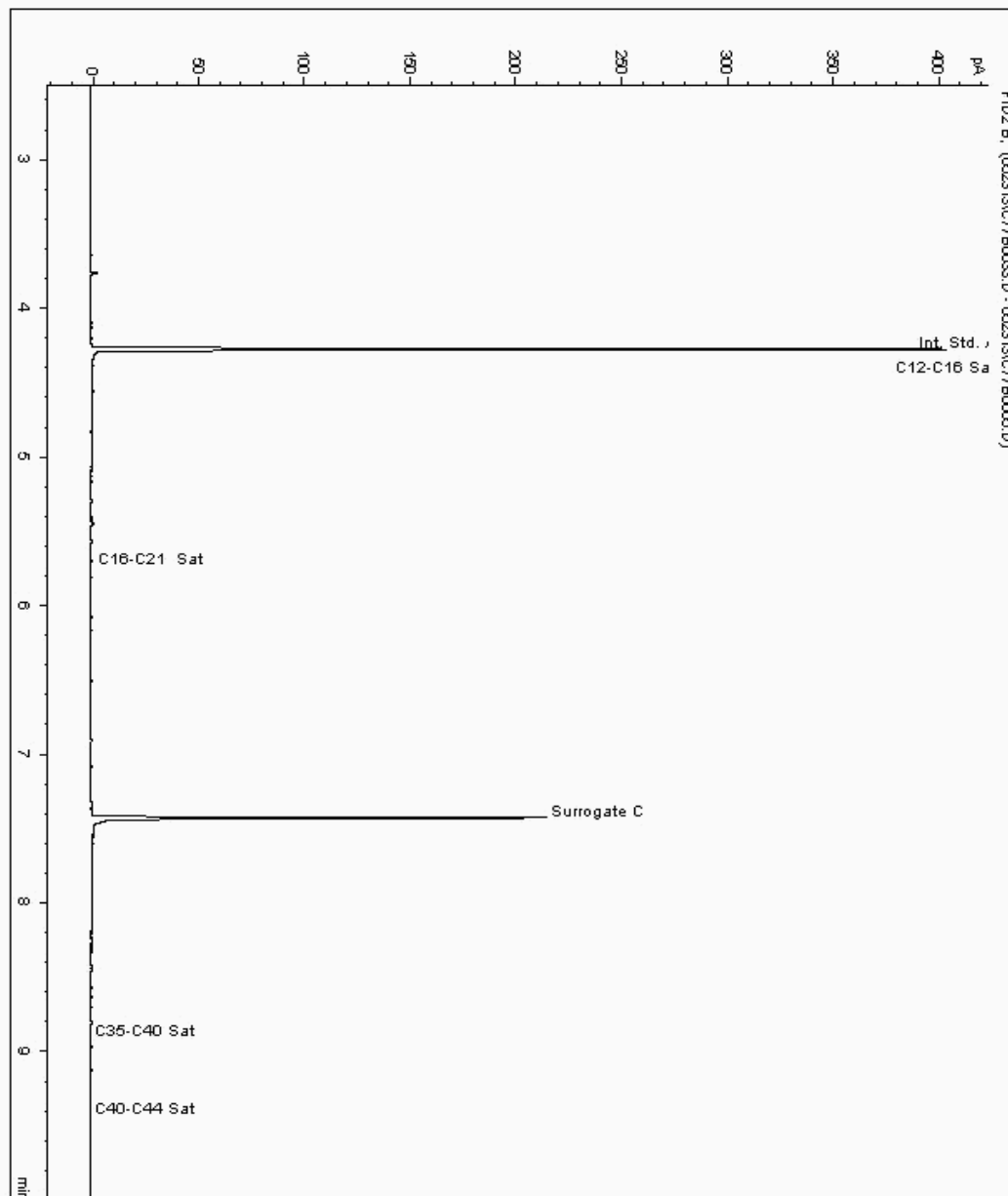
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7454712
Sample ID : FILL

Depth : 0.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7150892-7454712
Date Acquired : 24/05/2013 01:20:49 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.982





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Chromatogram

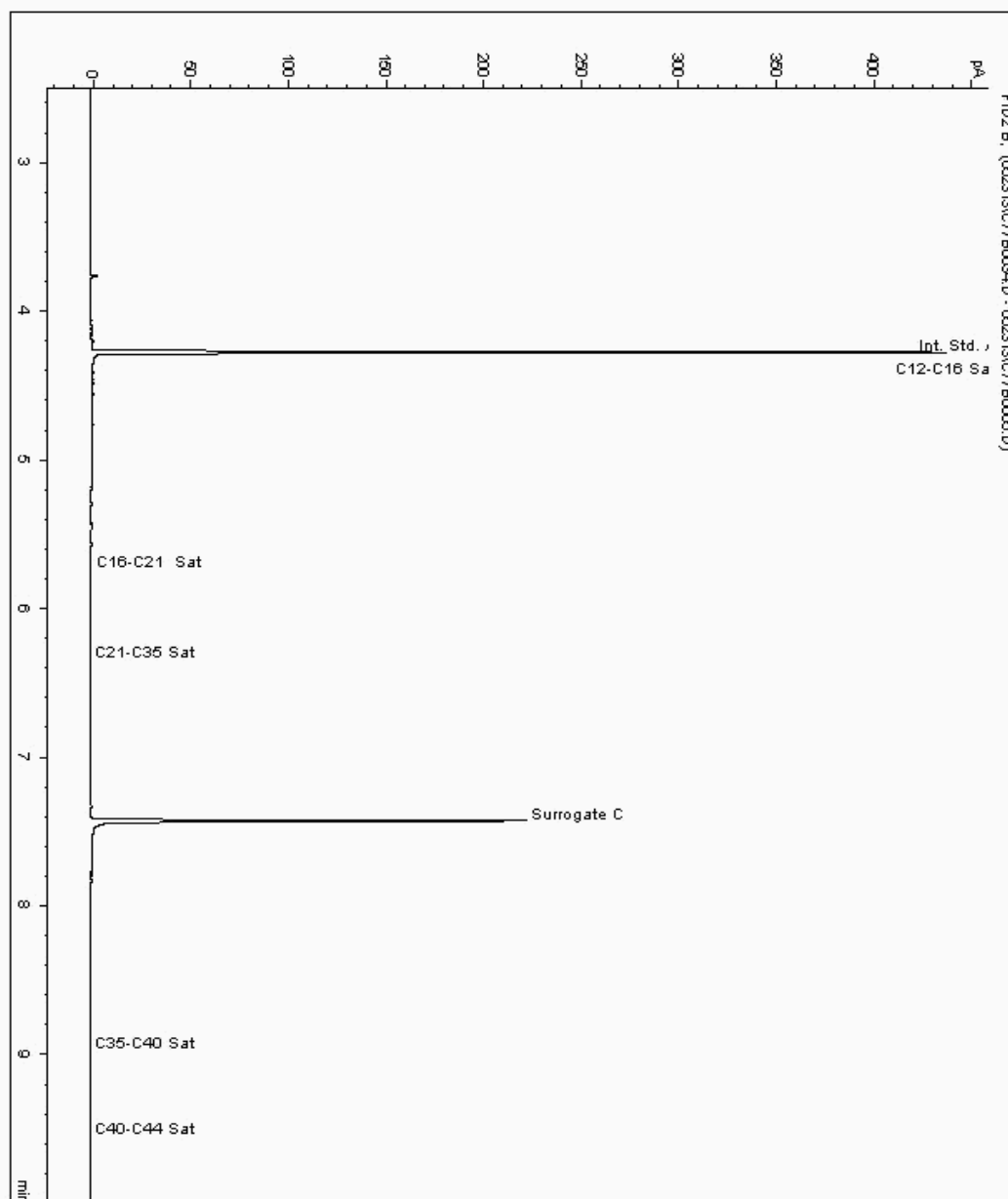
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7454731
Sample ID : VA150

Depth : 7.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7150874-7454731
Date Acquired : 24/05/2013 01:41:36 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.982





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Location: Shell Hitchin
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Order Number:
Report Number: 228142
Superseded Report:

Chromatogram

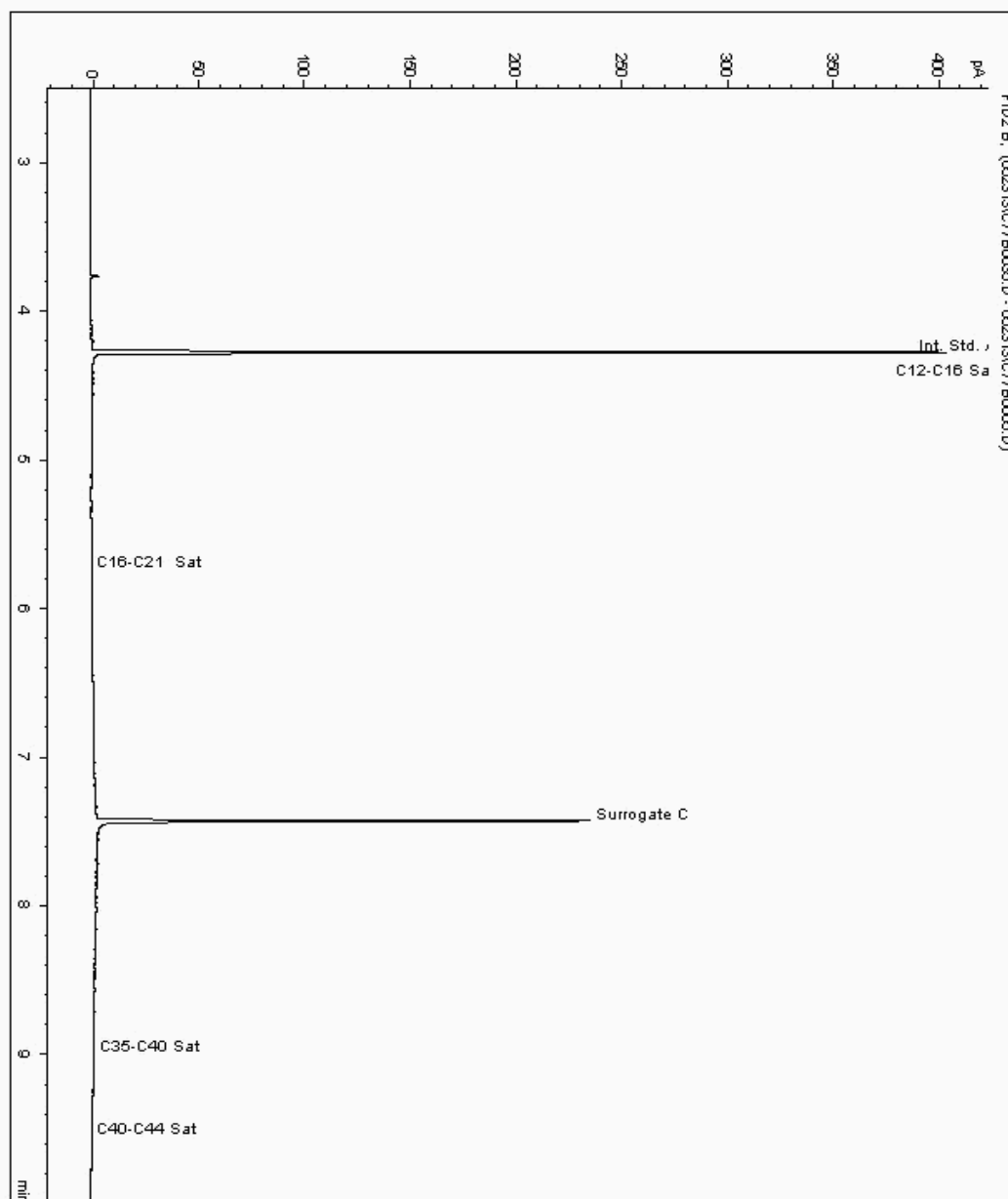
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7454742
Sample ID : VA149

Depth : 6.80

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7150865-7454742
Date Acquired : 24/05/2013 02:02:15 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.009





SDG: 130521-37
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
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Attention: Jocelyn Willis

Order Number:
Report Number: 228142
Superseded Report:

Chromatogram

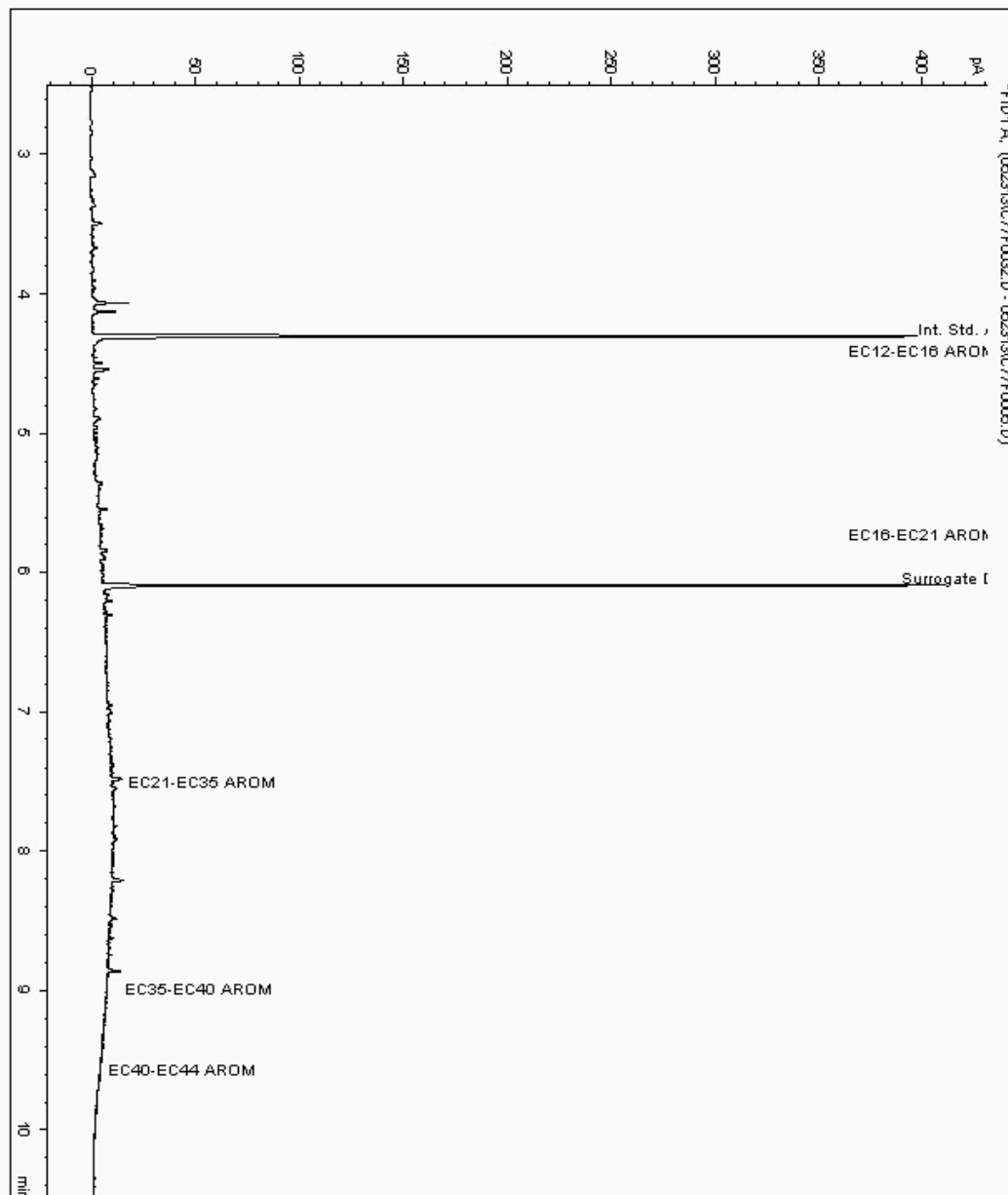
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7454693
Sample ID : VA148

Depth : 6.60

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 7150847-7454693
Date Acquired : 24/05/2013 01:00:08 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.021





SDG: 130521-37
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
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Order Number:
Report Number: 228142
Superseded Report:

Chromatogram

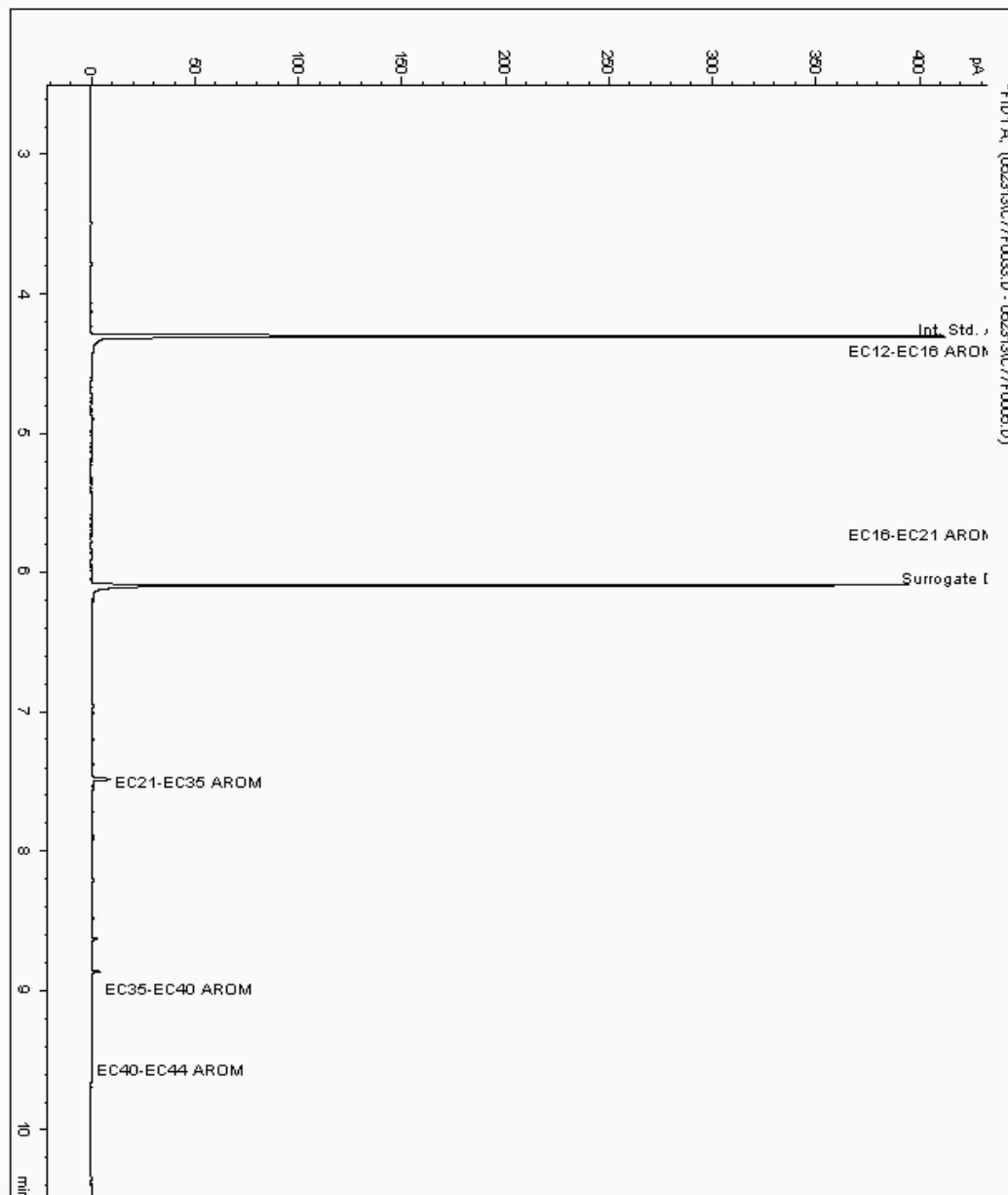
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7454712
Sample ID : FILL

Depth : 0.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 7150893-7454712
Date Acquired : 24/05/2013 01:20:49 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.982





SDG: 130521-37
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 228142
Superseded Report:

Chromatogram

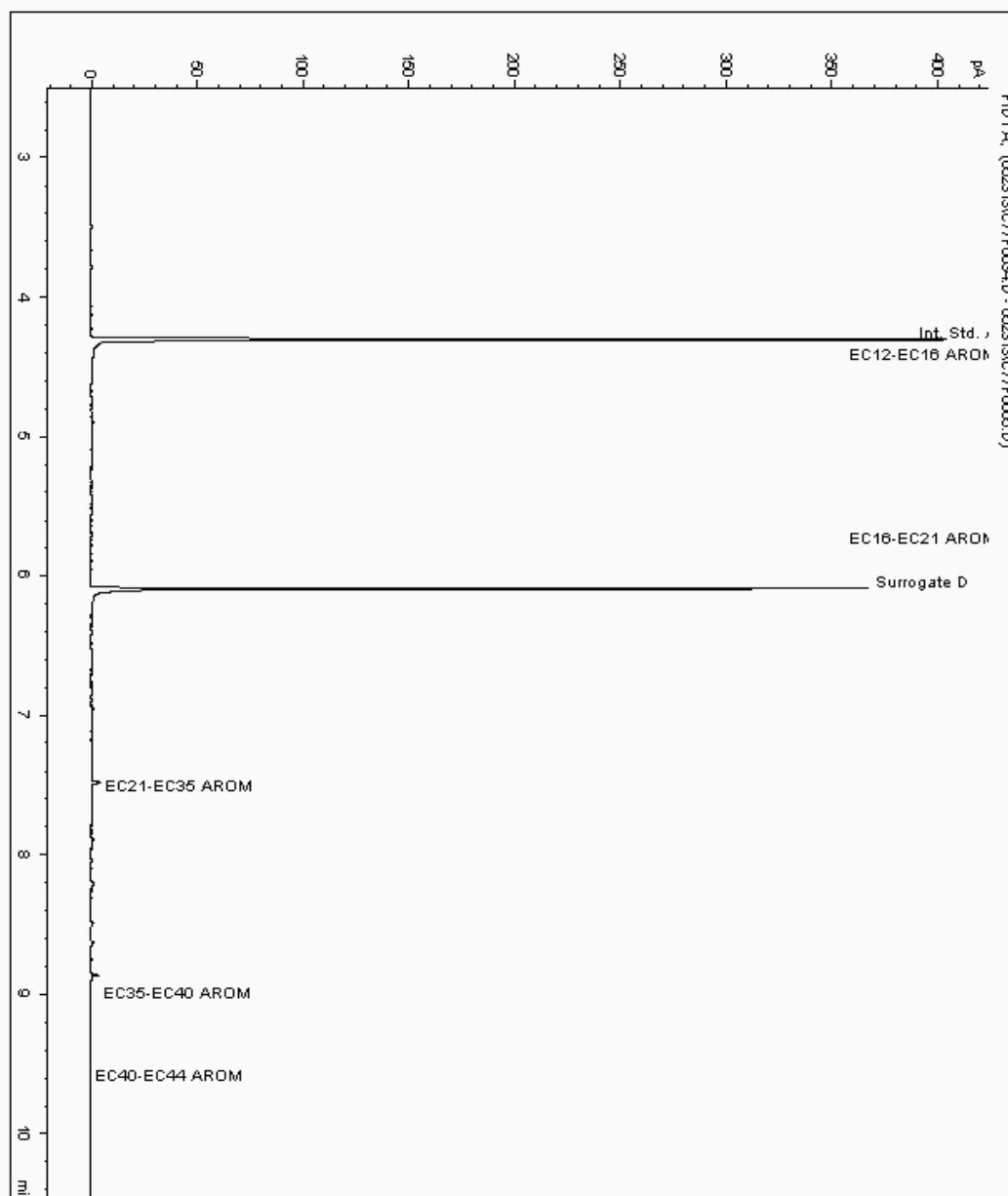
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7454731
Sample ID : VA150

Depth : 7.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 7150875-7454731
Date Acquired : 24/05/2013 01:41:36 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.982





SDG: 130521-37
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 228142
Superseded Report:

Chromatogram

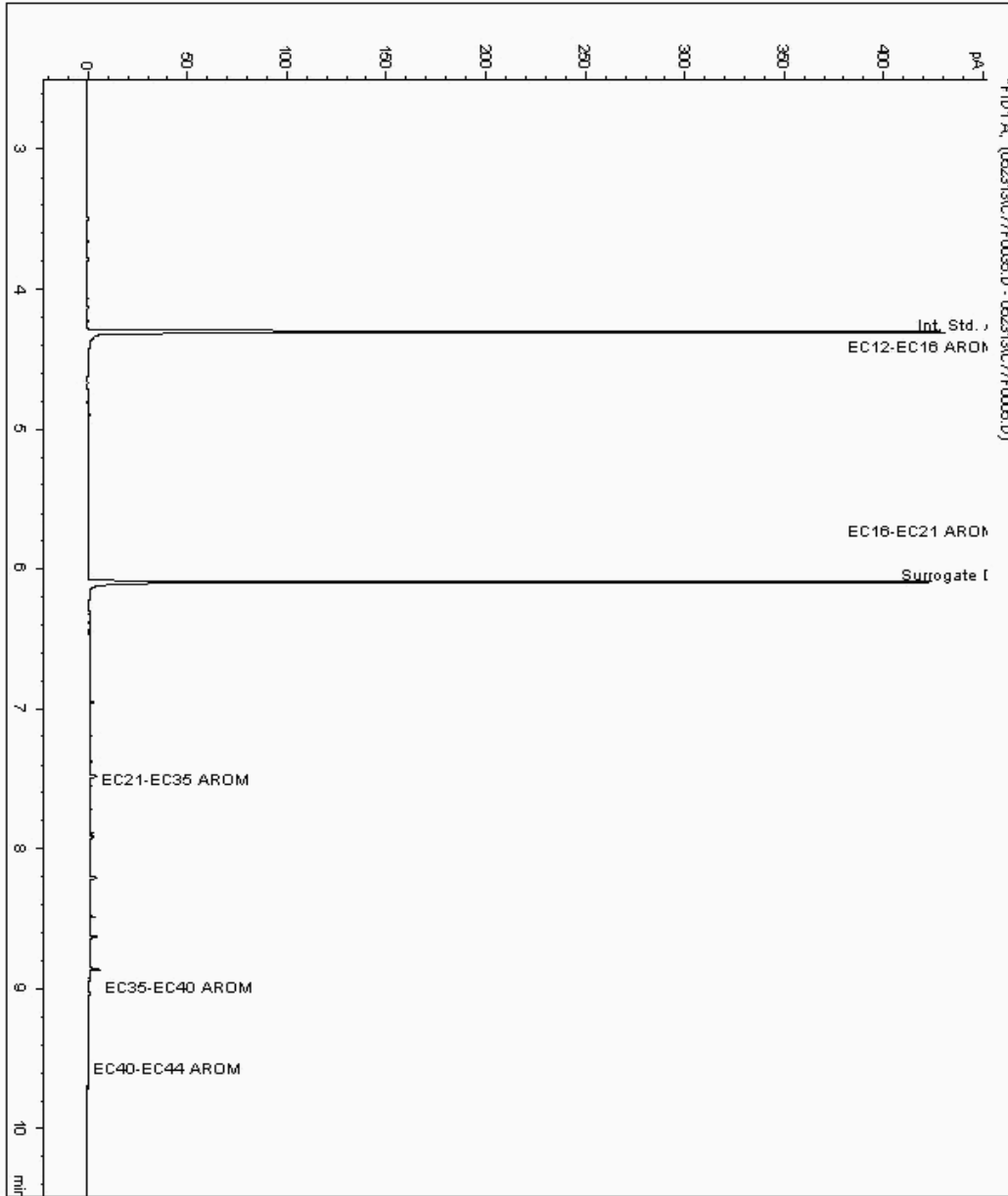
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7454742
Sample ID : VA149

Depth : 6.80

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 7150866-7454742
Date Acquired : 24/05/2013 02:02:15 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.009





CERTIFICATE OF ANALYSIS

SDG: 130521-37
Job: H_URS_WIM-174
Client Reference: 46370079

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Order Number:
Report Number: 228142
Superseded Report:

Chromatogram

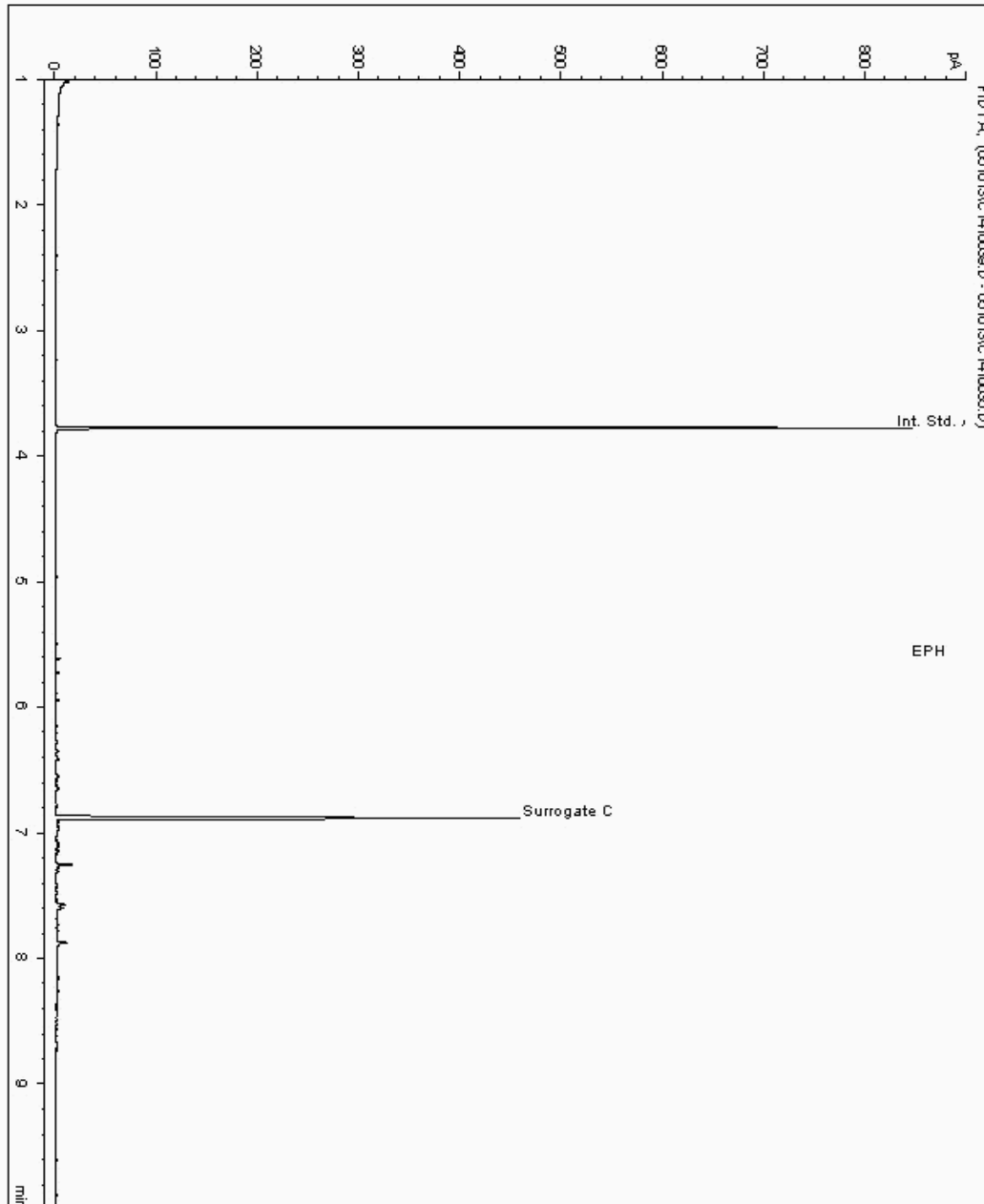
Analysis: Mineral Oil

Sample No : 7456580
Sample ID : WAC

Depth : 0.00

Alcontrol/Geochem Analytical Services
EPH Range Organics (C10 - C40)

Sample Identity : 7089735-7382432
Date Acquired : 10/05/13 22:16:22 PM
Units : mg/kg
Sample Multiplier : 0.000
Dilution :





CERTIFICATE OF ANALYSIS

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Job: H_URS_WIM-174
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Order Number:
Report Number: 228142
Superseded Report:

Chromatogram

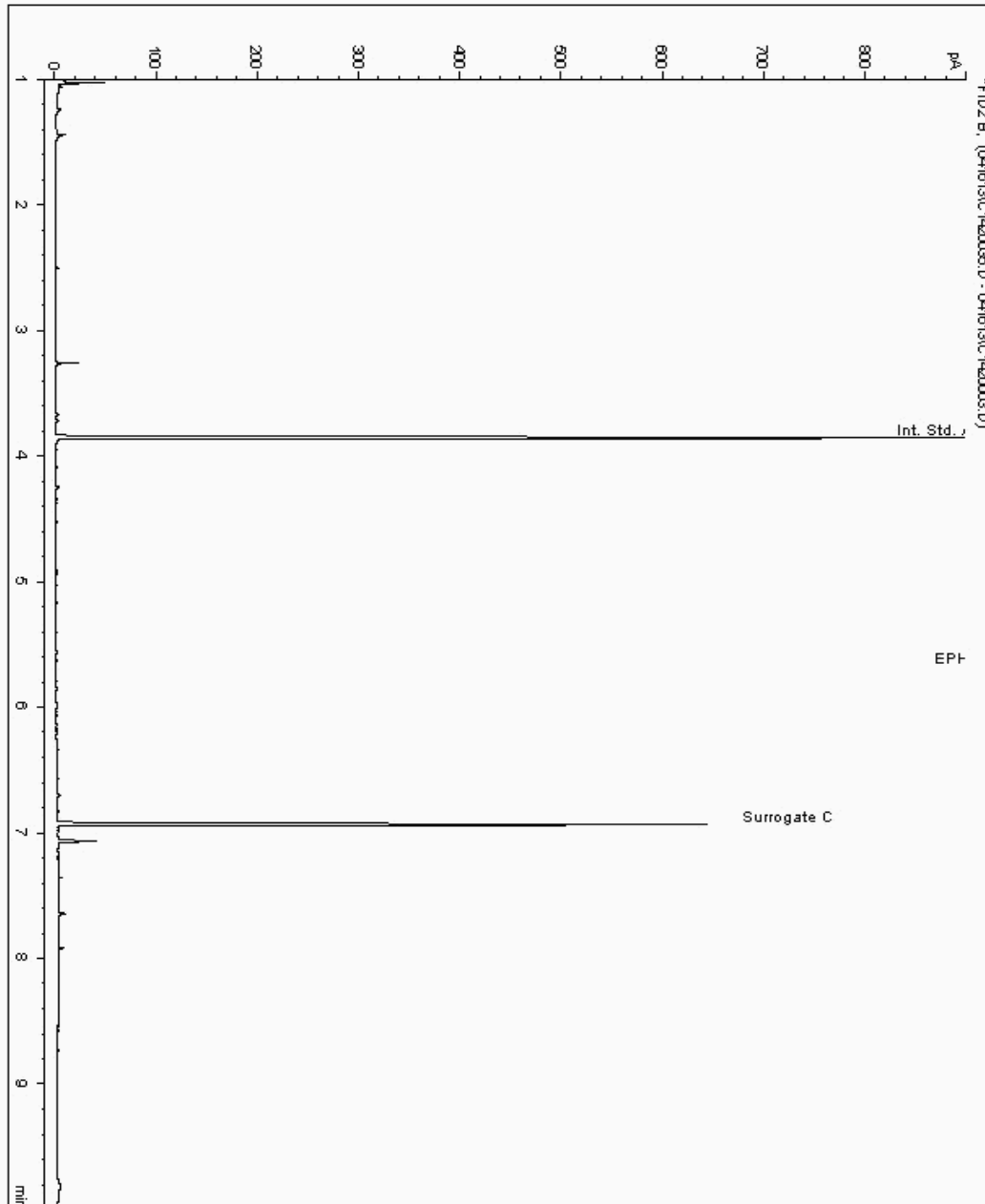
Analysis: Mineral Oil

Sample No : 7466250
Sample ID : WAC 2

Depth : 0.00

Alcontrol/Geochem Analytical Services
EPH Range Organics (C10 - C40)

Sample Identity : 6921841-7228916
Date Acquired : 17/04/13 10:46:28 PM
Units : mg/kg
Sample Multiplier : 0.000
Dilution :





SDG: 130521-37
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Client Reference: 46370079

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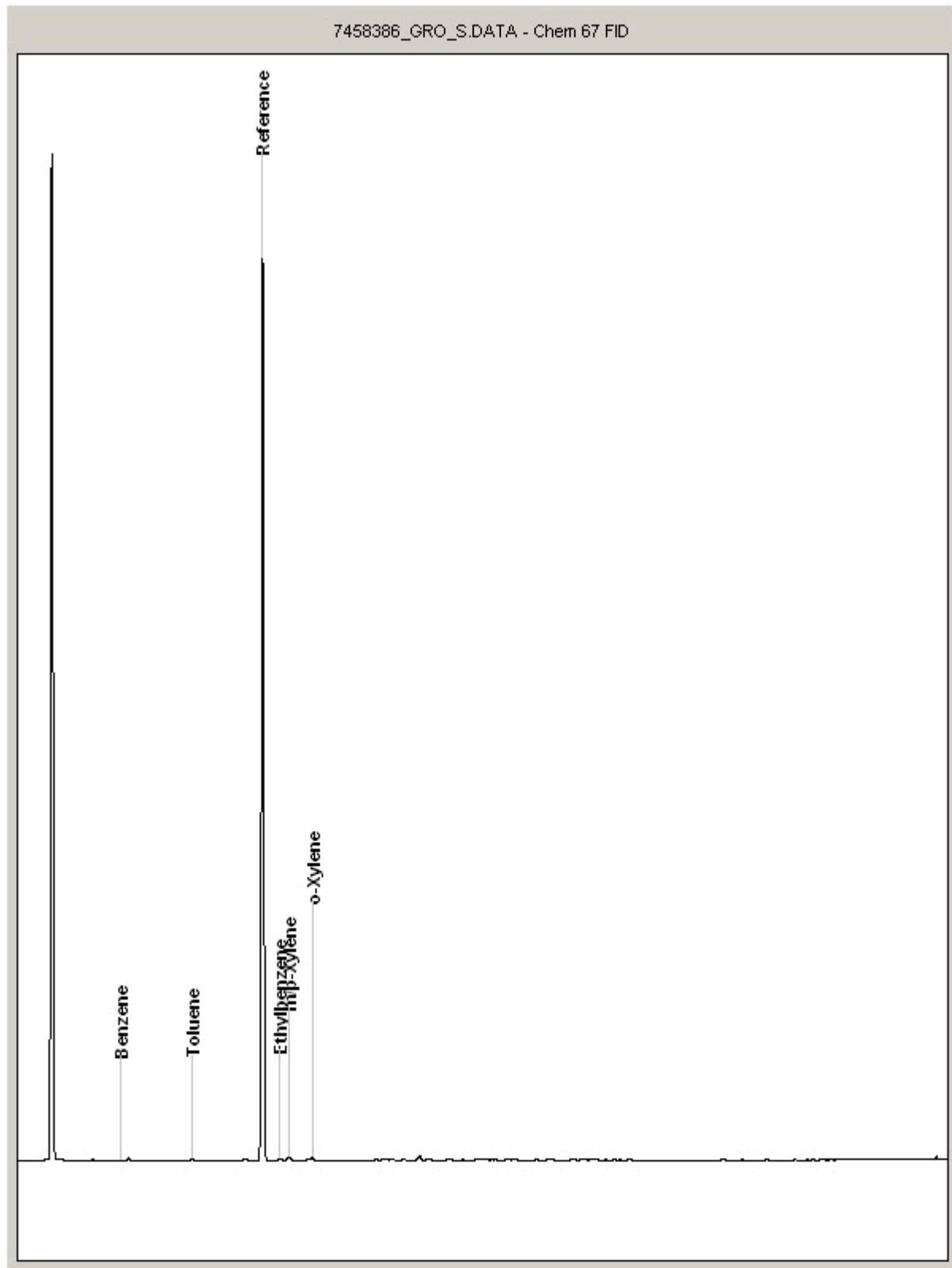
Order Number:
Report Number: 228142
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7458386
Sample ID : FILL

Depth : 0.00





SDG: 130521-37
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

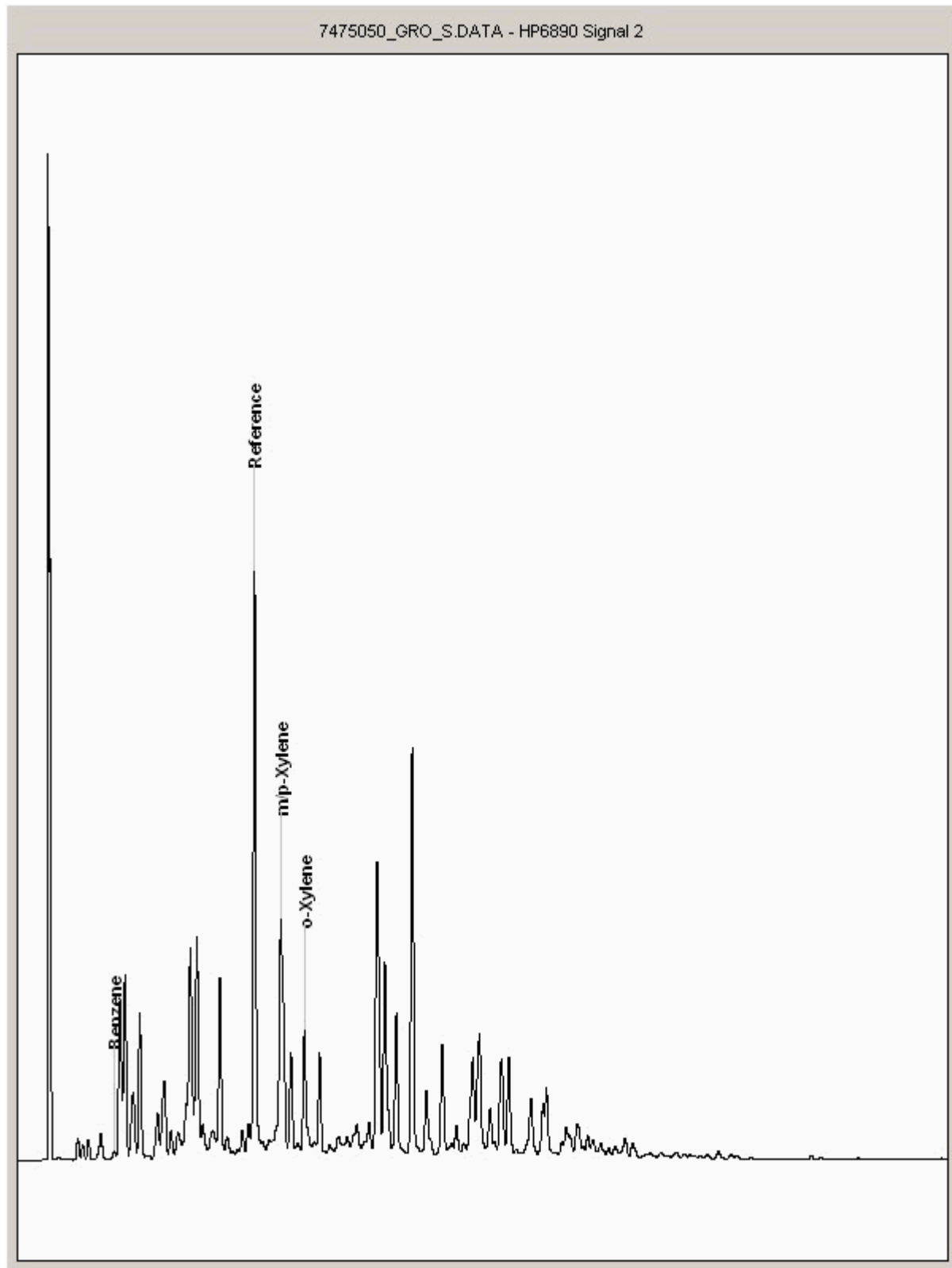
Order Number:
Report Number: 228142
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7475050
Sample ID : WAC

Depth : 0.00





SDG: 130521-37
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

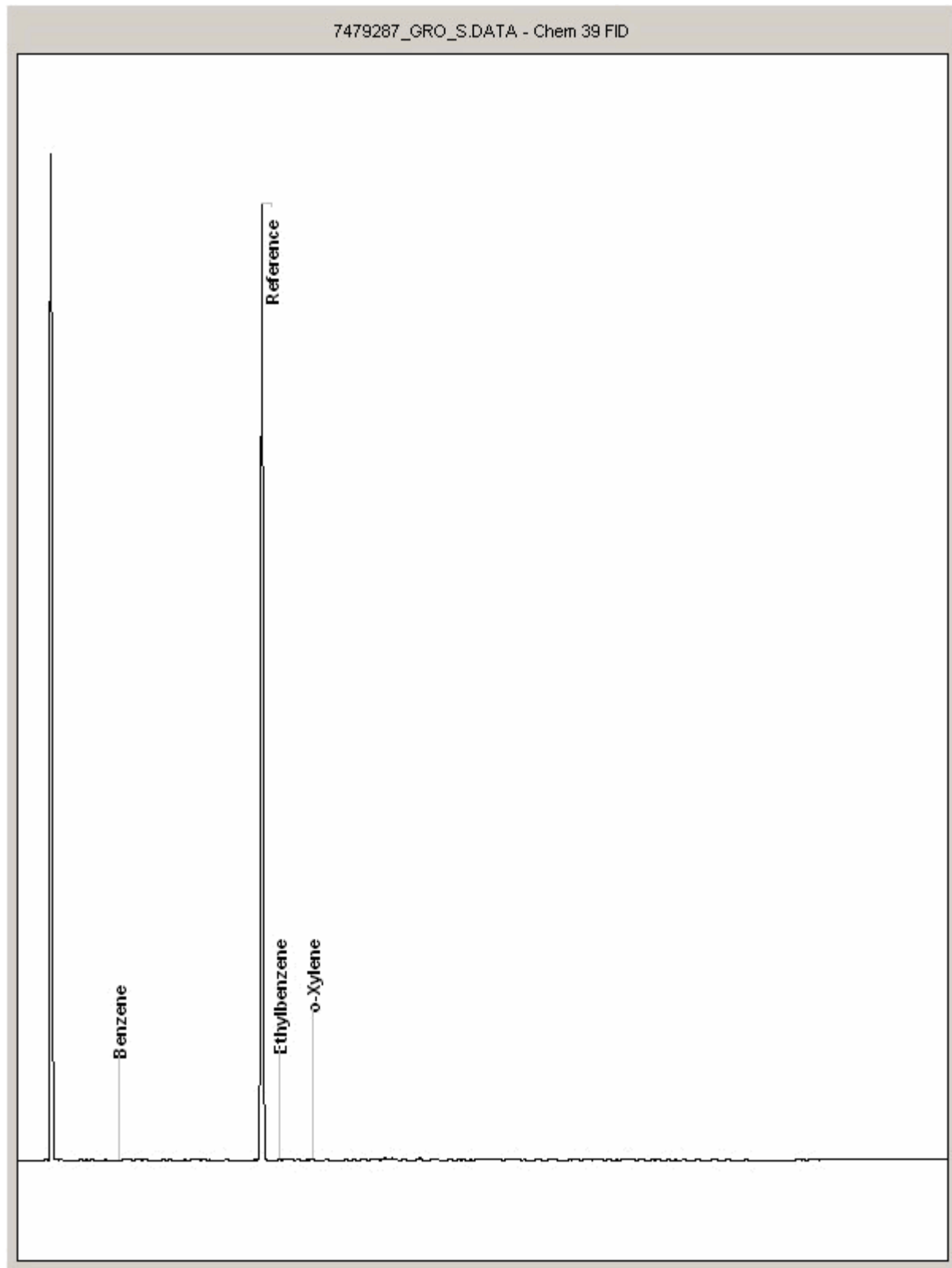
Order Number:
Report Number: 228142
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7479287
Sample ID : VA150

Depth : 7.00





SDG: 130521-37
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

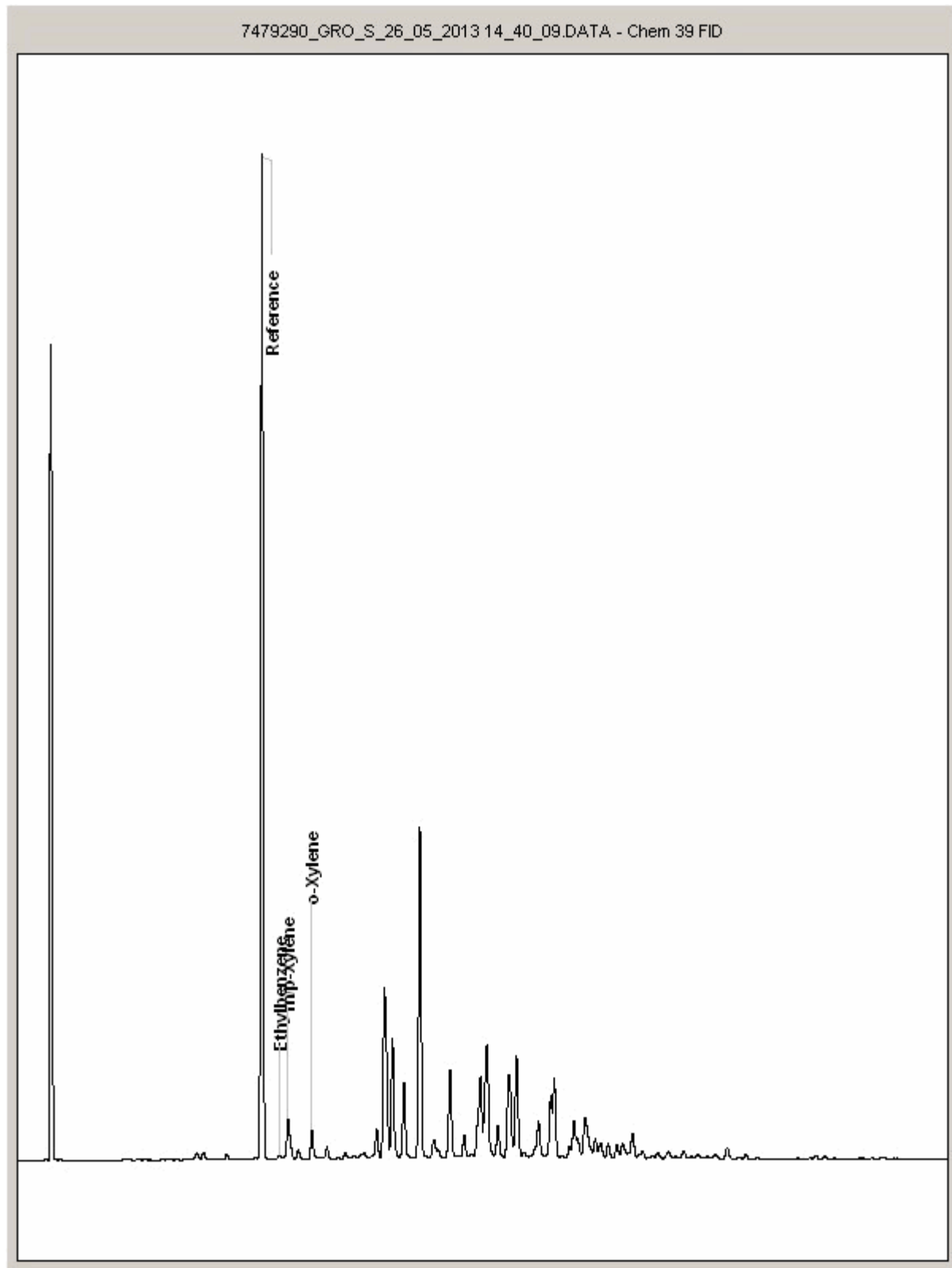
Order Number:
Report Number: 228142
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7479290
Sample ID : VA149

Depth : 6.80





SDG: 130521-37
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

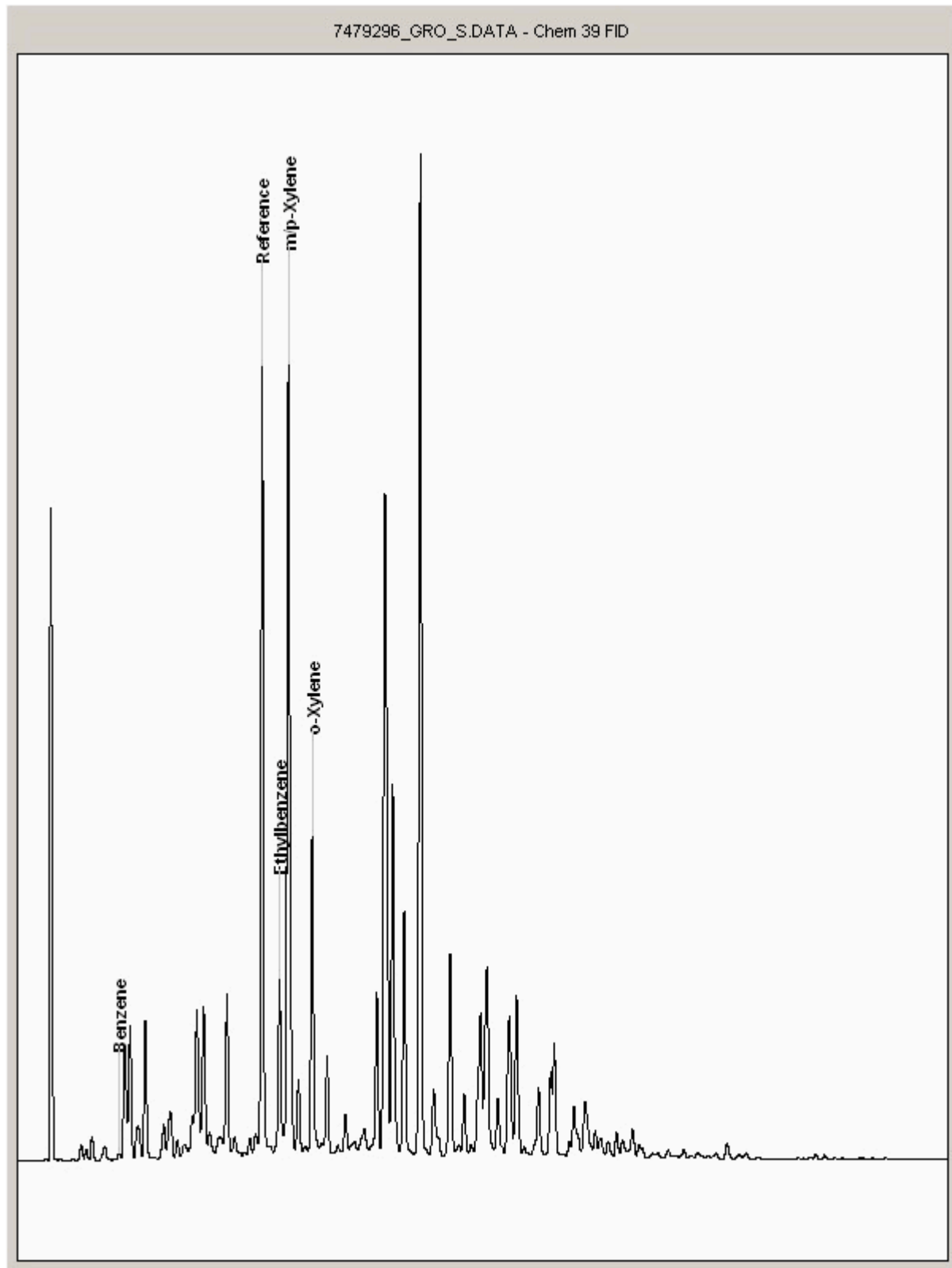
Order Number:
Report Number: 228142
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7479296
Sample ID : VA148

Depth : 6.60





SDG: 130521-37
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

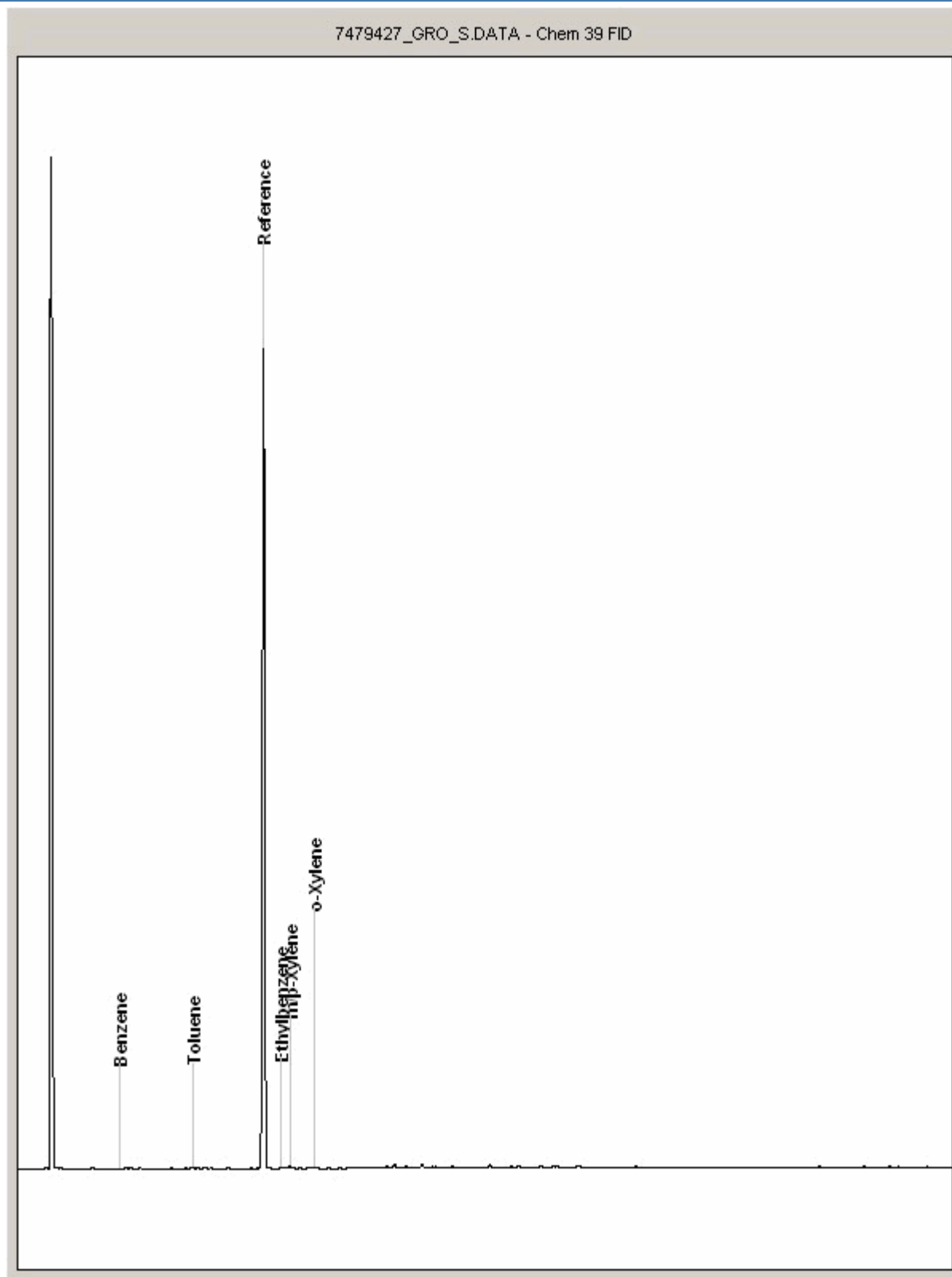
Order Number:
Report Number: 228142
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7479427
Sample ID : WAC 2

Depth : 0.00





SDG: 130521-37
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 228142
Superseded Report:

Appendix General

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

2. 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 2 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. ALcontrol Laboratories 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. 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 for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

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 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.

21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.

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.

Sample Deviations

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Holding time exceeded before sample received
§	Sampled on date not provided
+	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to sampled on date
&	Sample Holding Time exceeded - Late arrival of instructions.

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.



URS Corporation Limited
St. George's House
2nd Floor
5 St. George's Road
Wimbledon
Greater London
SW19 4DR

Attention: Jocelyn Willis

CERTIFICATE OF ANALYSIS

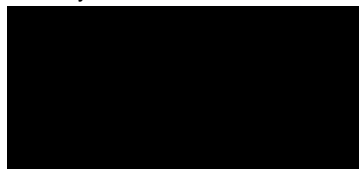
Date: 04 June 2013
Customer: H_URS_WIM
Sample Delivery Group (SDG): 130524-117
Your Reference: 46370079
Location: Hitchin
Report No: 227170

We received 7 samples on Friday May 24, 2013 and 5 of these samples were scheduled for analysis which was completed on Tuesday June 04, 2013. 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.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Sonia McWhan

Operations Manager





SDG:	130524-117	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	227170
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
7472291	VAI51		1.20	22/05/2013
7472293	VAI52		1.20	22/05/2013
7472295	VAI53		1.20	22/05/2013
7472298	VAI54		1.20	22/05/2013
7472300	VAI55		3.00	22/05/2013
7472286	WAC03			22/05/2013
7472289	WAC04			22/05/2013

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



SDG: 130524-117
 Job: H_URS_WIM-162
 Client Reference: 46370079

Location: Hitchin
 Customer: URS Corporation Limited
 Attention: Jocelyn Willis

Order Number:
 Report Number: 227170
 Superseded Report:

SOLID**Results Legend**

Test

No Determination
Possible**Lab Sample No(s)****Customer
Sample Reference****AGS Reference****Depth (m)****Container**

7472291	7472293	7472295	7472298	7472300
VA151	VA152	VA153	VA154	VA155
1.20	1.20	1.20	1.20	3.00
250g Amber Jar (AL 60g VOC (ALE215))	250g Amber Jar (AL 60g VOC (ALE215))	250g Amber Jar (AL 60g VOC (ALE215))	250g Amber Jar (AL 60g VOC (ALE215))	250g Amber Jar (AL 60g VOC (ALE215))

EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 5	X	X	X	X	X	
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 5	X	X	X	X	X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 5		X	X	X	X	X
Oxygenates (S)	All	NDPs: 0 Tests: 5	X	X	X	X	X	X
PAH by GCMS	All	NDPs: 0 Tests: 3	X		X			X
Sample description	All	NDPs: 0 Tests: 1				X		
Total Organic Carbon	All	NDPs: 0 Tests: 3	X		X			X
VOC MS (S)	All	NDPs: 0 Tests: 5	X	X	X	X	X	X



SDG:	130524-117	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	227170
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions	Inclusions 2
7472291	VAI51	1.20	Light Brown	Clay	<0.063 mm	Stones	None
7472293	VAI52	1.20	Light Brown	Clay	<0.063 mm	Vegetation	Stones
7472295	VAI53	1.20	Light Brown	Clay	<0.063 mm	Stones	None
7472298	VAI54	1.20	Light Brown	Sandy Clay	0.1 - 2 mm	Stones	None
7472300	VAI55	3.00	Dark Brown	Clay	<0.063 mm	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.

Order Number:
Report Number: 227170
Superseded Report:

08:13:38 04/06/2013

Order Number:
Report Number: 227170
Superseded Report:

Page 6 of 32

Order Number:
Report Number: 227170
Superseded Report:

Page 7 of 32

Order Number:
Report Number: 227170
Superseded Report:

Page 8 of 32

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 227170
Superseded Report:

SDG: 130524-117
Job: H_URS_WIM-162
Client Reference: 46370079

[illegible]

Order Number:
Report Number: 227170
Superseded Report:

Page 10 of 32



SDG:	130524-117	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	227170
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample ¹	Surrogate Corrected
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds 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		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		
TM288		Determination of Oxygenates in Soils by Headspace/GC-MS		

¹ Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.



SDG:	130524-117	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	227170
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Test Completion Dates

Lab Sample No(s)	7472291	7472293	7472295	7472298	7472300
Customer Sample Ref.	VAI51	VAI52	VAI53	VAI54	VAI55
AGS Ref.					
Depth	1.20	1.20	1.20	1.20	3.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID
EPH CWG (Aliphatic) GC (S)	03-Jun-2013	31-May-2013	31-May-2013	31-May-2013	03-Jun-2013
EPH CWG (Aromatic) GC (S)	03-Jun-2013	04-Jun-2013	31-May-2013	31-May-2013	03-Jun-2013
GRO by GC-FID (S)	02-Jun-2013	31-May-2013	01-Jun-2013	03-Jun-2013	02-Jun-2013
Oxygenates (S)	03-Jun-2013	03-Jun-2013	03-Jun-2013	03-Jun-2013	03-Jun-2013
PAH by GCMS	02-Jun-2013		02-Jun-2013		02-Jun-2013
Sample description	28-May-2013	28-May-2013	28-May-2013	28-May-2013	28-May-2013
Total Organic Carbon	31-May-2013		31-May-2013		31-May-2013
VOC MS (S)	31-May-2013	02-Jun-2013	02-Jun-2013	31-May-2013	31-May-2013



SDG: 130524-117
Job: H_URS_WIM-162
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Report Number: 227170
Superseded Report:

ASSOCIATED AQC DATA

EPH CWG (Aliphatic) GC (S)

Component	Method Code	QC 79	QC 70
Total Aliphatics >C12-C35	TM173	95.21 69.19 : 111.75	89.79 69.98 : 113.27

EPH CWG (Aromatic) GC (S)

Component	Method Code	QC 79	QC 70
Total Aromatics >EC12-EC35	TM173	102.67 74.25 : 118.35	94.0 73.70 : 120.82

GRO by GC-FID (S)

Component	Method Code	QC 70	QC 74	QC 75	QC 75
Benzene by GC (Moisture Corrected)	TM089	99.5 79.00 : 121.00	98.5 79.00 : 121.00	99.5 80.02 : 117.27	105.5 80.02 : 117.27
Ethylbenzene by GC (Moisture Corrected)	TM089	101.0 79.00 : 121.00	99.5 79.00 : 121.00	100.5 84.04 : 116.69	107.0 84.04 : 116.69
m & p Xylene by GC (Moisture Corrected)	TM089	101.0 79.00 : 121.00	99.5 79.00 : 121.00	100.5 84.58 : 114.27	106.75 84.58 : 114.27
MTBE GC-FID (Moisture Corrected)	TM089	104.5 74.48 : 125.29	100.0 74.48 : 125.29	103.0 79.00 : 121.00	107.5 79.00 : 121.00
o Xylene by GC (Moisture Corrected)	TM089	102.5 79.00 : 121.00	100.5 79.00 : 121.00	102.0 84.97 : 115.07	107.5 84.97 : 115.07
QC	TM089	111.85 40.00 : 160.00	106.89 40.00 : 160.00	100.19 40.00 : 160.00	108.21 40.00 : 160.00
Toluene by GC (Moisture Corrected)	TM089	101.0 79.00 : 121.00	99.5 79.00 : 121.00	99.0 84.65 : 117.24	106.5 84.65 : 117.24

Oxygenates (S)

Component	Method Code	QC 75
Benzene raw	TM288	92.5 77.94 : 128.84
Diisopropyl ether raw	TM288	96.25 78.68 : 128.65
Ethanol raw	TM288	111.0 56.39 : 148.67
Ethylbenzene raw	TM288	99.25 78.18 : 122.27
o-Xylene raw	TM288	91.25 78.38 : 109.16
p/m-Xylene raw	TM288	98.38 76.92 : 116.65
tert Butanol raw	TM288	110.5 62.51 : 145.03
tert-amyl methyl ether raw	TM288	95.0 71.22 : 127.95



CERTIFICATE OF ANALYSIS

SDG: 130524-117
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Order Number:
Report Number: 227170
Superseded Report:

Oxygenates (S)

		QC 75
tert-butyl ethyl ether raw	TM288	96.0 64.00 : 136.00
tert-butyl methyl ether raw	TM288	98.0 83.50 : 129.91
Toluene raw	TM288	88.0 75.97 : 110.53

PAH by GCMS

Component	Method Code	QC 77	QC 70
Acenaphthene	TM218	111.0 80.50 : 119.50	92.0 79.96 : 117.68
Acenaphthylene	TM218	100.0 74.20 : 109.60	85.0 71.19 : 110.66
Anthracene	TM218	104.5 75.54 : 110.88	90.5 75.14 : 109.30
Benz(a)anthracene	TM218	116.0 83.07 : 126.36	96.5 79.62 : 124.12
Benzo(a)pyrene	TM218	116.0 79.21 : 128.01	96.0 81.56 : 121.22
Benzo(b)fluoranthene	TM218	116.0 86.21 : 131.42	94.5 81.11 : 119.79
Benzo(ghi)perylene	TM218	111.0 83.37 : 119.89	89.5 81.23 : 116.67
Benzo(k)fluoranthene	TM218	112.5 78.77 : 120.72	91.5 79.07 : 114.76
Chrysene	TM218	112.5 78.77 : 118.99	92.0 77.94 : 118.46
Dibenzo(ah)anthracene	TM218	114.0 78.63 : 120.55	92.0 79.74 : 118.79
Fluoranthene	TM218	110.5 77.25 : 117.75	90.5 77.89 : 110.15
Fluorene	TM218	109.5 79.28 : 117.35	93.0 73.20 : 120.90
Indeno(123cd)pyrene	TM218	114.5 78.87 : 122.50	91.5 79.80 : 118.43
Naphthalene	TM218	106.0 74.75 : 118.25	88.5 73.48 : 119.86
Phenanthrene	TM218	110.5 83.20 : 113.96	91.0 75.81 : 115.66
Pyrene	TM218	108.5 82.10 : 113.43	90.0 78.21 : 109.14

Total Organic Carbon

Component	Method Code	QC 76	QC 73
Total Organic Carbon	TM132	100.0 86.66 : 109.87	101.83 86.66 : 109.87

VOC MS (S)



SDG: 130524-117
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Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 227170
Superseded Report:

VOC MS (S)

Component	Method Code	QC 77	QC 77
1,1,1,2-tetrachloroethane	TM116	101.4 77.50 : 124.09	93.4 80.75 : 134.87
1,1,1-Trichloroethane	TM116	99.0 86.36 : 114.14	102.2 85.77 : 122.01
1,1,2-Trichloroethane	TM116	109.0 93.86 : 131.61	104.0 91.41 : 143.81
1,1-Dichloroethane	TM116	103.8 83.96 : 125.03	115.0 78.61 : 135.49
1,2-Dichloroethane	TM116	104.8 88.93 : 122.77	103.8 90.28 : 129.77
1,4-Dichlorobenzene	TM116	109.0 89.32 : 117.26	100.2 83.71 : 117.61
2-Chlorotoluene	TM116	128.8 93.47 : 156.27	126.0 93.89 : 157.94
4-Chlorotoluene	TM116	126.0 92.38 : 149.49	124.6 84.89 : 151.49
Benzene	TM116	98.6 86.95 : 110.62	101.2 86.73 : 121.77
Carbon Disulphide	TM116	93.4 76.98 : 118.83	108.6 52.89 : 135.40
Carbontetrachloride	TM116	110.6 71.94 : 132.65	102.8 78.49 : 129.92
Chlorobenzene	TM116	99.8 78.33 : 118.74	99.2 83.32 : 124.69
Chloroform	TM116	101.2 69.66 : 148.03	106.8 84.73 : 129.61
Chloromethane	TM116	106.0 49.71 : 146.30	101.4 73.11 : 150.06
Cis-1,2-Dichloroethene	TM116	93.8 83.23 : 111.14	100.6 76.58 : 129.10
Dibromomethane	TM116	105.2 65.13 : 138.40	89.2 78.41 : 139.22
Dichloromethane	TM116	103.8 70.67 : 150.15	112.2 76.56 : 138.81
Ethylbenzene	TM116	99.2 84.09 : 110.87	95.0 84.50 : 121.58
Hexachlorobutadiene	TM116	138.6 67.98 : 202.14	148.2 52.26 : 206.55
Isopropylbenzene	TM116	90.0 75.72 : 100.29	84.2 72.21 : 107.47
Naphthalene	TM116	95.6 80.72 : 132.86	97.2 83.25 : 124.03
o-Xylene	TM116	97.0 76.04 : 111.23	90.0 82.93 : 114.17
p/m-Xylene	TM116	96.6 79.03 : 115.32	95.5 85.88 : 120.69
Sec-Butylbenzene	TM116	111.2 73.42 : 125.99	97.0 55.24 : 129.90
Tetrachloroethene	TM116	106.2 87.31 : 123.54	99.4 88.48 : 135.49
Toluene	TM116	92.6 83.48 : 106.73	93.8 80.73 : 120.76



CERTIFICATE OF ANALYSIS

SDG:	130524-117	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	227170
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

VOC MS (S)

		QC 77	QC 77
Trichloroethene	TM116	100.6 86.48 : 110.46	97.0 88.14 : 121.77
Trichlorofluoromethane	TM116	98.2 82.57 : 120.95	106.8 80.46 : 129.75
Vinyl Chloride	TM116	110.8 62.58 : 154.52	136.0 73.50 : 128.61

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

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

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



SDG: 130524-117
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 227170
Superseded Report:

Chromatogram

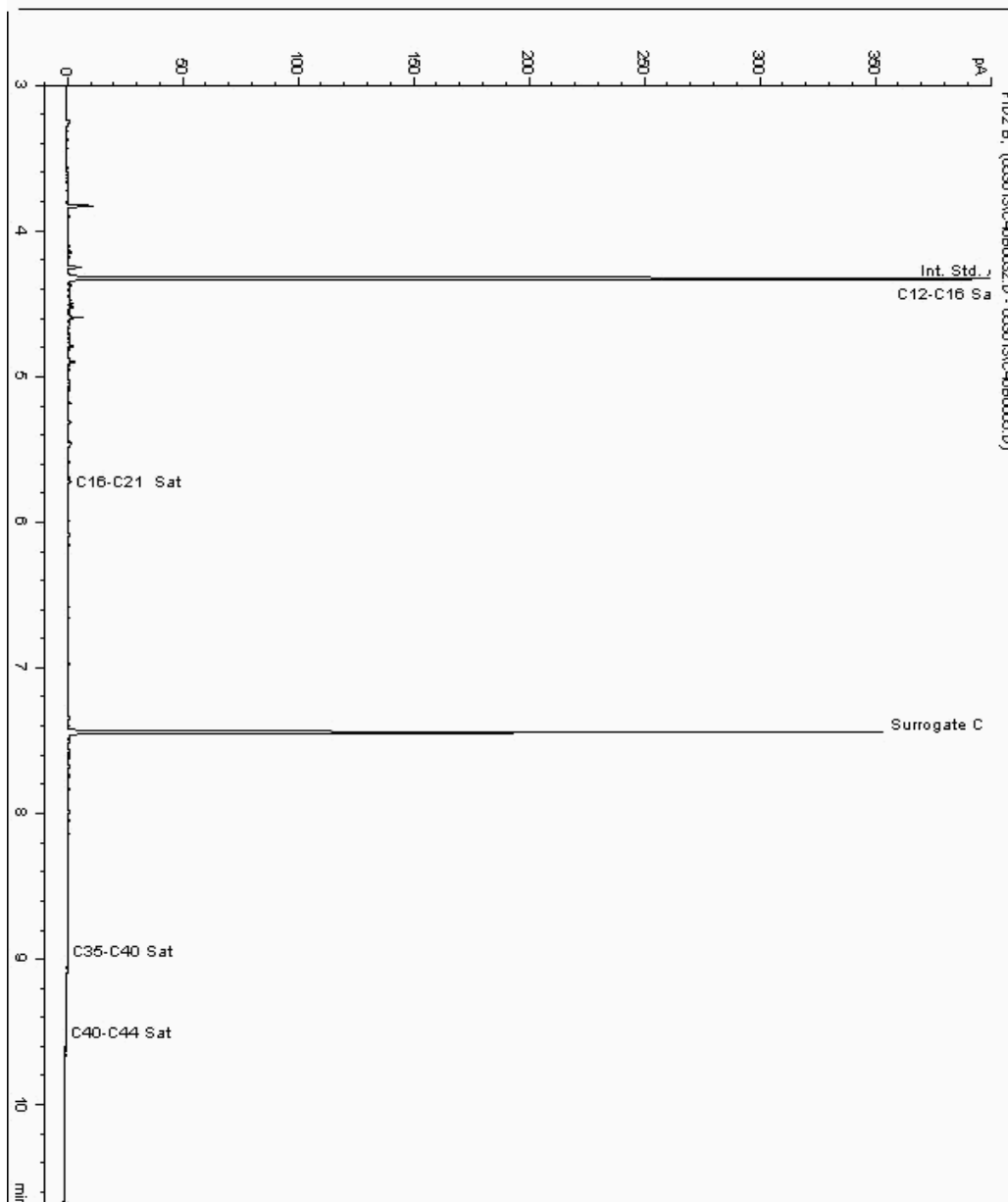
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7488984
Sample ID : VAI54

Depth : 1.20

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7172619-7488984
Date Acquired : 31/05/13 03:07:28 PM
Units : ppb
Dilution:





SDG: 130524-117
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 227170
Superseded Report:

Chromatogram

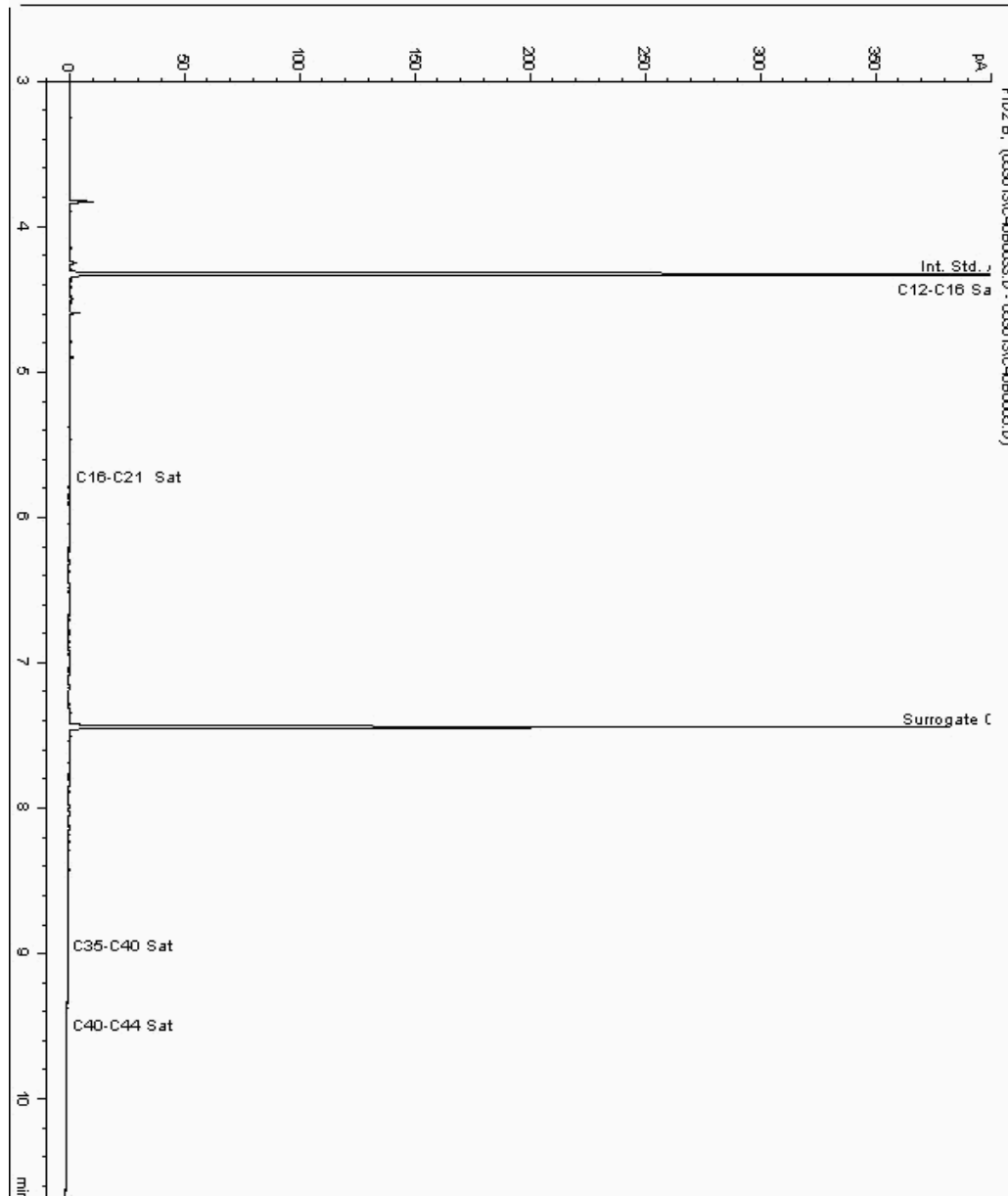
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7488999
Sample ID : VAI53

Depth : 1.20

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7172590-7488999
Date Acquired : 31/05/13 03:28:18 PM
Units : ppb
Dilution:





SDG: 130524-117
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 227170
Superseded Report:

Chromatogram

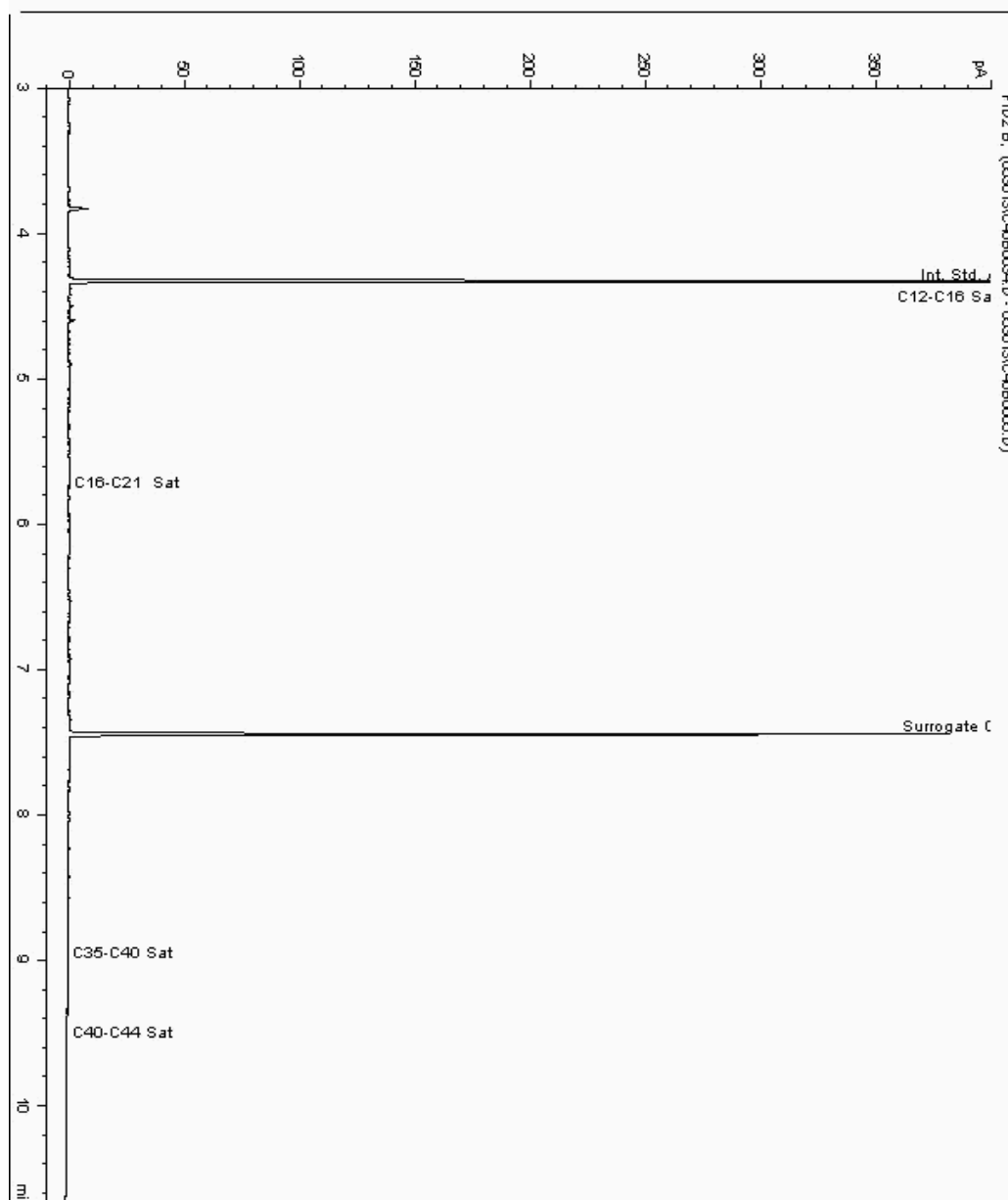
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7489049
Sample ID : VAI52

Depth : 1.20

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7172581-7489049
Date Acquired : 31/05/13 03:49:04 PM
Units : ppb
Dilution:





SDG: 130524-117
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 227170
Superseded Report:

Chromatogram

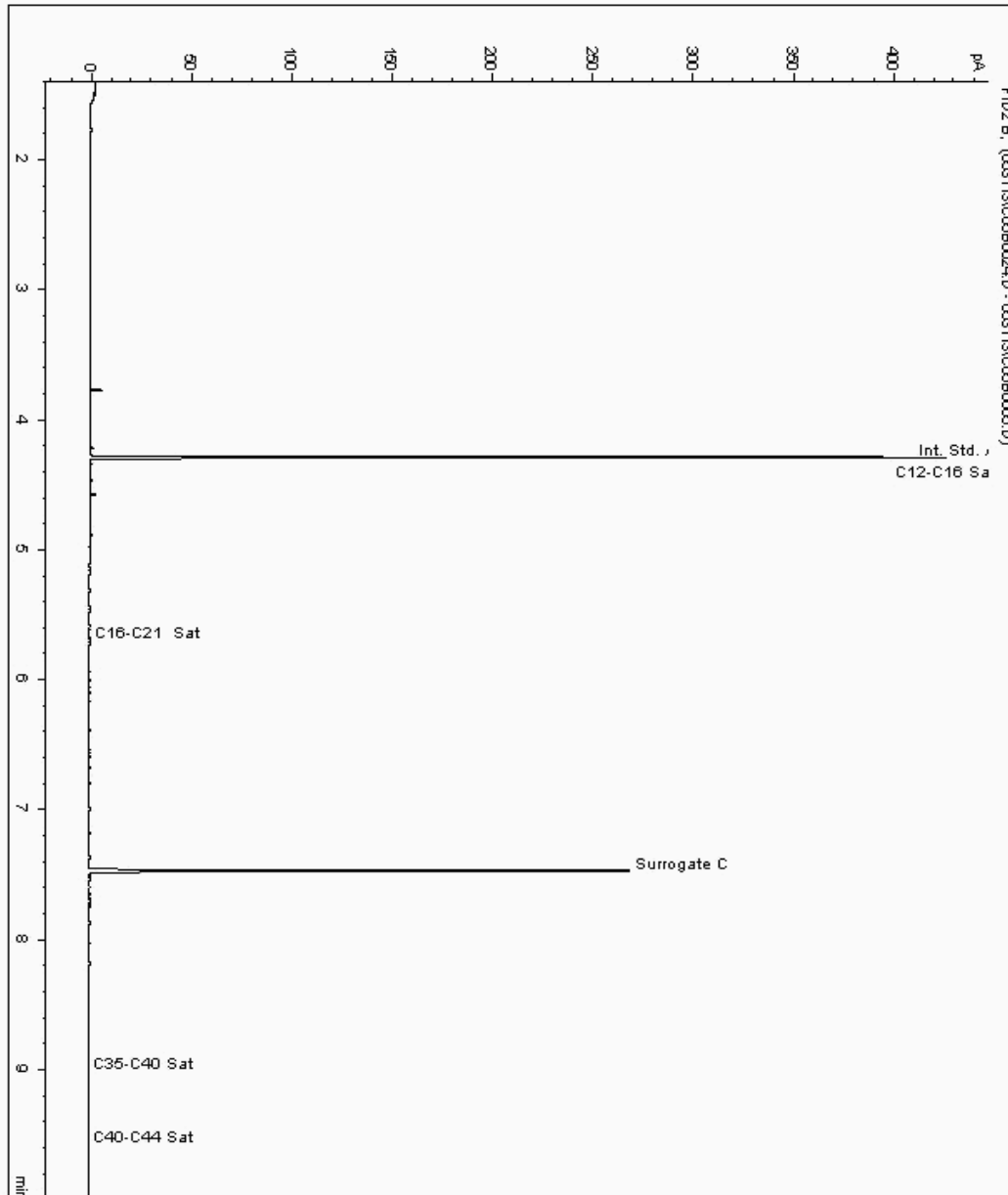
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7489070
Sample ID : VAI55

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7172641-7489070
Date Acquired : 31/05/13 18:12:48 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.018





SDG: 130524-117
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 227170
Superseded Report:

Chromatogram

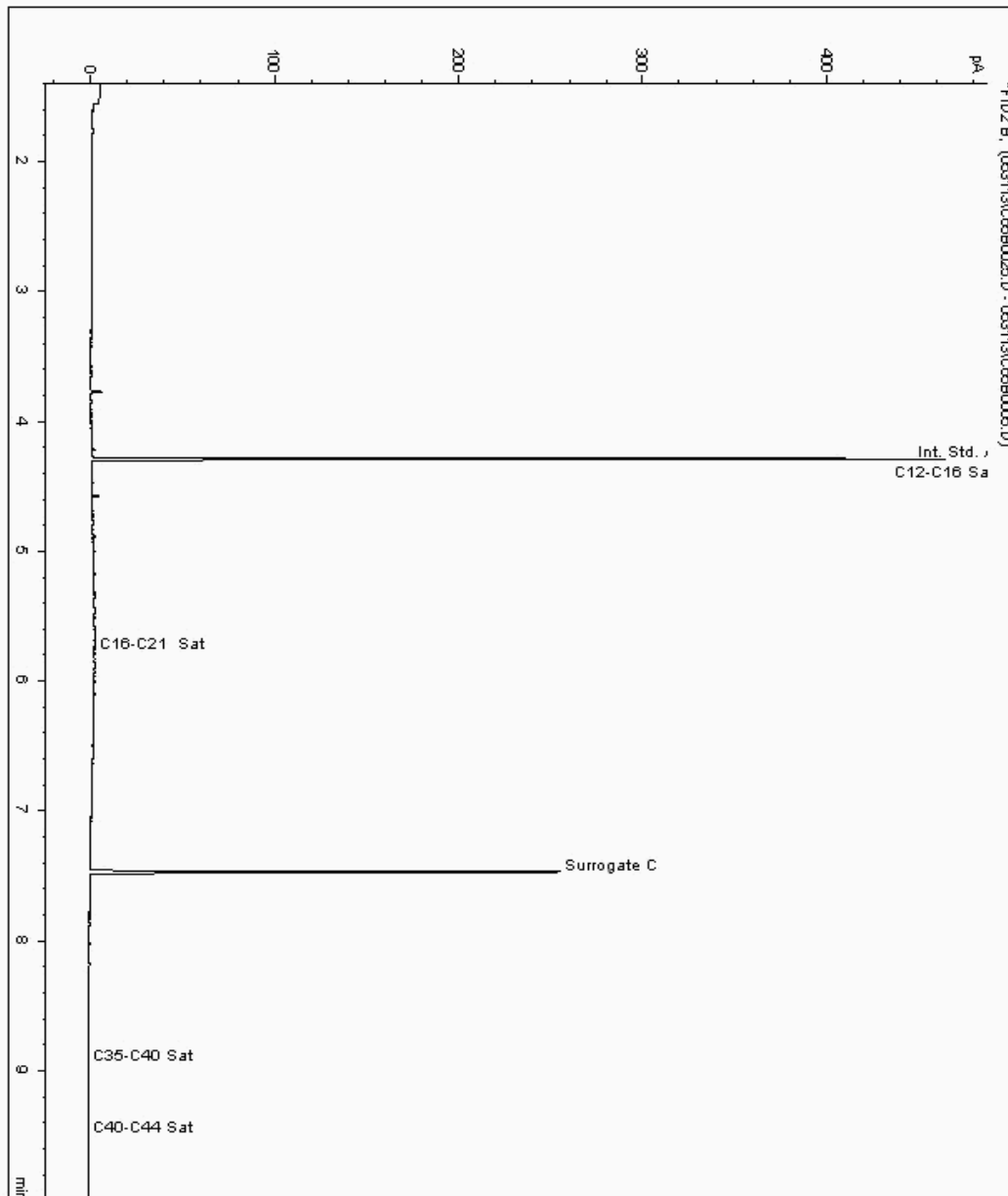
Analysis: EPH CWG (Aliphatic) GC (S)

Sample No : 7489107
Sample ID : VAI51

Depth : 1.20

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7172569-7489107
Date Acquired : 31/05/13 18:33:48 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.966





SDG: 130524-117
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 227170
Superseded Report:

Chromatogram

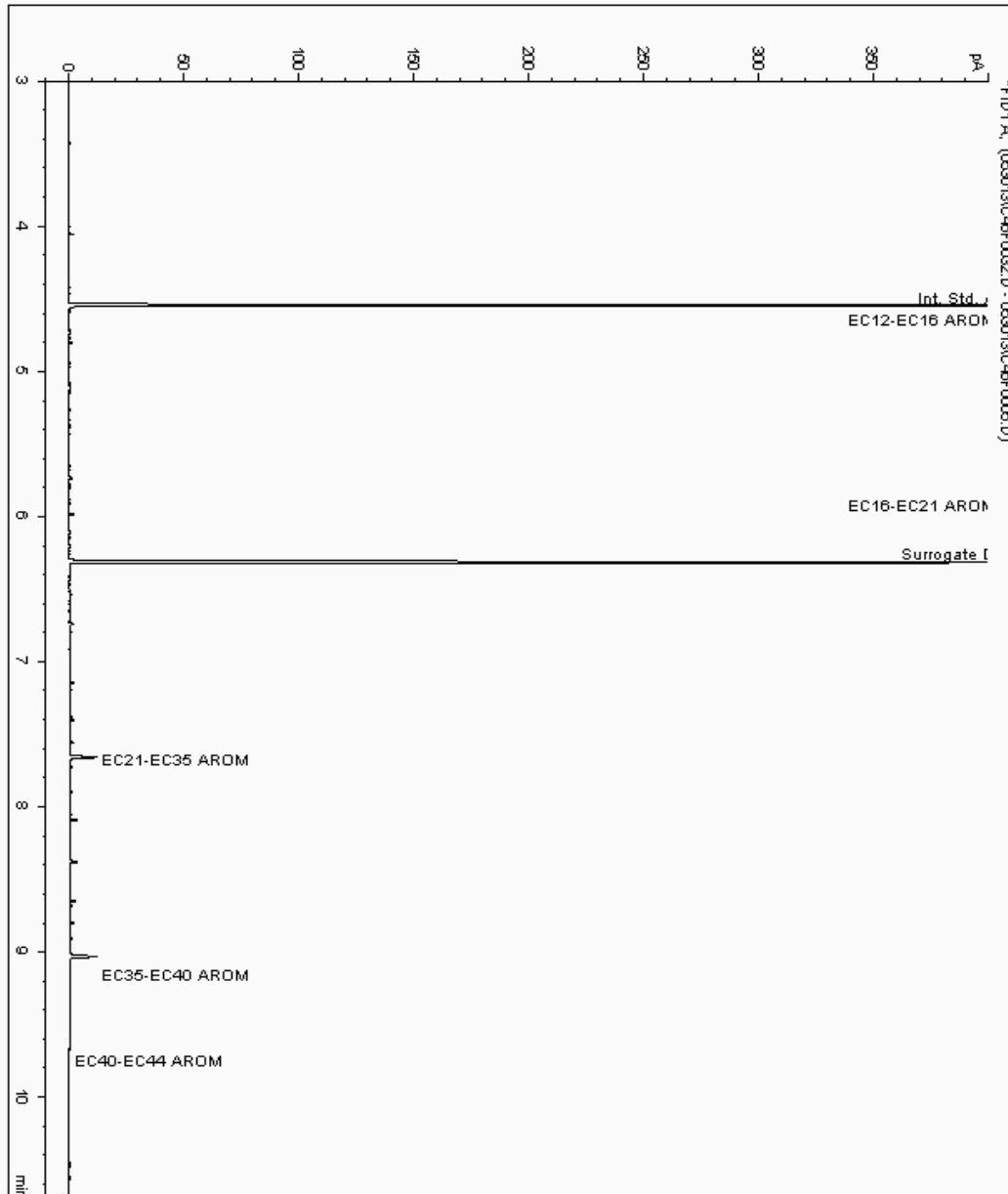
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7488984
Sample ID : VAI54

Depth : 1.20

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 7172620-7488984
Date Acquired : 31/05/13 03:07:27 PM
Units : ppb
Dilution:





SDG: 130524-117
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 227170
Superseded Report:

Chromatogram

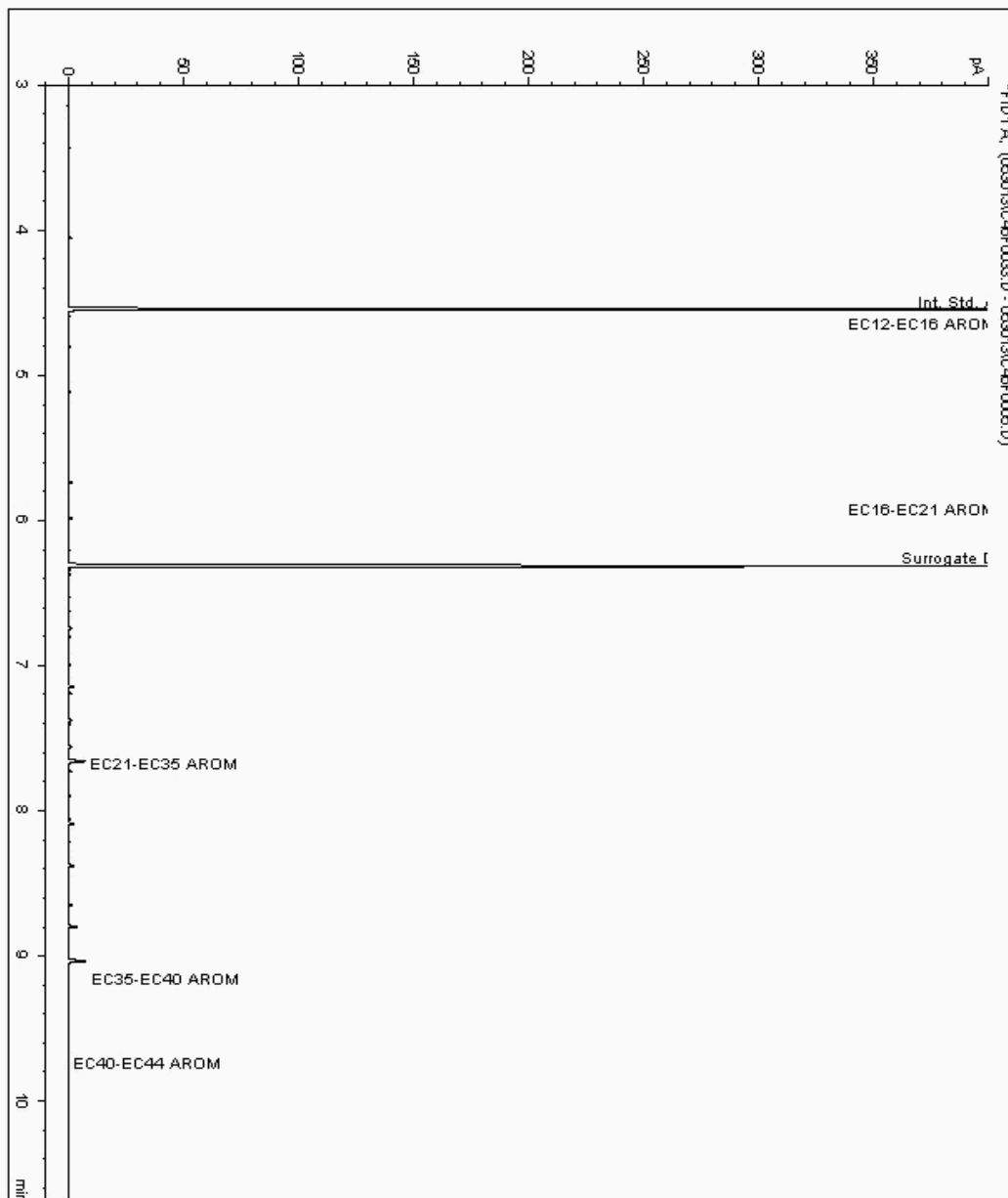
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7488999
Sample ID : VAI53

Depth : 1.20

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 7172591-7488999
Date Acquired : 31/05/13 03:28:19 PM
Units : ppb
Dilution:





SDG: 130524-117
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 227170
Superseded Report:

Chromatogram

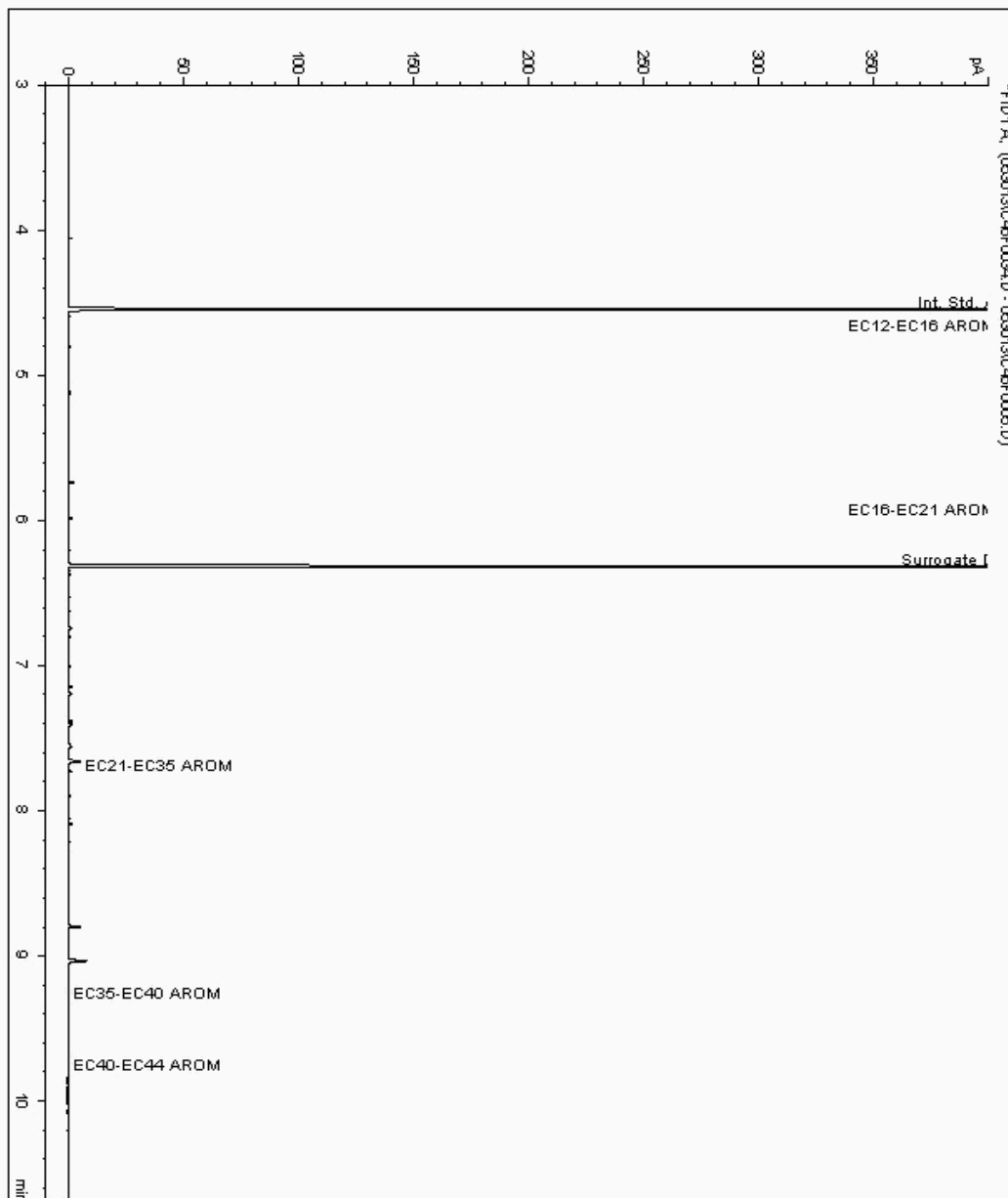
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7489049
Sample ID : VAI52

Depth : 1.20

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 7172582-7489049
Date Acquired : 31/05/13 03:49:03 PM
Units : ppb
Dilution:





SDG: 130524-117
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 227170
Superseded Report:

Chromatogram

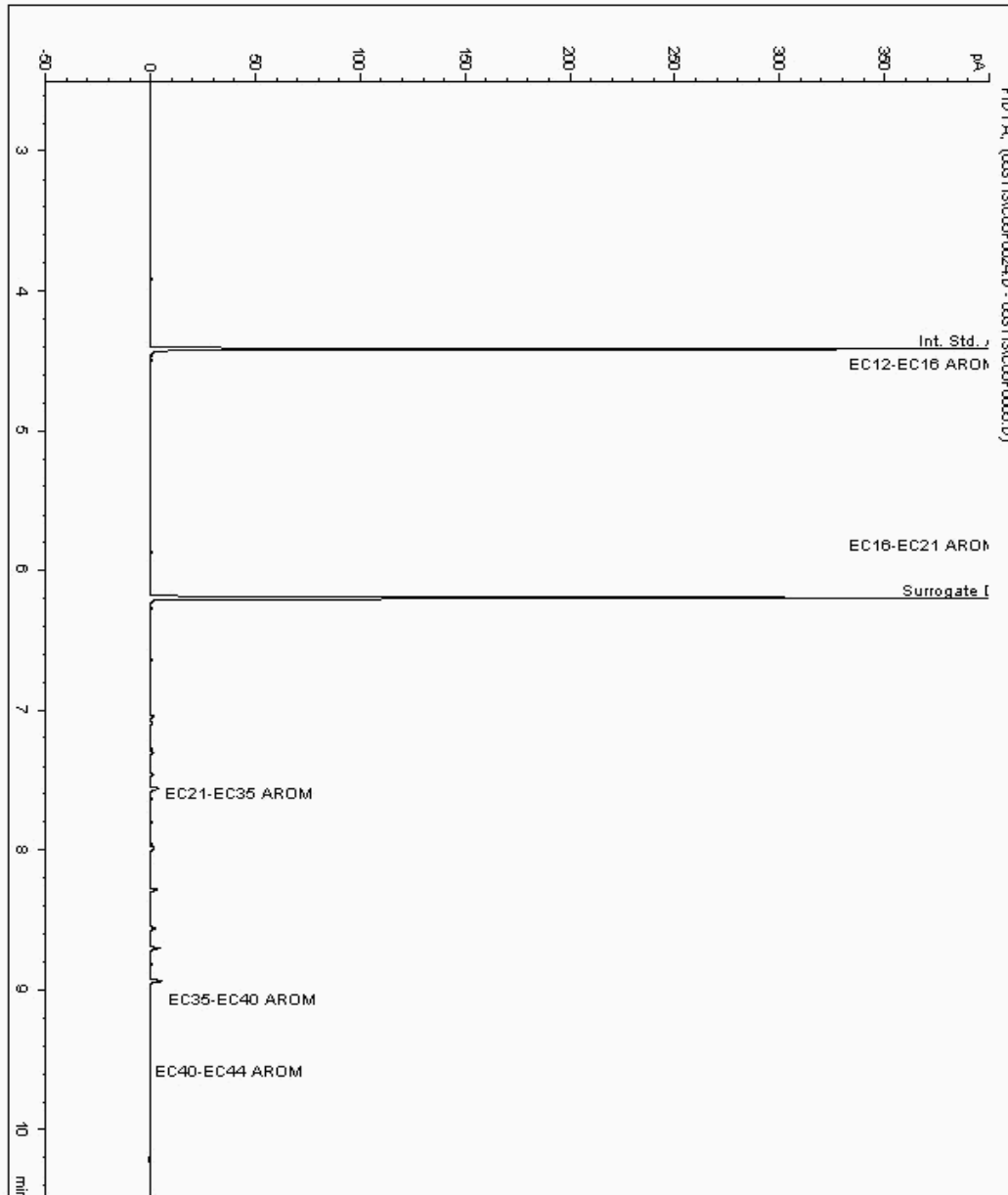
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7489070
Sample ID : VAI55

Depth : 3.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 7172642-7489070
Date Acquired : 31/05/13 18:12:49 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 1.018





SDG: 130524-117
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 227170
Superseded Report:

Chromatogram

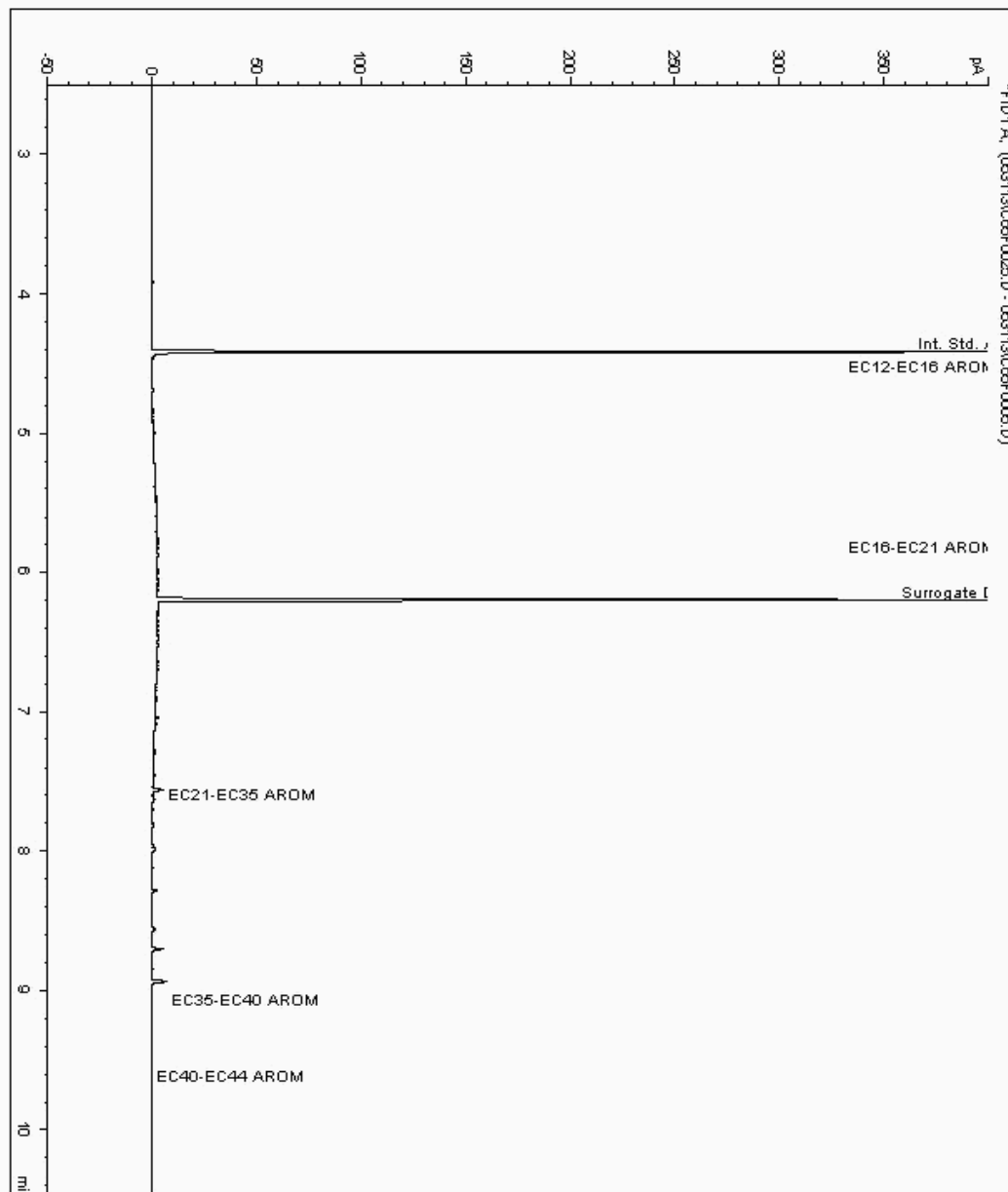
Analysis: EPH CWG (Aromatic) GC (S)

Sample No : 7489107
Sample ID : VAI51

Depth : 1.20

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 7172570-7489107
Date Acquired : 31/05/13 18:33:47 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.966





SDG: 130524-117
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

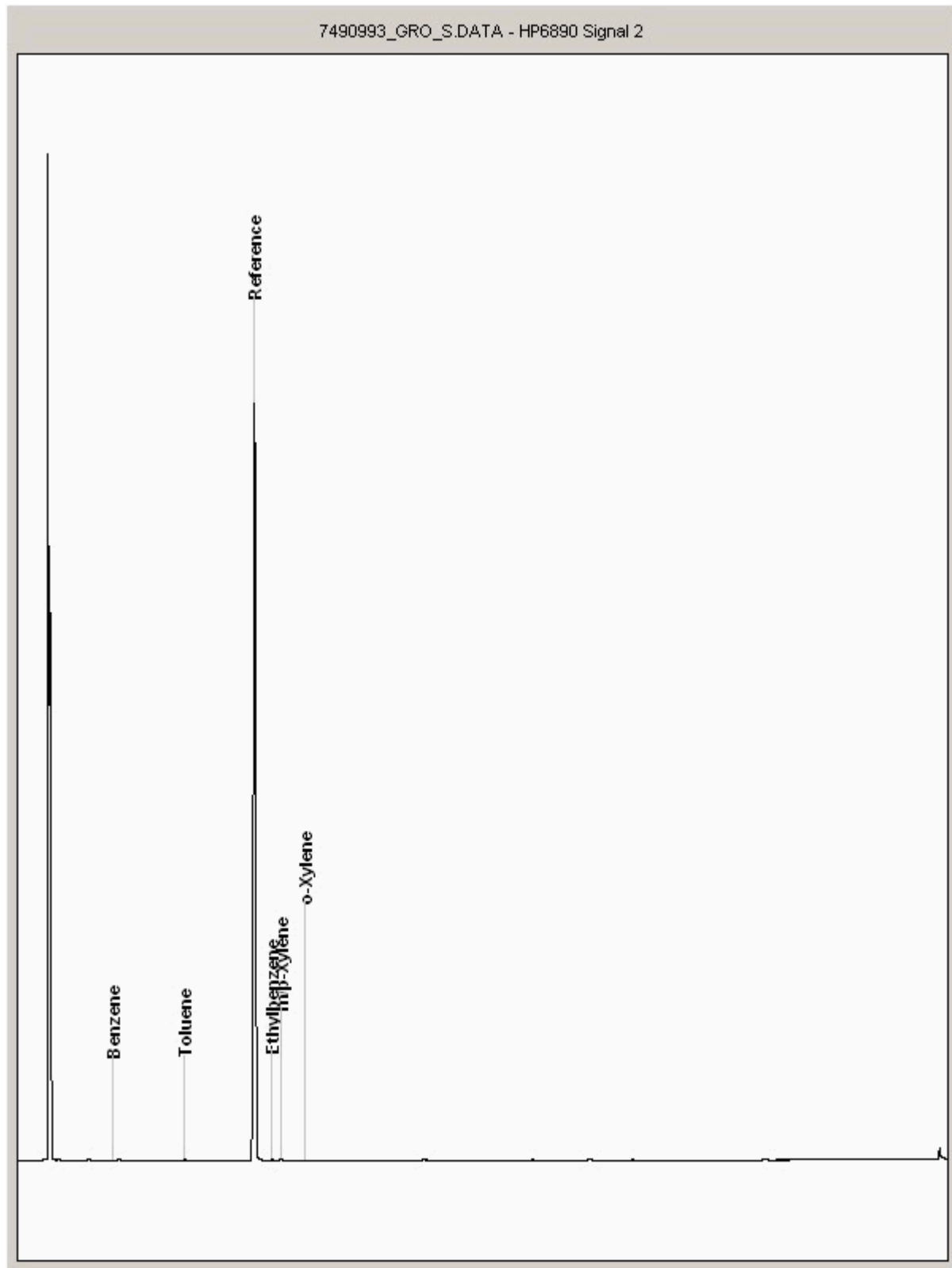
Order Number:
Report Number: 227170
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7490993
Sample ID : VAI52

Depth : 1.20





SDG: 130524-117
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

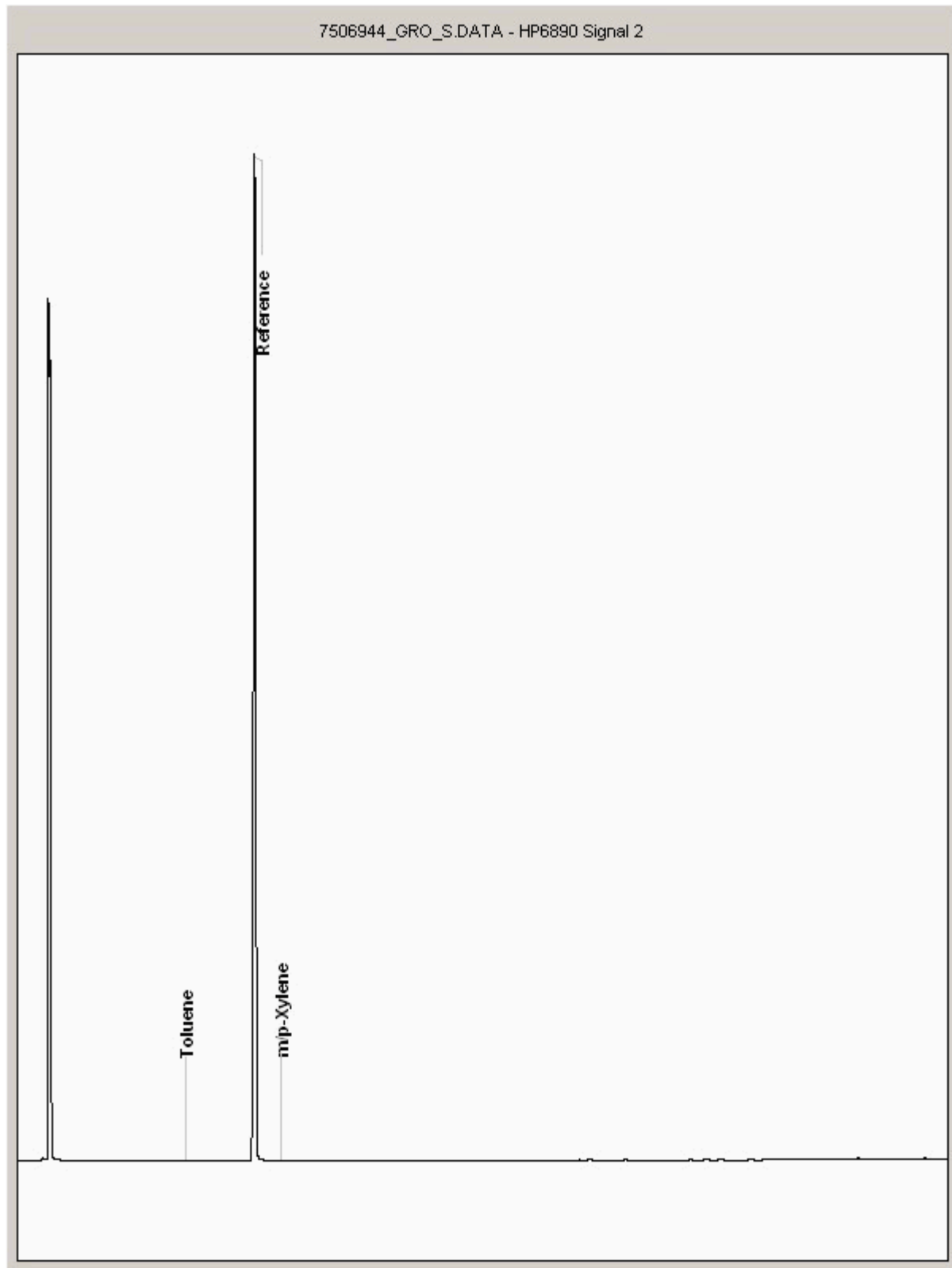
Order Number:
Report Number: 227170
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7506944
Sample ID : VAI53

Depth : 1.20





CERTIFICATE OF ANALYSIS

SDG: 130524-117
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

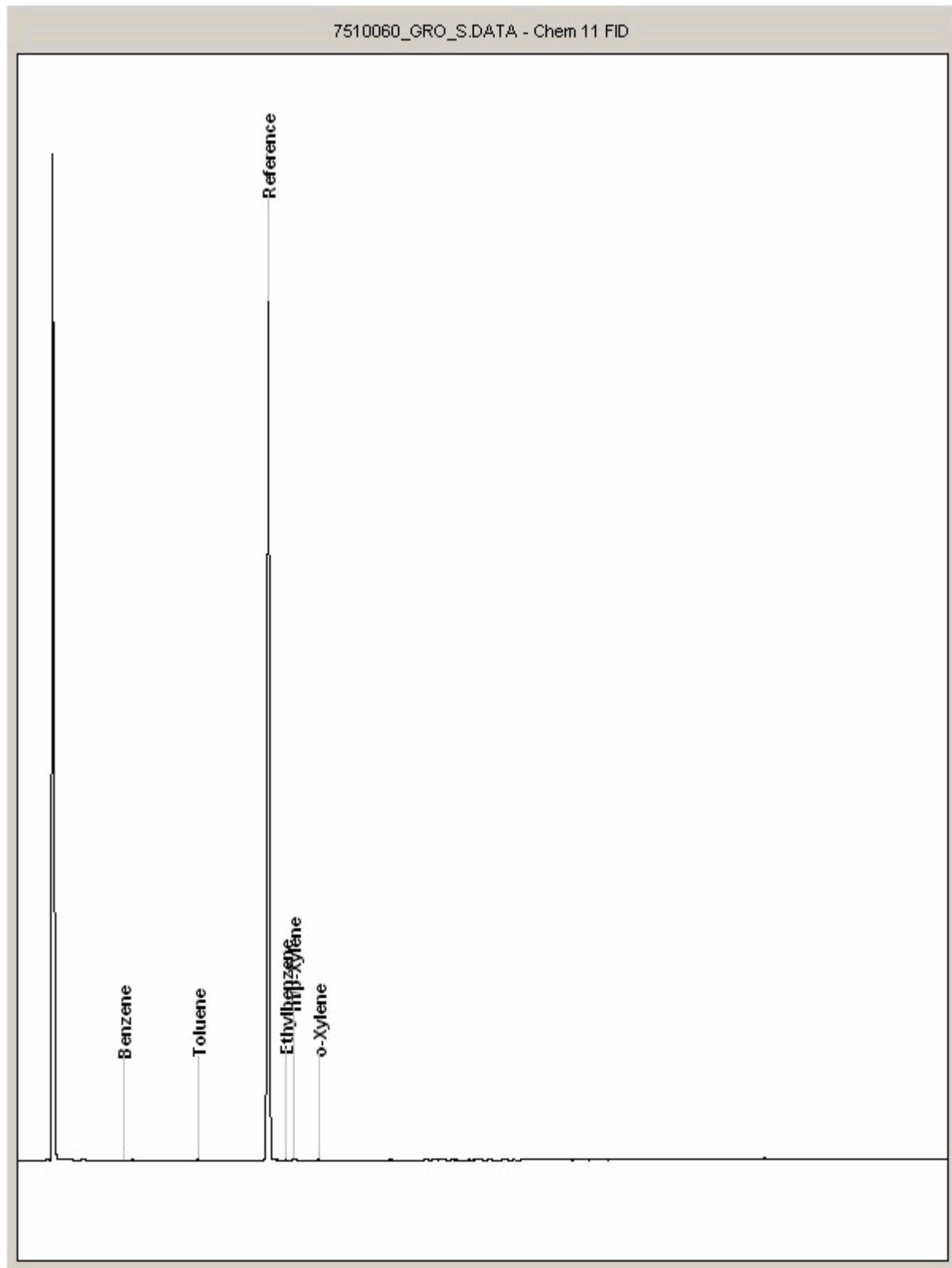
Order Number:
Report Number: 227170
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7510060
Sample ID : VAI51

Depth : 1.20





CERTIFICATE OF ANALYSIS

SDG: 130524-117
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

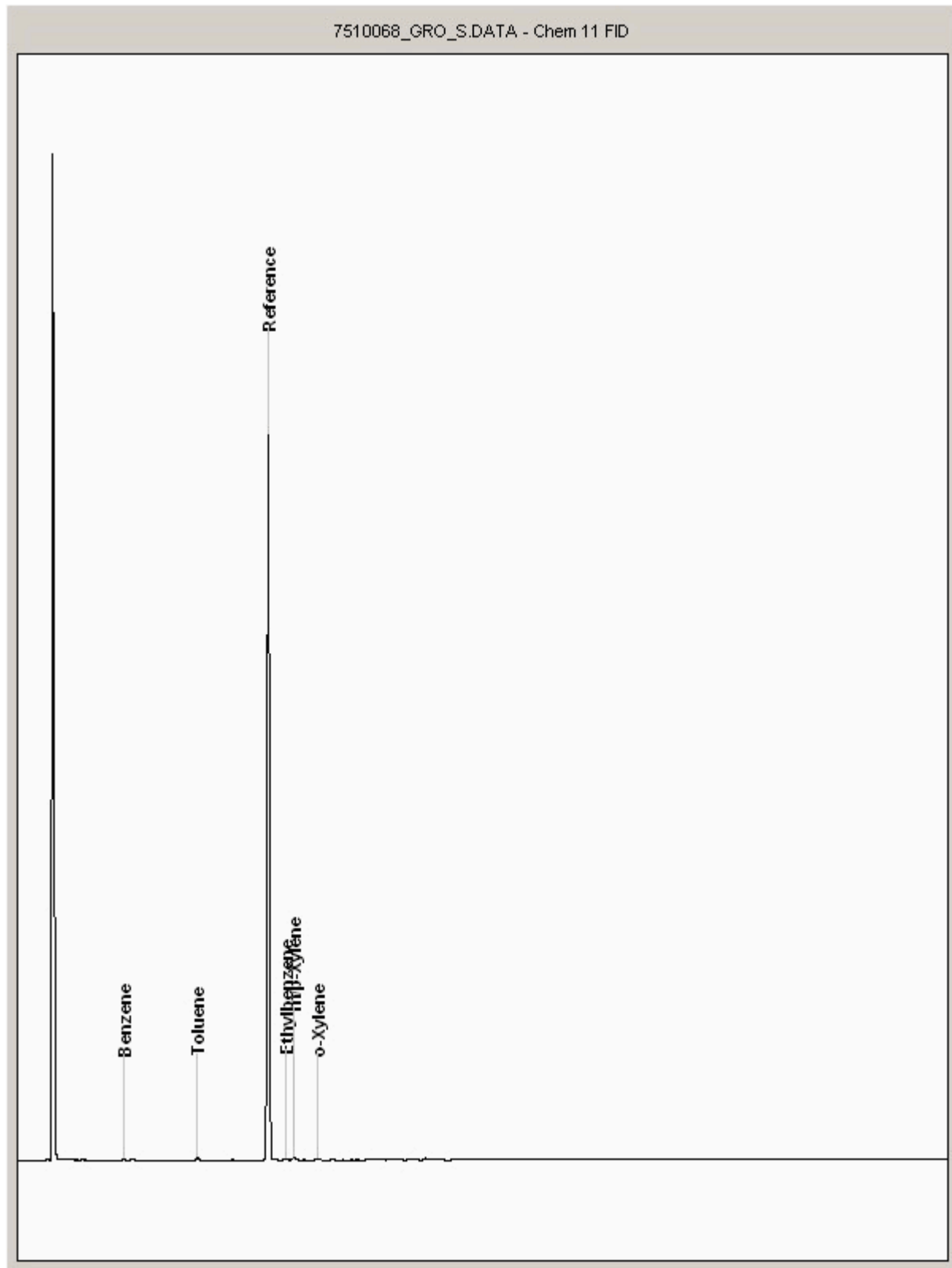
Order Number:
Report Number: 227170
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7510068
Sample ID : VAI55

Depth : 3.00





CERTIFICATE OF ANALYSIS

SDG: 130524-117
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

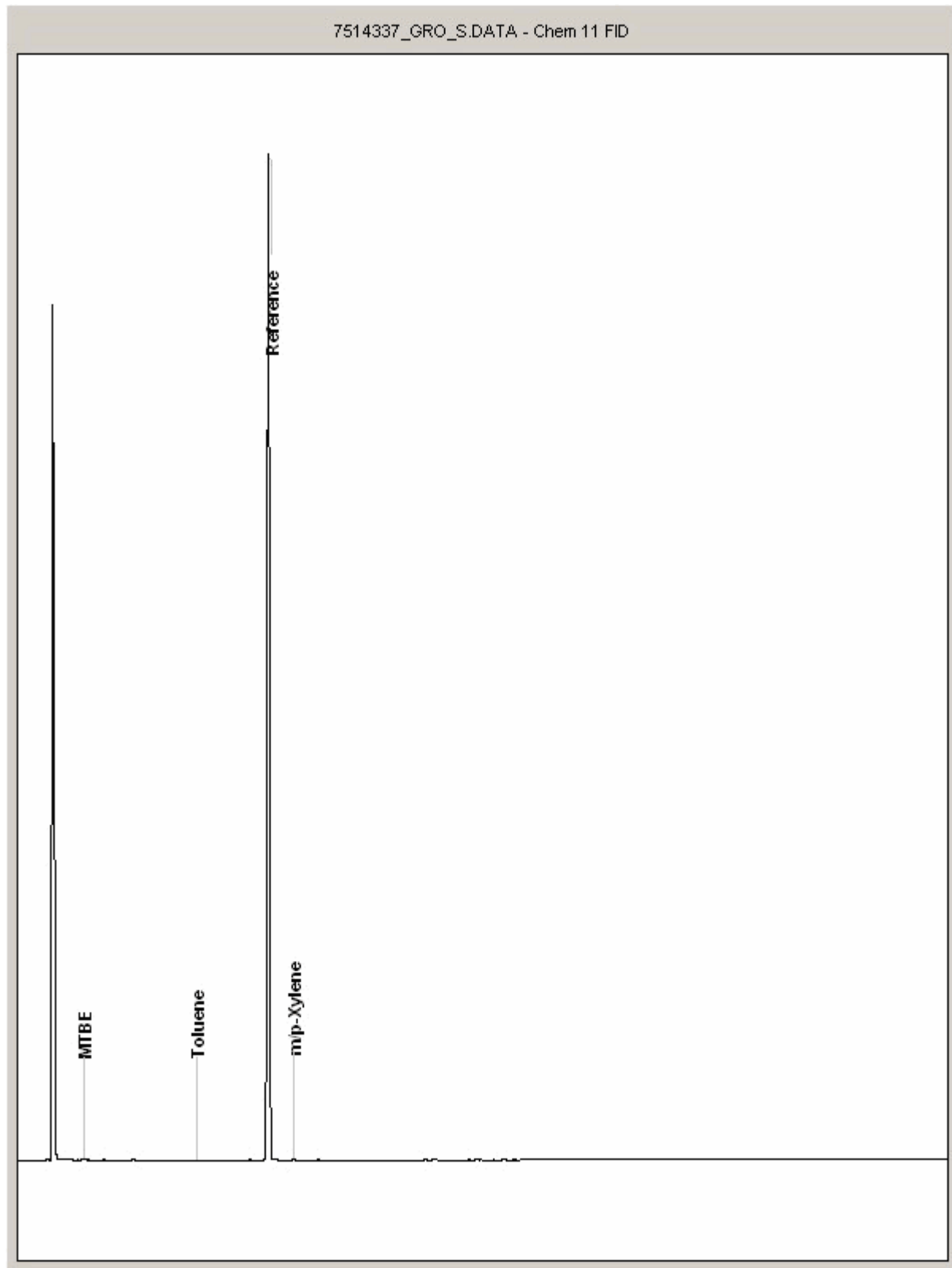
Order Number:
Report Number: 227170
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (S)

Sample No : 7514337
Sample ID : VAI54

Depth : 1.20





SDG: 130524-117
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 227170
Superseded Report:

Appendix General

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

2. 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 2 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. ALcontrol Laboratories 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. 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 for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

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 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.

21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.

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.

Sample Deviations

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Holding time exceeded before sample received
§	Sampled on date not provided
+	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to sampled on date
&	Sample Holding Time exceeded - Late arrival of instructions.

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.



URS Corporation Limited
St. George's House
2nd Floor
5 St. George's Road
Wimbledon
Greater London
SW19 4DR

Attention: Jocelyn Willis

CERTIFICATE OF ANALYSIS

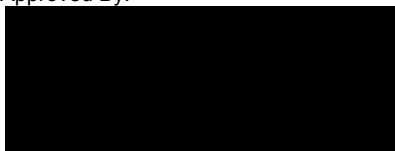
Date: 11 September 2013
Customer: H_URS_WIM
Sample Delivery Group (SDG): 130905-27
Your Reference: 46370079
Location: Hitchin
Report No: 241559

We received 8 samples on Thursday September 05, 2013 and 8 of these samples were scheduled for analysis which was completed on Wednesday September 11, 2013. 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.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:



Sonia McWhan

Operations Manager





SDG:	130905-27	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	241559
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
8050294	BH102		0.00	04/09/2013
8050295	BH103		0.00	04/09/2013
8050296	BH102A		0.00	04/09/2013
8050289	BH105A		0.00	04/09/2013
8050297	BH106A		0.00	04/09/2013
8050298	DUP		0.00	04/09/2013
8050300	EB		0.00	04/09/2013
8050303	Trip Blank		0.00	04/09/2013

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



SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 241559
Superseded Report:

LIQUID**Results Legend**

Test

No Determination
Possible**Lab Sample No(s)****Customer
Sample Reference****AGS Reference****Depth (m)****Container**

8050303	Trip Blank		0.00	Vial (ALE297)
8050300	EB		0.00	Vial (ALE297)
8050298	DUP		0.00	11 Glass bottle (ALE Vial (ALE297)
8050297	BH106A		0.00	11 Glass bottle (ALE Vial (ALE297)
8050289	BH105A		0.00	11 Glass bottle (ALE Vial (ALE297)
8050296	BH102A		0.00	11 Glass bottle (ALE Vial (ALE297)
8050295	BH103		0.00	11 Glass bottle (ALE Vial (ALE297)
8050294	BH102		0.00	11 Glass bottle (ALE Vial (ALE297)

EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 7	X	X	X	X	X	X											
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 7	X	X	X	X	X	X	X										
GRO by GC-FID (W)	All	NDPs: 0 Tests: 7		X	X	X	X	X	X	X									
Oxygenates (W)	All	NDPs: 0 Tests: 7		X	X	X	X	X	X	X									
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 7	X	X	X	X	X	X	X										
VOC MS (W)	All	NDPs: 0 Tests: 8	X	X	X	X	X	X	X	X	X								

Order Number:
Report Number: 241559
Superseded Report:

Page 4 of 42

Order Number:
Report Number: 241559
Superseded Report:

16:25:18 11/09/2013

Order Number:
Report Number: 241559
Superseded Report:

Page 6 of 42

Order Number:
Report Number: 241559
Superseded Report:

Page 7 of 42

Order Number:
Report Number: 241559
Superseded Report:

Page 8 of 42

Order Number:
Report Number: 241559
Superseded Report:

Page 9 of 42

Order Number:
Report Number: 241559
Superseded Report:

Page 10 of 42

Order Number:
Report Number: 241559
Superseded Report:

Page 11 of 42

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 241559
Superseded Report:

[illegible]

Order Number:
Report Number: 241559
Superseded Report:

Page 13 of 42

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Order Number:
Report Number: 241559
Superseded Report:

[illegible]

Order Number:
Report Number: 241559
Superseded Report:

Page 15 of 42



SDG:	130905-27	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	241559
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample ¹	Surrogate Corrected
TM061	Method for the Determination of EPH,Massachusetts Dept.of EP, 1998	Determination of Extractable Petroleum Hydrocarbons by GC-FID (C10-C40)		
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID		
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters		
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters		
TM245	By GC-FID	Determination of GRO by Headspace in waters		
TM289		Determination of Oxygenates in Waters by Headspace/GC-MS		

¹ Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.



SDG:	130905-27	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	241559
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Test Completion Dates

Lab Sample No(s)	8050294	8050295	8050296	8050289	8050297	8050298	8050300	8050303
Customer Sample Ref.	BH102	BH103	BH102A	BH105A	BH106A	DUP	EB	Trip Blank
AGS Ref.								
Depth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Type	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID

EPH CWG (Aliphatic) Aqueous GC (W)	11-Sep-2013	11-Sep-2013	11-Sep-2013	11-Sep-2013	10-Sep-2013	11-Sep-2013	11-Sep-2013	
EPH CWG (Aromatic) Aqueous GC (W)	11-Sep-2013	11-Sep-2013	11-Sep-2013	11-Sep-2013	10-Sep-2013	11-Sep-2013	11-Sep-2013	
GRO by GC-FID (W)	06-Sep-2013	06-Sep-2013	06-Sep-2013	06-Sep-2013	06-Sep-2013	06-Sep-2013	06-Sep-2013	
Oxygenates (W)	06-Sep-2013	06-Sep-2013	06-Sep-2013	06-Sep-2013	06-Sep-2013	06-Sep-2013	08-Sep-2013	
PAH Spec MS - Aqueous (W)	10-Sep-2013	10-Sep-2013	10-Sep-2013	10-Sep-2013	10-Sep-2013	10-Sep-2013	10-Sep-2013	
TPH CWG (W)	11-Sep-2013	11-Sep-2013	11-Sep-2013	11-Sep-2013	10-Sep-2013	11-Sep-2013	11-Sep-2013	
VOC MS (W)	06-Sep-2013	06-Sep-2013	06-Sep-2013	06-Sep-2013	06-Sep-2013	06-Sep-2013	06-Sep-2013	06-Sep-2013



SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 241559
Superseded Report:

ASSOCIATED AQC DATA

EPH CWG (Aliphatic) Aqueous GC (W)

Component	Method Code	QC 83	QC 87
Total Aliphatics >C12-C35	TM174	92.71 77.43 : 102.04	91.88 74.16 : 102.40

EPH CWG (Aromatic) Aqueous GC (W)

Component	Method Code	QC 80	QC 86
Total Aromatics >EC12-EC35	TM174	93.33 79.98 : 106.68	98.67 77.73 : 108.59

GRO by GC-FID (W)

Component	Method Code	QC 89
Benzene by GC	TM245	102.5 79.00 : 121.00
Ethylbenzene by GC	TM245	101.5 79.00 : 121.00
m & p Xylene by GC	TM245	100.75 79.00 : 121.00
MTBE GC-FID	TM245	103.5 79.00 : 121.00
o Xylene by GC	TM245	101.5 79.00 : 121.00
QC	TM245	111.78 79.38 : 147.19
Toluene by GC	TM245	102.0 79.00 : 121.00

Oxygenates (W)

Component	Method Code	QC 88	QC 81
Benzene	TM289	103.0 80.12 : 119.82	102.5 80.12 : 119.82
Diisopropyl ether	TM289	98.5 72.91 : 124.47	98.0 72.91 : 124.47
Ethanol	TM289	108.2 60.84 : 141.13	102.8 60.84 : 141.13
Ethylbenzene	TM289	91.5 76.16 : 122.57	93.5 76.16 : 122.57
o-Xylene	TM289	91.5 78.00 : 113.49	93.0 78.00 : 113.49
p/m-Xylene	TM289	91.25 77.76 : 113.78	92.75 77.76 : 113.78
tert Butanol	TM289	105.0 70.51 : 143.48	100.0 70.51 : 143.48
tert-amyl methyl ether	TM289	96.0 78.92 : 124.29	96.0 78.92 : 124.29



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Oxygenates (W)

		QC 88	QC 81
tert-butyl ethyl ether	TM289	95.0 78.17 : 124.34	94.5 78.17 : 124.34
tert-butyl methyl ether	TM289	102.0 78.27 : 127.85	101.5 78.27 : 127.85
Toluene	TM289	95.5 79.08 : 122.51	96.5 79.08 : 122.51

PAH Spec MS - Aqueous (W)

Component	Method Code	QC 82	QC 88
Acenaphthene by GCMS	TM178	97.5 89.97 : 111.53	105.0 92.76 : 114.98
Acenaphthylene by GCMS	TM178	92.5 81.56 : 108.55	100.0 83.00 : 113.00
Anthracene by GCMS	TM178	93.0 86.47 : 109.66	101.0 81.50 : 111.50
Benz(a)anthracene by GCMS	TM178	98.0 80.74 : 112.30	100.0 80.00 : 113.00
Benzo(a)pyrene by GCMS	TM178	100.5 86.69 : 118.58	99.5 86.63 : 118.58
Benzo(b)fluoranthene by GCMS	TM178	104.5 92.99 : 117.35	101.0 90.00 : 117.00
Benzo(ghi)perylene by GCMS	TM178	101.0 84.91 : 116.79	94.0 82.05 : 112.05
Benzo(k)fluoranthene by GCMS	TM178	101.5 87.20 : 122.40	107.5 87.20 : 122.40
Chrysene by GCMS	TM178	98.5 88.02 : 114.98	102.0 88.25 : 115.25
Dibenzo(ah)anthracene by GCMS	TM178	100.5 72.40 : 118.55	92.0 72.40 : 118.55
Fluoranthene by GCMS	TM178	95.5 81.00 : 117.30	101.5 81.00 : 117.30
Fluorene by GCMS	TM178	99.0 85.60 : 115.94	107.5 83.80 : 116.50
Indeno(123cd)pyrene by GCMS	TM178	102.5 84.94 : 119.98	96.5 82.25 : 114.75
Naphthalene by GCMS	TM178	97.5 83.80 : 111.40	103.0 83.80 : 111.40
Phenanthrene by GCMS	TM178	98.5 83.90 : 114.50	103.0 93.20 : 111.80
Pyrene by GCMS	TM178	97.0 88.50 : 112.24	102.5 83.60 : 118.10

VOC MS (W)

Component	Method Code	QC 88	QC 81
1,1,1,2-Tetrachloroethane	TM208	96.5 84.25 : 114.84	92.5 84.25 : 114.84
1,1,1-Trichloroethane	TM208	94.0 77.50 : 122.50	92.0 77.50 : 122.50
1,1-Dichloroethane	TM208	92.0 83.40 : 120.26	91.0 83.40 : 120.26
1,2-Dichloroethane	TM208	100.5 77.68 : 127.05	99.5 77.68 : 127.05



CERTIFICATE OF ANALYSIS

SDG: 130905-27
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Order Number:
Report Number: 241559
Superseded Report:

VOC MS (W)

		QC 88	QC 81
2-Chlorotoluene	TM208	103.5 77.50 : 122.50	102.0 77.50 : 122.50
4-Chlorotoluene	TM208	104.0 77.50 : 122.50	101.5 77.50 : 122.50
Benzene	TM208	97.0 77.50 : 122.50	96.5 77.50 : 122.50
Bromomethane	TM208	107.5 80.14 : 135.35	107.0 80.14 : 135.35
Carbontetrachloride	TM208	96.0 77.50 : 122.50	93.5 77.50 : 122.50
Chlorobenzene	TM208	105.0 77.50 : 122.50	102.5 77.50 : 122.50
Chloroform	TM208	98.5 84.84 : 119.97	98.0 84.84 : 119.97
Chloromethane	TM208	98.5 53.01 : 144.16	100.0 53.01 : 144.16
Cis-1,2-Dichloroethene	TM208	94.0 81.65 : 120.44	93.5 81.65 : 120.44
Dichloromethane	TM208	92.0 79.31 : 122.56	93.0 79.31 : 122.56
Ethylbenzene	TM208	93.0 77.50 : 122.50	90.5 77.50 : 122.50
Hexachlorobutadiene	TM208	88.5 76.59 : 123.95	89.5 76.59 : 123.95
o-Xylene	TM208	101.5 77.50 : 122.50	100.5 77.50 : 122.50
p/m-Xylene	TM208	98.5 55.00 : 145.00	96.0 55.00 : 145.00
Tert-butyl methyl ether	TM208	91.0 69.07 : 119.88	91.5 69.07 : 119.88
Tetrachloroethene	TM208	98.5 77.50 : 122.50	96.0 77.50 : 122.50
Toluene	TM208	96.5 77.50 : 122.50	94.5 77.50 : 122.50
Trichloroethene	TM208	96.0 83.50 : 113.50	92.5 83.50 : 113.50
Vinyl Chloride	TM208	89.5 77.80 : 125.65	88.5 77.80 : 125.65

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

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

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



SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

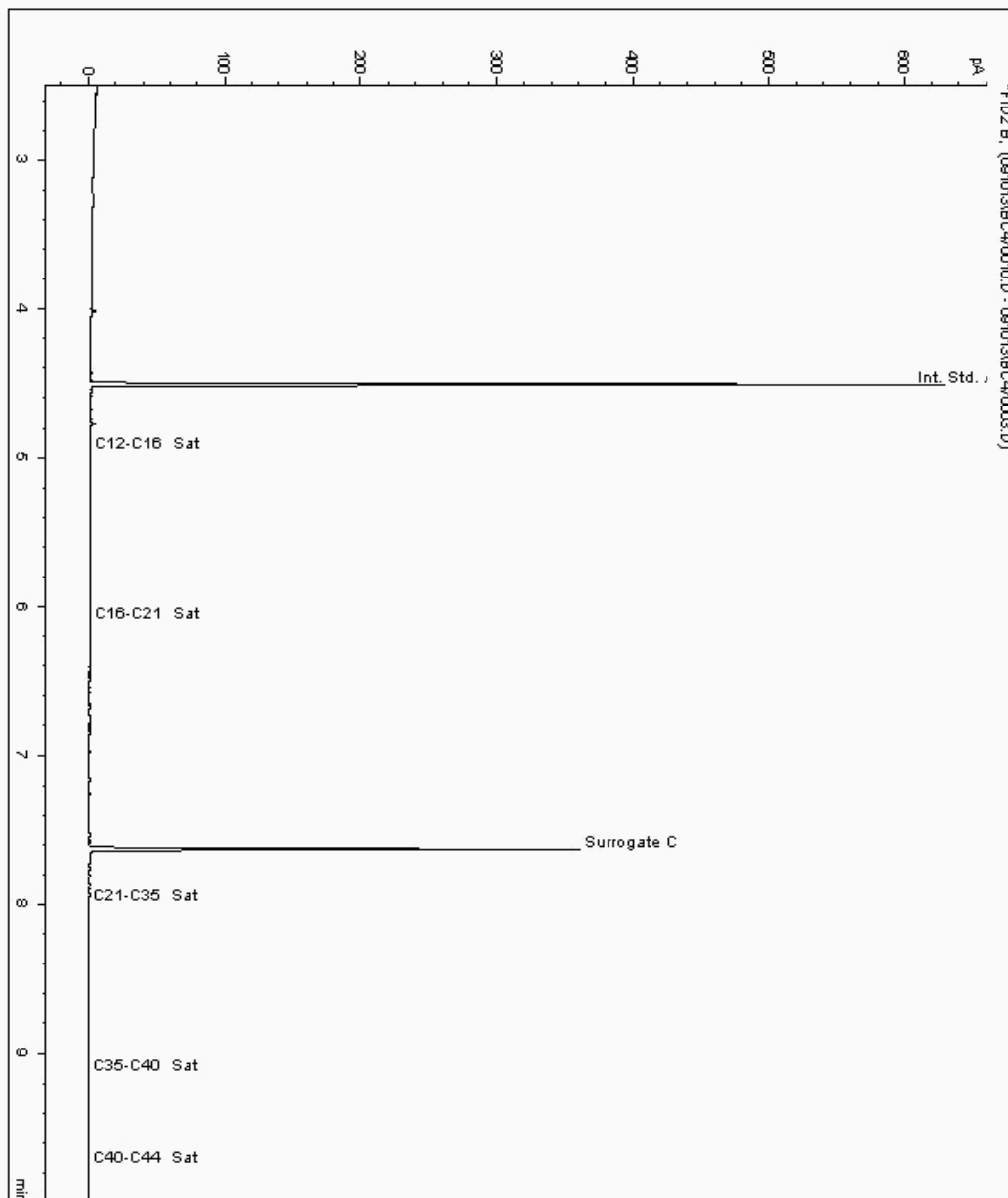
Analysis: EPH CWG (Aliphatic) Aqueous GC (W)

Sample No : 8056408
Sample ID : BH102A

Depth : 0.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7702182-8056408
Date Acquired : 10/09/13 18:37:14 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.008





SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

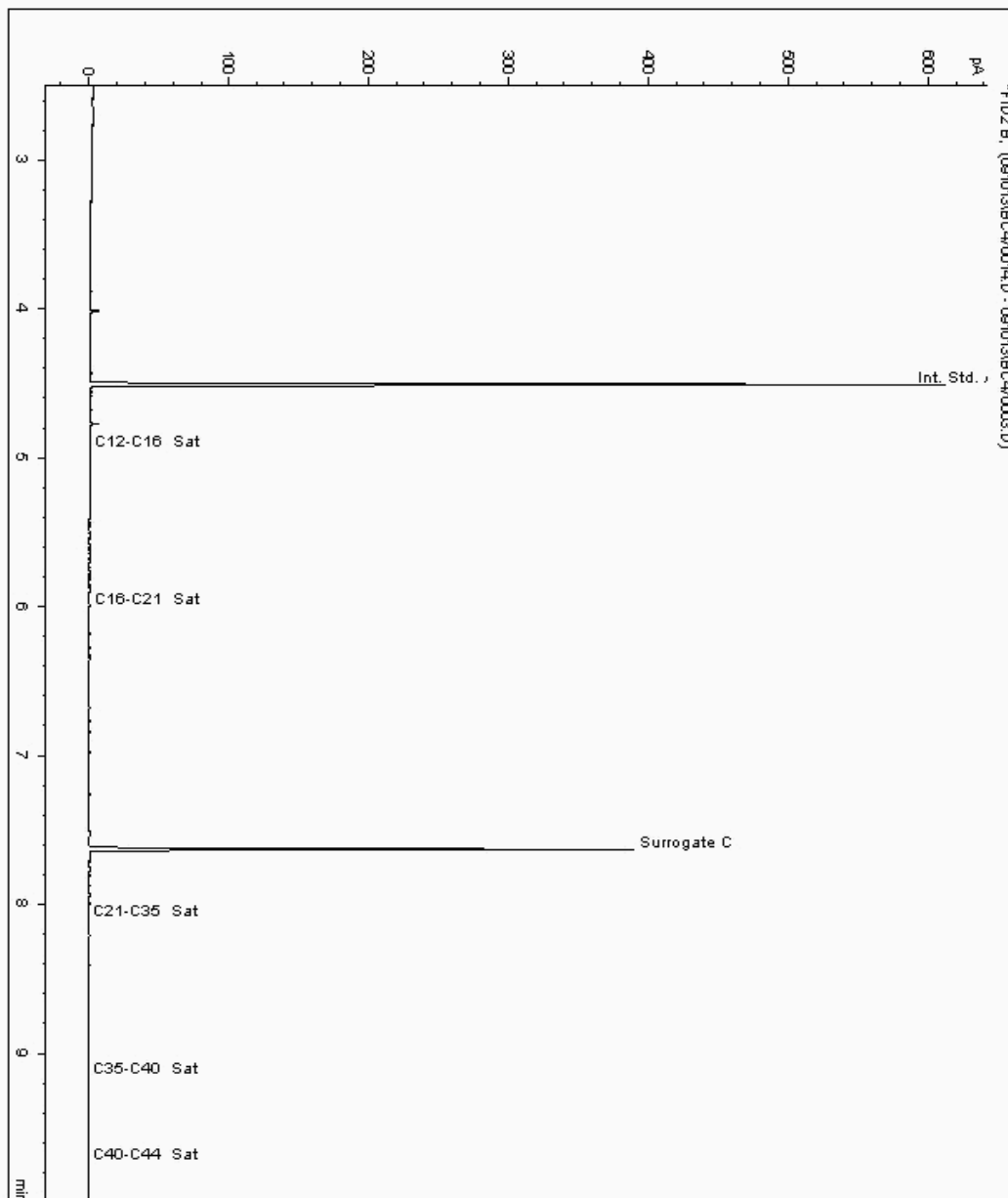
Analysis: EPH CWG (Aliphatic) Aqueous GC (W)

Sample No : 8056414
Sample ID : EB

Depth : 0.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7702210-8056414
Date Acquired : 10/09/13 19:52:41 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.008





SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

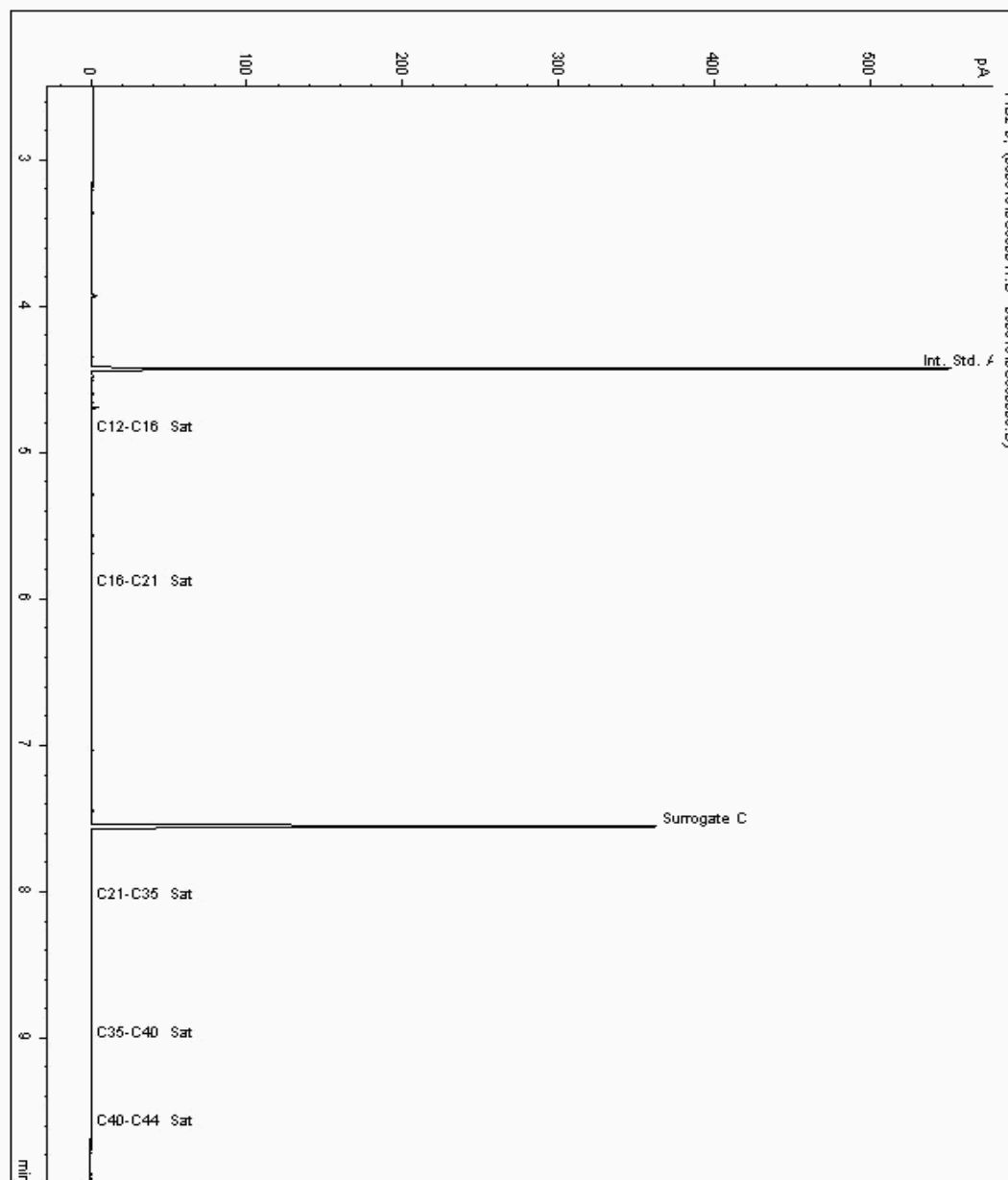
Analysis: EPH CWG (Aliphatic) Aqueous GC (W)

Sample No : 8056418
Sample ID : BH106A

Depth : 0.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7702194-8056418
Date Acquired : 10/09/13 02:14:37 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.008





SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

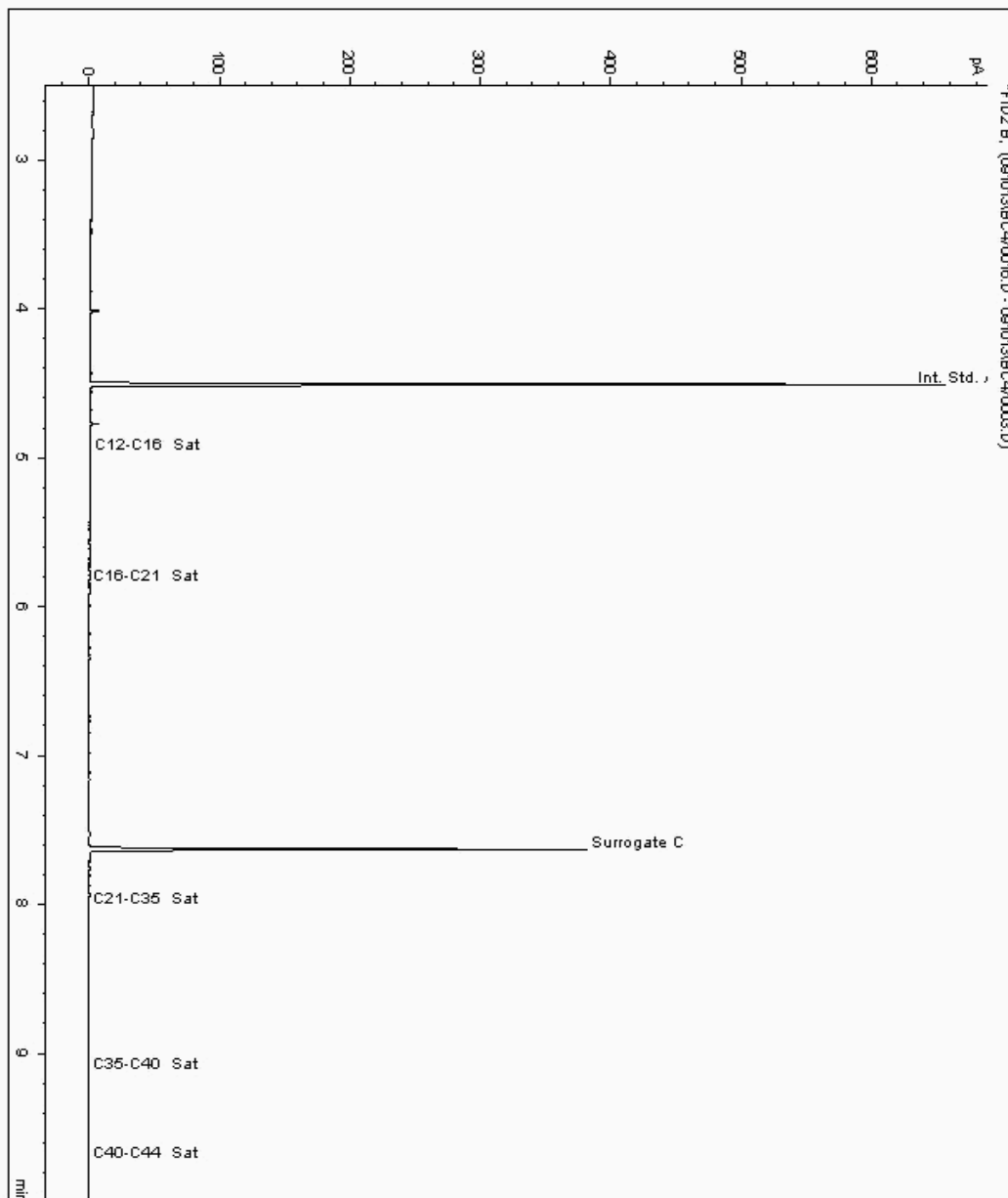
Analysis: EPH CWG (Aliphatic) Aqueous GC (W)

Sample No : 8056423
Sample ID : BH103

Depth : 0.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7702174-8056423
Date Acquired : 10/09/13 20:30:25 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.008





SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

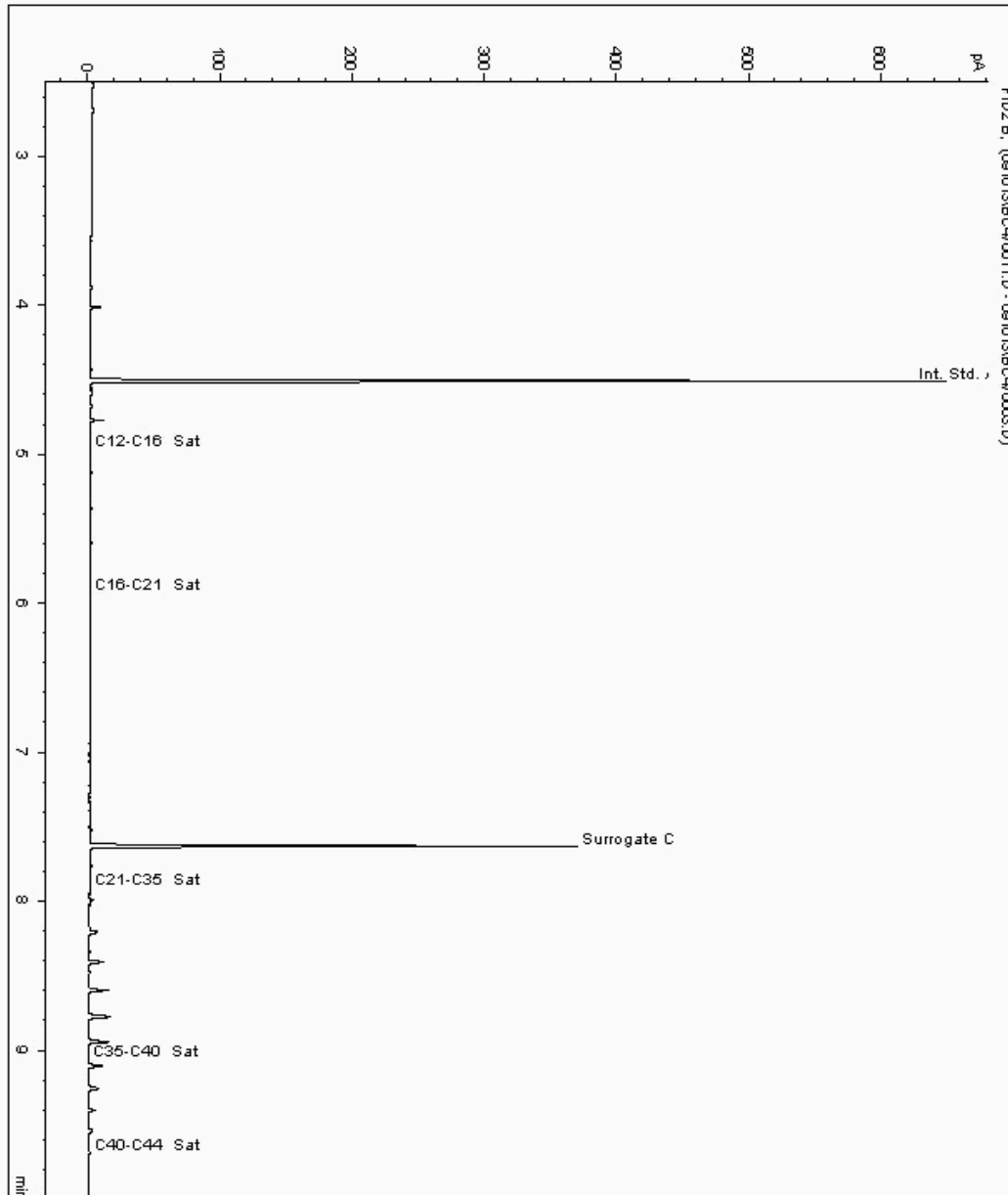
Analysis: EPH CWG (Aliphatic) Aqueous GC (W)

Sample No : 8056438
Sample ID : BH102

Depth : 0.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7702164-8056438
Date Acquired : 10/09/13 18:56:04 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.008





SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

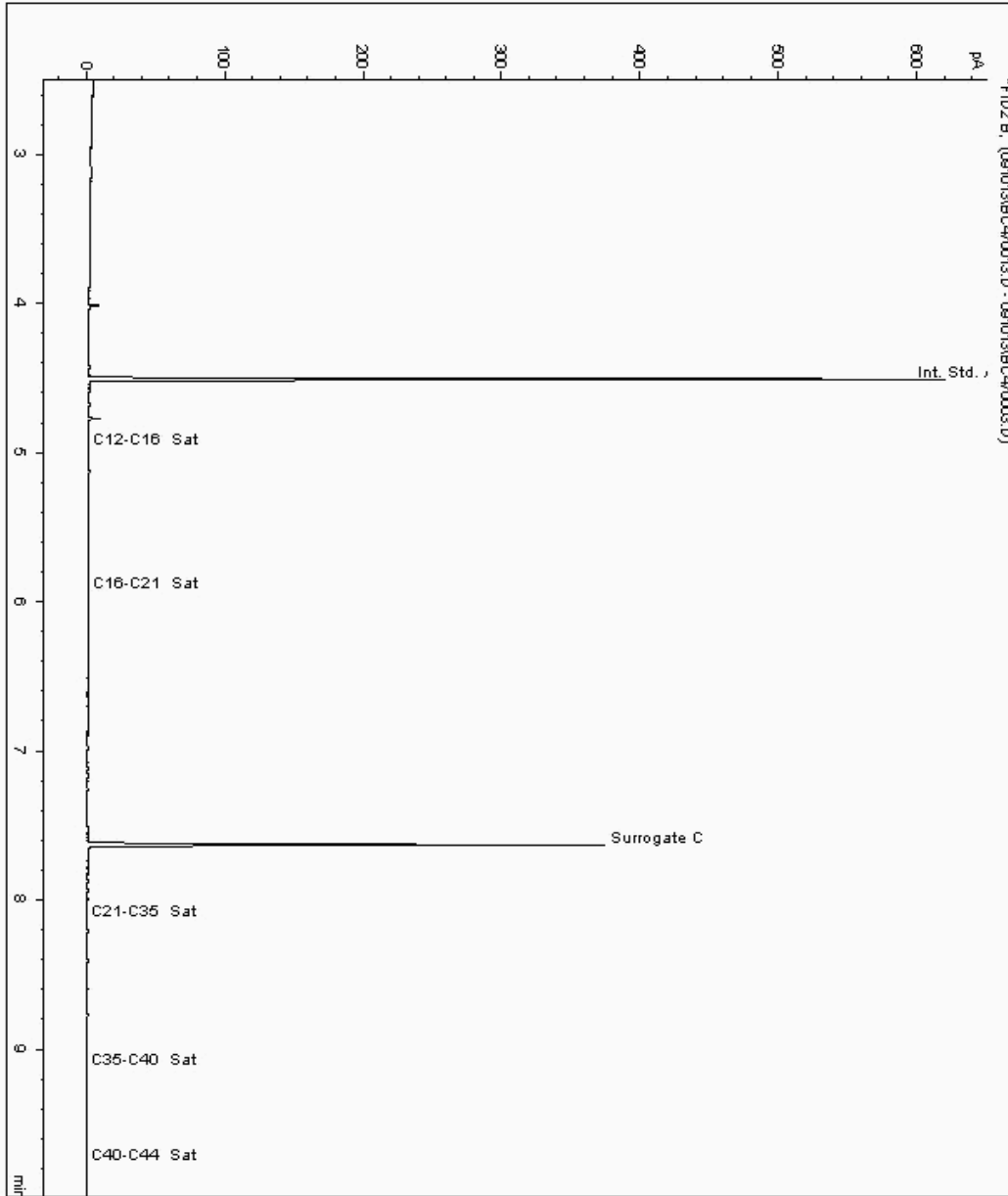
Analysis: EPH CWG (Aliphatic) Aqueous GC (W)

Sample No : 8056447
Sample ID : BH105A

Depth : 0.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7702155-8056447
Date Acquired : 10/09/13 19:33:54 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.008





SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

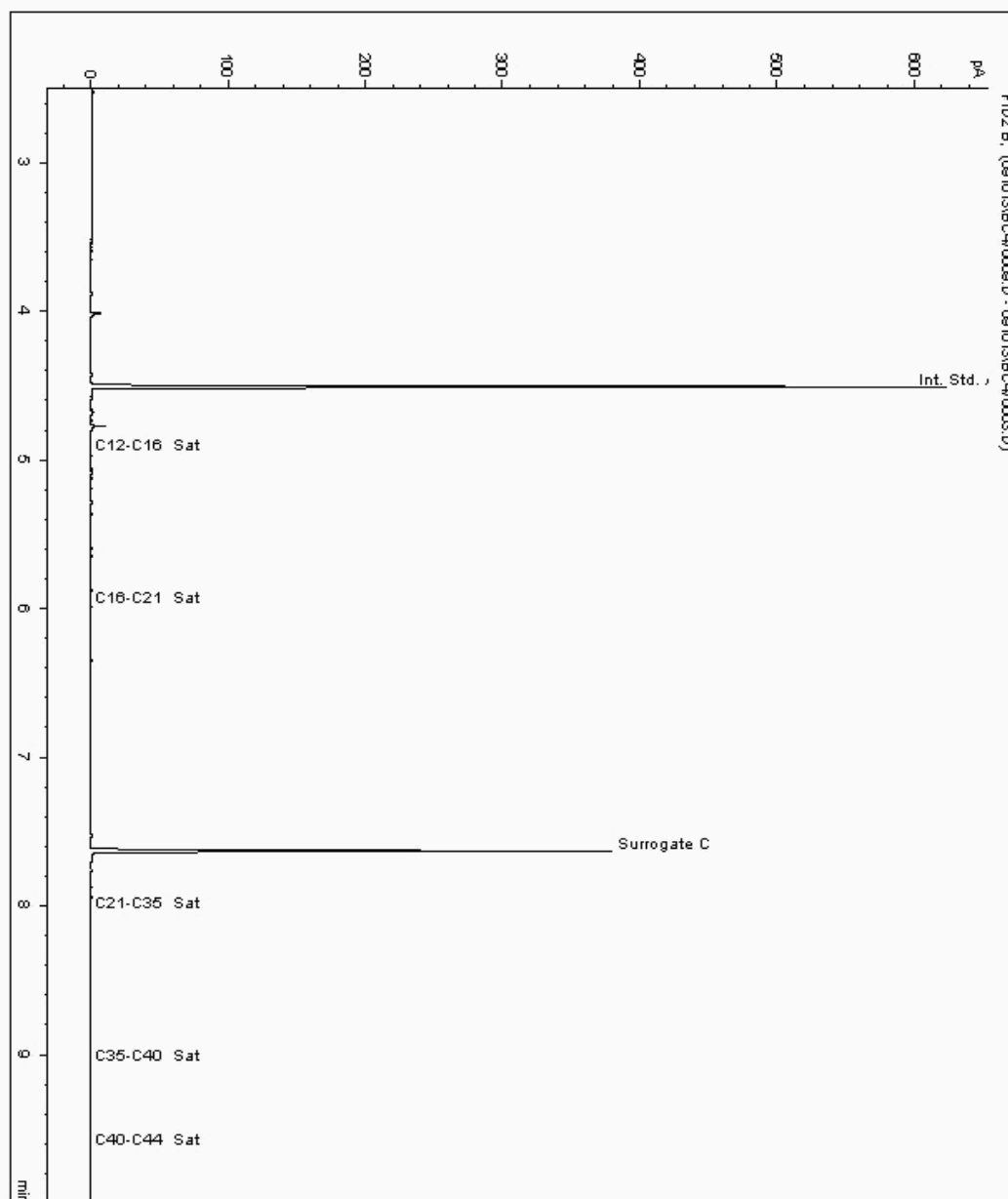
Analysis: EPH CWG (Aliphatic) Aqueous GC (W)

Sample No : 8056449
Sample ID : DUP

Depth : 0.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7702202-8056449
Date Acquired : 10/09/13 18:18:22 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.008





SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

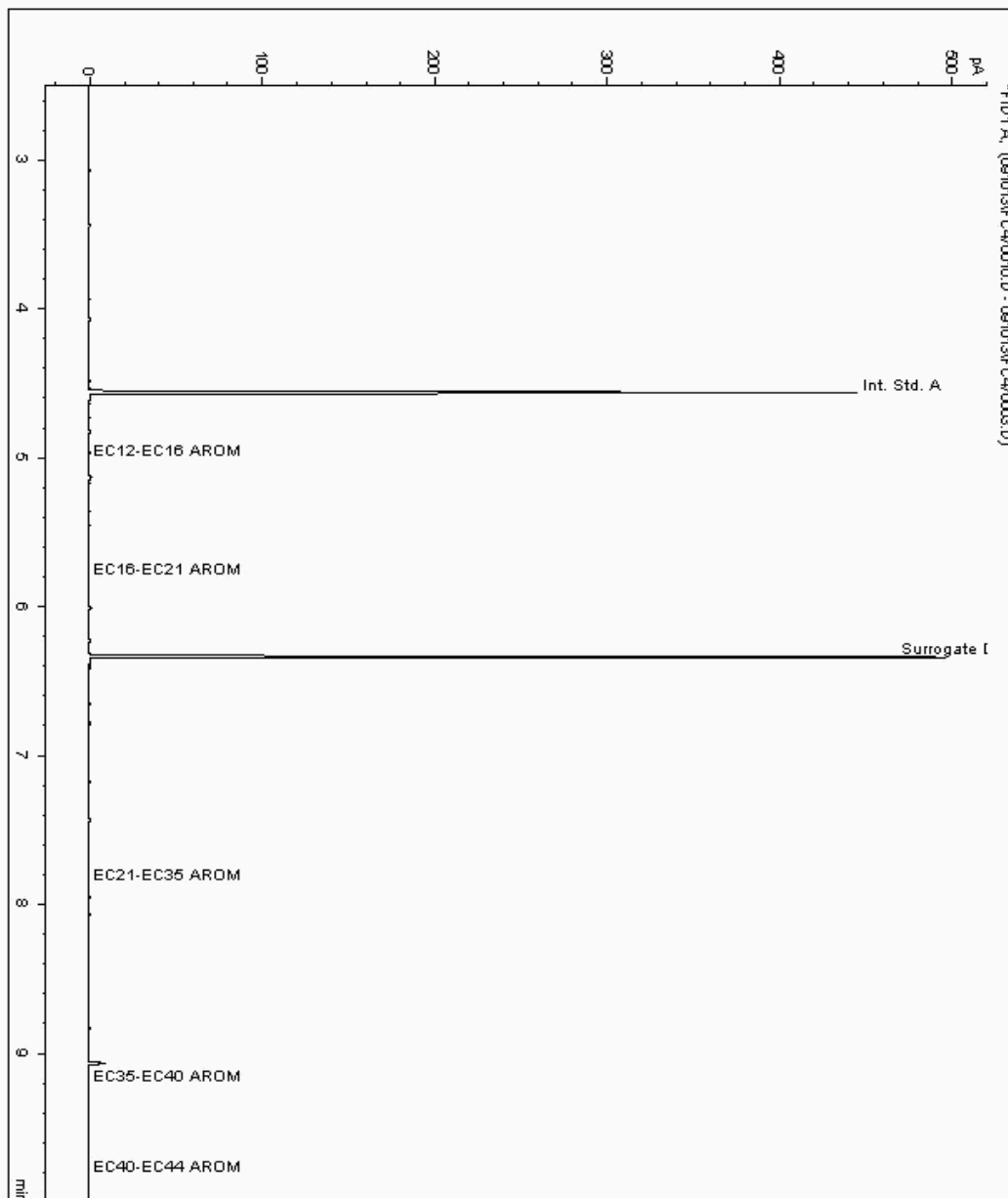
Analysis: EPH CWG (Aromatic) Aqueous GC (W)

Sample No : 8056408
Sample ID : BH102A

Depth : 0.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7702183-8056408
Date Acquired : 10/09/13 18:37:14 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.008





SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

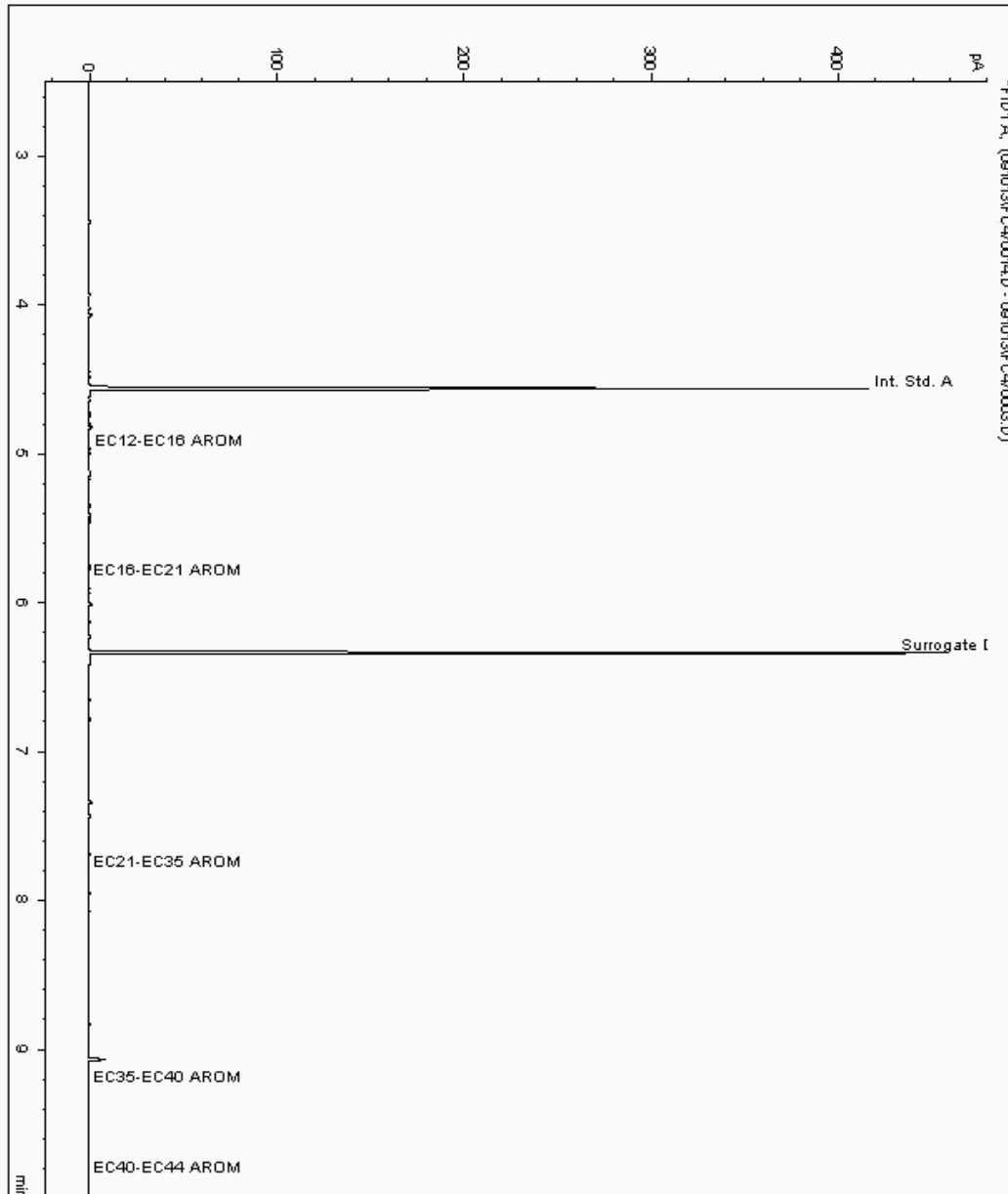
Analysis: EPH CWG (Aromatic) Aqueous GC (W)

Sample No : 8056414
Sample ID : EB

Depth : 0.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7702211-8056414
Date Acquired : 10/09/13 19:52:41 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.008





SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

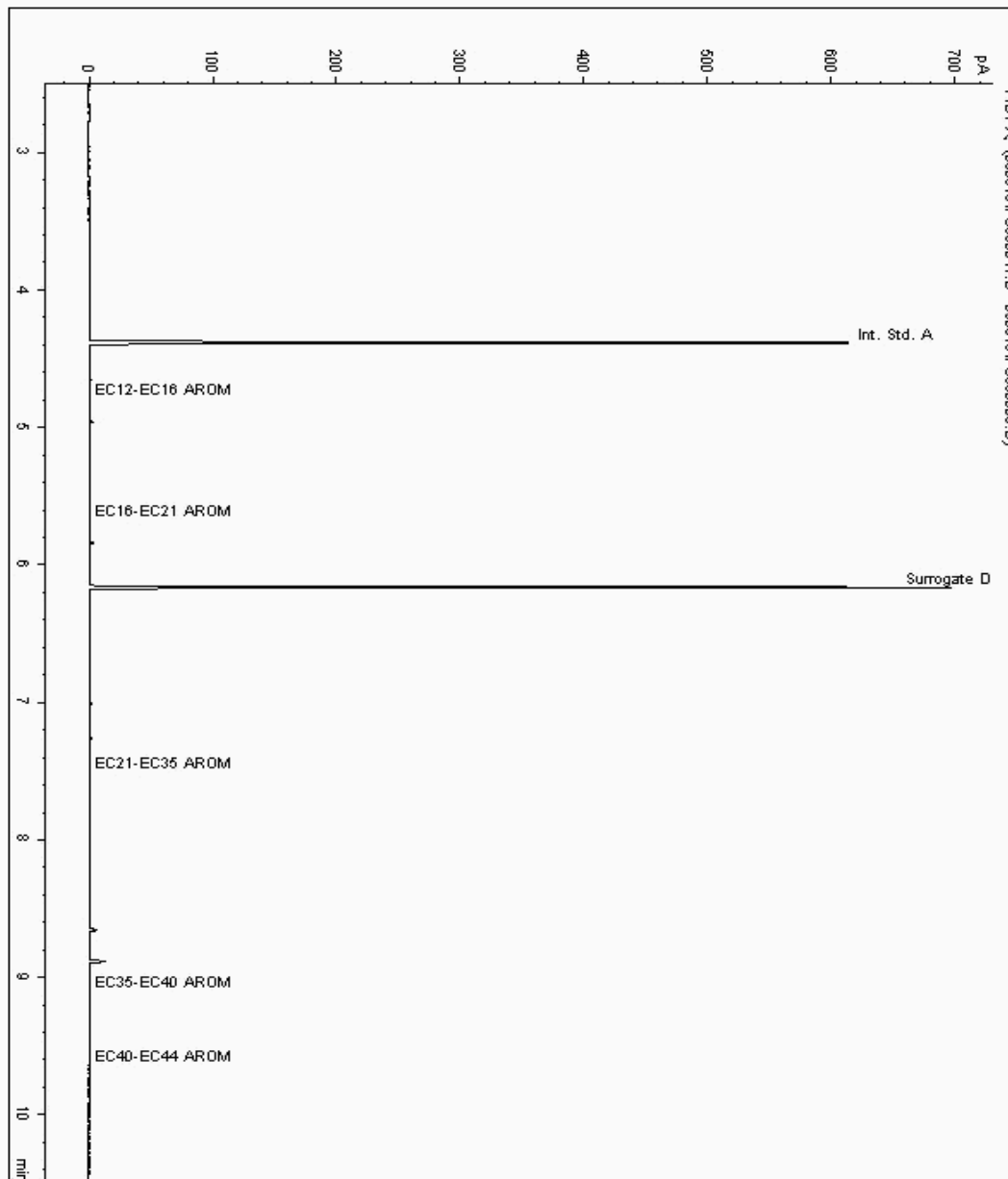
Analysis: EPH CWG (Aromatic) Aqueous GC (W)

Sample No : 8056418
Sample ID : BH106A

Depth : 0.00

Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 7702195-8056418
Date Acquired : 10/09/13 02:14:37 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.008





SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

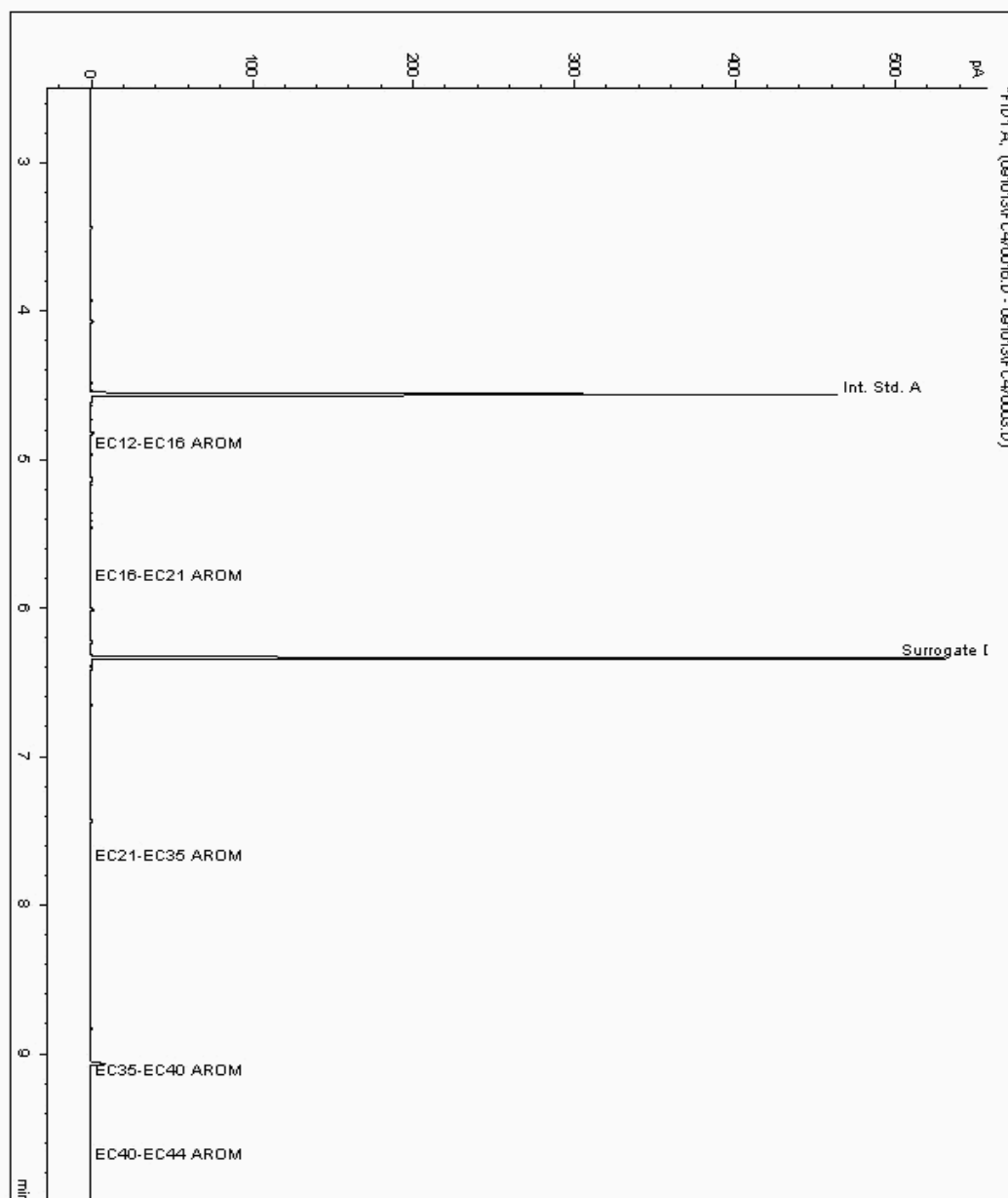
Analysis: EPH CWG (Aromatic) Aqueous GC (W)

Sample No : 8056423
Sample ID : BH103

Depth : 0.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7702175-8056423
Date Acquired : 10/09/13 20:30:25 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.008





SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

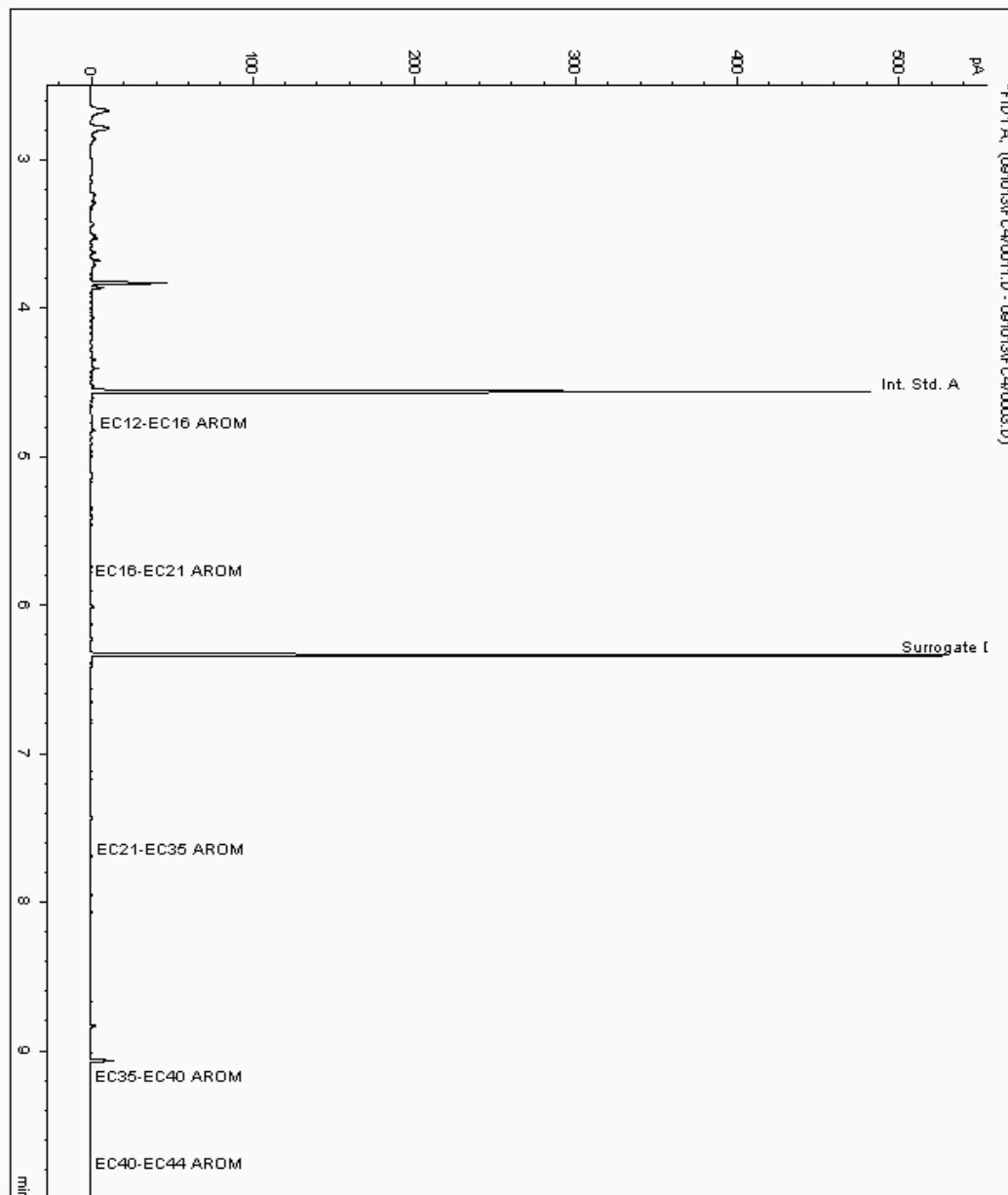
Analysis: EPH CWG (Aromatic) Aqueous GC (W)

Sample No : 8056438
Sample ID : BH102

Depth : 0.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7702165-8056438
Date Acquired : 10/09/13 18:56:04 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.008





SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

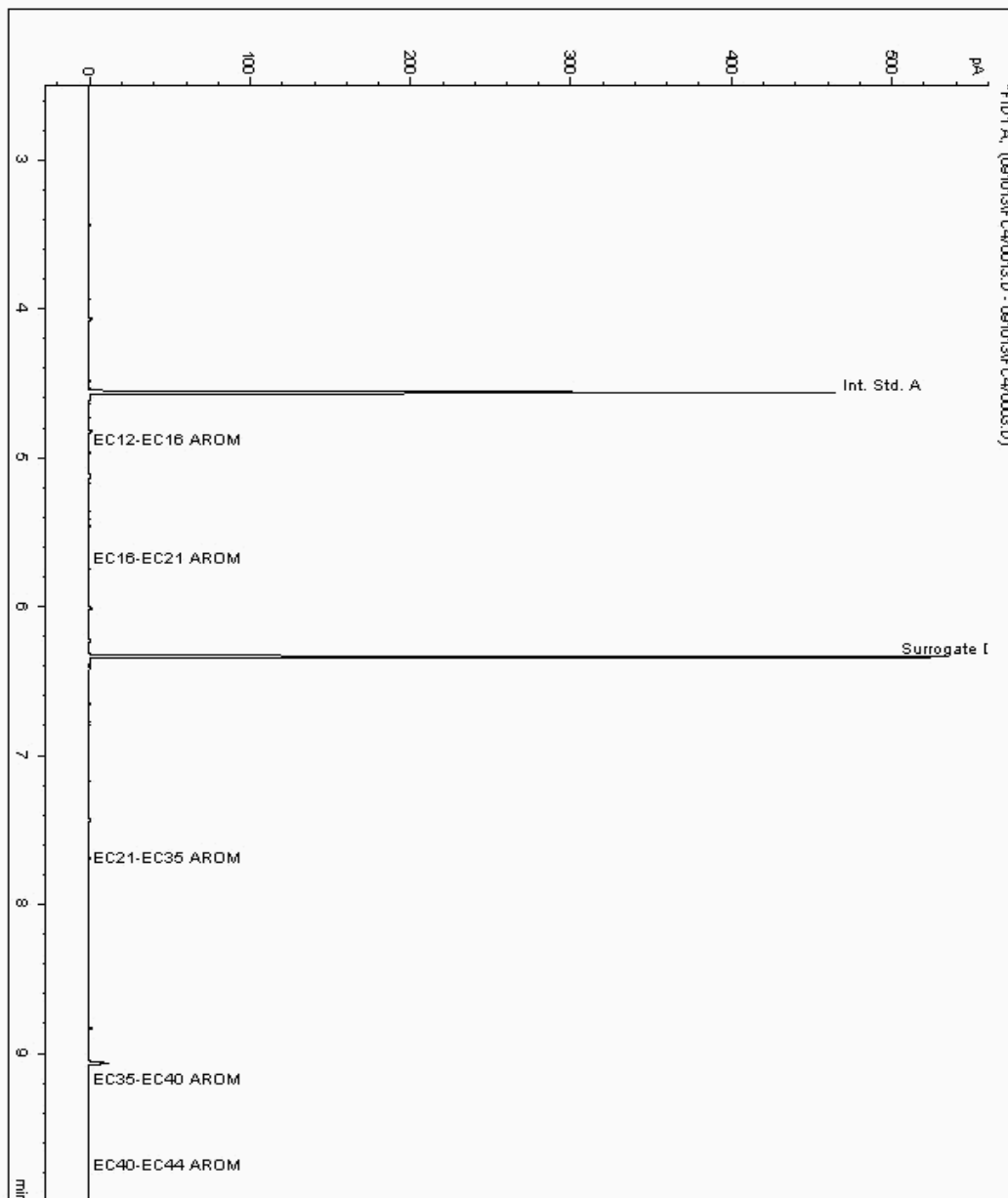
Analysis: EPH CWG (Aromatic) Aqueous GC (W)

Sample No : 8056447
Sample ID : BH105A

Depth : 0.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7702156-8056447
Date Acquired : 10/09/13 19:33:54 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.008





SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

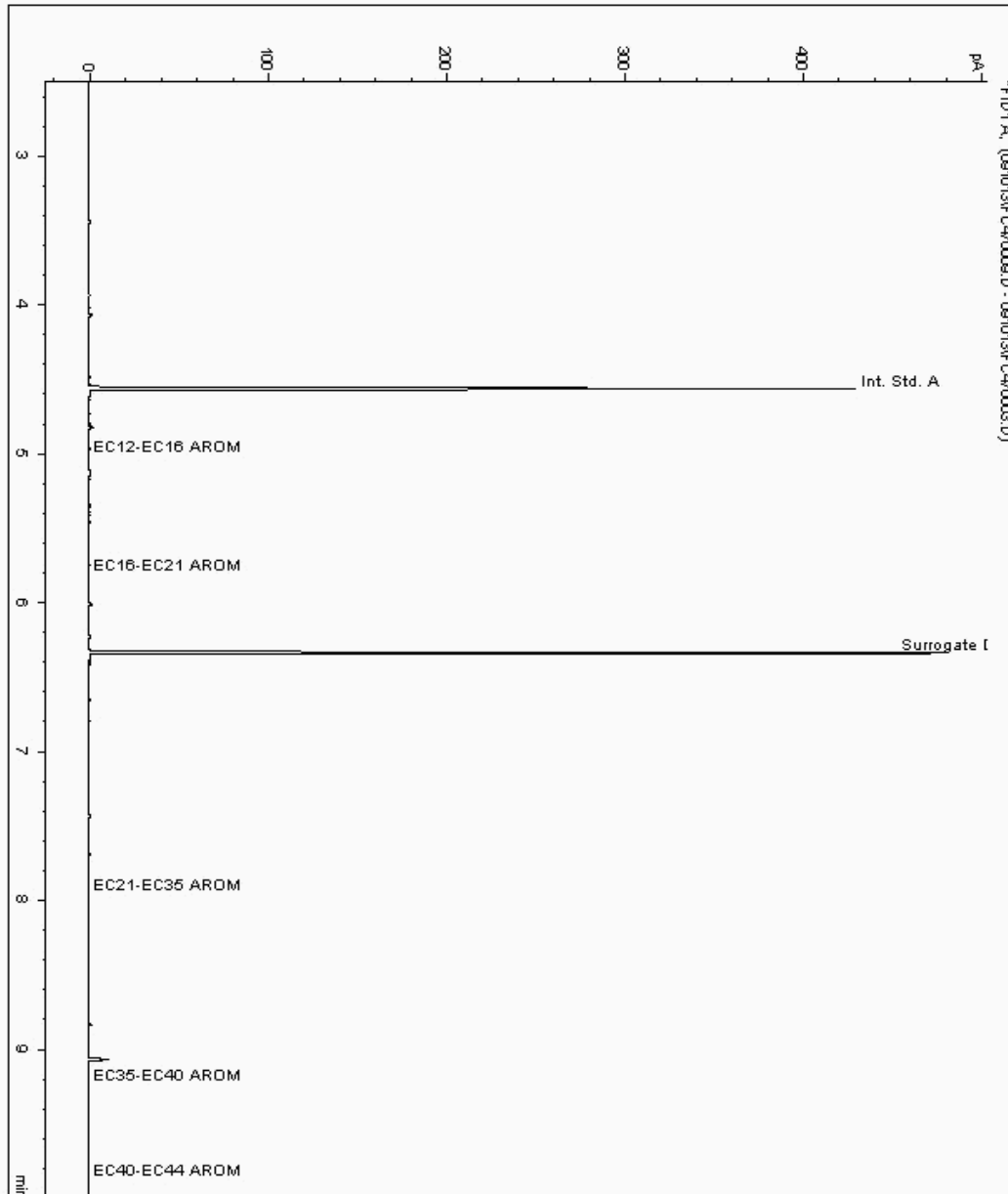
Analysis: EPH CWG (Aromatic) Aqueous GC (W)

Sample No : 8056449
Sample ID : DUP

Depth : 0.00

Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 7702203-8056449
Date Acquired : 10/09/13 18:18:22 PM
Units : ppb
Dilution :
CF : 1
Multiplier : 0.008





SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

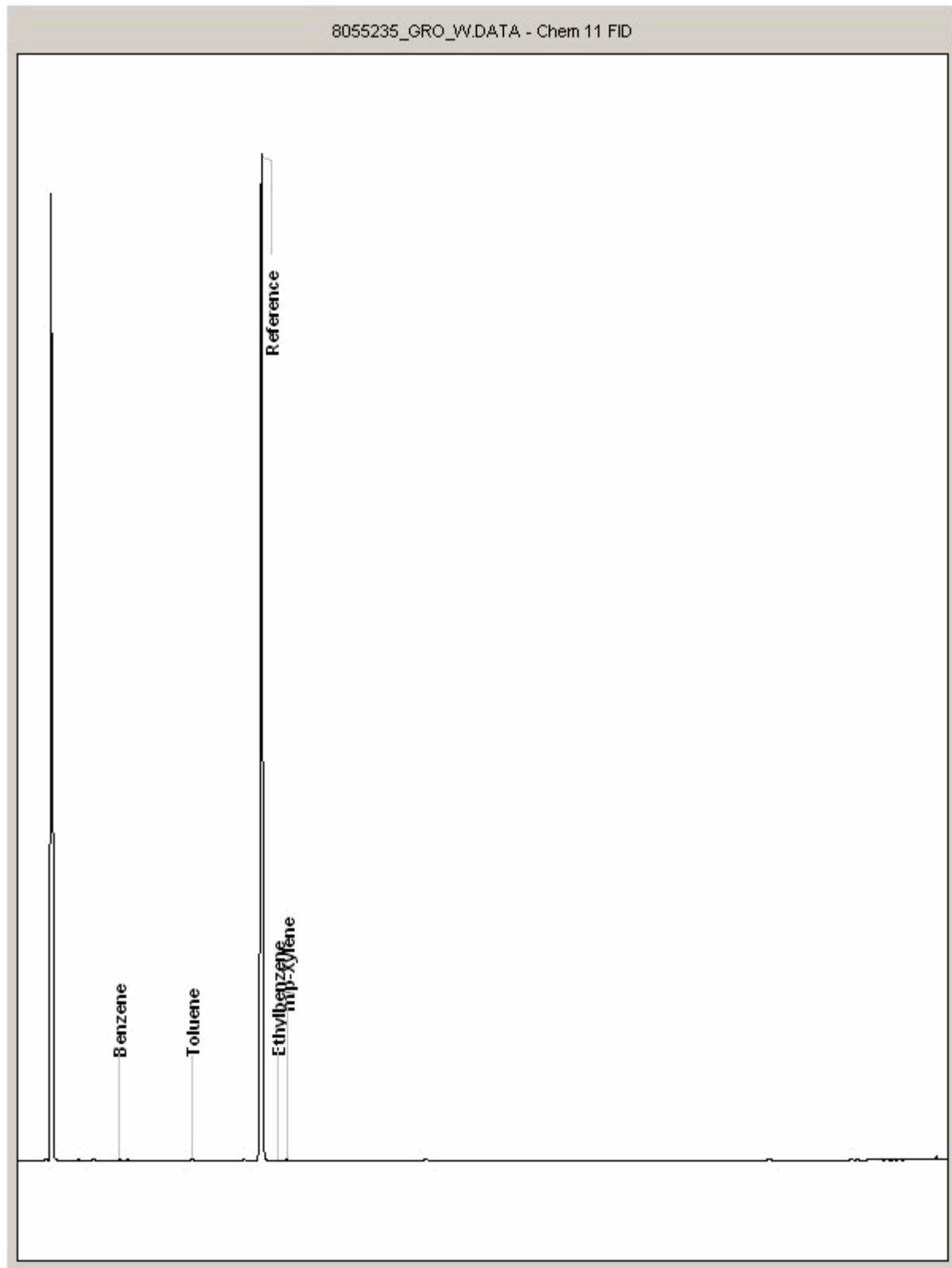
Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (W)

Sample No : 8055235
Sample ID : EB

Depth : 0.00





SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
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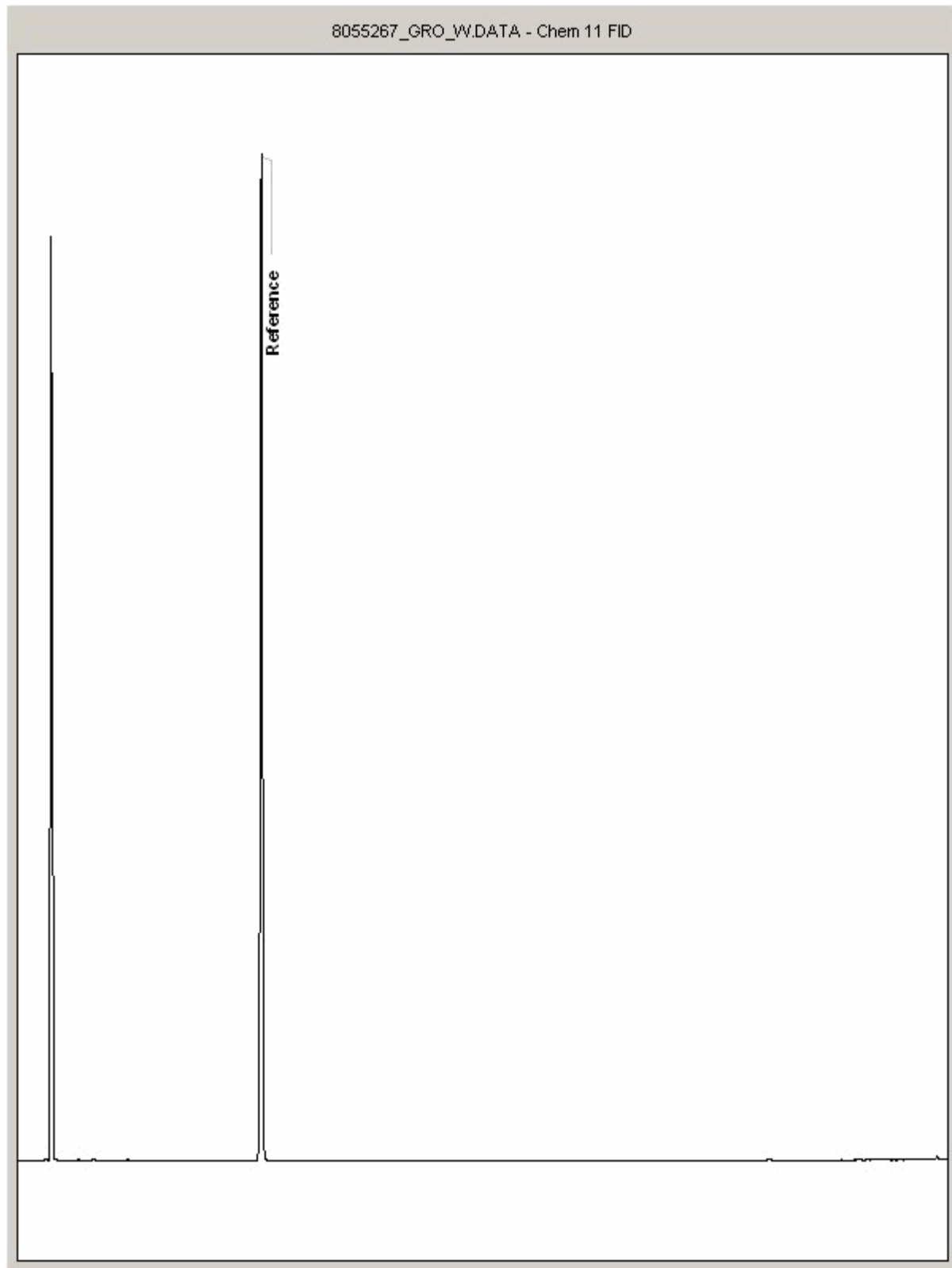
Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (W)

Sample No : 8055267
Sample ID : BH102A

Depth : 0.00





SDG: 130905-27
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Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

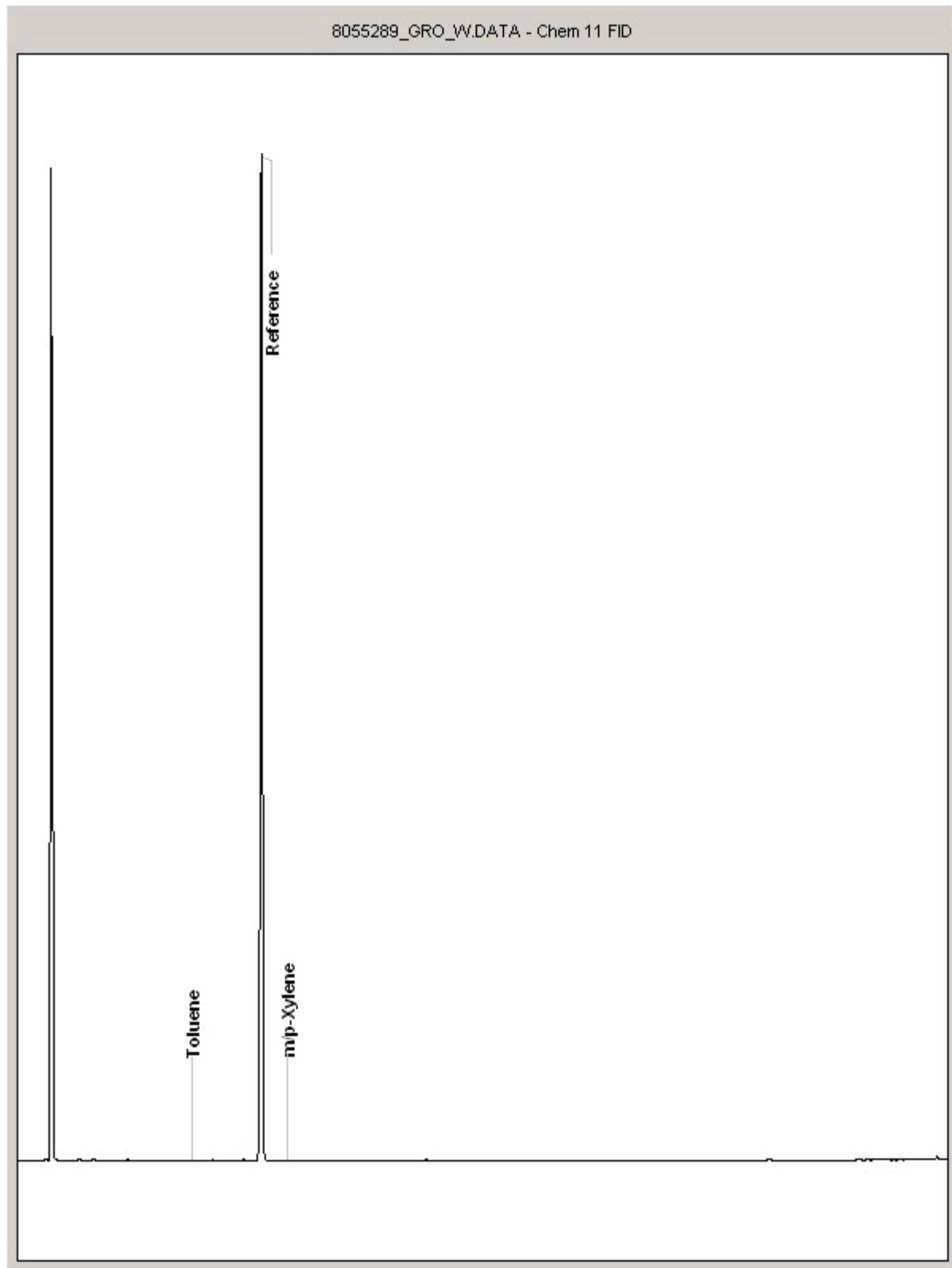
Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (W)

Sample No : 8055289
Sample ID : BH103

Depth : 0.00





CERTIFICATE OF ANALYSIS

SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

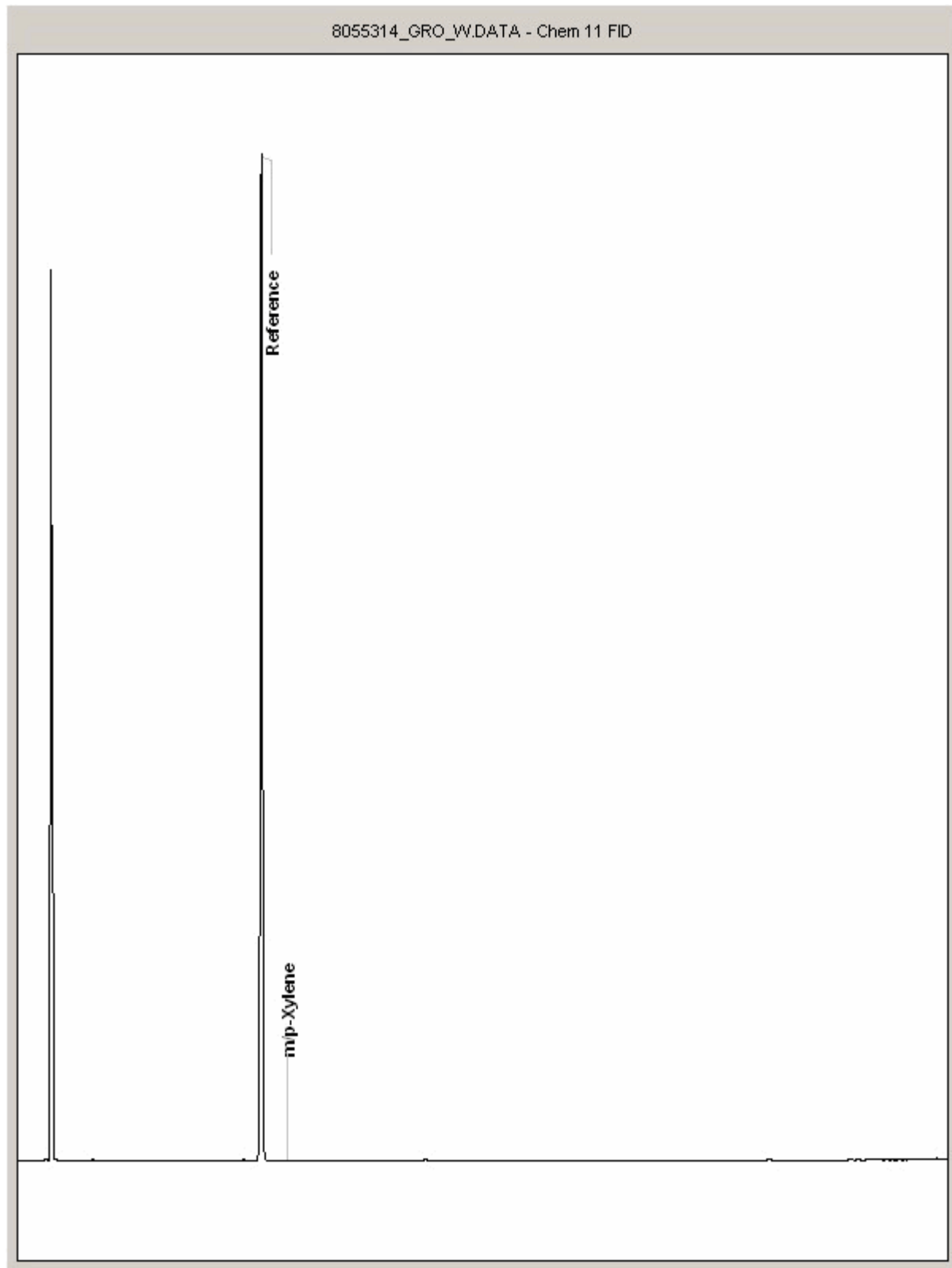
Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (W)

Sample No : 8055314
Sample ID : BH105A

Depth : 0.00





SDG: 130905-27
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Client Reference: 46370079

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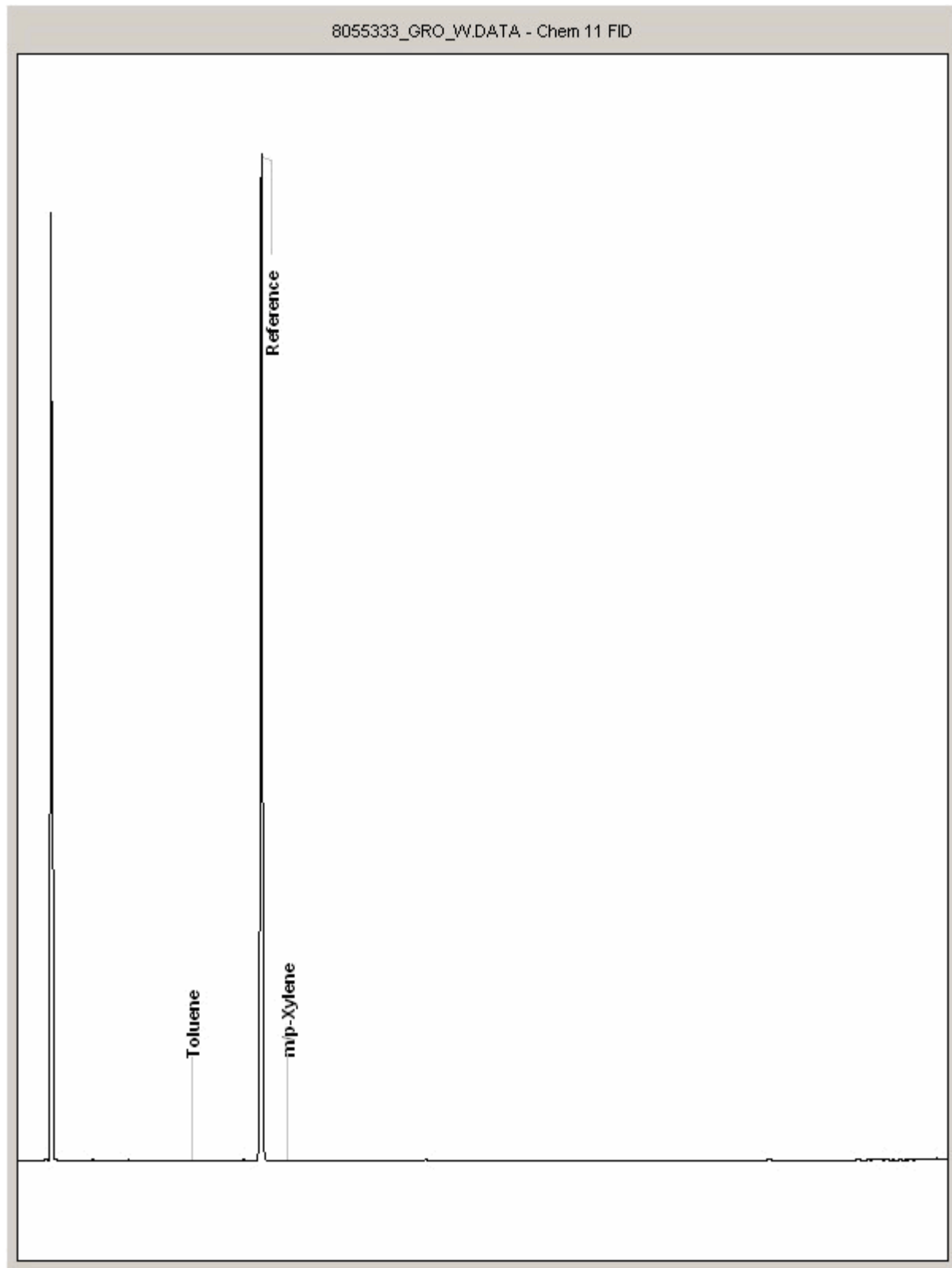
Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (W)

Sample No : 8055333
Sample ID : DUP

Depth : 0.00





SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

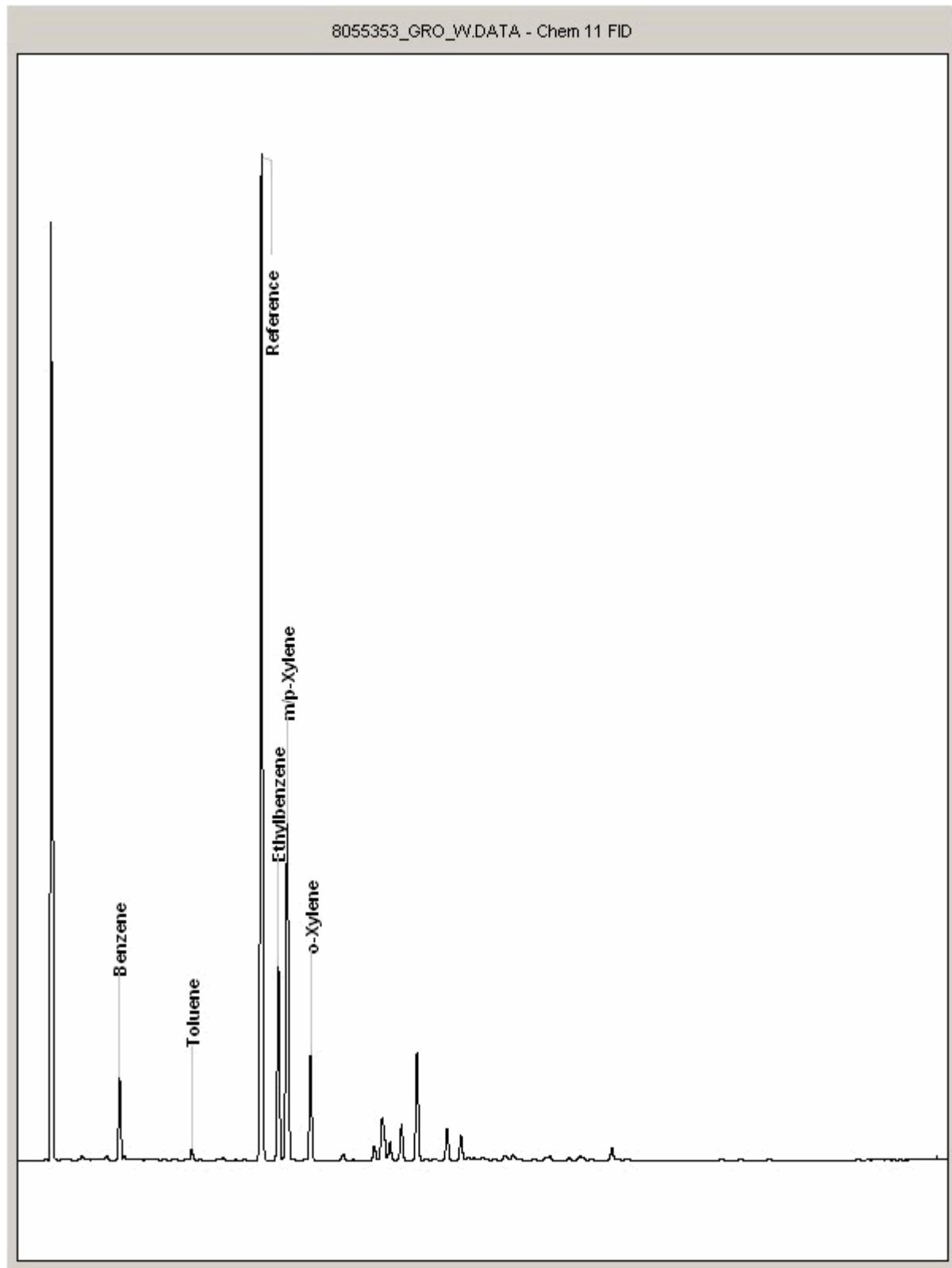
Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (W)

Sample No : 8055353
Sample ID : BH102

Depth : 0.00





SDG: 130905-27
Job: H_URS_WIM-162
Client Reference: 46370079

Location: Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

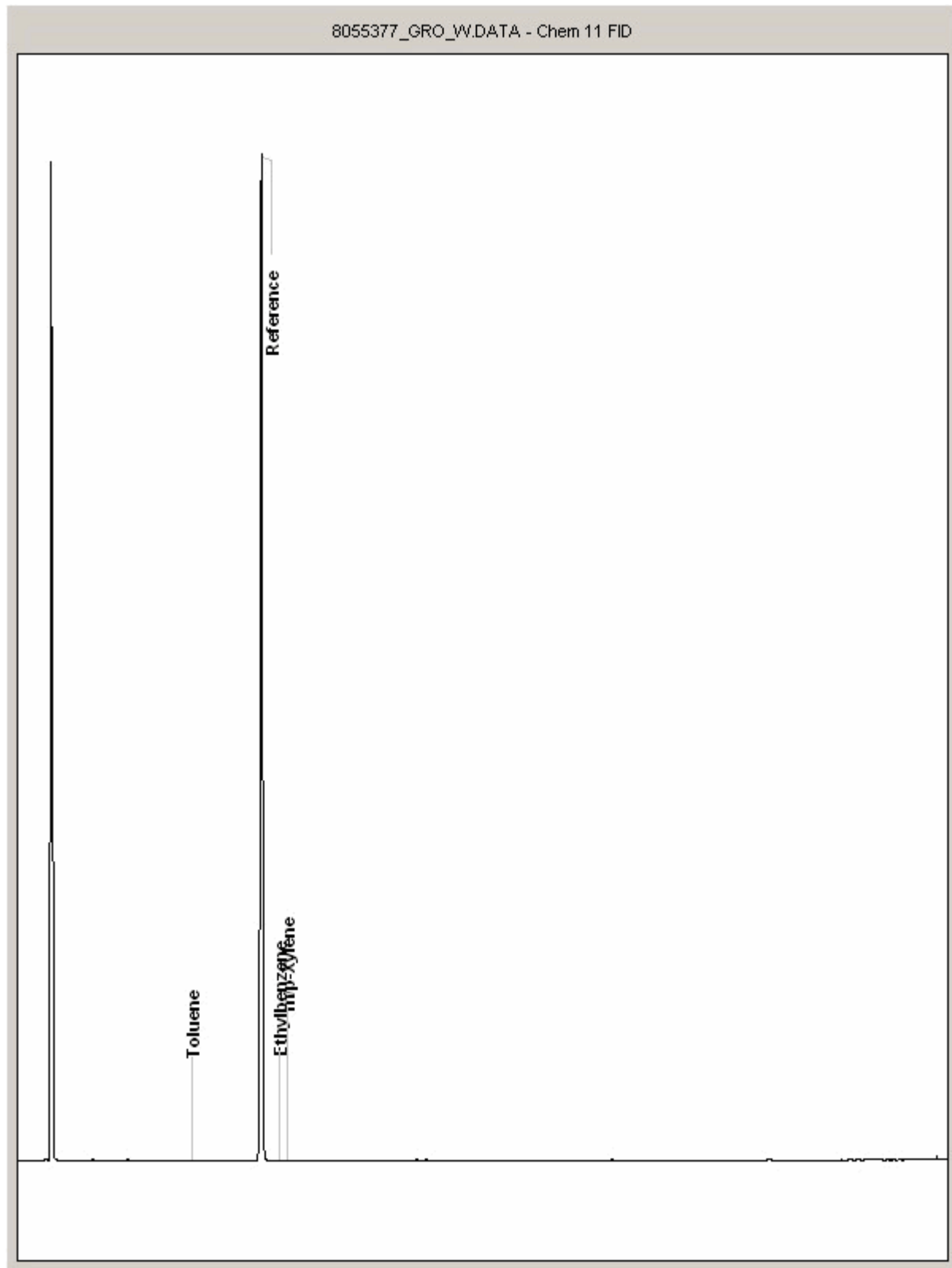
Order Number:
Report Number: 241559
Superseded Report:

Chromatogram

Analysis: GRO by GC-FID (W)

Sample No : 8055377
Sample ID : BH106A

Depth : 0.00





SDG:	130905-27	Location:	Hitchin	Order Number:	
Job:	H_URS_WIM-162	Customer:	URS Corporation Limited	Report Number:	241559
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

Appendix General

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICS and SVOC TICS.
2. 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 2 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. ALcontrol Laboratories 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. 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 for wet tests reported on a dry weight basis are not corrected for moisture content.
13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.
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 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.
21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.
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.

Sample Deviations

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Holding time exceeded before sample received
§	Sampled on date not provided
+	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to sampled on date
&	Sample Holding Time exceeded - Late arrival of instructions.

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 Alcontrol Laboratories (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 Alcontrol Laboratories (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.

Appendix D - Chain of Custodies



ALcontrol Laboratories

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

email: customerservices@alcontrol.com
Tel : 01244 528 777 Couriers : 0845 900 3800

Date Samples Despatched : 4/9/13

Sampler : S Omm

Quotation - yes/no (please specify Quotation Number)

Sheet _____

of _____

Only one project per sheet please.

Job Continuation - yes / no

Continuation of ALcontrol job:

Date of Sampling [SAMP_DATE]	Time of Sampling	Sample Ref. ID [HOLE_ID]	Depth in metres (top) [SAMP_TOP]	Depth in metres (base) [SAMP_BASE]	AGS Sample Type [SAMP_REF]	Client Sample Type [SAMP_REF]	Sample Preservation Y/N	(S)oil or (W)ater (specify if other) (E)ffluent, (Sew)age, (Sa)line	Suite Name/Analysis Required	Turnaround - please tick	Report Format	Samplers Signature	
													7 day turnaround _____
4/9/2013	16 PM	BH105A							Lab 51				
		BH102							Lab 54				
		BH103							Lab 58				
		BH102A							Lab 55				
		BH106A											
		DUP											
		EP											
		TR											



Will samples be scheduled in @mis? Yes / No

KNOWN HAZARDS / Additional Instructions / overseas samples

P.O. Number _____

NB.-Results will not be issued without a PO number

Invoice address if different from above:

Please ensure water matrices are clearly identified for correct MCERTS accreditation.

Date Received: _____

Time: _____

Signature: _____

ALcontrol Job No. _____



ALcontrol Laboratories

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

email: customerservices@alconcontrol.com
Tel : 01244 528 777 Couriers : 0845 900 3800

Date Samples Despatched : 13/11/15

Sampler: E. M. ...

Quotation - yes/no (please specify Quotation Number)

Sheet
of

Only one project per sheet
please.

Job Continuation - yes / no

Continuation of ALcontrol job:

[illegible]

Will samples be scheduled in @mis? Yes / No

P.O. Number

Invoice address if different from above:

NB.-Results will not be issued without a PO number

Date Received:

Time:

Signature: _____

ALcontrol Job No.

Please ensure water matrices are clearly identified for correct MCERTS accreditation.



ALcontrol Laboratories

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

email: customerservices@alconcontrol.com
Tel : 01244 528 777 Couriers : 0845 900 3800

Date Samples Despatched : 15/10/15

Sampler : KM

Quotation - yes/no (please specify Quotation Number)

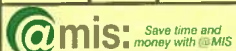
Job Continuation - yes / no

Continuation of ALcontrol job:

Sheet

of

Only one project per sheet please.

[illegible]

Will samples be scheduled in @mis? Yes / No

KNOWN HAZARDS / Additional Instructions / overseas samples

P.O. Number

NB.-Results will not be issued without a PO number

Invoice address if different from above:

Date Received:

Time:

Signature:

ALcontrol Job No.

Please ensure water matrices are clearly identified for correct MCERTS accreditation.



ALcontrol Laboratories

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

email: customerservices@alconcontrol.com
Tel : 01244 528 777 Couriers : 0845 900 3800

ate Samples Despatched :

Sampler :

Quotation - yes/no (please specify Quotation Number)

Sheet

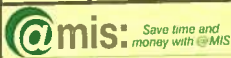
03

Only one project per sheet please.

Job Continuation - yes / no

Continuation of ALcontrol job:

Contact Name

[illegible]

Will samples be scheduled in @mis? Yes / No

KNOWN HAZARDS / Additional Instructions / overseas samples

Please ensure water matrices are clearly identified for correct MCERTS accreditation.

P.O. Number

NB.-Results will not be issued without a PO number

Date Received:

Time:

Invoice address if different from above:

Signature: _____

ALcontrol Job No.



ALcontrol Laboratories

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

email: customerservices@alcontrol.com
Tel : 01244 528 777 Couriers : 0845 900 3800

Date Samples Despatched : 17-4-13

Sampler : Lynsey Coles

Quotation - yes/no (please specify Quotation Number)

SHELL

Job Continuation - yes / no

Continuation of ALcontrol job:

Sheet

of

Only one project per sheet please.

Date of Sampling [SAMP_DATE]	Time of Sampling	Sample Ref. ID [HOLE_ID]	Depth in metres (top) [SAMP_TOP]	Depth in metres (base) [SAMP_BASE]	AGS Sample Type [SAMP_REF]	Client Sample Type [SAMP_REF]	Sample Preservation Y/N	(S)oil or (W)ater (specify if other)	(E)ffluent, (Sew)age, (Sa)line	Suite-Name/Analysis Required	Turnaround - please tick		Report Format	Samplers Signature
											7 day turnaround	5 day turnaround		
17-4		VA138	3.0							LAB 10	☒	Standard	☐ Standard ☐ Cross Tab ☐ NG ☐ AGS ☐ Equis ☐ Other (please specify)	
	VA139	3.5							LAB 07	☒				
	VA140	3.0							LAB 16	☒				
	VA141	6.5							LAB 44	☒				
	VA142	3.0												
	VA143	6.5												
	VA144	3.0												
	VA145	6.5												
		VA146	3.0											
		VA147	6.5											



Will samples be scheduled in @mis? Yes / No

P.O. Number

Invoice address if different from above:

NB.-Results will not be issued without a PO number

Date Received:

Time:

Signature:

ALcontrol Job No.

Please ensure water matrices are clearly identified for correct MCERTS accreditation.

KNOWN HAZARDS / Additional Instructions / overseas samples



ALcontrol Laboratories

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

email: customerservices@alcontrol.com
Tel : 01244 528 777 Couriers : 0845 900 3800

Date Samples Despatched: 16/4/13

Sampler: Lynsey Coles

Quotation - yes/no (please specify Quotation Number)

SHELL

Job Continuation - yes / no

Continuation of ALcontrol job:

Sheet

of

Only one project per sheet please.

Date of Sampling [SAMP_DATE]	Time of Sampling	Sample Ref. ID [HOLE_ID]	Depth in metres (top) [SAMP_TOP]	Depth in metres (base) [SAMP_BASE]	AGS Sample Type [SAMP_REF]	Client Sample Type [SAMP_REF]	Sample Preservation Y/N	(S)oil or (W)ater (specify if other)	(E)ffluent, (Sew)age, (Sa)line	Suite Name/Analysis Required	Turnaround - please tick	Report Format	Samplers Signature
15/4/13		VA134	6.0							LAB10	☒	Standard	
		VA135	6.0							LAB09	☒	Cross Tab	
		VA136	3.0							LAB16	☒	NG	
		VA137	6.0							LAB44	☒	AGS	
												Equis	
												Other	
												(please specify)	



Save time and money with @MIS

Will samples be scheduled in @mis? Yes / No

P.O. Number

Invoice address if different from above:

NB.-Results will not be issued without a PO number

Date Received:

Time:

Signature:

ALcontrol Job No.

Please ensure water matrices are clearly identified for correct MCERTS accreditation.



ALcontrol Laboratories

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

email: customerservices@alconcontrol.com
Tel : 01244 528 777 Couriers : 0845 900 3800

Date Samples Despatched :

Sampler : Linsenides

Quotation - yes/no (please specify Quotation Number)

SHELL

Job Continuation - yes / no

Continuation of ALcontrol job:

Sheet

of

Only one project per sheet
please.

[illegible]

Will samples be scheduled in @mis? Yes / No

P.O. Number

Invoice address if different from above:

NB.-Results will not be issued without a PO number

Date Received: _____

Time:

Signature:

ALcontrol Job No.

Please ensure water matrices are clearly identified for correct MCERTS accreditation.



ALcontrol Laboratories

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

email: customerservices@alcontrol.com
Tel : 01244 528 777 Couriers : 0845 900 3800

Date Samples Despatched : 12.4.13

Sampler : Lynsey Cole
Quotation - yes/no (please specify Quotation Number)

SHELL

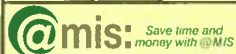
Job Continuation - yes / no

Continuation of ALcontrol job:

Sheet 1 of 1

Only one project per sheet please.

Date of Sampling [SAMP_DATE]	Time of Sampling	Sample Ref. ID [HOLE_ID]	Depth in metres (top) [SAMP_TOP]	Depth in metres (base) [SAMP_BASE]	AGS Sample Type [SAMP_REF]	Client Sample Type [SAMP_REF]	Sample Preservation Y/N	(S)oil or (W)ater (specify if other)	(E)ffluent, (Sew)age, (Sa)line	Suite Name/Analysis Required	Turnaround - please tick	Report Format	Samplers Signature
11.4.13		VA124	6.7							LAB10	☒		
		VA125	3.0							LAB16	☒		
		VA126	3.0							LAB07	☒		
12.4.13		VA127	0.8							LAB44	☒		
		VA128	1.5							LAB05	☒		
		VA128A	0.6								☒		
		VA129	2.0								☒		
		VA129A	0.25								☒		
		BACKFILL 01	-								☒		
		BACKFILL 02	-								☒		
		BACKFILL 03	-								☒		



Save time and money with @mis

Will samples be scheduled in @mis? Yes / No

KNOWN HAZARDS / Additional Instructions / overseas samples

P.O. Number

NB.-Results will not be issued without a PO number

Invoice address if different from above:

Please ensure water matrices are clearly identified for correct MCERTS accreditation.

Date Received:

Time:

Signature:

ALcontrol Job No.



ALcontrol Laboratories

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

email: customerservices@alconcontrol.com
Tel : 01244 528 777 Couriers : 0845 900 3800

Date Samples Despatched: 11-04-13

Quotation - yes/no (please specify Quotation Number)

SHELL

Job Continuation - yes / no

Continuation of ALcontrol job:

Sheet

of

Only one project per sheet
please.

[illegible]

Will samples be scheduled in @mis? Yes / No

KNOWN HAZARDS / Additional Instructions / overseas samples

P.O. Number

NB.-Results will not be issued without a PO number

Invoice address if different from above:

Date Received:

Time:

Signature: _____

ALcontrol Job No.

Please ensure water matrices are clearly identified for correct MCERTS accreditation.



ALcontrol Laboratories

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

email: customerservices@alcontrol.com
Tel : 01244 528 777 Couriers : 0845 900 3800

Date Samples Despatched : 10-4-13

Sampler : Lynsey Cokes

Quotation - yes/no (please specify Quotation Number)

SHELL

Job Continuation - yes / no

Continuation of ALcontrol job:

Sheet

of

Only one project per sheet please.

Date of Sampling [SAMP_DATE]	Time of Sampling	Sample Ref. ID [HOLE_ID]	Depth in metres (top) [SAMP_TOP]	Depth in metres (base) [SAMP_BASE]	AGS Sample Type [SAMP_REF]	Client Sample Type [SAMP_REF]	Sample Preservation Y/N	(S)oil or (W)ater (specify if other)	(E)ffluent, (Sew)age, (Sa)line	Suite Name/Analysis Required	Turnaround - please tick				Report Format	Samplers Signature
											7 day turnaround	5 day turnaround	4 day turnaround	3 day turnaround		
9-4-13		VA101	4.5					S		LAB10	☒	☐	☐	☐	Standard	
		VA102	3.0					S		LAB07	☒	☐	☐	☐	Cross Tab	
		VA103	3.0					S		LAB16	☒	☐	☐	☐	NG	
		VA104	6.5					S		LAB44	☒	☐	☐	☐	AGS	
		VA105	6.5					S			☒	☐	☐	☐	Equis	
↓		VA106	6.3					S			☒	☐	☐	☐	Other	
		VA107	6.8					S			☒	☐	☐	☐	(please specify)	
		VA108	6.7					S			☒	☐	☐	☐		
		VA109	6.8					S			☒	☐	☐	☐		
↓		VA110	3.0					S			☒	☐	☐	☐		
10-4-13		VA111	7.0					S			☒	☐	☐	☐		
		VA112	7.0					S			☒	☐	☐	☐		
		VA113	6.7					S			☒	☐	☐	☐		
		VA114	3.0					S			☒	☐	☐	☐		
↓																



Save time and money with @MIS

Will samples be scheduled in @mis? Yes / No

P.O. Number

NB.-Results will not be issued without a PO number

Invoice address if different from above:

KNOWN HAZARDS / Additional Instructions / overseas samples

Please ensure water matrices are clearly identified for correct MCERTS accreditation.

Date Received:

Time:

Signature:

ALcontrol Job No.

Appendix E - Waste Acceptance Criteria



SDG:	130521-37	Location:	Shell Hitchin	Order Number:	
Job:	H_URS_WIM-174	Customer:	URS Corporation Limited	Report Number:	228142
Client Reference:	46370079	Attention:	Jocelyn Willis	Superseded Report:	

CEN 10:1 CUMULATIVE TWO STAGE BATCH TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/3

Client Reference		Site Location	Shell Hitchin
Mass Sample taken (kg)	0.213	Moisture Content Ratio (%)	21.6
Mass of dry sample (kg)	0.175	Dry Matter Content Ratio (%)	82.3
Particle Size <4mm	>95%		

Case SDG130521-37 Lab Sample Number(s)7447495 Sampled Date20-May-2013 Customer Sample Ref.WAC Depth (m)0.00		Landfill Waste Acceptance Criteria Limits		
		Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Solid Waste Analysis				
Total Organic Carbon (%)	<0.2	3	5	6
Loss on Ignition (%)	1.49	-	-	10
Sum of BTEX (mg/kg)	3.72	6	-	-
Sum of 7 PCBs (mg/kg)	<0.021	1	-	-
Mineral Oil (mg/kg)	32.8	500	-	-
PAH Sum of 17 (mg/kg)	<10	100	-	-
pH (pH Units)	8.26	-	<6 or >9	-
ANC to pH 6 (mol/kg)	0.278	-	-	-
ANC to pH 4 (mol/kg)	3.35	-	-	-

Eluate Analysis	C2	C8	A2	A2-10	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Conc ⁿ in 2:1 eluate	Conc ⁿ in 8:1 eluate	2:1 conc ⁿ leached	Cumulative conc ⁿ leached			
	mg/l		mg/kg				
Arsenic	0.00358	0.00289	0.00716	0.0301	0.5	2	25
Barium	0.0427	0.0138	0.0853	0.187	20	100	300
Cadmium	<0.0001	<0.0001	<0.0002	<0.001	0.04	1	5
Chromium	0.00109	0.000334	0.00217	0.00464	0.5	10	70
Copper	0.00145	<0.00085	0.0029	<0.0085	2	50	100
Mercury Dissolved (CVAf)	0.0000142	0.0000308	0.0000285	0.00028	0.01	0.2	2
Molybdenum	0.00698	0.00407	0.014	0.0457	0.5	10	30
Nickel	0.00183	0.000661	0.00365	0.00861	0.4	10	40
Lead	0.0182	0.0027	0.0364	0.0535	0.5	10	50
Antimony	0.0022	0.00112	0.0044	0.013	0.06	0.7	5
Selenium	0.00157	<0.00039	0.00313	<0.0039	0.1	0.5	7
Zinc	<0.00041	0.000602	<0.00082	0.00499	4	50	200
Chloride	16.8	<2	33.6	28.8	800	15000	25000
Fluoride	<0.5	<0.5	<0.999	<5	10	150	500
Sulphate (soluble)	11.8	<2	23.6	20.2	1000	20000	50000
Total Dissolved Solids	195	70.7	389	920	4000	60000	100000
Total Monohydric Phenols (W)	0.21	<0.016	0.42	0.36	1	-	-
Dissolved Organic Carbon	5.68	<3	11.3	<30	500	800	1000

Leach Test Information	2:1	8:1
Date Prepared	22-May-2013	23-May-2013
pH (pH Units)	8.317	8.521
Conductivity (µS/cm)	243.00	82.50
Temperature (°C)	19.70	19.90
Volume Leachant (Litres)	0.312	1.400
Volume of Eluate VE1 (Litres)	0.300	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable
Stated limits are for guidance only and ALcontrol cannot be held responsible for any discrepancies with current legislation
Mcerts Certification does not apply to leachates
10/06/2013 13:49:36



CERTIFICATE OF ANALYSIS

SDG: 130521-37
Job: H_URS_WIM-174
Client Reference: 46370079

Location: Shell Hitchin
Customer: URS Corporation Limited
Attention: Jocelyn Willis

Order Number:
Report Number: 228142
Superseded Report:

CEN 10:1 CUMULATIVE TWO STAGE BATCH TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/3

Client Reference

Mass Sample taken (kg) 0.194

Mass of dry sample (kg) 0.175

Particle Size <4mm >95%

Site Location

Shell Hitchin

Moisture Content Ratio (%) 10.9

Dry Matter Content Ratio (%) 90.2

Case

SDG 130521-37

Lab Sample Number(s) 7447497

Sampled Date 20-May-2013

Customer Sample Ref. WAC 2

Depth (m) 0.00

Landfill Waste Acceptance
Criteria LimitsInert Waste
LandfillStable
Non-reactive
Hazardous
Waste in Non-
Hazardous
LandfillHazardous
Waste Landfill

Solid Waste Analysis

Total Organic Carbon (%) <0.1

Loss on Ignition (%) -

Sum of BTEX (mg/kg) <0.024

Sum of 7 PCBs (mg/kg) <0.021

Mineral Oil (mg/kg) 109

PAH Sum of 17 (mg/kg) 17.2

pH (pH Units) 10.8

ANC to pH 6 (mol/kg) 0.331

ANC to pH 4 (mol/kg) 1.44

3

5

6

-

-

-

6

-

-

1

-

-

500

-

-

100

-

-

-

<6 or >9

-

-

-

-

-

-

-

Eluate Analysis

C₂Concⁿ in 2:1
eluateC₈Concⁿ in 8:1
eluateA₂2:1 concⁿ
leachedA₂₋₁₀Cumulative
concⁿ
leachedLimit values for compliance leaching test
using BS EN 12457-3 at L/S 10 l/kg

	mg/l		mg/kg				
Arsenic	0.0092	0.0104	0.0184	0.102	0.5	2	25
Barium	0.431	0.00533	0.862	0.759	20	100	300
Cadmium	<0.0001	<0.0001	<0.0002	<0.001	0.04	1	5
Chromium	0.0291	0.0114	0.0582	0.143	0.5	10	70
Copper	0.0164	0.00372	0.0327	0.0582	2	50	100
Mercury Dissolved (CVAf)	0.0000126	<0.00001	0.0000251	<0.0001	0.01	0.2	2
Molybdenum	0.0384	0.005	0.0768	0.105	0.5	10	30
Nickel	0.0031	0.00482	0.0062	0.0453	0.4	10	40
Lead	0.00102	0.000376	0.00205	0.00483	0.5	10	50
Antimony	0.00195	0.00153	0.00389	0.016	0.06	0.7	5
Selenium	0.00105	0.000803	0.00209	0.00844	0.1	0.5	7
Zinc	0.00124	<0.00041	0.00249	<0.0041	4	50	200
Chloride	35.6	2.1	71.2	76.5	800	15000	25000
Fluoride	0.912	<0.5	1.82	<5	10	150	500
Sulphate (soluble)	192	24.6	384	523	1000	20000	50000
Total Dissolved Solids	439	104	878	1600	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.032	<0.16	1	-	-
Dissolved Organic Carbon	10.9	3.45	21.8	46.9	500	800	1000

Leach Test Information

2:1

8:1

Date Prepared	23-May-2013	24-May-2013
pH (pH Units)	8.917	10.517
Conductivity (µS/cm)	602.00	157.10
Temperature (°C)	20.80	19.60
Volume Leachant (Litres)	0.331	1.400
Volume of Eluate VE1 (Litres)	0.290	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Stated limits are for guidance only and ALcontrol cannot be held responsible for any discrepancies with current legislation

Mcerts Certification does not apply to leachates

10/06/2013 13:49:36

13:49:14 10/06/2013

Appendix F - Off-site Disposal and Import / Export Waste Transfer Notes

WASTE PLAN & DISPOSAL REGISTER

Fox Construction

Site Name :- <u>SHELL HITCHIN</u>	Contractor <u>Fox Construction</u>	Start Date <u>25</u> dd <u>03</u> mm <u>2013</u> yy		

Anticipated waste arising from this site (circle appropriate categories):									
Category 'A' - Inert / Inactive wastes									
1 - Rock	Yes	No	4 - Bricks	Yes	No	7 Glass	Yes	No	
2 - Concrete	Yes	No	5 - Tiles	Yes	No	8 - Plastics (Most)	Yes	No	
3 - Mortar	Yes	No	6 - Aggregates	Yes	No	9 - Uncontaminated Soil	Yes	No	
Category 'B' - Active & Biodegradable wastes									
A - Timber	Yes	No	D - Green Wastes	Yes	No	G - Biodegradable Plastics	Yes	No	
B - Paper	Yes	No	E - Food stuff	Yes	No	H - Contaminated Non Hazardous Soil and Materials	Yes	No	
C - Cardboard	Yes	No	F - Metal	Yes	No		Yes	No	
Category 'C' - Special or Hazardous wastes									
1 - Asbestos	Yes	No	4 - Interceptor sludge	Yes	No	7 - Redundant tanks - steel	Yes	No	
2 - Contaminated Hazardous Soil & Materials	Yes	No	5 - Tank 'bottoms'	Yes	No	8 - Redundant fuel lines	Yes	No	
3 - Contaminated Waste Water	Yes	No	6 - Pump, hoses, nozzles	Yes	No	9 - Fluorescent, sodium, neon lamps / tubes	Yes	No	

The removal of the above waste products will be carried out by; <u>Thomas Bros.</u>			
Inert / Inactive Waste - Category 'A'			
Type (Enter number)	Waste Carrier	License Number	Disposal Site Inc Post Code
1, 2	Thomas Bros	CB/LE5401RQ	Cainhoe Quarry
4/6/9			Post Code: <u>5917 5PJ</u>
2,			
3,			
Active / Biodegradable Waste - Category 'B'			
Type (Enter letter)	Waste Carrier	License Number	Disposal Site Inc Post Code
1, H.	Thomas Bros	CB/LE5401RQ	FCC, Bletchley landfill
* Soil & Stone		CB/RES133ZN	Post Code: <u>MK3 5FR</u>
2, A/B/C/E/F/G	Three Sheds Waste	ACE/109705/CB	250- Toddington Rd - Luton
			Post Code: <u>LU4 9DZ</u>
3,			
Special / Hazardous Waste - Category 'C'			
Type (Enter Number)	Waste Carrier	License Number	Disposal Site Inc Post Code
1, 7 - 8	EMR	CB/ZE5607KJ	EMR, Bedford.
			Post Code;
2, 5	LCH	CB/QES233PN	Avonmouth
			Post Code: <u>BS11 0YA</u>
3, 4	LIS	CB/TM3109N	HAYDOCK S. HAZEN
			Post Code: <u>DA11 8UG</u>



CARAGORY 'A' INERT / INACTIVE - WASTE MOVEMENT / DISPOSAL RECORD SHEET

Fox Construction

Waste disposal register - the following movements of waste have taken place as detailed;										
Date Of Waste Movement	Type (Enter number(s) or letter(s) see cover page)	Reuse, Recyclable Or For Landfill / Disposal (Please Indicate Quantities m3, tonnes or lt)			EWC Code (see SWMP for advice) (Carrier must indicate code on transfer note)	Type of Transport (Tipper, Skip, Tanker etc.)	Area Of Site Waste Removed From (e.g. tank excavation, Interceptor excavation etc.)	Disposal Site Waste Being Transported To (Haulier <u>must</u> supply this information before leaving site with load) (This information MUST match entry on cover page)	Waste Carriers Name (Refer to cover page for carriers license No)	Waste Duty of Care or Transfer Note Serial No. (No load can leave site without this being received)
		Reuse	Recycle	Landfill Disposal						
09/04/13	2.		11M ³		170101	Tipper	TANK FARM	CAINHOE	THOMAS BROS	129788
09/04/13	2		11M ³		170101	Tipper	FORECAUNT TANK BASE	CAINHOE	✓	128959
09/04/13	2		11M ³		170101	Tipper	TANK EXCAVATION	CAINHOE	✓	128877
09/04/13	2		11M ³		170101	Tipper	TANK EXCAVATION	CAINHOE	✓	129794
09/04/13	2		11M ³		170101	Tipper	TANK EXCAVATION	CAINHOE	✓	129793
09/04/13	2		11M ³		170101	Tipper	TANK EXCAVATION	CAINHOE	✓	129792
09/04/13	2.		11M ³		170101	Tipper	TANK EXCAVATION	CAINHOE	✓	129791
09/04/13	2.		11M ³		170101	Tipper	TANK EXCAVATION	CAINHOE	✓	128878
09/04/13	2		11M ³		170101	Tipper	TANK EXCAVATION	CAINHOE	✓	129905
10/04/13	2		11M ³		170101	Tipper	TANK EXCAVATION	CAINHOE	✓	129795
9/4/13	2		11M ³		170101	Tipper	TANK EXCAVATION	CAINHOE	✓	128879
10/4/13	2		11M ³		170101	Tipper	TANK base/forecaunt	CAINHOE	✓	129487
10/4/13	2		11M ³		170101	Tipper	TANK base/forecaunt	CAINHOE	✓	128535
10/4/13	2		11M ³		170101	Tipper	TANK base/f/court	CAINHOE	✓	129963
10/4/13	2		11M ³		170101	Tipper	TANK base/f/court	CAINHOE	✓	128790

* 1 x Builders Skip (8yd) = Approx 5m³ , * 1 m³ = Approx 1.75 Ton * 20 Ton Load = Approx 11m³ (These Figures are for guidance only)



CATEGORY 'A' INERT / INACTIVE - WASTE MOVEMENT / DISPOSAL RECORD SHEET

Waste disposal register - the following movements of waste have taken place as detailed;										
Date Of Waste Movement	Type (Enter number(s) or letter(s) see cover page)	Reuse, Recyclable Or For Landfill / Disposal (Please Indicate Quantities m3, tonnes or lt)			EWC Code (see SWMP for advice) (Carrier must indicate code on transfer note)	Type of Transport (Tipper, Skip, Tanker etc.)	Area Of Site Waste Removed From (e.g. tank excavation, Interceptor excavation etc.)	Disposal Site Waste Being Transported To (Haulier must supply this information before leaving site with load) (This information MUST match entry on cover page)	Waste Carriers Name (Refer to cover page for carriers license No)	Waste Duty of Care or Transfer Note Serial No. (No load can leave site without this being received)
		Reuse	Recycle	Landfill Disposal						
10/04/13	2		11m ³		170101	Tipper	Tank Excavation F/L	Cainhoe	Thomas Bros	128788
10/04/13	2		20T		170101	Tipper	Tank Excavation	Cainhoe	Thomas Bros	128789
11/04/13	2		20T		170101	Tipper	Tank Excavation F/L	Cainhoe	Thomas Bros	129341
12/04/13	2		20T		170101	Tipper	Tank Base/Forecast	Cainhoe	Thomas Bros	128896
12/04/13	2		20T		170101	Tipper	Tank Excavation	Cainhoe	Thomas Bros	128894
12/04/13	2		20T		170101	Tipper	Tank Excavation	Cainhoe	Thomas Bros	134001
12/04/13	2		20T		170101	Tipper	Tank Excavation	Cainhoe	Thomas Bros	123194
12/04/13	2		20T		170101	Tipper	Tank Excavation F/L	Cainhoe	Thomas Bros	123193
12/04/13	2		20T		170101	Tipper	Tank Excavation F/L	Cainhoe	Thomas Bros	134000
12/04/13	2		20T		170101	Tipper	Tank Excavation	Cainhoe	Thomas Bros	123192
12/04/13	2		20T		170101	Tipper	Tank Excavation F/L	Cainhoe	Thomas Bros	133999
12/04/13	2		20T		170101	Tipper	Tank Excavation	Cainhoe	Thomas Bros	123191
12/04/13	2		20T		170101	Tipper	Tank Excavation	Cainhoe	Thomas Bros	123190
12/04/13	2		20T		170101	Tipper	Tank Excavation F/L	Cainhoe	Thomas Bros	128895
12/04/13	2		20T		170101	Tipper	Tank Excavation	Cainhoe	Thomas Bros	128897

* 1 x Builders Skip (8yd) = Approx 5m³ , * 1 m³ = Approx 1.75 Ton * 20 Ton Load = Approx 11m³ (These Figures are for guidance only)



CARAGORY 'A' INERT / INACTIVE - WASTE MOVEMENT /DISPOSAL RECORD SHEET

Fox Construction

Waste disposal register - the following movements of waste have taken place as detailed;										
Date Of Waste Movement	Type (Enter number(s) or letter(s) see cover page)	Reuse, Recyclable Or For Landfill / Disposal (Please Indicate Quantities m3, tonnes or lt)			EWC Code (see SWMP for advice) (Carrier must indicate code on transfer note)	Type of Transport (Tipper, Skip, Tanker etc.)	Area Of Site Waste Removed From (e.g. tank excavation, Interceptor excavation etc.)	Disposal Site Waste Being Transported To (Haulier <u>must</u> supply this information before leaving site with load) (This information MUST match entry on cover page)	Waste Carriers Name (Refer to cover page for carriers license No)	Waste Duty of Care or Transfer Note Serial No. (No load can leave site without this being received)
		Reuse	Recycle	Landfill Disposal						
15/04/13	2		20ton		170101	8-Wheel Tipper	Forecourt Surface	Cainhoe	Thomas Bros	134005
15/04/13	2		20ton		170101	8-Wheel Tipper	Forecourt Surface	Cainhoe	Thomas Bros	134006
15/04/13	2		20ton		170101	8-Wheel Tipper	Forecourt Surface	Cainhoe	Thomas Bros	134007
15/04/13	2		20ton		170101	8-Wheel Tipper	Forecourt Surface	Cainhoe	Thomas Bros	134011
15/04/13	2		20ton		170101	8-Wheel Tipper	Forecourt Surface	Cainhoe	Thomas Bros	135304
15/04/13	2		20ton		170101	8-Wheel Tipper	Forecourt Surface	Cainhoe	Thomas Bros	135305
15/04/13	2		20ton		170101	8-Wheel Tipper	Forecourt Surface	Cainhoe	Thomas Bros	135306
15/04/13	2		20ton		170101	8-Wheel Tipper	Forecourt Surface	Cainhoe	Thomas Bros	135307
16/04/13	2		20ton		170101	8-Wheel Tipper	Forecourt Surface	Cainhoe	Thomas Bros	139294
16/04/13	2		20ton		170101	8-Wheel Tipper	Forecourt Surface	Cainhoe	Thomas Bros	139295
16/04/13	2		20ton		170101	8-Wheel Tipper	Forecourt Surface	Cainhoe	Thomas Bros	135016
16/04/13	2		20ton		170101	8-Wheel Tipper	Forecourt Surface	Cainhoe	Thomas Bros	139297
15/04/13	2		20ton		170101	8-Wheel Tipper	Forecourt Surface	Cainhoe	Thomas Bros	134008
20/05/13	2		20ton		170101	8w-Tipper	Tank Base	Cainhoe	Thomas Bros	*
21/05/13	2		20ton		170101	8w-Tipper	Tank Base	Cainhoe	Thomas Bros	134691
21/05/13	2		20ton		170101	8w-Tipper	Tank Base	Cainhoe	Thomas Bros	124255

* 1 x Builders Skip (8yd) = Approx 5m³ , * 1 m³ = Approx 1.75 Ton * 20 Ton Load = Approx 11m³ (These Figures are for guidance only)

CATEGORY 'A' INERT / INACTIVE - WASTE MOVEMENT / DISPOSAL RECORD SHEET

Fox Construction

Waste disposal register - the following movements of waste have taken place as detailed;										
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		Reuse	Recycle	Landfill Disposal						
22/05/13	4/6		11m ³		170107	8w Tipper	Interceptor Panel	Cainhoe	Thomas Bros	135847
22/05/13			12m ³		170302	8w Tipper	Forecourt Panel	Cainhoe	Thomas Bros	142001
24/05/13	2		11m ³		170101	8w Tipper	Forecourt	Cainhoe	Thomas Bros	124783
03/06/13			11m ³		170504	8w Tipper	Tank Excavation	Cainhoe	Thomas Bros	142817
03/06/13			11m ³		170504	8w Tipper	Tank Backfill	Cainhoe	Thomas Bros	122744
03/06/13			11m ³		170504	8w Tipper	Tank Backfill	Cainhoe	Thomas Bros	142818
03/06/13			11m ³		170504	8w Tipper	Tank Backfill	Cainhoe	Thomas Bros	124326
03/06/13			11m ³		170504	8w Tipper	Tank Backfill	Cainhoe	Thomas Bros	126056
03/06/13			11m ³		170504	8w Tipper	Tank Backfill	Cainhoe	Thomas Bros	142274
03/06/13			11m ³		170504	8w Tipper	Tank Backfill	Cainhoe	Thomas Bros	142953
03/06/13			11m ³		170504	8w Tipper	Tank Backfill	Cainhoe	Thomas Bros	142954
03/06/13			11m ³		170504	8w Tipper	Tank Backfill	Cainhoe	Thomas Bros	126052
03/06/13			11m ³		170504	8w Tipper	Tank Backfill	Cainhoe	Thomas Bros	142275
03/06/13			11m ³		170504	8w Tipper	Tank Backfill	Cainhoe	Thomas Bros	124327
03/06/13			11m ³		170504	8w Tipper	Tank Backfill	Cainhoe	Thomas Bros	142819
03/06/13			11m ³		170504	8w Tipper	Tank Backfill	Cainhoe	Thomas Bros	142955

* 1 x Builders Skip (8yd) = Approx 5m³ , * 1 m³ = Approx 1.75 Ton * 20 Ton Load = Approx 11m³ (These Figures are for guidance only)

used
any
skip
*
*

CARAGORY 'A' INERT / INACTIVE - WASTE MOVEMENT / DISPOSAL RECORD SHEET

Fox Construction

Waste disposal register - the following movements of waste have taken place as detailed;										
Date Of Waste Movement	Type (Enter number(s) or letter(s) see cover page)	Reuse, Recyclable Or For Landfill / Disposal (Please Indicate Quantities m3, tonnes or lt)			EWC Code (see SWMP for advice) (Carrier must indicate code on transfer note)	Type of Transport (Tipper, Skip, Tanker etc.)	Area Of Site Waste Removed From (e.g. tank excavation, Interceptor excavation etc.)	Disposal Site Waste Being Transported To (Haulier must supply this information before leaving site with load) (This information MUST match entry on cover page)	Waste Carriers Name (Refer to cover page for carriers license No)	Waste Duty of Care or Transfer Note Serial No. (No load can leave site without this being received)
		Reuse	Recycle	Landfill Disposal						
08/06/13			11 M ³		170504	8w-Tipper	Tank Backfill	Cainhoe	Thomas Bros	142276
08/06/13			11 M ³		170504	8w-Tipper	Tank Backfill	Cainhoe	Thomas Bros	142456
08/06/13			11 M ³		170504	8w-Tipper	Tank Backfill	Cainhoe	Thomas Bros	124328
08/06/13			11 M ³		170504	8w-Tipper	Tank Backfill	Cainhoe	Thomas Bros	126055
08/06/13			11 M ³		170504	8w-Tipper	Tank Backfill	Cainhoe	Thomas Bros	160053
08/06/13			11 M ³		170504	8w-Tipper	Tank Backfill	Cainhoe	Thomas Bros	142277
08/06/13			11 M ³		170504	8w-Tipper	Tank Backfill	Cainhoe	Thomas Bros	124329
10/06/13			11 M ³		170504	8w-Tipper	Tank Backfill	Cainhoe	Thomas Bros	142959
10/06/13			11 M ³		170504	8w-Tipper	Tank Backfill	Cainhoe	Thomas Bros	142960
10/06/13			11 M ³		170504	8w-Tipper	Tank Backfill	Cainhoe	Thomas Bros	142962
10/06/13			11 M ³		170504	8w-Tipper	Tank Backfill	Cainhoe	Thomas Bros	142963

* 1 x Builders Skip (8yd) = Approx 5m³ , * 1 m³ = Approx 1.75 Ton * 20 Ton Load = Approx 11m³ (These Figures are for guidance only)

* Working Time 30mins

CATEGORY 'A' INERT / INACTIVE - WASTE MOVEMENT / DISPOSAL RECORD SHEET

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		Reuse	Recycle	Landfill Disposal						
10/06/13	4/6/9		11m ³		170504	8W-Tipper	Tank Forkfill	Cainhoe	Thomas Bros	142961
27/06/13	2		11m ³		170101	8W-Tipper	Forecourt	Cainhoe	Thomas Bros	142316
27/06/13	2		11m ³		170101	8W-Tipper	Forecourt	Cainhoe	Thomas Bros	160857
27/06/13	2		11m ³		170101	8W-Tipper	Forecourt	Cainhoe	Thomas Bros	160858
27/06/13	2		11m ³		170101	8W-Tipper	Forecourt	Cainhoe	Thomas Bros	160859
11/7/13	2		11m ³		170101	8W-Tipper	Forecourt	Cainhoe	Thomas Bros	160142
11/7/13	2		11m ³		170101	8W-Tipper	Forecourt	Cainhoe	Thomas Bros	160143
11/7/13	2		11m ³		170101	8W-Tipper	Forecourt	Cainhoe	Thomas Bros	160144
4/7/13	2		11m ³		170101	8W-Tipper	Forecourt	Cainhoe	Thomas Bros	160296
16/7/13	4/6/9		11m ³		170504	8W-Tipper	Forecourt	Cainhoe	Thomas Bros	149626
16-7-13	4/6/9		11m ³		170504	8W-Tipper	Site	Cainhoe	Thomas Bros	149627
17/7/13	4/6/9		11m ³		170504	8W-Tipper	Site	Cainhoe	Thomas Bros	149363
17/7/13	4/6/9		11m ³		170504	8W-Tipper	Site	Cainhoe	Thomas Bros	149154
24/7/13	4/6/9		11m ³		170504	8W-Tipper	Site	Cainhoe	Thomas Bros	149783
24/7/13	4/6/9		11m ³		170504	8W-Tipper	Site	Cainhoe	Thomas Bros	149782

* 1 x Builders Skip (8yd) = Approx 5m³ , * 1 m³ = Approx 1.75 Ton * 20 Ton Load = Approx 11m³ (These Figures are for guidance only)